UNLV sustainability task force report

David M. Hassenzahl
University of Nevada, Las Vegas, david.hassenzahl@unlv.edu

Follow this and additional works at: https://digitalscholarship.unlv.edu/reports

Part of the Environmental Policy Commons, Natural Resources and Conservation Commons, and the Sustainability Commons

Repository Citation
Available at: https://digitalscholarship.unlv.edu/reports/1

This Report is brought to you for free and open access by the Urban Sustainability Initiative at Digital Scholarship@UNLV. It has been accepted for inclusion in Reports (USI) by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.
Memorandum

To: Dr. David Ashley, UNLV President
From: Dr. David M. Hassenzahl, Chair, UNLV Sustainability Task Force
RE: Sustainability Task Force Report
Date: June 23, 2008

President Ashley

The UNLV Sustainability Task Force has completed its mission to provide you with recommendations as to how UNLV can best pursue sustainability ideals. The attached report contains our conclusions and recommendations, along with appendices containing supporting materials and details. I hope you will join me in thanking the members of the Sustainability Task Force for their extraordinary effort, and dedication to sustainability. Please do not hesitate to let me know if you have questions or comments. I look forward to UNLV’s continued progress. The Sustainability Task Force members request that this be primarily an electronic document.

cc: Sustainability Task Force Members
Neal Smatresk, Executive Vice President and Provost
Ron Smith, Vice President for Research
UNLV STF FINAL REPORT JUNE 23, 2008

UNLV Sustainability Task Force Report

Introduction

Over the past several years, the issue of sustainability has become central to planning and mission at many institutions of higher learning. While both a precise definition and practical implementation can be elusive, the central philosophy of sustainability is clear: a sustainable campus ensures that its current practices and behaviors ensure that future generations will have opportunities equal or superior to ours. The American Association for Sustainability in Higher Education, of which UNLV is one of over 600 member institutions, “defines sustainability in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations.”¹

This document provides guidance to the UNLV President on how to pursue campus sustainability. There is a need to improve practices and policies that incorporate sustainability. An important recommendation from this group is that the President should approach sustainability as a process that requires continuous planning and assessment, pursued through engagement by the entire campus community and all relevant stakeholders related to the campus. UNLV has already started the process as shown by the efforts of Facilities Management and Planning to improve campus operations, the Focus 50 – 100 Planning process which highlighted the need for UNLV to incorporate aspects of sustainability into education and research, and the establishment of the Office of Urban Sustainability Initiatives that has promoted sustainability research and outreach with on- and off-campus partners. While this is a good starting point, there remains a need to continue and expand sustainability efforts at UNLV. This report contains strategies and opportunities to address that need.

Overview

The UNLV Sustainability Task Force (STF) was established in Fall, 2007 with the mission of providing a report to the President of UNLV with recommendations on how UNLV can best:

1) Engage the campus in a dialogue about reaching environmental sustainability
2) Integrate environmental sustainability with existing campus programs in education, research, operations, and public service; and
3) Instill a culture of sustainable, long-range planning and forward-thinking design.

This document constitutes that report.

Appendix One contains the document establishing the Sustainability Task Force

Task Force Composition

The Task Force was originally comprised of:

- Academic Representative and Task Force Chair: David M. Hassenzahl
- Provost’s Office: Dawn Neuman
- VP Research Office: Nancy Flagg
- VP Finance and Business Office: Gerry Bomotti
- Planning and Construction: Bob Dincecco
- Facilities Management: Jim Wilhelm
- Purchasing: Rolando Mosqueda
- Graduate Students: Allison Proctor, Mary Anila Jeyaprekash
- Undergraduate Students: Ashley St. Denis, Melissa Mezger

¹ http://www.aashe.org/about/about.php

PLEASE AVOID PRINTING THIS REPORT
Subsequently, the two graduate student members withdrew, and were replaced by Heather Skaza and Ashley Rosia. Tom Piechota, Director of Sustainability and Multidisciplinary Research, was added to the STF.

**Task Force Meetings**

The task force met monthly November through May, and twice in June. All meetings were announced and open to the public.

**Task Force Organization**

The STF’s recommendations cover sustainability in four broad (and often overlapping) areas: Resources, Livability, Academics and Connections. These areas are detailed below.

1. **Resources: campus facilities, maintenance, purchasing, disposal, and resource management**

   This includes a wide range of practices at UNLV, as it is responsible for assessing all campus materials and energy use. Key areas are:
   1. Construction and maintenance of buildings and grounds,
   2. Water use and disposal
   3. Electricity and other energy resources
   4. Vehicles used on campus
   5. Equipment and materials for
      a. Laboratories
      b. Janitorial services
      c. Maintenance services
      d. Computing services
      e. Reprographics
   6. Waste management
   7. Food services
   8. Purchasing

2. **Livability: Faculty, Staff and Student life**

   This includes sustainable practices that may be adopted in the day to day activities of the people at UNLV. Some of the areas covered may overlap with Resources, as they include purchasing for the faculty, staff and students on campus. Key areas are:
   1. Office design and equipment
   2. Support services (IT, equipment)
   3. Professional travel (transportation and lodging)
   4. Multi-modal transportation planning
   5. Campus amenities and recreation
   6. Involvement / buy-in
      a. Faculty Senate
      b. Academic Council
      c. Student Body
      d. Classified Council
   7. Sustainable behavior
      a. Education
      b. Incentives
c. Mandates
   8. Health and wellness (facilities, opportunities)
   9. Dining

3. Academics: Research and Education
   This includes all aspects of research and education on campus and associated with the campus. Key areas are
   1. Research projects
   2. Research practices
   3. Research funding sources
   4. Educational opportunities
   5. Educational requirements

4. Connections: Campus - Community Relations
   This covers how sustainability may be incorporated into interaction that UNLV has with the community; it includes both sustainability education or outreach and making all other types of outreach more sustainable. Key areas are
   1. Campus impacts on the physical environment
   2. Campus impacts on the social environment
   3. Campus services to the community

Task Force Process and Approach
   Information on the sustainability efforts of peer institutions and other universities was prepared by searching for relevant information on university web sites; by contacting faculty, staff, and environmental groups on university campuses; by reviewing sustainability data on universities collected by the Sustainable Endowments Institute; and by using data provided on the Association for the Advancement of Sustainability in Higher Education (AASHE) web site, as well as through contact with members of that group.

   “Peer Institutions” were determined from a list provided by the Office of Institutional Analysis and Planning. There were two peer institutions listed as Sustainable Leaders by the Sustainable Endowments Institute: Arizona State University and the University of Oregon.

   “Other Institutions” were selected based on their being located in the same western region as UNLV and/or for their comprehensive sustainability programs. Some of the universities were named Campus Sustainability Leaders by the Sustainable Endowments Institute. These include Harvard University, Oregon State University, the University of California at Berkeley, the University of California at Irvine, the University of California at Los Angeles, the University of California at San Diego, the University of Colorado, the University of Washington, and Yale University.

   Individual “University Profiles” that provide brief descriptions of the organizational structure of sustainability departments/committees, as well as information regarding sustainability commitments, and sustainability programs in facilities, purchasing, and transportation were prepared for each Peer Institution and Other Institution. That information was then summarized in a more quantitative manner in the “University Sustainability Organizations and Initiatives” spreadsheet (Appendix Two), which includes UNLV. This spreadsheet can be used to compare in general the types of sustainability programs that UNLV has undertaken with its Peer Institutions and with Other Institutions.

   “Best Practices” for Peer Institutions and Other Institutions were addressed by indicating the sustainability program by category and listing the universities who had a program in that category. Due to the variety of programs in each category and the difficulty of collecting data on the effectiveness of these programs,
there was no further evaluation of them. Websites in the following paragraph with an asterisk (*) designate sustainability leaders in general and by sustainability program and can be used as a source for “Best Practices.”

Reference material was compiled on the actual commitments that some Universities have signed, on the American College and University Presidents Climate Commitment Implementation Guide, on the AASHE *web site directory, on selected excerpts from the Sustainable Endowments Institute College Sustainability Report Card and on the University of California systems sustainability policy. This information was distributed to the Task Force members for their use in the preparations of their various subcommittee reports and recommendations.

Appendix Two contains materials underpinning the Sustainability Task Force Process and Approach

Task Force Recommendations

In this section, the STF provides overall recommendations, as well as specific recommendations in each of the four focus areas (Resources, Livability, Academics and Connections). We provide immediate actions and suggested actions for 1, 5, and 10 years. Finally, recognizing that 20 years is beyond the scope of current planning, the STF proposes a vision of UNLV in 20 years. Table One summarizes the STF recommendations.

<table>
<thead>
<tr>
<th>General</th>
<th>Immediate</th>
<th>1 – Year</th>
<th>5 – Year</th>
<th>10 - Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish a position of sustainability coordinator</td>
<td>• Hire a sustainability coordinator</td>
<td>• Have in place a campus sustainability program that coordinates sustainability activities, practices and efforts</td>
<td>• Complete a 10-year review of sustainability efforts that includes an external review team</td>
<td></td>
</tr>
<tr>
<td>• President Ashley to sign Campus Climate Commitment</td>
<td>• Complete a carbon footprint for UNLV</td>
<td>• Complete a 5-year internal review of implementation of this report</td>
<td>• Demonstrate substantial progress towards sustainability in all four focus areas.</td>
<td></td>
</tr>
<tr>
<td>• President Ashley to sign sustainability policy and implementing procedures, including energy / water efficiencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Continue to partner with campus departments to prioritize sustainability in their purchasing practices.</td>
<td>• Incorporate sustainability requirements into formal solicitations and contracts.</td>
<td>• Promote strict adherence to sustainable or alternative commodity and service requirement to accomplish “green purchasing” initiative.</td>
<td>• New technologies, concepts and ideas will be utilized to make UNLV as sustainable as possible.</td>
<td></td>
</tr>
<tr>
<td>• Continue to build and maintain all campus facilities and equipment to be sustainable, efficient, and livable.</td>
<td>• Upgrade the energy and water management systems to allow the maximization of efficiency.</td>
<td>• Be the leader in energy and water efficiency, and waste management.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Formally adopt a purchasing policy that requires Energy Star rated products in all areas for which such ratings exist</td>
<td>• As feasible, improve the waste management and thereby reduce the flow to the landfill.</td>
<td>• Build all facilities to LEED™ Silver equivalency.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Upgrade existing buildings to LEED™ EB equivalency.</td>
<td></td>
</tr>
</tbody>
</table>
Livability
• Make UNLV a smoke free campus
• Finalize the campus multi-modal transportation plan

• Identify core livability values, and develop a strategy for achieving those values
• Seek funds for multi-modal transportation plan

• Reduce single occupancy vehicle community by 50%
• Open an on-campus transportation hub to support students, faculty and staff, in conjunction with the RTC

• Achieve 20% participation in RTC multi-modal transportation alternatives

Academics
• Continue to seek external support for incorporating sustainability into education and research

• Provide internal opportunities for faculty to conduct sustainability-related research and course development

• Identify future areas of study in sustainability, broadly interpreted upon consultation with faculty, administrators, staff, and students.

Connections
• Identify a central location where community partners can contact regarding sustainability for our region.

• Continue to provide conferences relevant to urban sustainability issues in our community.

• Develop a sustainability lecture series that engages people on and off campus.

Table One: STF immediate, 1-year, 5-year and 10-year planning suggestions for Resources, Livability, Academics and Connections

**Overall Recommendations**

UNLV has made moderate progress towards sustainability in some areas, and substantial progress in a few areas. Nonetheless, the major general finding of the STF is that sustainability efforts at UNLV could benefit from more explicit and specific commitment and coordination at the highest level of campus administration. The STF recommends that UNLV:

1. Designate one website as a university hub for sustainability information and provide links to other related department websites. (Year 1)
2. Complete a carbon footprint analysis for UNLV
3. Constitute a permanent Advisory Committee on Sustainability, which should include representatives from the Provost’s Office; the Offices of the Vice Presidents for Research, Finance and Student Life; Planning and Construction; Facilities Management; Purchasing; the Graduate and Professional Students Association; Consolidated Students of the University of Nevada; Athletics; Residence Life Religious Groups; and Campus Vendors. From this larger committee create a smaller Steering Committee to maintain direction and focus. Committee objectives (Year 1) would be to
   a. Advise the administration on sustainability issues.
   b. Develop a baseline of environmental data from which to measure UNLV’s future environmental progress.
   c. Oversee graduate student work on developing the carbon footprint for UNLV.
   d. In consultation with various departments, propose targets (measurable goals) to improve UNLV’s environmental performance over time for administrative approval.
   e. Develop a position description for a Campus Sustainability Coordinator and a reporting structure. Pending approval of this, and subject to budgetary constraints, advertise the position, coordinate the evaluation and selection process and make a recommendation on the final
candidate to the administration. A recommendation to consider is that this position report jointly
to Facilities (where most likely the staff office would be located) and to the Provost’s office.

4. Establish the position of Campus Sustainability Coordinator (Year 2), funded as possible within
budgetary constraints. This individual should report directly to the President and be authorized to
directly impact sustainability on campus. This individual should be tasked with engaging all
members of the campus community in sustainability commitment and implementation, and work
closely with units (e.g., student groups, Facilities Management and Planning, Office of Urban
Sustainability Initiatives, Office of Information Technology) that are currently promoting
sustainability on and off campus. These efforts should be both overall, with sustainability as a
consistent agenda item at the President’s Cabinet meetings, as well as in the four areas:
   a. Resource issues, in collaboration with the Vice Presidents for Finance and Planning
   b. Livability issues, in collaboration with the Faculty Senate, Student Council, and the Vice
      Presidents for Student Life, Diversity and Inclusion, and Athletics
   c. Academic issues, in collaboration with the Faculty Senate, the Executive Vice President and
      Provost, the Vice President for Research, and the academic Deans
   d. Community issues, in collaboration with the President and the Vice President for Advancement.

5. Adopt sustainability standards (AASHE and President’s Climate Commitment), while recognizing
that these should be minimum standards and that they might not always be appropriate standards for
UNLV’s relatively unique climate.

6. Continue to establish itself in the area of arid urban sustainability by seeking external support from
foundations, community partners, and federal, state, and local agencies.

7. Evaluate how best to finance sustainability efforts through a combination of mechanisms such as
directed resource allocations, fees, and external funding. While some components of sustainability
should be relatively inexpensive, and while ideally (see the definition of sustainability above)
sustainability should represent low cost over the very long term, implementing practices such as low-
energy building design, ergonomic workspaces, low-water landscaping and support for low impact
transportation can be expensive in the short run.

8. Require all administrative units to develop sustainability plans, with oversight from the sustainability
coordinator. These plans should be consistent with and contribute to the campus sustainability
policy.

9. UNLV President, through the Sustainability Coordinator, should encourage and work with the
Faculty Senate, Classified Staff Council and Student Council to develop Sustainability Policies that
are consistent with and contribute to the campus sustainability policy.

10. Plan annual reviews, as well as an internal five-year review and an intensive ten-year review of
sustainability progress. The ten year review should include a panel of external reviewers with
expertise in the four areas of sustainability planning covered in this report.

A draft sustainability policy and implementing procedures is contained in Appendix Three

For Facilities, the STF recommends that UNLV:

1. Immediately adopt a purchasing policy that requires Energy Star rated products in all areas for which
such ratings exist

2. Adopt a building standard appropriate for the Southern Nevada Region. The STF suggests that
LEED principles may not be best practices for UNLV, but energy efficiency should be an integral
part of any building design on campus.
3. Adopt an energy accounting system to better analyze data and forecast trends. This information is
will be used in implementing energy management control system.
4. Increase recycling efforts at UNLV to include recycling containers everywhere there are disposal
containers.
5. Implement ‘green’ purchasing as policy for laboratories, maintenance, and office supply materials
across campus.

A complete resources report and detailed recommendations for Facilities are found in Appendix Four.

For Livability, the STF recommends that UNLV:

1. Establish a committee for sustainable campus living, to identify and implement livability ideals
2. Ban smoking from the entire campus.
3. Develop a transportation management plan that takes a “Multi-modal Transportation” perspective, which would include
   a. Facilities for bicycle commuters (storage, changing and showering)
   b. Priority parking for car poolers
   c. Incentives and other encouragement of and improved access to public transportation
4. Engage students, faculty and staff in sustainability with activities like outreach programs,
   sustainability-related competitions and the promotion of sustainability in new-student orientation.
5. Research opportunities to purchase the least resource-intensive food options. The university should
   include food that is served in the dining commons, other on-campus dining facilities, and catered
   functions on campus.
6. Develop a policy to offset and reduce greenhouse gas emissions involved in university transportation
   and make reductions where possible in the areas of campus fleet, commuting, and air travel.
7. Promote and develop an awareness of carpooling to campus among staff, student, and faculty
   emphasizing the environmental and cost effective benefits.
8. Develop a sustainable policy for inter-campus transportation which would include:
   a. Limiting the use of electric and gas powered vehicles on campus
   b. Requiring the purchase of electric powered golf carts for all campus departments except in cases
      where gas powered carts are required due to specific approved requirements.
   c. Adopt the use of solar charger panels on all golf carts which will reduce the need to charge carts
      through standard electrical outlets.
   d. Establish the expectation that “cart pooling” – the sharing of golf carts by departments - should
      be followed thereby eliminating idle carts and energy consumption.

A complete resources report and detailed recommendations for Livability are found in Appendix Five.

For Research and Academics, the STF recommends that UNLV:

1. Implement recommendations from the Focus 50-100 strategic plan, which lists sustainability as one
   of three research foci: “The issue of sustainability, including environmental, economic, and social
   sustainability, is particularly relevant for Nevada. Research opportunities in this field abound, such
   as in the areas of water resources, the hospitality industry, energy systems, health, and education.”
   Based on this research focus, the college deans and university faculty should identify future areas of
   study in sustainability, broadly interpreted, and the Executive Vice President and Provost should
   form implementation teams to ensure follow-through on goals and action items identified during the
   strategic planning process.
2. Implement recommendations from the Focus 50-100 strategic plan that call for an educational program that provides students with “Broad elucidation of sustainability as it impacts economic, environmental, and social concerns.” To achieve this educational outcome, the college deans and university faculty should identify additional ways of weaving sustainability into the curriculum and co-curricular activities.

3. By the Fall 2010 semester, make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.

4. Conduct a campus wide assessment of sustainability research projects.

5. Encourage interdisciplinary teams of faculty to write research proposals to funding agencies such as NSF, NIH, DOE, DHS, Department of Education.

6. Provide seed grants for faculty to form interdisciplinary research teams focused on sustainability. Expectation is that they will conduct preliminary research and write at least one proposal to an appropriate funding agency.

7. Develop a strategic plan for sustainability research at UNLV and with external partners.

8. Establish public – private partnerships to advance sustainability discussion on and off campus.

9. Conduct a national survey on sustainable research practices.

10. Encourage internships for all students with sustainability-related businesses. Career Services could be expanded to include coordination of service-learning opportunities.

11. Conduct a campus-wide survey on sustainability related courses currently being offered and planned for the future.

A complete resources report and detailed recommendations for Academics are found in Appendix Six.

For Connections, the STF recommends:

1. Designing and promoting sustainability education opportunities for the community, presented by UNLV faculty and/or students.

2. Assessing what practices that are currently a part of outreach efforts, such as transportation, could be planned with sustainability in mind.

3. Establish UNLV as a focal point for sustainability practice and expertise for the region and for similar arid urban regions worldwide.

A complete resources report and detailed recommendations for Connections are found in Appendix Seven.

List of Appendices

1 Task Force Founding Document 3 Sustainability Policy and Implementation Procedures
2A Best Practices: Other Institutions 4A Facilities Committee Report
2C Organization Approaches to Sustainability 5 Livability Committee Report
2D Summary: Organizations and Initiatives 6 Academic Committee Report
2E Summary: Peer Institution Profiles 7 Connections Committee Report
2F Summary: Other Institutions Profiles
2G References
UNLV Campus Sustainability Task Force

Article I - Purpose

SECTION 1: PURPOSE

The purpose of the President's Advisory Task Force on Sustainability is to promote environmental management and sustainable development at the University of Nevada, Las Vegas, and recommend specific activities to the President that will allow UNLV to appropriately address sustainability issues for the future. The Task Force will also help UNLV comply with the NSHE Energy and Sustainability Policy (Board Handbook, Title 4, Ch 10, Section 26, which is included at the end of this document).

SECTION 2: DEFINITION OF SUSTAINABILITY

The term “sustainability” can be defined as the ability to meet the needs of the present while living within the carrying capacity of supporting ecosystems and without compromising the ability of future generations to meet their own needs.

Article II - Goals and Responsibilities

The Task Force is charged with advising the President on matters pertaining to the environment and sustainability as it directly relates to the University of Nevada, Las Vegas, and recommending specific activities to the President for how UNLV can best address these sustainability issues for the future.

The mission of the Task Force shall be composed of four central goals:

-- To engage the campus in a dialogue about reaching environmental sustainability;

-- To integrate environmental sustainability with existing campus programs in education, research, operations, and public service;

-- To instill a culture of sustainable long-range planning and forward-thinking design.

-- To provide the President with recommendations and suggestions about how UNLV can best support various sustainability issues/efforts on an on-going basis.

The Task Force shall choose projects and subcommittees related to these goals, as appropriate. The Task Force will complete its activities prior to June 30, 2008.

Article III - Organization and Governance

The President shall name a Chair of the Task Force whose responsibilities shall include setting the agenda and distributing it to members before each meeting, facilitating meetings, and serving as a liaison for the Task Force.

Article IV - Membership

SECTION 1: TERM OF SERVICE
All members of the Task Force shall be appointed by the President for the full term of the task force – through June 30, 2008.

SECTION 2: TASK FORCE COMPOSITION

The Task Force shall be composed of appropriate representatives from specific departments and university divisions, including both undergraduate and graduate students.

*Provost’s Office  1 member: Dawn Neuman
*VP Research Office  1 member: Nancy Flagg
*VP Fin and Business Office  1 member: Gerry Bomotti
*Planning and Construction  1 member: Bob Dincecco
*Facilities Management  1 member: Jim Wilhelm
*Purchasing  1 member: Rolando Mosqueda
*Academic Representative  1 member: David Hassenzahl
*Graduate Students  2 members: Allison Proctor,
Mary Anaila Jeyabrakash
*Undergraduate Students  2 members: Ashley St. Denis,
Melissa Mezger

The task force should coordinate closely with existing campus activities and programs that are involved in sustainability, specifically including the new office of Urban Sustainability Initiatives under the responsibility of the Vice President for Research.

**Article V - Meetings**

**SECTION 1: TASK FORCE MEETINGS**

The Task Force shall meet as necessary in order to complete its responsibilities prior to June 30, 2008. The time and location shall be determined by consensus of the Task Force, and all members of the Task Force shall be notified in advance.
The NSHE Energy and Sustainability Policy is documented in the Board of Regents Handbook (Title 4, Chapter 10, Section 26). It is the result of the Board of Regents Meeting August 17-18, 2006, item 12. The following URL is a link to the minutes of that meeting: http://system.nevada.edu/Board-of-r/Meetings/Minutes/2000/2006/Bor_0806.doc_cvt.htm

The following is a copy of Section 26 from the Board of Regents Handbook

Section 26. **NSHE Energy and Sustainability Policy**

1. The Board of Regents is committed to protecting the environment, reducing the System’s dependence on non-renewable energy sources, and promoting the construction, maintenance, and renovation of buildings that are environmentally responsible, economically feasible, and healthy spaces to work and live. Therefore, the Chancellor shall develop procedures and guidelines applicable to NSHE institutions that will address matters including, but not limited to:

   a.) Leadership in Energy and Environmental Design Green building rating system or an equivalent standard adopted by the Director of the Office of Energy;
   b.) Energy and water conservation including the minimized use of non-renewable energy sources and the use of local renewable energy sources; and
   c.) Alternative methods of transportation.

2. The procedure and guidelines developed under subsection 1 must be approved by the Board of Regents.

(B/R 8/06)
Program Summary
Best Practices - Other Institutions

The categories of sustainability programs, the number of other institutions that have such programs and the program descriptions at specific institutions combine to provide an indicator of what may be current “Best Practices.”

This summary has been compiled using the University Profiles – Other Institutions and the University Sustainability Organizations and Initiatives spreadsheet.

To view a more detailed description of a specific institution’s programs or initiatives, please refer to the University Profiles pages. For a quantitative assessment of universities sustainable practices, please refer to the University Sustainability Organizations and Initiatives spreadsheet.
Other Institutions - Programs

There are a total of 16 other institutions

Building
Colorado State
Harvard University
Oregon State University
UC Berkeley
UC Irvine
UC Los Angeles
UC San Diego
University of Arizona
University of Colorado
University of New Mexico (Taos)
University of Utah
University of Washington
Utah State
Yale University

Recycling Programs
Colorado State
Harvard University
Oregon State University
UC Berkeley
UC Irvine
UC Los Angeles
UC San Diego
University of Arizona
University of Colorado
University of New Mexico (Taos)
Energy Programs (Renewable Energy Use and/or Conservation)

Colorado State
Harvard University
Oregon State University
UC Berkeley
UC Irvine
UC Los Angeles
UC San Diego
University of Arizona
University of Colorado
University of New Mexico (Taos)
University of Utah
University of Washington
Utah State
Washington State
Yale University

Rideshare

Harvard University
Oregon State University
UC Los Angeles
University of Arizona
University of Utah
University of Washington
Alternative Fuel Vehicles
Colorado State
Harvard University
Oregon State University
UC Irvine
UC Los Angeles
UC San Diego
University of Arizona
University of Colorado
University of New Mexico (Taos)
University of Utah
University of Washington
Utah State
Yale University

Bike Program
Oregon State University
University of Colorado
University of New Mexico (Taos)
University of Washington

Public Transportation Programs
Harvard University
Oregon State University
University of Arizona
University of Colorado
University of New Mexico (Taos)
University of Utah
Yale University
Summary of Other Institution Commitments

This summary lists the type of sustainability commitment and the institutions that have made that type of commitment.

This summary has been compiled using the University Profiles – Other Institutions and the University Sustainability Organizations and Initiatives spreadsheet.

To view a more detailed explanation of a specific institution’s programs or initiatives, please refer to the University Profiles pages. For a quantitative assessment of universities sustainable practices, please refer to the University Sustainability Organizations and Initiatives spreadsheet.
Other Institutions - Commitments

There are a total of 16 other institutions

**Signatories of the American College and University Presidents Climate Commitment (requires greenhouse gas inventory)**

- Oregon State University
- UC Berkeley
- UC Irvine
- UC Los Angeles
- UC San Diego
- University of Arizona
- University of Colorado
- University of New Mexico (Taos)
- University of Washington
- Washington State

**Signatories of Tailloires**

- Colorado State
- University of Colorado

**University-Based Commitment**

- Colorado State
- Harvard University
- UC Berkeley
- UC Irvine
- UC Los Angeles
- UC San Diego
- University of Arizona
- University of Colorado
- University of Utah
- Washington State
- Yale University
Program Summary
Best Practices - Peer Institutions

The categories of sustainability programs, the number of peer institutions that have such programs and the program descriptions at specific institutions combine to provide an indicator of what may be current “Best Practices.”

This summary has been compiled using the University Profiles – Peer Institutions and the University Sustainability Organizations and Initiatives spreadsheet.

To view a more detailed explanation of a specific institution’s programs or initiatives, please refer to the University Profiles pages. For a quantitative assessment of universities sustainable practices, please refer to the University Sustainability Organizations and Initiatives spreadsheet.
Peer Institutions - Programs

There are a total of 15 peer institutions

Building
Arizona State University
New Mexico State University
University of Alabama
University of Central Florida
University of Houston
University of Maine
University of Massachusetts Amherst
University of Nevada Reno
University of Oklahoma (Norman)
University of Oregon
University of Rhode Island

Recycling Programs
Arizona State University
George Mason University
Georgia State University
Texas Tech University
University of Central Florida
University of Houston
University of Maine
University of Massachusetts Amherst
University of Mississippi (Main)
University of Nevada Reno
University of Oklahoma (Norman)
University of Oregon
University of Rhode Island
**Energy Programs (Renewable Energy Use and/or Conservation)**

Arizona State University  
George Mason University  
New Mexico State University  
University of Alabama  
University of Central Florida  
University of Houston  
University of Maine  
University of Massachusetts Amherst  
University of Nevada Reno  
University of Oklahoma (Norman)  
University of Oregon  
University of Rhode Island

**Rideshare**

Arizona State University  
George Mason University  
University of Houston  
University of Maine  
University of Nevada Reno

**Alternative Fuel Vehicles**

University of Central Florida  
University of Maine  
University of Oklahoma (Norman Campus)  
University of Oregon  
University of Rhode Island

**Bike Program**

Arizona State University  
George Mason University
University of Alabama
University of Maine
University of Nevada Reno
University of Oklahoma (Norman)
University of Oregon
University of Rhode Island

**Public Transportation Programs**

Arizona State University
George Mason University
New Mexico State University
The University of Alabama
The University of Central Florida
University of Oregon
University of Nevada Reno
University of Rhode Island
Summary of Peer Institution Commitments

This summary lists the type of sustainability commitment and the institutions that have made that commitment.

This summary has been compiled using the University Profiles – Peer Institutions and the University Sustainability Organizations and Initiatives spreadsheet.

To view a more detailed explanation of a specific institution’s programs or initiatives, please refer to the University Profiles pages. For a qualitative assessment of universities sustainable practices, please refer to the University Sustainability Organizations and Initiatives spreadsheet.
Peer Institutions - Commitments

There are a total of 15 peer institutions

Signatories of the American College and University Presidents Climate Commitment
(Requires GHG Inventory)

Arizona State University
George Mason University
New Mexico State University
University of Houston
University of Maine
University of Massachusetts – Amherst
University of Nevada – Reno
University of Oklahoma
University of Oregon
University of Rhode Island

Signatories of Tailloires

University of Rhode Island

University-Based Commitment

Arizona State University
University of Maine
University of Mississippi (Main)
University of Nevada Reno
University of Oregon
University of Rhode Island
There are several approaches to organize the sustainability endeavor on a university campus.

They are as follows from lowest level to highest level of commitment:

1. Implement a dedicated website on Campus Sustainability. The website is used to communicate sustainability initiatives to the campus community and to the public.

2. Form an Advisory Committee on Sustainability. The Advisory Committee includes multiple stakeholders (e.g., faculty, students, staff) to provide advice to the administration on sustainability issues.

3. Dedicate full-time staff to sustainability. These dedicated staff can be associated with one, or more, departments that have a lead role in sustainability initiatives on campus.

4. Create an Office of Sustainability. This office would identify campus sustainability goals, working with various campus constituents, propose and initiate programs to implement those goals.

There is a growing trend for universities to have a Sustainability Coordinator/Director as a full-time administrator for their sustainability endeavors. A Sustainability Director can bring financial benefits to a university as well as an increase in the university’s reputation due to their activities. Members of an Advisory Committee (or Task Force) on Sustainability have demanding schedules in their respective departments, which make it very difficult for them, as a group, to fulfill whatever charge is given to them by their administration. Also, there may be student, both undergraduate and graduate, individually or in groups, who may have an interest in environmental issues on campus, who could become more productive and beneficial to the university under the guidance of a Sustainability Director. Students have their academic priorities, interrupted residency, and continual turnover, all of which could be solved by this position.

The following is recommended for UNLV:

1. Designate one website as a university hub for sustainability information and provide links to other related department websites. (Year 1)

2. Continue with an Advisory Committee on Sustainability (based on the Task Force membership) to include representatives from Athletics, Residence Life, Religious Groups and Campus Vendors. From this larger committee create a smaller Steering Committee to maintain direction and focus.

   Committee objectives (Year 1) would be to:

   a) Advise the administration on sustainability issues,
   b) Develop a baseline of environmental data from which to measure UNLV’s future environmental progress,
   c) Oversee graduate student work on developing the carbon footprint for UNLV,
   d) In consultation with various departments, propose targets (measurable goals) to improve UNLV’s environmental performance over time for administrative approval,
   e) Develop a position description for a Sustainability Director and a reporting structure. Pending approval of this, then advertise the position, coordinate the evaluation and selection process and make a recommendation on the final candidate to the administration. A recommendation to consider is that this position report jointly to Facilities (where most likely the staff office would be located) and to the Provost’s office.

3. Hire a Sustainability Director (Year 2). The Sustainability Director would develop recommendations on the approach to sustainability on the campus, based on the work to date and the articulated environmental performance targets, and how this function would be organized.
Summary – University Sustainability Organizations and Initiatives Spreadsheet

The information on this spreadsheet was acquired through research among the different University Web Sites, emails, and phone calls to University officials. Research was done in the following categories: Organization, Commitments, Facilities, Purchasing, and Transportation. Each category is divided into subcategories and the University receives an ‘x’ if it has an initiative in that subcategory.

The spreadsheet has UNLV listed in a top with two sections following: Peer Institutions and Other Institutions. The Peer Institutions list was provided by the Office of Institutional Analysis and Planning. The Other Institution list was compiled by researching Universities in the general geographic region as UNLV, as well as Universities that were known to have comprehensive sustainability initiatives.
<table>
<thead>
<tr>
<th>Organization</th>
<th>Commitment(s)</th>
<th>Facilities</th>
<th>Purchasing</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Nevada Las Vegas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer Institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arizona State University*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia Mason University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia State University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Mexico State University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas Tech University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Central Florida</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Houston</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Maine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Massachusetts Amherst</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Nevada Reno</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Oklahoma (Norman)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Oregon*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Rhode Island</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10 3 4 6 10 11 12 5 4 3 5 5 6 13 4 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization</th>
<th>Commitment(s)</th>
<th>Facilities</th>
<th>Purchasing</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researched 16 Other Institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvard University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Arizona University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC Berkeley*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC Irvine*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC Los Angeles*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC San Diego</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Arizona</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Colorado*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of New Mexico (Taos)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Utah</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Washington*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yale University*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11 3 8 4 12 5 6 13 4 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Campus Sustainability Leaders according to the Sustainable Endowments Institute's 2007 College Sustainability Report Card
2Plants native plant species on campus will be included under categories "water" and "grounds".
3ACUPCC - American College & University Presidents Climate Commitment
Information on the sustainability efforts of other institutions was prepared by searching for relevant information on university websites; by contacting faculty, staff, and environmental groups on university campuses; by reviewing sustainability data on universities collected by the Sustainable Endowments Institute; and by using data provided on the Association for the Advancement of Sustainability in Higher Education (AASHE) website, as well as through contact with members of that group.

“Other institutions” were selected based on their being located in the same western region as UNLV and/or for their comprehensive sustainability programs. Campus Sustainability Leaders according to the Sustainable Endowments Institute that were among those universities researched are: Harvard University, Oregon State University, UC Berkeley, UC Irvine, UC Los Angeles, UC San Diego, University of Colorado, University of Washington, and Yale University.

Individual “University Profiles” that provide brief descriptions of the organizational structure of sustainability departments/committees at universities as well as information regarding sustainability commitments, and sustainability programs in facilities, purchasing, and transportation were prepared for each Peer Institution and Other Institution. That information was then summarized in a more quantitative manner in the “University Sustainability Organizations and Initiatives” spreadsheet, which includes UNLV. This spreadsheet can be used to compare in general the types of sustainability programs that UNLV has undertaken with Other Institutions.
Name of University: Colorado State

Public or Private: Public

Enrollment: 25,000

University Sustainability Commitment: 2001- Signed the Talloires Declaration

Campus Acreage: 3,994 acres (579 acres – main campus)

Programs and Initiatives:

- **Buildings** – There are several LEED buildings on the campus
- **Recycling** – Participants in Recyclemania, recycles paper, cardboard, plastic, glass, batteries, paint, refrigerators, televisions, and computer screens
- **Energy** – University owns a wind farm, Green Power Project
- **Water/Grounds** – sprinklers run on computers that take amount of rainfall into account as well as evapo-transpiration so that the correct amount of water is used to water the grounds at all times, the school is also constructing a wetlands on campus
- **Alternative Fuel Vehicles** – The university has electric, hybrid, and biodiesel vehicles in its fleet
- **Public Transportation Program** - $8 million dollar transit center located on campus, bus passes are free with a student ID

Sustainability Department/Office/Committee (if applicable: Staff): University Environment and Sustainability Advisory Committee – members include faculty and staff, no students.

Sustainability Goals/Targets: The Green Power Project’s objective is to get every building on the Fort Collins Campus utilizing wind electricity generation for 100% of power needed. (Announced in March of 2007 and to be completed in 8 years).
Name of University: Harvard University

Public or Private: Private

Enrollment: 20,042

Campus Acreage: 4,938 acres (real estate holdings)

University Sustainability Commitment: n/a

Programs and Initiatives:

- **Building** – All new construction will be LEED
- **Recycling** – campus recycles paper, cardboard, glass, plastic, aluminum cans and bottles
- **Energy** – award winning energy conservation programs, purchase renewable energy credits and have renewable energy sources on campus (photovoltaics and ground heat pumping)
- **Water/Grounds** – water conservation program, provide guidelines and suggestions to facility department on how to make buildings more water efficient
- **Organic/Local Food** – school hosts a farmer’s market
- **Rideshare** – operate a web site dedicated to finding students people to carpool with
- **Alternative Fuel Vehicles** – utilizes biodiesel for fleet cars
- **Public Transportation Program** – Commuter choice program encourages public transportation as well as walking, riding a bike, and carpooling. Public transportation passes can be bought for about half the price with a Harvard ID

Sustainability Department/Office/Committee (if applicable: Staff): Harvard Center for the Environment, Harvard Green Campus Initiative

Sustainability Goals/Targets:

*Harvard University was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.*
**Name of University:** Northern Arizona University

**Public or Private:** Public

**Enrollment:** 21,352

**Campus Acreage:** 738

**Programs and Initiatives:** Campus Environmental Sustainability Plan (2004)

**Sustainability Department/Office/Committee (if applicable: Staff):** Task force of staff, faculty and students

**Sustainability Goals/Targets:**
- Use the campus-wide site plan to ensure sustainable and appropriate uses of land, water and resources managed by NAU
- Advance sustainable building, explore the potential use of renewable energy for heating, and seek reduction of heating costs
- Increase institutional purchases of Arizona-grown foods to reduce fossil fuel use and carbon emissions associated with long-distance transport, and reduce food waste
- Develop diversified strategies for reducing fossil fuel use and carbon emissions associated with motorized vehicles on campus
- Maintain sustainable materials purchasing and disposal practices
- Maintain attractive outdoor landscapes through environmentally friendly means
- Ensure that hazardous chemicals are safely store, used and disposed.
University Profile – Other Institution

Name of University: Oregon State University

Public or Private: Public

Enrollment: 82,249

Campus Acreage: 570 Acres

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:

- **Buildings** – preferential parking for carpoolers, bicycle parking and showers,
- **Recycling** – Recyclemania participants, recycles paper, magazines, newspapers, paperboard, cardboard, glass bottles and jars, aluminum and tin cans, plastic containers, books, packaging materials, toner cartridges, electronic media, batteries, scrap wood and metal, oil, tires, plastic Tyvek envelopes
- **Energy** – Sustainability audits are available at no cost for anyone on campus to see how much energy and other impacts they are having, purchase renewable energy credits to offset 75% of electrical consumption
- **Organic/Local Food** – OSU and UHDS are members of the Oregon Food Alliance which supports sustainable agricultural practices. Locally grown organic produce are specified from the produce company whenever possible which largely depends on the time of year. UHDS purchases Oregon Natural Beef for the hamburgers used at Calabaloo's restaurants.
- **Alternative Fuel Vehicles** – Waste oil is currently recycled by a rendering company and UHDS staff are looking into experimental bio-diesel projects on campus including the possibility of powering the OSU Catering trucks with the waste oil from the dining facilities.
- **Bike Program** – Bike repair shop, free bike registration, and lockers available to rent for a term
- **Public Transportation Program** – encourages students to take public transportation
- **Rideshare** – Encourage carpooling through the University Web Site

Sustainability Department/Office/Committee (if applicable: Staff): Committees: Alternative Transportation Advisory Committee, Campus Planning Committee, Provost’s Sustainability Council, Sustainable Facilities Committee.

Sustainability Goals/Targets: Attain a university wide net-zero environmental impact.
*Oregon State University was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Other Institution

Name of University: University of California, Berkeley

Public or Private: Public

Enrollment: Approx. 34,900

Campus Acreage: 1232 acres

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:
- **Buildings** – LEED silver certification required for all new buildings and major renovations
- **Water** – provides building occupants with a monthly water audit, educates about water conservation
- **Recycling** –
- **Energy** – purchase renewable energy from the grid, energy conservation education, energy retrofit program, provide local renewable energy for the campus
- **Organic/Local Food** – it is policy that organic or local food be used whenever possible
- **Purchasing** – products that have less impact on the environment are given preference whenever purchasing is needed, university looks into it’s suppliers before purchasing to ensure their practices are also environmentally friendly

Sustainability Department/Office/Committee (if applicable: Staff): Director of Campus Sustainability, Cal Climate Action Partnership (CalCAP) – made up of students, staff, faculty, and administration. CalCAP tries to plan how to reduce the campus’ emissions. There is also the Chancellor’s Advisory Committee on Sustainability, the purpose of this committee is “to promote environmental management and sustainable development at UC Berkeley.” (http://sustainability.berkeley.edu/docs/CACS_UCB_Charter.pdf)

Sustainability Goals/Targets: Have emissions from campus reduced down to 1990 levels by 2014, have 20% of electrical needs come from renewable energy sources by 2010

*UC Berkeley was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability*
Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Other Institution

Name of University: University of California - Irvine

Public or Private:

Enrollment: Approx. 25,000

Campus Acreage:

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:
- Alternative Fuel Vehicles – fleet is run on 100% biodiesel fuel
- Buildings – see “Chancellors Policy on Sustainable Practices” in the reference section
- Recycling – see “Chancellors Policy on Sustainable Practices” in the reference section
- Energy - see “Chancellors Policy on Sustainable Practices” in the reference section
- Purchasing - see “Chancellors Policy on Sustainable Practices” in the reference section
- Organic/Local Food – mention of a sustainable dining policy on university Web Site, but no specifics

Sustainability Department/Office/Committee (if applicable: Staff): UC Irvine Sustainability Committee (the purpose of this committee is to ensure that the American College & University Presidents Climate Commitment is carried out).

Sustainability Goals/Targets: climate neutrality

*UC Irvine was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Other Institution

Name of University: University of California – Los Angeles

Public or Private:

Enrollment:

Campus Acreage: 419 acres

University Sustainability Commitment: American College and University Presidents
Climate Commitment

Programs and Initiatives:

- **Rideshare** – Vanpool program to get people to travel to and from the campus in the same vehicle
- **Alternative Fuel Vehicles** – Offers alternative fuel vehicles for daily rentals
- **Purchasing** – “The University will use its purchasing power to promote the availability of products that are resource-efficient, energy-efficient, water-efficient and of recycled and rapidly renewable content for building materials, subsystems, components, equipment and supplies.”
- **Recycling** – see “Chancellors Policy on Sustainable Practices” in the reference section
- **Buildings** – see “Chancellors Policy on Sustainable Practices” in the reference section
- **Energy** – see “Chancellors Policy on Sustainable Practices” in the reference section
- **Organic/Local Food** – operates an organic garden, in the process of developing best practices for food

Sustainability Department/Office/Committee (if applicable: Staff): Sustainability Committee – staffed by co-chairs, students, faculty members, staff members, and one committee staff member. “Committee participants include staff from the Chancellor’s Office, Capital Programs, General Services, Student Affairs, and University Communications; faculty with expertise in business, engineering, the environment, and law; as well as both graduate and undergraduate students.”
(https://www.sustain.ucla.edu/committee/participants.php)

Sustainability Goals/Targets: In 1990, UCLA adopted measures seeking to reduce (by 2005) campus water consumption by at least 15 percent from the levels of 1988.

*UC Los Angeles was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.

4/25/2008
University Profile – Other Institution

Name of University: University of California – San Diego

Public or Private: Public

Enrollment: 26,247 (in 2006)

Campus Acreage: 1200 acres

University Sustainability Commitment: American College and University Presidents Climate Commitment, Chicago Climate Exchange (legally binding greenhouse gas reduction commitment),

Programs and Initiatives:
  • Alternative Fuel Vehicles - UC San Diego has an automobile fleet with 225 electric vehicles and 30 hybrid vehicles
  • Building – see “Chancellors Policy on Sustainable Practices” in the reference section
  • Recycling – see “Chancellors Policy on Sustainable Practices” in the reference section
  • Energy – see “Chancellors Policy on Sustainable Practices” in the reference section
  • Organic/Local Food – café on campus serves organic food
  • Purchasing – see “Chancellors Policy on Sustainable Practices” in the reference section

Sustainability Department/Office/Committee (if applicable: Staff): Campus Sustainability Coordinator. Advisory Committee on Sustainability (ACS). Students are hired to work in a program called Major Planet which tries to spread the word about sustainable living on campus. Environmental Sustainability Committee – Undergrads, Grads, and Administration. (There are also a number of student groups that come together to make the campus more sustainable).

Sustainability Goals/ Targets: Reduce greenhouse gas emissions to baseline level through 2010.

*UC San Diego was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Other Institution

Name of University: University of Arizona

Public or Private: Public

Enrollment: 36,805

Campus Acreage: 387 acres

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:
- **Buildings** – registers buildings with USGBC for LEED silver certification
- **Energy** – energy conservation program – encourages conservation and for people to teach conservation to others not just on campus
- **Organic/Local Food** – has many organic food products available in the markets on campus, also dining services buys organic produce from a company in Mexico
- **Rideshare** – separate parking permits for those who carpool, several parking lots/garages are designated carpool spaces
- **Alternative Fuel Vehicles** – biodiesel vehicles, use of E85
- **Public Transportation Program** – employees get one free bus pass a year, UA will pay 50% for an annual bus pass for students/staff/faculty

Sustainability Department/Office/Committee (if applicable: Staff): Campus Sustainability Committee.

Committee purpose(s):

“Focus primarily on facilitating collaborative and synergistic activities among all departments, administrative units and student groups that enable sustainable practices on the UA campus

Participate in efforts to provide a leading-edge knowledge-base for sustainable practices for the campus and for local and State of Arizona communities, such as through the new UA Campus Sustainability web portal (http://sustainability.arizona.edu), forums, workshops and Campus Sustainability Day

Assist in promoting the visibility and leadership of the UA in major areas of sustainability, including water, energy, manufacturing, environmental management, climate change, etc.

4/25/2008
Help coordinate linkages between campus sustainability activities and educational, research and outreach programs.”
(http://sustainability.arizona.edu/azsustainability/jsf/public/news/Detail.jsp?id=1120)

**Sustainability Goals/Targets:** “At this point, the University has established a goal of constructing future buildings to the Silver LEED standard.”
(http://www.sustainability.arizona.edu/greeningthecampus/campusdevelopment/index.htm) Long term goal of climate neutrality.
University Profile – Other Institution

Name of University: University of Colorado

Public or Private: Public

Enrollment: Approximately 29,000

Campus Acreage: 786 acres

University Sustainability Commitment: Signed the Talloires Declaration, American College and University Presidents Climate Commitment

Programs and Initiatives:

Buildings – The 2001 CU Master Plan for campus states that CU’s goal for sustainability is to "Adopt improved building industry practices for sustainability and the use of safe materials," as led by these three guidelines:

Select environmentally sensitive architects to design CU-Boulder buildings.

Keep up-to-date the provisions of adopted building codes and campus construction standards regarding these concerns.

Weigh first-cost vs. longer-term payback decisions.

- Recycling – glass, paper, plastic
- Energy – solar array on campus, campus purchases wind power credits
- Water – conservation program
- Organic/Local Food – restaurants on campus offer organic options
- Alternative Fuel Vehicles –
- Bike Program – rent a bike, or get an interest free loan for a bike
- Public Transportation Program – discounted bus passes with a valid student ID

Sustainability Department/Office/Committee (if applicable: Staff): Campus Environmental Council, Chancellors Committee on Energy, Environment, and Sustainability.

Sustainability Goals/Targets: “Colorado University will have a zero or positive net impact on the climate by the year 2025 . . .” - Blueprint for a Green Campus

*University of Colorado was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.

4/25/2008
Name of University: University of New Mexico (Taos)

Public or Private:

Enrollment:

Campus Acreage:

Programs and Initiatives:

- **Energy** - Fully wind powered campus
- **Water** - Current partnership with [Living Designs Group](#) to design Full Reclamation, Catchment & Reuse of Water for the campus through the development of a central courtyard ecosystem
- **Buildings** – have a LEED building on campus
- **Recycling** – recycles glass, plastic, Styrofoam, books, scrap metal
- **Alternative Fuel Vehicles** – university has purchased 8 alternative fuel light duty vehicles for use on campus
- **Bike Program** – bike share program where bikes are left in an office to be used to run errands around campus
- **Public Transportation Program** – offers information on the web site about bus routes

Sustainability Department/Office/Committee (if applicable: Staff):

Sustainability Goals/Targets:

4/25/2008
University Profile – Other Institution

Name of University: University of Utah

Public or Private: Public

Enrollment: 28,976

Campus Acreage: 1,534 acres (includes health sciences complex, Research Park, and Fort Douglas)

University Sustainability Commitment: n/a

Programs and Initiatives:

- **Buildings** – The University of Utah subscribes at a minimum to the State of Utah’s Building Energy Efficiency Program (SBEEP).
- **Recycling** – paper, cardboard, aluminum
- **Energy** – conservation initiative, buy renewable energy credits to offset emissions
- **Water/Grounds** – xeriscaping
- **Organic/Local Food** – buy from local sources, offer organic options
- **Purchasing** – EPA listed University of Utah as one of the top ten schools that utilize green purchasing
- **Rideshare** – provides a service of matching people up for carpooling
- **Bike Program** – offer to teach students how to fix their own bikes, bike lockers located on campus
- **Alternative Fuel Vehicles** – There are currently 9 hybrid gas vehicles in our University Fleet. As more vehicle types become available using hybrid technology, the University will increase purchases and utilize hybrids on a larger scale. The University of Utah purchases flex-fuel vehicles that can operate on unleaded fuel and ethanol. There are currently 23 configured as flex-fuel vehicles in the University Fleet.
- **Public Transportation Program** – encourages the use of public transportation, free bus passes for students and faculty

Sustainability Department/Office/Committee (if applicable: Staff):

S.E.E.D – “The second focus of SEED is the Sustainable Campus Initiative. It seeks to utilize the resources available on campus through research, teaching, and leadership. SEED hopes to reach out to the community, better our use of water and fossil fuels, and close the waste loop on campus. Through this initiative, SEED helps to facilitate a dialogue between students and other student groups departments, administrators, and campus organizations to identify the needs of the University of Utah. To achieve these goals, we will work very closely with the newly created Office of Sustainability” (http://www.sustainability.utah.edu/initiatives/SEEDgroup.htm)

4/25/2008
Office of Sustainability; Staff includes: a director, coordinator, community service fellow, intern, and research assistant.

“Green teams are comprised of working groups on campus who are actively pursuing sustainability initiatives at the University of Utah. Most staff-led groups have received official authorization from their department administrators to devote work hours to these projects. Others are volunteer in nature. Student groups have staff advisors and also coordinate their efforts with the Office of Sustainability.”

[http://www.sustainability.utah.edu/initiatives/greenTeams.htm](http://www.sustainability.utah.edu/initiatives/greenTeams.htm) There are four listed on the web site: Student Affairs Sustainability Committee, Continuing Education Green Team, [Green Computing Committee](http://www.sustainability.utah.edu/initiatives/greenTeams.htm), and Red Butte Garden Green Team.

**Sustainability Goals/Targets:**
University Profile – Other Institution

Name of University: University of Washington

Public or Private:

Enrollment:

Campus Acreage:

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:
- Energy – conservation program
- Water – water conservation program
- Recycle – paper, aluminum, batteries, packing material, x-rays, cardboard, coffee grounds, electronic equipment, glass, vehicle batteries
- Rideshare – carpool parking permits, students park for cheaper per day when carpooling
- Alternative Fuel Vehicles - There are 21 Toyota Prius and 6 2007 Toyota Camry hybrid vehicles in the fleet with several available for daily rental.
- Buildings – Leed silver certified for new construction and major renovation

Sustainability Department/Office/Committee (if applicable: Staff): Environmental Stewardship Advisory Committee, Communications/Outreach Subcommittee, Green Purchasing Subcommittee, Energy Subcommittee

Sustainability Goals/Targets:

*University of Washington was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.

4/25/2008
University Profile – Other Institution

Name of University: Utah State

Public or Private:

Enrollment:

Campus Acreage:

University Sustainability Commitment: n/a

Programs and Initiatives:
- **Recycling** – paper, cardboard, aluminum, plastic, glass, Styrofoam, batteries, motor oil, electronics
- **Energy** – Energy conservation program
- **Buildings** – participate in Utahs Building Energy Efficiency Program

Sustainability Department/Office/Committee (if applicable: Staff):

Office of Sustainability, Objectives of the Office of Sustainability:

- Provide a clearing house for exchanging information
- Coordinate sustainability activities
- Promote environmentally responsible practices and encourage sustainable behaviors at the University and in the community
- Identify a baseline inventory of current campus practices and impacts
- Develop a Strategic Plan for enhanced campus sustainability with anticipated cost savings and external funding opportunities
- Explore new projects in purchasing and inventory management, water and energy conservation, and building design
- Create educational resources and project support for campus sustainability efforts by students, faculty, staff, and administrators

Office setup:

4/25/2008
Sustainability Goals/Targets:

Here is a list of practices that the facilities departments lists for sustainability:

- The utilization of energy savings design standards in renovation and new building construction projects
- The elimination of the use of culinary water as a heat sink for refrigeration systems
- The elimination of system distribution leaks through the use of an annual ultrasonic leak detection program
- The installation of low water consumption devices in new buildings and those being renovated
- Moving away from culinary water as an irrigation source
- Separated turf and shrub beds to separate watering zones
- Replaced older spray heads with new models with better distribution patterns and old valves with new valves having pressure regulating devices
- Replaced old manual operated irrigation systems with automatic systems managed by computer
- Installed new time clocks that have more control of when and how often areas are watered
- Installed new variable speed drives and pumps in irrigation pump houses that operate more efficiently and reduce power consumption
- Increased the amount and quality of topsoil used on new construction and renovation
- Installed over one million dollars of direct digital control system upgrades for HVAC in major campus buildings High efficiency lighting upgrades have been completed in 3.5 million square feet of building space
- Replacement of old oil filled electrical switches with new more efficient switches is 50% complete; the new ones do not use SF-6 ozone depleting insulators
- Replacement of old inefficient electrical motors with high efficient units has become the standard
- Electrical substations have been upgraded with staged and controlled power factor correction capacitors
- The quartz halogen fixtures in the basketball arena have been replaced with high efficiency metal halide fixtures which reduced energy usage by half and improved lighting levels by 6-7 times
- Occupancy sensors have been installed for lighting systems across campus which reduces usage and maximizes the use of daylight
- Co-generation plant is now operational providing 5MW of base power or reducing peak demand depending on gas prices
- Installed a new high voltage distribution system model (SCDA) which tracks energy usage and identifies inefficiencies
- New pedestrian lighting on main pathways is dark sky friendly and energy efficient
- Variable frequency drives are being installed with major equipment replacements to add control and improve energy efficiency

4/25/2008
• Old natural gas steel piping is badly corroded and has nearly all been replaced with PVC pipe
• All of the key staff working on natural gas systems have been certified through the State of Utah’s Certified Gas Systems Operator Course
• A comprehensive sewer pretreatment and preventive maintenance system has been established; there are now 45 stations connected to Logan City’s system
• An education program to make campus users aware of the proper use and disposal methods concerning the sanitary sewer system has been implemented
• Infrared aerial surveys have been made over a ten year period to identify heat loss and used to justify project funding for repair or replacement
• A new natural gas fired heating plant was built and became operational in 2001; overall air emissions reduced from 265 tons to under 20 tons in 2004
• The steam/condensate piping was installed in 6,200 linear feet of new utility tunnels replacing old and badly leaking direct buried piping
• In house staff crews have replaced most of the lateral steam feeds to individual buildings
• Four thousand tons of central cooling has been installed in the new Central Energy Plant and the supply/return piping in the utility tunnel system
• Twenty one buildings have been converted to the central cooling system; two more are currently underway
• The individual building chillers and cooling towers have been disposed of as the buildings are supplied by the central cooling system
• A campus recycling center was built in ’91 and the items taken have been constantly increased; the campus is now recycling 24% of the waste stream; in addition surplus sales recycles all surplus campus assets
• To date four major buildings have been re-commissioned – putting internal energy system back to the design intent - and a fifth is underway

In addition to these accomplishments, there are a number of opportunities that continue to be evaluated:

• Wind power metering has been installed near the mouth of Logan Canyon to determine if there is justification for a wind generator project
• Working with campus customers to identify server locations in space that can be cooled independent of the building so nighttime setbacks can work
• Increasing the amount of recycling throughout the campus; use of a compactor to increase the amount of materials and including food waste in recycling
• Installation of a SCDA system for chilled water usage which would help to balance the overall campus cooling distribution systems
• Updating of the campus master plan to include: use of GIS modeling to study campus needs and address problems; enhancing bike paths on campus and connections to routes off campus; enhancing effectiveness of walk paths, bus routes, and connections to campus
• Continue to work with the state to fund more LEED type energy savings design applications for new buildings and the development of green standards
• Continue to emphasize office energy saving procedures and minimize waste
• Continue to re-commission major buildings that are about fifteen years old
• Continue to replace piping insulation on older systems to reduce heat loss
• Evaluate alternative fuel vehicles for on campus usage
University Profile – Other Institution

Name of University: Washington State University

Public or Private: Public

Enrollment: 22,741

Campus Acreage: Over 6 square miles

University Sustainability Commitment: American College and University Presidents Climate Commitment

Programs and Initiatives:
- Recycling – participated in Recyclemania
- Energy – conservation program and electric efficiency upgrades
- Water – water conservation program

WSU Campus & Community Ecology Project, member of the National Wildlife Federation's Campus Ecology program

Sustainability Department/Office/Committee (if applicable: Staff): Volunteer Coordinator, sustainability workgroup.

Sustainability Goals/Targets: adopt a green campus policy
University Profile – Other Institution

Name of University: Yale University

Public or Private: Private

Enrollment: 11,000 students

Campus Acreage: 835 acres

University Sustainability Commitment: Greenhouse Gas Reduction Commitment; Yale Sustainability Metrics – creates a baseline for the University to measure and benchmark it’s progress. The Metrics are reviewed often and “help reshape goals, feed results, and keep the process in-check.” (http://www.yale.edu/sustainability/strategy.htm)

Programs and Initiatives:

- **Buildings** – new buildings are built with many environmentally friendly features, does not follow LEED guidelines, but institutes the same principles in building techniques
- **Energy** – solar arrays on campus, conservation efforts, fuel cells on campus, installing geothermal pumps on campus, summer 2008 there will be installation of wind turbines on campus
- **Recycling** – mixed paper, cans and bottles, cardboard, telephone books, plastic, printer cartridges, office furniture, technosrap, electronics, Styrofoam (SWAP program for donated goods that cant be recycled but are still usable)
- **Water/Grounds** –
- **Organic/Local Food** – Yale Sustainable Food Project is introducing organic food across campus
- **Alternative Fuel Vehicles** – a shuttle on campus runs off of cooking oil,
- **Public Transportation Program** – goal of increasing the amount of public transportation used, free bus passes

Sustainability Department/Office/Committee (if applicable: Staff): Office of Sustainability, staff includes a director, education and outreach manager, project coordinator, administrative assistant and research assistants. Several committees: Land & Water, Yale Sustainable Management Working Group, Yale Sustainability Committee, Building Design and Construction, and the Yale Council

Sustainability Goals/Targets: Reduce greenhouse gas emissions by 10% under 1990 levels by the year 2020. 15% reduction of CO2 emissions at residential colleges over a three-year period and a 10% reduction at all other facilities (http://www.yale.edu/sustainability/yaleCommits.htm). Goals listed by Yale are: “Operate a demand management system that reduces sing occupancy vehicles, develop a portfolio that leads to long-term greenhouse gas emission reductions and monetizes carbon, build high-performance, long term, cost-effective, environmentally responsible facilities, integrate life-cycle cost analysis into procurement while minimizing waste,
maximizing reuse & recycle, manage campus landscape in an aesthetically ecologically and economically responsible manner, develop and implement water conservation and management standards, procure, prepare healthy meals for students using locally grown sources where possible, and integrate life-cycle cost analysis into procurement standards.” (http://www.yale.edu/sustainability/YaleSustainability.pdf)

*Yale University was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
Summary of University Profiles – Peer Institutions

Information on the sustainability efforts of Peer Institutions was prepared by searching for relevant information on university web sites; by contacting faculty, staff, and environmental groups on university campuses; by reviewing sustainability data on universities collected by the Sustainable Endowments Institute; and by using data provided on the Association for the Advancement of Sustainability in Higher Education (AASHE) web site, as well as through contact with members of that group.

“Peer Institutions” were determined from a list provided by the Office of Institutional Analysis and Planning. There were two peer institutions listed as Sustainable Leaders by the Sustainable Endowments Institute, and those are: Arizona State University and University of Oregon.

Individual “University Profiles” that provide brief descriptions of the organizational structure of sustainability departments/committees at universities as well as information regarding sustainability commitments, and sustainability programs in facilities, purchasing, and transportation were prepared for each Peer Institution. That information was then summarized in a more quantitative manner in the “University Sustainability Organizations and Initiatives” spreadsheet, which includes UNLV. This spreadsheet can be used to compare in general the types of sustainability programs that UNLV has undertaken with its Peer Institutions.
Name of University: Arizona State University (Tempe Campus)*

Public or Private: Public

Enrollment: 64,394 students

Campus Acreage: 642 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Recycling Program** – Recyclables include: paper, cardboard, aluminum, plastic, ink/toner cartridges, batteries, tennis shoes, books, and scrap metal
- **Public Transportation Program** – Commuter Options Program (encourage students and staff to take alternatives methods of transportation to and from campus and offers help on learning how to find these types of transportation) Free bus passes for students
- **Buildings** – Requires LEED Silver certification for all new construction and major renovations.
- **Rideshare Program** – Involved with a web site where people register to be matched with other interested in carpooling. Offer carpooling parking spaces in some of the parking facilities on campus. Fleet Services also recommends carpooling whenever renting out vehicles.
- **Energy** – Energy efficiency program: “Energy efficiency projects included retrofit lighting systems, motors, building HVAC controls and HVAC upgrades, Central Plant and Thermal Energy Storage system digital controls, chiller and cooling tower replacements, steam pipe insulation—and newly installed boiler blow down heat recovery, campus buildings energy sub-metering, and solar photovoltaic parking covers”
- **Bike Program** – bike co-op program that also offers bike repair services
- **Water/Grounds** – water conservation in buildings and for landscaping

**Sustainability Department/Office/Committee (if applicable: Staff):** Global Institute of Sustainability – University Sustainability Officer. The Sustainability Leadership Council, and the International Board of Trustees for Sustainability.  
([http://sustainability.asu.edu/giosmain/index.htm](http://sustainability.asu.edu/giosmain/index.htm))

**Sustainability Goals/Targets:** carbon neutrality, generate zero waste

Here is a list of sustainable practices as outlined by University Services.

- All chillers in Central Plant were replaced with energy efficient units.
As part of the APSES Performance Contract approximately 70 buildings have been retrofitted with low energy use lamps and ballasts as of August 2004. Signage is being added at the entryway of retrofitted buildings to inform people about the program. Campus lighting represents nearly 40% of the Tempe campus electrical consumption.

Over 400 electric motors (used for running air handlers, pumps, fans etc) in buildings were replaced with premium energy efficient units.

All HVAC units installed are required to be energy efficient, 12 SEER or greater.

Facilities Management is using higher quality air filters in buildings to improve energy efficiency and indoor air quality.

Solar energy panels on Parking Structure # 2 provide electrical power for daytime lighting in the structure.

Waterless urinals are being tested in the University Services Building (USB).

Waterless urinals are in the specifications for new buildings.

When repairing/replacing water faucets, low flow aerators/faucets are being used.

Metering faucets (low water use) are being used in public areas in new buildings and units are replaced in existing buildings.

Planning is underway to reuse condensate drain water from air handlers and fan coils for irrigation purposes in buildings that are currently in design.

Non-recyclable engraved signs are being phased-out and replaced with a changeable, recyclable/reusable sign system that reduces waste consumption.

Most campus sprinkler systems are run during nighttime hours.

Where practical, landscape areas and flower beds are being replaced with decomposed granite.

Custodial services currently use at least five green certified cleaning products; plans are in place to move to 100% green certified products.

Campus beautification and grounds and classroom appearance is promoted through the ASU Clean & Beautiful program.

"Trash to Treasures" student resident hall move-out recycling program was piloted spring 2007.

Campus-wide recycling is now combined with waste management for more accurate reporting and baseline measurements.

Met or exceeded the Governor's reduced emissions and increased alternative fuel integration mandates issued in 2005.

Here is a list of the sustainable practices of the purchasing and business departments at ASU

- No or low volatile organic compound (VOC) products have been specified for purchase for the past 10 years.
- All carpeting for purchase is specified as 100% recyclable.
- Liquid crystal displays, rather than cathode ray tube monitors, are specified for purchase.
- A 5% preference is given for purchasing recycled products.

6/12/2008
• Recycled products, through ASU Stores and the office supply company, Staples, are stocked.
• All of the panel lights in outside vending machines have been turned off.
• Snack machines are located preferably inside buildings so that they do not require refrigeration.
• Vending contracts require the use of energy miser energy conservation devices.
• If an Energy Star product is available in any category, that product will be bought before any non-Energy Star certified product.
• LEED certification is required for new University construction, and for significant renovations. (LEED Silver is the goal.)
• Non-recyclable engraved sign are being phased out and replaced with a changeable, recyclable/reusable sign system.

*Arizona State University was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Peer Institution

Name of University: George Mason University

Public or Private: Public

Enrollment: 29,889

Campus Acreage: 806 Acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives: Sustainability Baseline Assessment Report.

- **Rideshare** - use of the GoLoco web site ([www.goloco.org](http://www.goloco.org)) to bring people together for carpooling,
- **Bike Program** – encourages biking, “Bike to Mason Day” event held (offered to reduce a student’s parking ticket amount if the student rode a bike to school on this day and free t-shirts).
- **Public Transportation Program** – Transportation Department web site offers information to students on how to get to school without using a car, and the benefits of public transportation, as well as how to get around locally using the public transit system.
- **Recycling** – The Facilities Management web site for George Mason University states that there are recycling services, however, does not specify in detail the type of recycling that exists on campus.
- **Water and Grounds** – Resident halls are equipped with low-flow shower heads, toilets, and sinks. Sprinklers for watering lawns are turned off in the winter. Fountains on campus run on recycled water. (source: The Mason Gazette)
- **Energy** – policy to purchase as much renewable energy as feasible, also will purchase renewable energy credits to help offset some of the GHG emissions from the campus

Sustainability Department/Office/Committee (if applicable: Staff): Green Campus Task Force (includes faculty, students, and graduate student researchers), Environmental Task Force (representatives from facilities and transportation management, the provost’s office, faculty and students), Green Education Task Force, and one full time Sustainability Coordinator,

Sustainability Goals/Targets: In the process of creating a Greenhouse Gas Emissions Report, eventual goal of a written Climate Action Plan for the campus. Environmental Task Force is in the process of trying to get a sustainability commitment signed for the campus.

6/12/2008
University Profile – Peer Institution

Name of University: Georgia State University

Public or Private: Public

Enrollment: 27,000

Campus Acreage: 33 acres

University Sustainability Commitment: n/a

Programs and Initiatives:

- Recycling program - The Georgia State University residence halls currently provide receptacles for recycling of newspaper, plastic, glass and aluminum in the receptacles located in various areas. (Source: [http://www.gsu.edu/housing/Recycling.html](http://www.gsu.edu/housing/Recycling.html))

Sustainability Department/Office/Committee (if applicable: Staff):

Sustainability Goals/Targets:

6/12/2008
Name of University: New Mexico State University

Public or Private: Public

Enrollment: Approximately 23,000 students

Programs and Initiatives:

- **Buildings** - Committed that all new construction and major remodeling projects shall meet the U.S. Green Building Council’s LEED Silver standard or equivalent.
- **Public Transportation Program** - Committed to encourage use of public transportation on campus for faculty, staff and students through the Aggie Shuttle Service
- **Energy** - Committed to seek ways to provide energy through renewable sources such as wind, solar and geothermal resources.

University Profile – Peer Institution

From emails inquiring about sustainability and Texas Tech it has been determined that they have no sustainability initiatives, programs, goals, or any type of department or committee at this time.

Name of University: Texas Tech University

Public or Private: Public

Enrollment: 28,260 students

Campus Acreage:

University Sustainability Commitment: none

Programs and Initiatives:

- **Recycling** - As of the Spring of '08, there are mixed paper bins in every academic building on campus.

Sustainability Department/Office/Committee (if applicable: Staff): A task force will be created for next semester (spring 2008).

Sustainability Goals/Targets:
University Profile – Peer Institution

Name of University: University of Alabama

Public or Private: Public

Enrollment: 23,878 students

Campus Acreage:

University Sustainability Commitment:

Programs and Initiatives:

- Buildings – Adheres to LEED compliant construction, but does not require certification
- Energy – Buys 5% of power from hydroelectric sources, encourage conservation, did a lighting retrofit in 2005
- Public Transportation Program – campus has implemented a mass transit system
- Organic/Local Food – All dining services are required to buy locally before looking at other options, organic food is available on campus for purchase in some convenience stores

Sustainability Department/Office/Committee (if applicable: Staff): Environmental Council – sets the sustainability policies. The Student Government Association (SGA) Environmental Concerns Committee

Sustainability Goals/Targets:

6/12/2008
Name of University: University of Central Florida

Public or Private: Public

Enrollment: Approximately 45,000

Campus Acreage: 1415 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Buildings** – Finished construction on the LEED silver building on campus, the University has a commitment that all new construction and major renovations will achieve a LEED silver rating or higher
- **Energy** – Retrofitting the library with energy efficient light bulbs ([http://www.energy.ucf.edu/](http://www.energy.ucf.edu/)), holds a yearly energy conservation competition for students
- **Recycling** – Campus recycles paper, cardboard, and plastics (types 1-7)
- **Alternative Fuel Vehicles** – Utilizes biodiesel
- **Public Transportation Program** – Provides a shuttle service around campus to promote mass transit

Sustainability Department/Office/Committee (if applicable: Staff): members of the Center for Energy and Sustainability make decisions about what programs and initiatives to proceed with.

Sustainability Goals/Targets: UCF has conducted a Greenhouse Gas Emissions report to determine what their baseline is to decide if progress being made. Similar reports will be issued each spring. “By 2011, UCF wants to reduce its energy consumption up to 20 percent in all education and general buildings on campus.” ([http://www.energy.ucf.edu/?q=node/4](http://www.energy.ucf.edu/?q=node/4)).
University Profile – Peer Institution

Name of University: University of Houston

Public or Private: Public

Enrollment: 35,000

Campus Acreage: 551 acres

University Sustainability Commitment:

Programs and Initiatives: Recycling program. Carpool program.

- **Building** – Designed a “green” roof atop one of the school’s buildings to model the advantages of building it.
- **Energy** – College of Engineering is involved in Lone Star Wind Alliance – trying to develop wind energy systems
- **Recycling** – CHEM SWAP program (reuse chemicals on campus that would have to be disposed of as hazardous waste)
- **Rideshare** – Designated spots for people who carpool (must show two or more parking placards in one care)

Sustainability Department/Office/Committee (if applicable: Staff): None

Sustainability Goals/Targets: None
Name of University: University of Maine

Public or Private: Public

Enrollment: 11,400

Campus Acreage: 600 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Bike Program** – Greenbike Program – free bike use for students around campus
- **Buildings** – all buildings must meet LEED criteria
- **Energy** – efficient lighting and heating devices are used
- **Water** - replaces outdated water utilities to conserve water
- **Alternative Fuel Vehicles** – adding hybrid cars to the motor fleet on campus
- **Recycling** – cardboard, glass, paper, plastic, motor oil, cell phones, batteries, clean clothes

Sustainability Department/Office/Committee (if applicable: Staff): UMaine Sustainability Alliance – students, staff, and faculty.

Sustainability Goals/Targets: Governor's Carbon Challenge (10% below 2005 levels by 2010)
University Profile – Peer Institution

Name of University: University of Massachusetts Amherst

Public or Private: Public

Enrollment: 25,873 students

Campus Acreage: 1,463 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Energy** – Energy reduction program – reduce energy consumption in buildings
- **Building** – Sustainable design commitment – “commit to a resource and energy conservation program based on continual improvement of the design and construction of new buildings and major renovations”.
- **Recycling** - Thermometer exchange program – hand in thermometers that use mercury and replace with one that doesn’t. Recycles glass, plastics, and cardboard. Also has a composting program with composting bins around campus

Sustainability Department/Office/Committee (if applicable: Staff): According to the Universities Sustainability Plan from April of 2005 there was a Sustainability Team in place which consisted of 9 members of faculty and staff, and there was also one sustainability coordinator.

Sustainability Goals/Targets: “Reduce greenhouse gas emissions to 1990 levels by the year 2010 and to 10% below 1990 levels by 2020. Develops a greenhouse gas inventory, tracking, and reporting program.”

4/25/2008
University Profile – Peer Institution

Name of University: University of Mississippi – Main Campus

Public or Private: Public

Enrollment: 17,323

Campus Acreage: 2500 acres

University Sustainability Commitment:

Programs and Initiatives:

- Recycling - Recycling program (batteries, motor oil, and cell phones), waste minimization policy

Sustainability Department/Office/Committee (if applicable: Staff): None

Sustainability Goals/Targets: None

4/25/2008
University Profile – Peer Institution

Name of University: University of Nevada - Reno

Public or Private: Public

Enrollment: 15,465

Campus Acreage: Approx 290 acres (main campus)

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Water** – Water conservation policy, use of recycled water
- **Energy** - Energy conservation policy
- **Buildings** – New construction and major renovation must follow LEED guidelines
- **Purchasing** – University purchases products that are durable, recyclable after use, include recycled content, and can be repaired
- **Bike Program** – Free bike tire pumps on campus, rentable lockers for people who choose to ride a bike
- **Rideshare** – Carpooling program provided by university to search for people to carpool with.
- **Public Transportation Program** - “WOLF” pass is available to a limited number of students for bus rides.
- **Recycling** – paper, plastics, ink and toner cartridges, aluminum, glass, and batteries

Sustainability Department/Office/Committee (if applicable: Staff): Energy and Environment Committee; the committee members are: the Vice President of Administration & Finance, Executive Director of the University of Nevada, Reno Academy for the Environment, faculty member appointed by the Faculty Senate, one student appointed by ASUN, one student appointed by GSA, one community representative appointed by the committee, and the Environmental Affairs Manager (ex-officio). The chairman of the committee is determined by the committee.

Sustainability Goals/Targets: “. . . institute environmentally safe procedures in all campus activities. This entails building a culture of environmental responsibility that educates students whenever they are on campus, including not only curriculum changes, but changes in energy use, purchasing, recycling, waste disposal, and capital investment” (http://www.ehs.unr.edu/Website/LinkClick.aspx?fileticket=7Ib1DevbT31%3d&tabid=67&mid=688)

4/25/2008
University Profile – Peer Institution

Name of University: University of Oklahoma – Norman Campus

Public or Private: Public

Enrollment: 29,931

Campus Acreage: 567 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Recycling** - recycling program
- **Energy** - partner in a wind power initiative
- **Buildings** – LEED principles are incorporated into design, energy efficiency is an integral part of any building design on campus
- **Alternative Fuel Vehicles** – campus utilizes natural gas in some of its fleet, any new vehicle purchased for the university must be able to use a form of alternative fuel
- **Bike Program** – University repairs bikes and loans them to students for a semester
- **Organic/Local Food** – purchases food locally and also has organic choices available

Sustainability Department/Office/Committee (if applicable: Staff): The Environmental Concerns Committee (made up of faculty and staff members), and there is a student lead group called Our Earth.

Sustainability Goals/Targets: Reduce GHG emissions by 6% by 2010.
Name of University: University of Oregon*

Public or Private: Public

Enrollment: 20,394

Campus Acreage: 295 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment.

Programs and Initiatives:

- **Buildings** – requires LEED silver certified criteria be followed when designing a new building for the campus
- **Energy** – encourages energy efficiency campus-wide, 20% of energy that the school receives comes from carbon-neutral sources
- **Recycling** – compost program
- **Organic/Local Food** – purchases food from local sources, there is also an organic farm on campus that provides food and a class for campus
- **Bike Program** – A large amount of parking spaces for bikes are available on campus
- **Public Transportation Program** – faculty, staff, and students receive free bus passes
- **Alternative Fuel Vehicles** – some of the University’s fleet use biofuels
- **Purchasing** – campus has a green purchasing policy
- **Water/Grounds** – sprinklers are run by computers that only turn them on when the weather demands the lawns and plants be watered

Sustainability Department/Office/Committee (if applicable: Staff): Campus Planning Committee reviews the Sustainable Development Plan every 5 years to determine the plan’s effectiveness. Environmental Issues Committee; made up of several different staff members from different areas of the University including: Registrar’s Office, Environmental Health and Safety, Biology, College of Business, University Printing, University Housing, the Campus Operations Director, Campus Recycling, Facility Services, Computer and Information Science, University Planning, and the Office of Public Safety. Students are also welcome to get involved with the Environmental Issues Committee.

Sustainability Goals/Targets: “Environmental education, environmentally responsible purchasing, efficient use and conservation of energy, water, and other resources, minimization of solid waste, minimization of hazardous waste and toxics, and environmentally responsible campus design and planning.” (goals as listed by:

4/25/2008
*University of Oregon was recognized by the Sustainable Endowments Institute as a sustainability leader in their 2008 College Sustainability Report Card. Sustainability Leaders are recognized because of their long term commitments to sustainability and for prioritizing sustainable practices in campus operations and planning.
University Profile – Peer Institution

Name of University: University of Rhode Island

Public or Private: Public

Enrollment: 15,062

Campus Acreage: 1200 acres

University Sustainability Commitment: American College & University Presidents Climate Commitment, Talloires

Programs and Initiatives:

- **Building** - The Office of Strategic Planning and Institutional Research received funding to install a parking lot that will help filter pollutants before they enter the ground water. McDonough+Partners have developed plans to turn the north district into a demonstration of sustainable development and environmental design. The University developed an RFQ and engaged McDonough+Partners during the 2001-02 and 2002-03 school years.

- **Green Purchasing** - Members of the campus community are educating themselves and others in eco-friendly products in order to encourage more green purchases.

- **Energy** - Director of Facilities Jerry Sidio has supported installation of energy efficient exit lights, saving the University thousands of dollars. Energy faculty and graduate students have done energy audits on some buildings and are investigating energy-saving possibilities. Plans are being made to install solar shingles on the Continuing Education Center on campus. The roof will be a demonstration project, educating visitors and students alike.

- **Public Transportation Program** - Shuttle service now offers students easy access to the center of campus and transportation to most classes.

- **Bike Program** - Students are initiating a community bike program and encouraging more eco-friendly parking and transportation solutions. URIde aims to provide a fleet of recycled bikes, free of charge, for use on campus by students, staff, and faculty.


- **Water** – promotes water conservation

Sustainability Department/Office/Committee (if applicable: Staff): Sustainability Coordinating Committee. Campus Student Organizations: Two student groups, Down to Earth, Up to Us, and Students for a Sustainable Peace undertake teach-ins and sustainable projects on and off campus.

4/25/2008
Sustainability Goals/Targets: Turn the northern section of campus into a demonstration of sustainable development and environmental design.
(http://www.uri.edu/sustainability/susthood.html)
Reference List

The following documents were used throughout the research on sustainability initiatives at universities. It may be useful to review them for further information on Sustainability Commitments and “Best Practices.”

The references include:

- American College of Universities President Climate Commitment
- American College of Universities President Climate Commitment Implementation Guide
- Talloires Declaration and Signature Form
- Chancellor’s Policy on Sustainable Practices (University of California System)
- Association for the Advancement of Sustainability in Higher Education – Web Site Content
- Excerpts from the Sustainable Endowments Institute Report Card from 2008
American College & University Presidents Climate Commitment

We, the undersigned presidents and chancellors of colleges and universities, are deeply concerned about the unprecedented scale and speed of global warming and its potential for large-scale, adverse health, social, economic and ecological effects. We recognize the scientific consensus that global warming is real and is largely being caused by humans. We further recognize the need to reduce the global emission of greenhouse gases by 80% by mid-century at the latest, in order to avert the worst impacts of global warming and to reestablish the more stable climatic conditions that have made human progress over the last 10,000 years possible.

While we understand that there might be short-term challenges associated with this effort, we believe that there will be great short-, medium-, and long-term economic, health, social and environmental benefits, including achieving energy independence for the U.S. as quickly as possible.

We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop.

We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities.

Accordingly, we commit our institutions to taking the following steps in pursuit of climate neutrality:

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.
   a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
   b. Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
   c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
      i. A target date for achieving climate neutrality as soon as possible.
      ii. Interim targets for goals and actions that will lead to climate neutrality.
      iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
      iv. Actions to expand research or other efforts necessary to achieve climate neutrality.
      v. Mechanisms for tracking progress on goals and actions.

(continued...)
2. Initiate two or more of the following tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.
   a. 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.
   b. Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
   c. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.
   d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.
   e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution’s electricity consumption from renewable sources.
   f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution’s endowment is invested.
   g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.

3. Make the action plan, inventory, and periodic progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination.

In recognition of the need to build support for this effort among college and university administrations across America, we will encourage other presidents to join this effort and become signatories to this commitment.

Signed,

__________________________________________
President/ Chancellor Signature

__________________________________________
President/ Chancellor Name

__________________________________________
College or University

__________________________________________
Date

Please send the signed commitment document to:

Mary Reilly
Second Nature
18 Tremont St., Suite 1120
Boston, MA 02108

or fax to: 320-451-1612
or scan & email to: mreilly@secondnature.org
Implementation Guide

Information and Resources for Participating Institutions

September 2007  v1.0

AMERICAN COLLEGE & UNIVERSITY PRESIDENTS CLIMATE COMMITMENT
IMPLEMENTATION GUIDE

Executive Summary ................................................................. 3
Introduction .............................................................................. 5
Overview of the Commitment .................................................... 6
Who’s Who in the ACUPCC ....................................................... 7
Implementation Schedules ........................................................ 8
Organizational Boundaries ......................................................... 8
Institutional Structures .............................................................. 9
Greenhouse Gas Emissions Inventory ........................................ 10
Tangible Actions ....................................................................... 13
Climate Action Plans ............................................................... 21
Reporting Requirements ........................................................... 26
Offsets .................................................................................... 27
Extensions ............................................................................... 28
Non-Fulfillment ...................................................................... 28
Definition of Terms .................................................................. 29
Appendix A: The Presidents Climate Commitment ................. 31

Principal Author
Julian Dautremont-Smith, Associate Director, AASHE

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

This Implementation Guide is the "handbook" for implementation of the American College & University Presidents’ Climate Commitment (ACUPCC). It was developed to more fully define the specific obligations represented in the Commitment, explain technical issues related to implementation, and set out the conditions to be considered in "good standing" within the ACUPCC. It is intended for use at several levels, including presidents and other senior administrators, sustainability committees and directors, and ACUPCC implementation liaisons.

Presidents signing the Commitment are pledging their institution to eliminate its contribution to global warming over time. This includes establishing an institutional structure to oversee the development and implementation of the school’s program; completing an emissions inventory within a year and annually thereafter, establishing a climate neutrality action plan, taking some immediate steps to reduce greenhouse gas emissions, integrating sustainability into the curriculum and making their climate action plan, inventory and progress reports publicly available.

Presidents and Chancellors sign the commitment on behalf of their institutions. Those joining before December 2007 may also join the Leadership Circle and help lead and promote it. The Commitment is governed by a Steering Committee comprised of 15-20 volunteers from the Leadership Circle. Signatories, Leadership Circle Members and the Steering Committee are listed on the Commitment website: www.presidentsclimatecommitment.org.

Implementation of the Commitment is based on a school's implementation start date. For all Charter Signatories (those who before September 15, 2007), the implementation start date is September 15, 2007. For new signatories who join after September 15, 2007, there are three annual implementation start dates: September 15, January 15, and May 15. When an institution signs the Commitment, implementation begins on the next start date.

ELEMENTS OF THE COMMITMENT

Establish an Institutional Structure: After signing, the first step in the ACUPCC is to, within two months of the implementation start date, establish a committee or institutional structure to guide the development and implementation of the school’s plan. This must include faculty, staff and students.

Measure Greenhouse Gas Emissions: Within one year of their implementation start date and annually thereafter, participating colleges and universities must complete an inventory and publicly report on their greenhouse gas emissions using established protocols outlined in this document.
**Tangible Actions:** Within two months of their implementation start date, signatories agree to select two or more tangible actions, from a list of seven options, to be completed while their long-term climate action plan is being developed (within two years). This Guide provides details on meeting this portion of the Commitment and provides examples of schools taking each of these actions.

**Climate Action Plan:** Within two years of their implementation start date, signatories agree to develop a climate action plan that includes a target date and interim milestones for achieving climate neutrality. Climate neutrality is defined as having no net greenhouse gas (GHG) emissions, within a minimum scope of boundaries laid out in this Guide. This is to be achieved through such measures as conservation, renewable energy, and carbon offsets or other measures to mitigate the remaining emissions.

**Reporting Requirements:** Signatory institutions commit to make their institutional structure, greenhouse gas inventory, climate action plan, and progress reports publicly available by providing them to AASHE for posting and dissemination. Signatories will submit these materials through an online form on the AASHE website.

In addition to providing more detailed information on the elements of the ACUPCC, this Implementation Guide includes useful information on carbon offsets, on various administrative aspects of the Commitment, and a glossary of terms.

Information on the Commitment itself is available through the ACUPCC website, [www.presidentsclimatecommitment.org](http://www.presidentsclimatecommitment.org). The site includes contact information for the Commitment organizers, current news and events, and an up-to-date listing of Signatories. For assistance please contact:

**Technical questions on this guide or ACUPCC implementation:** Julian Dautremont-Smith, Associate Director, (AASHE), [julian@aashe.org](mailto:julian@aashe.org), (610) 349-5994

**General questions on this guide or on ACUPCC implementation:** [info@aashe.org](mailto:info@aashe.org), (859) 402-9272

**General questions on the ACUPCC or information about joining:** Michelle McKay, [mmckay@secondnature.org](mailto:mmckay@secondnature.org), (617) 477-9776
Thank you for participating in the American College & University Presidents’ Climate Commitment (ACUPCC). Through your leadership, America’s higher education community will play a determinant role in addressing climate change, one of the defining challenges of the 21st century.

This Implementation Guide is the “handbook” for implementation of the ACUPCC. At the direction of the Steering Committee, it was produced by the Supporting Organizations with input and feedback from signatories as well as the Implementation Advisory Committee. The purpose of the Guide is to more fully define the specific obligations represented in the Commitment, explain technical issues related to implementation, and set out the conditions necessary to be considered in “good standing” within the ACUPCC. Specifically, this document provides guidance on:

- when implementation begins;
- forming an institutional structure;
- conducting a greenhouse gas emissions inventory;
- meeting the tangible action options;
- developing a climate action plan; and
- reporting on implementation progress.

Information on the Commitment itself is available through the ACUPCC website, www.presidentsclimatecommitment.org. The site includes contact information for the Commitment organizers, current news and events, and an up-to-date listing of Signatories. For assistance please contact:

Technical questions on this guide or ACUPCC implementation: Julian Dautremont-Smith, Associate Director, (AASHE), julian@aashe.org, (610) 349-5994

General questions on this guide or on ACUPCC implementation: info@aashe.org, (859) 402-9272

General questions on the ACUPCC or information about joining: Michelle McKay, mmckay@secondnature.org, (617) 477-9776

We strongly recommend that ACUPCC participating institutions join the Association for the Advancement of Sustainability in Higher Education (AASHE) www.AASHE.org. AASHE provides weekly newsletters, resource materials, professional development, conferences, and other support for sustainability in higher education.

1 Participation in the ACUPCC is voluntary, and these requirements are not intended to be legally binding.
The American College & University Presidents’ Climate Commitment is a high-visibility effort to make campuses more sustainable and address global warming by garnering institutional commitments to reduce and ultimately neutralize greenhouse gas emissions on campus and to accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth’s climate.

Building on the growing momentum for leadership and action on climate change, the ACUPCC provides a framework and support for America’s colleges and universities to go climate neutral. The Commitment recognizes the unique responsibility that institutions of higher education have as role models for their communities and in training the people who will develop the social, economic and technological solutions to reverse global warming.

Presidents signing the Commitment are pledging their institution to eliminate its contribution to global warming over time. This involves:

- establishing an institutional structure to oversee the development and implementation of the schools program to comply with the ACUPCC.
- completing an emissions inventory within a year;
- within two years, establish a climate neutrality action plan and set a target date and interim milestones for becoming climate neutral;
- taking immediate steps to reduce greenhouse gas emissions by choosing from a list of tangible action options;
- integrating sustainability into the curriculum and making it part of the educational experience; and
- making their climate action plan, inventory and progress reports publicly available.

The college and university presidents and chancellors who are joining and leading the Commitment believe that, in addition to social and environmental benefits for their communities and society at large, exerting leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities.

The full text of the Commitment can be found in Appendix A and on the ACUPCC website: www.presidentsclimatecommitment.org
WHO’S WHO IN THE ACUPCC

Signatory
Any president or chancellor who signs the Commitment is a Signatory.

Charter Signatory
Presidents and chancellors who signed the Commitment on or before September 15, 2007 are Charter Signatories.

Leadership Circle
The Leadership Circle is comprised of Signatories who have agreed to help lead the initiative, promote it, and recruit colleagues to join. Any interested signatory may join the Leadership Circle through December 2007.

Steering Committee
The Steering Committee is the chief governing body of the ACUPCC. It is responsible for guidance, policy and direction of the ACUPCC. It is comprised of 15-20 volunteers from the Leadership Circle whose institutions reflect the diversity of higher education. The members of the Steering Committee are listed on the ACUPCC website.

Supporting Organizations
Under the guidance and direction of the Steering Committee, the supporting organizations work to support the ACUPCC in a variety of ways, including recruiting new signatories, helping signatories implement the Commitment, promoting the ACUPCC in the media, and fundraising. The three supporting organizations are: the Association for the Advancement of Sustainability in Higher Education (AASHE), Second Nature, and ecoAmerica.

Implementation Advisory Committee
The Implementation Advisory Committee is made up of 20-25 faculty, practitioners, and other experts who have experience working with climate change and sustainability issues on campus and beyond. The Committee provides guidance about resources campuses will need to support them in implementing the ACUPCC and helps shape implementation strategies, policies and resources.

ACUPCC Support Network
The ACUPCC Support Network refers to all the partner and supportive organizations, including the member associations of the Higher Education Association Sustainability Consortium (HEASC), the US Green Building Council, the U.S. Environmental Protection Agency, and the American Council on Renewable Energy. These groups provide technical and administrative support where appropriate, and generally promote the ACUPCC.
IMPLEMENTATION SCHEDULES

To facilitate reporting and enhance possibilities for coordination and collaboration, the implementation start date for all Charter Signatories (those that signed the ACUPCC prior to September 15, 2007) is September 15, 2007. This means that Charter Signatories must:

- Create or designate institutional structures to guide the development and implementation of a comprehensive climate action plan by November 15, 2007 (i.e. within two months);
- Select at least two of the tangible actions from the Commitment by November 15, 2007 (within two months), and implement them by November 15, 2009 (within two years);
- Complete a greenhouse gas inventory by September 15, 2008 (i.e. within one year);
- Develop a climate action plan and initiate two or more of the seven tangible actions described in the Commitment by September 15, 2009 (i.e. within two years).

The implementation start date for institutions that sign the ACUPCC after September 15, 2007 will be on the next of three possible implementation start dates throughout the year: January 15, May 15, and September 15. For example, the implementation start date for an institution that signs the ACUPCC in February 2008 would be May 15, 2008.

ORGANIZATIONAL BOUNDARIES

The ACUPCC is intended to cover all organizational units of signatory institutions, including multiple campuses. Signatories should refer to the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard or the California Climate Action Registry’s General Reporting Protocol for guidance on whether and how to account for greenhouse gas (GHG) emissions from operations or facilities in which signatories have a partial ownership share or working interest, hold an operating license, lease, or otherwise represent joint ventures or partnerships of some kind (both incorporated and unincorporated).

When participation in the ACUPCC by one or more organizational units – such as a specialized research facility – would present a unique and unduly burdensome challenge, signatory campuses may choose to exclude these units. The rationale for excluding such units should be provided in all reporting related to the ACUPCC.
INSTITUTIONAL STRUCTURES

American College & University Presidents’ Climate Commitment signatories agree to create "institutional structures" to guide the development and implementation of a comprehensive climate action plan. These structures are to be created within two months of the signatory’s implementation start date. The institutional structure could take the form of a committee, taskforce, council or other body that is appointed specifically for the purpose of implementing the terms of the ACUPCC, or a pre-existing body (such as a sustainability council) that is given responsibility for ACUPCC implementation.

The 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. Further, because achieving climate neutrality will require support from all sectors of campus, these structures should, at a minimum, include staff, faculty, student, and administrator 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, the primary contact person on ACUPCC matters.

Beyond this broad outline, the exact form and composition of the structure is left to the discretion of the signatory institutions.
American College & University Presidents’ Climate Commitment signatories agree to complete a comprehensive inventory of all GHG emissions within one year after their implementation start date. This section provides guidance for conducting a GHG emissions inventory.

To enable comparability and consistency in reporting, signatories would ideally use the same methodology to calculate their emissions. However, the establishment of standards for ACUPCC GHG inventories is complicated by the fact that signatories are already using a variety of tools and methodologies to track their emissions, and in some cases they are enrolled in programs – such as the California Climate Action Registry or the Chicago Climate Exchange – that require emissions be calculated in specific ways.

In light of this, signatories may use any methodology and/or calculator that is consistent with the standards of the Greenhouse Gas Protocol (GHG Protocol) of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). The GHG Protocol is the most widely-used international accounting tool for quantifying GHG emissions and it provides the accounting framework for nearly every GHG standard and program in the world, including the Chicago Climate Exchange and the California Climate Action Registry. Clean Air Cool Planet’s (CACP) Campus Carbon Calculator is also consistent with GHG Protocol standards.

For signatories not already participating in another GHG inventorying program, the CACP calculator is recommended because it was designed specifically for campuses and is the most commonly used tool for campus inventories.

Signatories must report on the emissions calculator they used, as well as the source of the emissions coefficients they used.

TEMPORAL BOUNDARIES

Before beginning an institutional 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 over periods of one year, as is standard practice. To simplify the data collection process, signatories may calculate their emissions according to their fiscal or academic year, rather than by calendar year. Whichever time period a signatory chooses, it should use the same time period consistently.

To aid the climate neutral planning process, signatories will need to understand their 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 for itself how far back it needs to track its emissions in order to understand its emissions trajectory. For guidance in tracking emissions over time, and specifically how to deal with structural changes such as acquisitions and divestments, signatories should consult Chapter 5 of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.
**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: 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 an institution’s total emissions.

**Global Warming Potentials**

Signatories are expected to calculate the emissions of each gas separately, and aggregate them into units of carbon dioxide equivalents (CO2-e) on the basis of each gas’ global warming potential (GWP). While each of the Inter-governmental Panel on Climate Change (IPCC) Assessment Reports contains updated global warming potentials for the six Kyoto gases, international convention and many GHG programs including the California Climate Action Registry continue to use the GWPs contained in the IPCC’s Second Assessment Report for consistency. For purposes of the ACUPCC, signatories may choose to use GWPs from the Second Assessment Report, or the most up-to-date GWPs from the IPCC. All GWPs should be over a 100 year time horizon.

**Scopes**

To help delineate direct and indirect emission sources, improve transparency, facilitate fair comparisons, and provide utility for different types of organizations and different climate policies and goals, the GHG Protocol defines three “scopes” for GHG accounting and reporting purposes.

Scope 1 refers to direct GHG emissions occurring from sources that are owned or controlled by the institution, including: on-campus stationary combustion of fossil fuels; mobile combustion of fossil fuels by institution owned/controlled vehicles; and “fugitive” emissions. Fugitive emissions result from intentional or unintentional releases of GHGs, including the leakage of HFCs from refrigeration and air conditioning equipment as well as the release of CH4 from institution-owned farm animals. Scope 2 refers to indirect emissions generated in the production of electricity consumed by the institution. Scope 3 refers to all other indirect emissions - those that are a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution.

Consistent with the GHG Protocol standards, ACUPCC signatories agree to account for and report on emissions from Scopes 1 and 2. In addition, as specified in the Commitment, signatories agree to report some Scope 3 emissions, specifically those from commuting and from air travel paid for by or through the institution, to the extent that data are available. For purposes of the Commitment, commuting is defined as travel to and from campus on a day to day basis by students, faculty, and staff. It does not include student travel to and from campus at the beginning and end of term or during break periods.

---

2 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.

3 Global warming potential refers to the total contribution to global warming over a certain time horizon resulting from the emission of one unit of gas relative to one unit of carbon dioxide. For example, if methane has a global warming potential of 21 over a 100 year time horizon, it means that over a period of 100 years, 1 lb. of methane has the same impact on climate change as 21 lbs. of carbon dioxide and thus 1 lb. of methane would count as 21 lbs. of carbon dioxide equivalent.
Emissions from commuting and from air travel paid for by or through the institution are the only Scope 3 emissions sources that signatories are required to report on. However, signatories are strongly encouraged, to the extent practical, to investigate and report on additional Scope 3 emissions, especially those from sources that are large and can be meaningfully influenced by the institution. Other Scope 3 emissions sources that signatories may choose to include in their 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.

**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, which provides guidance to ensure that reductions from forest lands are real, lasting, and "additional."

**Small Emissions Sources (De Minimis Emissions)**
Signatories are encouraged to track and report their emissions to the fullest extent practical. However, consistent with the rules for participation in the Chicago Climate Exchange and the California Climate Action Registry, participants may designate small emissions sources that are difficult to track as de minimis and exclude them from the inventory, provided that the emissions sources collectively comprise less than 5% of the institution’s total GHG emissions. Institutions declaring certain emissions sources as de minimis should use rough, upper-bound estimates to ensure that these emissions sources do in fact contribute less than 5% of the institution’s total emissions. The estimations and assumptions used to determine de minimis emissions should also be described within the institution’s GHG inventory.

For example, fugitive emissions of hydrofluorocarbons will likely comprise less than 5% of most institutions' total emissions, and assuming that this had been confirmed using rough upper-bound estimates, institutions could choose to exclude these emissions from their inventory. Other non-CO2 emissions and emissions from small off-campus facilities might also be de minimis. For further guidance and examples on de minimis emissions, signatories should consult Chapter 5 of the California Climate Action Registry General Reporting Protocol.

**Verification/Certification**
Emissions inventory verification or certification is not required of ACUPCC signatories, though they are encouraged to take steps to ensure their emissions inventory is complete and accurate. Chapter 7 of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard contains guidance on ensuring inventory quality that will be helpful in this regard. Additionally, Chapter 9 includes an overview of the key elements of a GHG verification process that will be useful to those interested in pursuing verification or certification of their emissions inventory.

**Resources**
- List of campus greenhouse gas emissions inventories
The ACUPCC signatories agree to initiate two or more of seven specified tangible actions to reduce greenhouse gases while the climate action plan is being developed. The actions should be selected within two months and implemented within two years after the start date for implementation, unless otherwise specified, such as in option E on green power purchasing. This section provides explanations and examples of each of the seven options presented in the Commitment. It is acceptable to count policies and practices in place prior to signing the ACUPCC, and that remain in place while the plan is being developed, toward meeting this part of the Commitment.

It is important to note that the tangible action options are not intended to cover all possible emissions reductions opportunities. There are many important emissions reduction strategies related to onsite plant improvements, building energy efficiency upgrades and retrofits, sustainable procurement, and water conservation that are not included. The tangible action items were selected because they represent a few concrete, meaningful actions an institution can take in the short term to demonstrate its commitment to climate neutrality. Though the Commitment requires institutions to implement only two of the tangible actions within two years, they are encouraged to take as many of these actions as soon as possible because early emission reductions are important in slowing down the adverse effects of some greenhouse gases (including carbon dioxide and chlorofluorocarbons) that can remain in the atmosphere for several centuries.

A. GREEN BUILDING POLICY

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.

To achieve this option, signatories must adopt and implement a written policy stating the institution’s intention to meet or exceed LEED Silver standards or equivalent for all new buildings and major renovations. Signatories are encouraged, but not required, to apply for LEED Silver certification from the USGBC. An internal system of evaluating all new buildings to ensure that they meet LEED Silver standards is also acceptable. The policy may include a qualifier limiting application of the policy to new buildings over 5,000 gross square feet.

To ensure that the green building policy results in more energy efficient buildings, signatories are encouraged to incorporate requirements to achieve specific energy points. For instance, in addition to requiring LEED Silver standards, the policy could also mandate the achievement of LEED points related to optimizing energy performance, advanced commissioning, and measurement and verification.

A signatory institution wishing to use an alternate green building standard may do so as long as they provide in their ACUPCC reporting a clear rationale as to why the alternate standard should be considered equivalent with LEED Silver.
Examples

Clemson University
Clemson has adopted a Sustainable Building Policy which stipulates that "all new facilities over 5,000 gross square feet and major capital renovations costing more that 50% of building replacement value shall seek to acquire a LEED Silver rating at a minimum." http://www.clemson.edu/facilities/pdf/p&p/Sustainable_Building_Policy.pdf

University of North Carolina at Chapel Hill
UNC Chapel Hill’s Design and Construction Guidelines specify that "every project is expected to incorporate measures that would allow it to be certified at the [LEED] silver level," but certification is not required. http://www.fpc.unc.edu/DesignGuidelines.asp

Resources

• US Green Building Council
  http://www.usgbc.org/
• List of campus green building policies
  http://www.aashe.org/resources/building_policies.php

B. ENERGY STAR PROCUREMENT POLICY
Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.

To achieve this option, signatories must adopt a written policy stating the institution’s intention to purchase ENERGY STAR certified products in all areas for which such ratings exist. The policy may include a qualifier limiting application of the policy to "whenever financially possible," "when the extra cost is less than or equal to the resulting energy savings," or "wherever practical."

Examples

The University of California System (10 campuses)
UC campuses follow a system-wide Policy on Sustainable Practices which mandates that "for product categories that have ENERGY STAR© rated products available, the University will focus its procurement efforts only on products with an ENERGY STAR© rating, consistent with the needs of UC researchers." http://www.ucop.edu/ucophome/coordrev/policy/PP032207guidelines.pdf

Villanova University
Villanova has adopted an Energy Star Purchasing Policy which states that "Villanova University is to purchase Energy Star equipment for both single and mass purchasing actions whenever financially possible." http://www.finaffairs.villanova.edu/policy/procurement/energystarpolicy.pdf
Resources

- ENERGY STAR for Higher Education
  http://www.energystar.gov/index.cfm?c=higher_ed.bus_highereducation
- List of campus procurement policies on purchasing energy efficient appliances
  http://www.aashe.org/resources/appliance_procurement_policies.php

C. AIR TRAVEL OFFSETTING

Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.

To achieve this option, signatories must adopt and implement a written policy stating the institution’s intention to purchase carbon offsets for campus air travel. Signatories may also wish to incorporate actions to reduce their institution’s air travel into this policy.

Since few campuses currently track air miles traveled, and doing so can be challenging, until a tracking system is in place, signatories may approximate their total air travel miles by dividing the total amount spent on air travel by a factor of $0.25 per passenger air mile. Alternatively, a signatory might implement such a policy by arranging for its travel agent(s) to track and offset the campus air travel emissions.

Guidance related to carbon offset purchasing is contained in the section on offsets below. Institutions may not count green power purchases undertaken to achieve tangible action E toward meeting the requirements of this tangible action as well – that would be double counting.

Example

College of the Atlantic

COA follows a Net Zero Greenhouse Gas Emissions Resolution (approved by the Board of Trustees) that states the College's intent "to avoid, reduce or offset all greenhouse gas emissions associated with the activities of the college," including "transportation associated with academic programs, and transportation to and from campus by students, staff and faculty, and other transportation made necessary by campus events."

http://www.coa.edu/html/carbonnetzeroproc.htm

D. PROVISION OF PUBLIC TRANSPORTATION

Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.

---

   http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1005&context=its
To achieve this option, signatories must provide free or heavily subsidized (50% or more below retail price) public transportation passes to students, faculty and staff. Operation of a fare-free shuttle system that provides access to key parts of campus and to surrounding neighborhoods (i.e. not just between campus and remote parking lots) also meets this option. Merely encouraging faculty, staff, and students to use public transportation is not sufficient to achieve this action option.

**Examples**

**University of Colorado at Boulder**

All students, faculty, and staff at CU Boulder receive fare-free transit passes (called “Eco-passes”) allowing unlimited use of public transportation within the region. The student portion of the program is funded by a mandatory student fee approved in student elections.

http://ucbparking.colorado.edu/AlternativeTransportation/

**Lewis & Clark College**

The college provides students, faculty and staff with a fare-free shuttle system that provides access to downtown Portland as well as local neighborhoods and grocery stores.

http://www.lclark.edu/dept/parking/shuttle.html

**E. GREEN POWER PRODUCTION OR PURCHASING**

Begin purchasing or producing at least 15% of our institution’s electricity consumption from renewable sources within one year of signing the ACUPCC.

To achieve this option, signatories may install and operate one or more renewable electricity generating devices on campus; purchase renewable electricity produced off-site but directly connected to campus; purchase renewable energy credits (RECs, also known as Green Tags); or any combination thereof such that 15% of the institution’s total electricity consumption is either derived directly from renewable sources or mitigated through the purchase of RECs.

On-campus installations of the following electricity sources may count towards meeting the terms of this action option: wind, solar, geothermal, low-impact hydropower, clean biomass, and biodiesel. However, if a signatory is selling the renewable energy credits derived from such installations, the signatory may not also count the electricity from these installations toward meeting this option. Likewise, if the renewable energy generating devices installed on campus are owned and maintained by a third party, the institution must have contractual rights to the associated emissions reductions for the electricity to count towards achieving the 15%. Otherwise two parties would be claiming emissions reductions for the same electricity. Renewable energy technologies that are not used to generate electricity do not count toward achieving this option.

To count towards the 15% necessary to achieve this action option, purchased RECs must be Green-e certified or meet the Green-e standard’s technical requirements. The Green-e Renewable Energy Certification Program is the leading voluntary certification and verification program for RECs. Green-e certification ensures that RECs meet strict environmental and
consumer protection standards. Green-e certified RECs are available from a variety of nationwide retailers, and may also be available from the signatory's electric utility.

Examples

**University of Minnesota, Morris (wind turbine)**
UMM has installed a 1.65 MW wind turbine on its campus. The turbine produces 5.6 million kilowatt hours of power annually, more than half of the University's annual electricity use.
http://www.morris.umn.edu/greencampus/WindsOfChange.pdf

**Butte College (solar panels)**
Butte installed 1.06 MW of solar photovoltaic panels in August 2005. The panels generate 1.6 million kWh annually and reduce the college's utility bills by one third.

**New York University (REC purchase)**
In October 2006, NYU purchased 118,000,000 KWh of wind power RECs, an amount equivalent to the power that the University purchases annually from its electric utility.
http://www.nyu.edu/public.affairs/releases/detail/1235

**Western Washington University (student-funded REC purchase)**
In spring 2004, 85% of voting students supported a fee increase of up to $19 per quarter to purchase RECs. In response to the student request, the WWU Board of Trustees approved a Renewable Energy Fee of $1.05 per credit with a maximum of $10.50 per quarter. The fee generates approximately $355,000 annually, which enables the University to offset 100 percent of its electricity consumption with RECs.
http://west.wwu.edu/ucomm_news/articles/1067.asp

Resources

- Green-e (includes a list of retailers of Green-e certified renewable energy products)
  http://www.green-e.org/
- EPA's Green Power Partnership
  http://www.epa.gov/greenpower/
- List of campus solar electric installations
  http://www.aashe.org/resources/solar_campus.php
- List of campus wind turbine installations
  http://www.aashe.org/resources/wind_campus.php
F. CLIMATE-FRIENDLY INVESTING

Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution’s endowment is invested.

To achieve this option, signatories may adopt and implement a written policy stating the institution’s intention to vote in favor of shareholder resolutions that support action to reduce GHG emissions. Alternatively, signatories may establish an advisory committee on responsible investment with student and faculty participation to review and make recommendations on climate-related shareholder resolutions at companies in which the signatory’s endowment is invested. Signatories are encouraged to incorporate other climate-friendly investment strategies – such as direct shareholder engagement with major GHG emitters and positive investments in climate-friendly technologies and investment funds – into their policies and/or the charges to their advisory committees.

Examples

Stanford University
Stanford has adopted policy guidelines that instruct the endowment to vote in favor of shareholder resolutions that support action to reduce GHG emissions.

Dartmouth College
The Dartmouth Advisory Committee on Investor Responsibility has consistently supported shareholder resolutions that support action to reduce GHG emissions.
http://www.dartmouth.edu/~finance/committees/acir.html

Resources
- Sustainable Endowments Institute
  http://www.endowmentinstitute.org/
- Responsible Endowments Coalition
  http://www.endowmentethics.org/

G. WASTE MINIMIZATION

Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.

To achieve this option, signatories must participate in the Waste Minimization component of RecycleMania, a friendly competition among campuses to increase recycling and reduce waste. The competition takes place every year over a 10-week period in the spring and requires contestants to report waste generation in a user-friendly online system. The Waste Minimization component of the competition rewards the institution that produces the least amount of municipal solid waste (including both recyclables and trash) per person.
Signatories wishing to meet this option must also adopt 3 or more associated measures to reduce waste. Measures that would count towards meeting this part of the Commitment include, but are not limited to the following:

- establishing a campus recycling program;
- creating accrual mechanisms to use savings in disposal costs to fund further waste reduction initiatives;
- purchasing office equipment with waste prevention in mind (e.g. electronic interface, double-sided capabilities etc.);
- establishing a campus surplus department;
- working with vendors to reduce transportation packaging (e.g. require vendors shipping on a pallet to take it back with the next delivery);
- reusing and/or redistribute packing materials from central stores and campus distribution centers;
- promoting inter-office reusable envelopes for campus mail and review/improve campus systems for reclaiming extra envelopes for reuse;
- replacing production of paper materials with online alternatives wherever possible (e.g. telephone directories, course catalogs, room selection, bill payment, grade distribution, etc.)
- creating an opt-out registry for unwanted bulk mail from off-campus sources;
- encouraging the cancellation of unnecessary or duplicate subscriptions;
- implementing campus printing initiatives which prohibit or discourage unlimited printing in computer labs and copy rooms;
- promoting the use of printer settings and paper reduction software (e.g. GreenPrint);
- prohibiting or discouraging non-recyclable (bright, dark, or plastic-coated) paper;
- creating an office supplies exchange on campus;
- offering discounts or other incentives for using reusable mugs in campus dining operations;
- creating an action plan for better materials management in concessions operations and sporting events;
- using bulk condiment dispensers instead of single serving packages in dining operations;
- implementing materials management improvements in "grab & go" dining operations if used;
- establishing a system to review and approve placement of new campus trash containers;
- creating and promoting a system for the campus community to report wasteful practices and offer suggestions for waste reduction;
- incorporating materials management information into new employee and/or new student orientation programs;
- recognizing materials management roles in relevant staff job descriptions including administrative assistants, purchasing officials, and building proctors.

Other waste minimization activities that the institution believes are roughly equivalent to the measures listed above may also count toward achieving this option.
To capture the GHG reductions achieved as a result of these waste reduction activities, signatories who undertake this tangible action option are encouraged to include emissions from waste disposal in their GHG inventory.

Examples

*University of Texas at Austin*

UT Austin won the Waste Minimization competition in RecycleMania 2007. The University recycles almost 40% of its waste, and has a variety of programs underway to cut down on waste generation.

Resources

- Recyclemania
- College and University Recycling Council (CURC)
  [http://www.nrc-recycle.org/curc.aspx](http://www.nrc-recycle.org/curc.aspx)
- U.S. EPA WasteWise College and University Campaign
  [http://www.epa.gov/wastewise/targeted/colleges/cu_index.htm](http://www.epa.gov/wastewise/targeted/colleges/cu_index.htm)
The ACUPCC signatory institutions agree to develop an institutional action plan for becoming climate neutral. This climate action plan is to be developed within two years of the implementation start date, and should include a target date as well as interim milestones for achieving climate neutrality as soon as possible. For purposes of the ACUPCC, climate neutrality is defined as having no net greenhouse gas (GHG) emissions, to be achieved by minimizing GHG emissions as much as possible, and using carbon offsets or other measures to mitigate the remaining emissions. To achieve climate neutrality under the terms of the Commitment, all Scope 1 and 2 emissions, as well as those Scope 3 emissions from commuting and from air travel paid for by or through the institution, must be neutralized.

The plan should explain how the institution intends to achieve climate neutrality by its target date. It should also describe planned actions to make climate neutrality and sustainability a part of the curriculum and/or other educational experience for all students as well as actions to expand research, community outreach and/or other efforts toward the achievement of GHG reductions for the institution and/or the community and society. Finally, the plan should describe mechanisms for tracking progress on goals and actions. Signatories may choose to incorporate their climate action plan into a more comprehensive sustainability plan.

**GENERAL FORMAT**

The climate action plan should be in the form of a brief summary report that is comprehensible by and accessible to the general public. For consistency, signatories are encouraged to include the following sections in their report (several of which are explained in greater detail below):

- **Introduction** – describes why the institution is taking this initiative and other background information.
- **Campus Emissions** – describes the institution's current emissions trajectory and sets a target date for climate neutrality. This section should include visual representations of the institution’s emissions trajectory under business as usual and under the ACUPCC plan, as well as a graph illustrating the contribution to the institution’s total emissions from each emission source.
- **Mitigation Strategies** – shows how the institution intends to achieve climate neutrality. This section should include sub-sections describing how the institution will neutralize emissions from each source.
- **Educational, Research, Community Outreach Efforts** – describes plans to make climate neutrality and sustainability a part of the curriculum and/or other educational experience for all students as well as actions to expand research, community outreach and/or other efforts toward the achievement of climate neutrality; this section should include sub-sections on education, research (if appropriate), and community outreach.
• **Financing** – explains how the institution will finance the mitigation strategies and other efforts described in the rest of the plan.

• **Tracking Progress** – describes how the institution will track its progress in achieving the goals set out in the rest of the plan.

The institutional body responsible for the ACUPCC should record and compile information about the process of developing the plan. This record should include minutes from meetings, input from stakeholder groups, and a longer, more detailed report with descriptions of emissions reduction activities, plan for contingency (e.g., if interim targets are missed, or if the plan needs to be amended), and information about key actors, technologies, etc. This is will allow the signatory schools to retain important institutional memory and to assess the value of steps taken in implementing the action plan.

**TARGET DATE AND INTERIM TARGETS**

According to the IPCC, 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.\(^5\) As institutions consider their own targets, they are encouraged to keep this broader context in mind, especially with regard to initiating emission reductions as soon as possible in order to slow down the adverse effects of greenhouse gases (including carbon dioxide and chlorofluorocarbons) that can remain in the atmosphere for several centuries.

To aid the target-setting process, the ACUPCC institutional 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. The structure can then evaluate each emissions mitigation strategy according institution-specific criteria that the structure itself has established. Example criteria that signatories may wish to consider when evaluating mitigation options include:

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
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

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 is also realistic, flexible and affordable. Chapter 11 of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard provides additional guidance on setting targets.

Resources

- List of existing campus global warming commitments

**CURRICULUM AND OTHER EDUCATIONAL EXPERIENCES**

This section of the climate action plan will be highly institution-specific and should take into account the institution's particular strengths. It should start by describing the 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 that institutions may wish to consider for inclusion in this section of the plan 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
- Inclusion of students on building and construction, 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 Harvard Campus Sustainability Pledge); First Year Experience and/or New Student Orientation sustainability sessions; sustainability themed housing; and sustainability competitions between residence halls.

This section of the plan should also explain how the implementation of the ACUPCC will be integrated into the institution's educational efforts (e.g., by having students or classes perform the campus GHG inventory), as well as how the entire campus community (including alumni) will be made aware of the institution’s participation in and progress toward implementing the ACUPCC.

Because some of these educational actions can also lead to emissions reductions on campus, these efforts (as appropriate) should be integrated with the previous section.
RESOURCES

- List of academic programs in sustainability
  http://www.aashe.org/resources/programs.php
- ACPA - College Student Educators International website on sustainability
  http://www.myacpa.org/task-force/sustainability/

RESEARCH

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. It should start by describing the institution’s current research efforts related to climate neutrality and sustainability, and should then describe planned actions to expand these efforts.

Example actions that institutions may wish to consider for inclusion this section of the plan 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
- Creation of research institutions or academic centers related to climate change or sustainability

COMMUNITY OUTREACH AND OTHER EFFORTS

As with the previous sections, this section of the climate action plan will be highly institution-specific. It should start by describing the institution’s current community outreach efforts related to climate neutrality and sustainability, as well as any other relevant activities not covered elsewhere in the plan (e.g. using endowment investments to support GHG reductions). It should then set out planned actions to expand these efforts.

Example actions that institutions may wish to consider for inclusion this section of the plan 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.

This section of the plan should also explain how the surrounding community will be made aware of the institution’s participation in and progress toward implementing the ACUPCC.

TRACKING PROGRESS

The final section of the climate action plan should describe how the institution will track its progress in achieving the goals set out in the rest of the plan. For example, signatories may wish to establish a centralized reporting system to track actions taken to reduce emissions as well as efforts
to incorporate climate neutrality and sustainability into educational, research, and community service activities. This system could also include evaluations about the cost and benefits of each project so as to help foster intra-and inter-campus learning.

Signatories are encouraged to also consider more quantitative methods of tracking progress. For example, signatories might utilize energy management and related systems to continuously monitor major emissions sources. Similarly, to measure success in making climate neutrality and sustainability part of the educational experience for all students, signatories might conduct periodic sustainability literacy surveys of students or surveys of faculty to assess the sustainability content of their courses.

**MODIFYING THE PLAN**

Signatories may choose to modify their climate action plans in response to changing circumstances. In such cases, the revised plan should be provided to AASHE for posting and dissemination. In addition, changes to the plan and the reasons for them should be described in reporting associated with the ACUPCC.

Signatories are encouraged to reevaluate their plans at least every other year (in conjunction with the ACUPCC reporting schedule) and make any changes necessary to keep plans relevant and up-to-date.
ACUPCC signatory institutions agree to make their climate action plan, inventory, and progress reports publicly available by providing them AASHE for posting and dissemination. Signatories agree to submit these materials to AASHE through an online form on the AASHE website. This will provide a common template for reporting and allowing maximum flexibility for sharing data.

REQUIRED INFORMATION

The online form will ask signatories for a variety of information about their GHG emissions and plans to reduce those emissions. In addition to basic information like institution name and contact information, the form will request three types of information:

- **Contextual** – these will be questions about contextual information that would facilitate peer comparisons, including the institution’s “Basic” Carnegie Classification, its size (in both student FTE and gross square footage), and its community type (urban, rural, or suburban).

- **Emissions** – these will be questions about the institution’s emissions, including boundaries, emissions calculator and coefficients used, scope 1 emissions by source, scope 2 emissions, scope 3 emissions by source, reductions due to offsets, de minimis emissions, and trend data.

- **Climate Action Plan Implementation** – these will be questions about the institution’s progress in implementing its climate action plan, including the tangible action options the institution has decided to undertake.

REPORTING FREQUENCY

A signatory’s due date for reporting is the same as the signatory’s implementation start date. The following reporting deadlines apply:

- **Within 2 months**, signatories are committed to submitting information on the institutional structure for developing their climate action plans, including designating the institutional liaison and the two tangible actions that will be implemented before the end of year 2;

- **Within 1 year**, signatories are committed to reporting the results of their GHG emissions inventories;

- **Within 2 years**, signatories are committed to submitting their climate action plans and updated information on GHG emissions;

- **Within 3 years**, signatories will report both their GHG emissions and their progress in implementing their climate action plans;

- **Starting in year 4**, signatories will continue to report their emissions data annually and will be encouraged to submit narrative progress report annually as well, but will only be required to submit narrative progress reports every other year.
The term “offset” refers to the practice of compensating for GHG emissions that cannot feasibly be avoided at a given time, by supporting projects that reduce, avoid, or sequester emissions elsewhere, and that would not have otherwise occurred. These projects generate offset credits, or “offsets”, that individuals or organizations purchase to compensate for their emissions. Since there is currently no well-established and widely-used certification system for carbon offsets, the Steering Committee has not adopted any specifications for types of offset products that are acceptable within the ACUPCC. As certification systems develop, the Steering Committee will consider the adoption of quality standards for offsets that count under the ACUPCC.

It is important to note that, under the Commitment, each institution sets its own target date for reaching climate neutrality so offsets need not be purchased immediately or even in the near future. If an institution were to eliminate all of its GHG emissions through other means by its target date, offsets would not be necessary at all. In general, signatories are encouraged to invest in on-campus emissions reductions before purchasing offsets, especially in the early stages when ‘low hanging fruit’ (i.e. relatively easy reductions with high returns on investment) are available.

Given the emerging nature of the carbon offset market, those institutions that choose to buy offsets are encouraged to exercise due diligence before committing to particular offset suppliers. To the extent possible, institutions should select offset suppliers that:

- are transparent about the projects where their offsets originate, and provide sufficient information about these projects to enable customers to evaluate offset quality;
- have strong, objective policies to ensure that offset projects are additional and would not have happened without the existence of the offset market;
- are transparent about their project selection processes and other internal operations;
- monitor offset projects to ensure reductions are occurring as projected;
- ensure that their offsets are “retired” after the purchase so that they cannot be traded back into the market;
- provide offsets with ancillary social and environmental benefits beyond GHG reductions;
- use third-party verification to ensure offset quality.

In addition, since most GHG emissions are also accompanied by other air pollutants, signatories may wish to give preference to offsets generated from projects within the institution's airshed. For more detailed explanations of what to look for when purchasing offsets, institutions are encouraged to read the two reports listed in the resources section.

Resources

In the event that, despite its best efforts, a signatory is unable to meet all of the terms of the ACUPCC, the signatory may remain in good standing by submitting in writing to the Steering Committee a request for an extension. The request should describe the signatory’s efforts to fulfill the terms of the ACUPCC and explain why it has been unable to do so. The request should also include a new target date for meeting the terms of the Commitment as well as a list of steps the signatory will take to achieve this target. The request should be submitted as soon as the signatory becomes aware that it will be unable to fulfill its obligations under the ACUPCC. The Steering Committee or designee will then review the request and decide whether to grant it.

Participants in the ACUPCC agree to make every effort to meet the terms of the Commitment outlined in this document. A signatory that does not meet one or more of the terms and has not received an extension through the process described above is considered to be in non-fulfillment of the ACUPCC and is not in good standing. Signatories that are not in good standing with the ACUPCC will be so noted on the website as well as in the annual reports and other materials related to the ACUPCC.

Failure to meet a target or milestone set out in a signatory’s climate action plan does not in and of itself mean that a campus is in non-fulfillment of the ACUPCC. In such cases, signatories are expected to disclose the deviation from the plan in their progress reports, and describe planned steps to get back into accordance with their plan. If circumstances necessitate modifications to the targets and milestones within the plan, signatories may revise their plan according to the guidelines above.

A signatory that is in non-fulfillment of the ACUPCC may come back into good standing at any time by taking the required steps.
<table>
<thead>
<tr>
<th><strong>DEFINITION OF TERMS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Charter Signatory</strong></td>
</tr>
<tr>
<td><strong>Climate Neutrality</strong></td>
</tr>
<tr>
<td><strong>The Commitment</strong></td>
</tr>
<tr>
<td><strong>Commuting</strong></td>
</tr>
<tr>
<td><strong>De Minimis Emissions</strong></td>
</tr>
<tr>
<td><strong>Fugitive emissions</strong></td>
</tr>
<tr>
<td><strong>GHG Emissions Inventory</strong></td>
</tr>
<tr>
<td><strong>Greenhouse Gas (GHG)</strong></td>
</tr>
<tr>
<td><strong>Implementation Advisory Committee</strong></td>
</tr>
<tr>
<td><strong>Implementation Start Date</strong></td>
</tr>
<tr>
<td><strong>Implementation Support Network</strong></td>
</tr>
<tr>
<td><strong>Institutional Structures</strong></td>
</tr>
<tr>
<td><strong>Leadership Circle</strong></td>
</tr>
<tr>
<td><strong>Operational Boundaries</strong></td>
</tr>
<tr>
<td><strong>Organizational Boundaries</strong></td>
</tr>
<tr>
<td><strong>Scope 1</strong></td>
</tr>
<tr>
<td><strong>Scope 2</strong></td>
</tr>
<tr>
<td><strong>Scope 3</strong></td>
</tr>
<tr>
<td><strong>Signatory</strong></td>
</tr>
<tr>
<td><strong>Steering Committee</strong></td>
</tr>
<tr>
<td><strong>Supporting Organizations</strong></td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
</tr>
<tr>
<td><strong>Temporal Boundaries</strong></td>
</tr>
</tbody>
</table>
The American College & University Presidents Climate Commitment

We, the undersigned presidents and chancellors of colleges and universities, are deeply concerned about the unprecedented scale and speed of global warming and its potential for large-scale, adverse health, social, economic and ecological effects. We recognize the scientific consensus that global warming is real and is largely being caused by humans. We further recognize the need to reduce the global emission of greenhouse gases by 80% by mid-century at the latest, in order to avert the worst impacts of global warming and to reestablish the more stable climatic conditions that have made human progress over the last 10,000 years possible.

While we understand that there might be short-term challenges associated with this effort, we believe that there will be great short-, medium-, and long-term economic, health, social and environmental benefits, including achieving energy independence for the U.S. as quickly as possible.

We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop.

We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities. Accordingly, we commit our institutions to taking the following steps in pursuit of climate neutrality:

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.
   a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
   b. Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
   c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
      i. A target date for achieving climate neutrality as soon as possible.
      ii. Interim targets for goals and actions that will lead to climate neutrality.
      iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
iv. Actions to expand research or other efforts necessary to achieve climate neutrality.

v. Mechanisms for tracking progress on goals and actions.

2. Initiate two or more of the following tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.

   a. 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.

   b. Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.

   c. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.

   d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.

   e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution’s electricity consumption from renewable sources.

   f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution’s endowment is invested.

   g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.

3. Make the action plan, inventory, and periodic progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination.

In recognition of the need to build support for this effort among college and university administrations across America, we will encourage other presidents to join this effort and become signatories to this commitment.

Signed,

The Signatories of the American College & University Presidents Climate Commitment
www.presidentsclimatecommitment.org

The American College & University Presidents Climate Commitment is coordinated and supported by Second Nature, ecoAmerica and the Association for the Advancement of Sustainability in Higher Education (AASHE).

Second Nature
Anthony Cortese
acortese@secondnature.org
617.224.1611
secondnature.org

AASHE
Tom Kimmerer
tom@aashe.org
859.402.9272
aashe.org

ecoAmerica
Lee Bodner
lee@ecoamerica.net
301.379.4200
ecoamerica.net
Association of University Leaders for a Sustainable Future

HIGHER EDUCATION INSTITUTION
SIGNATORY FORM

As an institution of higher education concerned about the state of the world environment and the advancement of sustainable development, we shall strive to promote actions that will achieve a sustainable future. We endorse the Talloires Declaration and agree to support environmental citizenship at all levels including senior managers, administrators, faculty, staff, and students. Together we shall endeavor to advance global environmental literacy and sustainable development by implementing the ten-point action plan of the Talloires Declaration.

Talloires Declaration Signatory
Chancellor/President/Rector/Provost
(please type or print)

Name __________________________________________ Title ____________________________

Institution ______________________________________

Signature ______________________________________________ Date ____________________________

Mailing Address: __________________________________________

City: ______________________ State/Province: __________ Postal Code: __________

Country: ______________________ E-Mail: ______________________

Phone: ______________________ Fax: ______________________

[Please send signed copy to ULSF at 4922 Eskridge Terrace, NW, Washington, DC 20016]
We, the presidents, rectors, and vice chancellors of universities from all regions of the world are deeply concerned about the unprecedented scale and speed of environmental pollution and degradation, and the depletion of natural resources.

Local, regional, and global air and water pollution; accumulation and distribution of toxic wastes; destruction and depletion of forests, soil, and water; depletion of the ozone layer and emission of “green house” gases threaten the survival of humans and thousands of other living species, the integrity of the earth and its biodiversity, the security of nations, and the heritage of future generations. These environmental changes are caused by inequitable and unsustainable production and consumption patterns that aggravate poverty in many regions of the world.

We believe that urgent actions are needed to address these fundamental problems and reverse the trends. Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature.

Universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible. Thus, university leaders must initiate and support mobilization of internal and external resources so that their institutions respond to this urgent challenge.

We, therefore, agree to take the following actions:

1) Increase Awareness of Environmentally Sustainable Development
Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.

2) Create an Institutional Culture of Sustainability
Encourage all universities to engage in education, research, policy formation, and information exchange on population, environment, and development to move toward global sustainability.

3) Educate for Environmentally Responsible Citizenship
Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all university graduates are environmentally literate and have the awareness and understanding to be ecologically responsible citizens.

4) Foster Environmental Literacy For All
Create programs to develop the capability of university faculty to teach environmental literacy to all undergraduate, graduate, and professional students.

5) Practice Institutional Ecology
Set an example of environmental responsibility by establishing institutional ecology policies and practices of resource conservation, recycling, waste reduction, and environmentally sound operations.

6) Involve All Stakeholders
Encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.

7) Collaborate for Interdisciplinary Approaches
Convene university faculty and administrators with environmental practitioners to develop interdisciplinary approaches to curricula, research initiatives, operations, and outreach activities that support an environmentally sustainable future.

8) Enhance Capacity of Primary and Secondary Schools
Establish partnerships with primary and secondary schools to help develop the capacity for interdisciplinary teaching about population, environment, and sustainable development.

9) Broaden Service and Outreach Nationally and Internationally
Work with national and international organizations to promote a worldwide university effort toward a sustainable future.

10) Maintain the Movement
Establish a Secretariat and a steering committee to continue this momentum, and to inform and support each other’s efforts in carrying out this declaration.

1994 Updated Version
March 22, 2007

CHANCELLORS

Policy on Sustainable Practices

The University of California is committed to minimizing the University’s impact on the environment and reducing the University’s dependence on non-renewable energy. In October 2006, in response to the requirement that the guidelines for the Policy on Green Building Design, Clean Energy Standards, and Sustainable Transportation Practices be re-examined every three years, sections of the policy were clarified and new sections were added. This review and the development of the revised guidelines were conducted by the Sustainability Steering Committee, consisting of administrators from all campuses and the Office of the President, and faculty members with expertise in these disciplines.

The new sections that expand on more general guidelines in the original policy are in the areas of:

- Building Renovations;
- Climate Protection Practices;
- Sustainable Operations;
- Recycling and Waste Management; and
- Environmentally Preferable Procurement.

The expansion of goals in these areas strengthens implementation of evolving best practices on sustainability. To reflect these changes, the Policy on Green Building Design, Clean Energy Standards, and Sustainable Transportation Practices has been renamed the Policy on Sustainable Practices.

Enclosed are the revised and renamed Policy on Sustainable Practices and the Guidelines for implementation of this policy. Supplementary to and embedded within the Guidelines are Implementation Procedures that are intended to provide specific courses of action, standardized methods, and/or consistent series of steps to implement the policy.

Robert C. Dynes
UNIVERSITY OF CALIFORNIA
POLICY GUIDELINES FOR SUSTAINABLE PRACTICES

SCOPE/AUTHORITY

The Regents have delegated authority to the President for promulgating policy promoting sustainable new capital projects, existing University facilities, and campus transportation resources. The President has delegated authority to the Senior Vice President, Business and Finance for further definition of measures to implement University policy regarding sustainability. Chancellors are responsible for implementation in the context of individual building projects, facilities operations, and transportation projects and programs.

These Policy Guidelines are intended to provide specific scope, direction, and expectations underlying from the Presidential Policy on Sustainable Practices. They also identify best practices to facilitate compliance and provide additional background relevant to this policy.

Supplementary to, and embedded within, these Policy Guidelines are Implementation Procedures that are intended to provide specific course of action, standardized methods, and/or consistent series of steps to implement the Presidential Policy on Sustainable Practices and these Policy Guidelines. The Implementation Procedures are denoted, follow applicable Policy Guidelines, and are formatted in italics.

BACKGROUND

Resource sustainability is critically important to the University of California, the State of California, and the nation. Efficient energy use is central to this objective, and renewable energy and energy-conservation projects provide a means to stabilize campus budgets, increase environmental awareness, reduce the environmental consequences of University activities, and provide educational leadership for the 21st century.

On July 17, 2003, The Regents of the University expressed their support for a Presidential policy to promote “…the principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and decommissioning of facilities and infrastructure to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements.” At their September 2005 meeting, The Regents authorized the President to incorporate sustainable transportation practices into this Policy. Transportation to, from and within a campus grounds has a significant impact on air quality and affects both the campus landscape and relations with surrounding communities. It is desirable, therefore, to effectively manage transportation demand, provide transportation options and encourage the use of low-impact vehicles, non-fossil fuels, and creative modes of transport, while ensuring maximum campus access and preserving lifestyle features. This
approach to transportation services is a necessary component of the University’s sustainability efforts.

In October 2006, in response to the requirement that this policy guideline document be re-examined every three years, sections of the policy were clarified and new sections were added specifically in the areas of: renovation policy, climate change practices, green building operations and maintenance, recycling and waste management, and environmentally preferable procurement.

The University of California is committed to improving the University’s effect on the environment and reducing the University’s dependence on non-renewable energy. Guidelines for implementing practices in support of Green Building Design, Clean Energy Standards, and Sustainable Transportation Practices are explained in detail in the following plan for achieving these goals.

POLICY GUIDELINES

I. Green Building Design

New Buildings

a. Given the importance of energy efficiency to Green Building design, the University has set a goal for all new building projects, other than acute-care facilities, to outperform the required provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. Standards for energy efficiency for acute care facilities will be developed in consultation with campuses and medical centers.

b. The University of California will design and build all new buildings, except for laboratory and acute care facilities, to a minimum standard equivalent to a LEED™ 2.1 “Certified” rating.

c. Campuses will strive to achieve a standard equivalent to a LEED™ “Silver” rating or higher, whenever possible within the constraints of program needs and standard budget parameters.

d. Given the importance of specifically addressing sustainability in laboratory facilities, the University of California will design and build all new laboratory buildings to a minimum standard equivalent to a LEED™ 2.1 “Certified” rating and the Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC), as appropriate. The design process will include attention to energy efficiency for systems not addressed by the California Energy Code (Title 24).

e. In consultation with the campuses, the Office of the President will develop an internal evaluation and certification standard based on the LEED™ and Labs21 measures.
f. The measures required by this Policy Guideline will be incorporated into all new building projects, other than acute care facilities, submitted for first formal scope and budget approval as of July 1, 2004.

g. Further study will be conducted before a similar sustainable design policy for new acute-care facilities is adopted.

Building Renovations

a. Any significant renovation projects involving existing buildings will also apply sustainability principles to the systems, components and portions of the building being renovated. At Budget Approval, all renovation projects should include a listing of sustainable measures under consideration. Design and specification of renovation components such as mechanical, electrical and plumbing components, lighting, finishes, materials, etc. must meet or exceed associated Campus Baseline Green Building points.

b. Renovation of buildings that require 100% replacement of mechanical, electrical and plumbing systems and replacement of over 50% of all non-shell areas (interior walls, doors, floor coverings and ceiling systems) should at a minimum comply with a UC equivalent to a LEED-NC 2.1 or most current version of the LEED NC program certified rating. Subject to life cycle cost analysis, such projects should outperform Title 24, Part 6, that is currently in effect, by 20% and register with the Savings by Design program.

c. Renovation projects with a project cost of $5 million or greater (CCCI 5000) that do not fall under item b. above should at a minimum comply with a UC equivalent to a LEED Commercial Interiors certified rating and register with the Savings by Design program, if eligible.

d. The green building requirements in b. and c. above will apply to the listed categories of renovations, receiving budget approval after July 1, 2007.

General/Miscellaneous

a. Policy guidelines for sustainable operations of existing buildings previously addressed by this section are now found in Section V of this document.

b. Policy guidelines which previously indicated that the University will use its purchasing power to promote the availability of products that are resource-efficient, energy-efficient, water-efficient, and of recycled and rapidly renewable content for building materials, subsystems, components, equipment, and supplies are now found in Section VII, Environmentally Preferable Procurement, of this document.

c. The University will work with regulatory agencies and other entities to speed the development, approval, and implementation of products and technologies that improve energy efficiency and support sustainable design, construction, and operating practices.
d. The University will develop a program for sharing of best practices.

e. The University will incorporate the Green Building Design policy into existing facilities-related training programs, with the aim of promoting and maintaining the goals of the policy.

Implementation Procedures for Green Building Design – General/Miscellaneous:

- Any proposed exception from standards listed in the Policy Guideline may be requested administratively during preparation of the Project Planning Guide (PPG). Any exception proposed after approval of the PPG will be treated as a scope change and processed in accordance with standard University procedures.

- Campuses may choose to pursue external certification through the LEED™ process, augmented with Labs21 criteria as appropriate for laboratory systems, in lieu of the internal process for a given project.

- The University planning and design process will include explicit consideration of lifecycle cost along with other factors in the project planning and design process, recognizing the importance of long-term operations and maintenance in the performance of University facilities.

- The University will work closely with the U.S. Green Building Council, Labs21, the Department of Energy, the U.S. Environmental Protection Agency, State government, and other organizations to facilitate the improvement of evaluation methodologies to better address University requirements. Additionally, the University will work with the U.S. Green Building Council to develop a self-certification tool for University use.

II. Clean Energy Standard

a. The University will implement a systemwide portfolio approach to reduce consumption of non-renewable energy. The portfolio will include a combination of energy efficiency projects, the incorporation of local renewable power measures for existing and new facilities, green power purchases from the electrical grid, and other energy measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. The appropriate mix of measures to be adopted within the portfolio will be determined by each campus. Since each campus’s capacity to adopt these measures is driven by technological and economic factors, the campus will need to reevaluate their energy measures mix on a regular basis. The portfolio approach will provide valuable analytical information for improving energy efficiency, resulting in an overall improvement in the University’s impact on the environment and reduced reliance on fossil fuels during the next decade of capital program growth.

b. The University will strive to achieve a level of grid-provided electricity purchases from renewable sources that will be similar to the State’s Renewable Portfolio Standard, which sets a goal of procuring 20 percent of its electricity needs from renewable sources by 2010.
c. With a goal of providing up to 10 megawatts of local renewable power by 2014, the University will develop a strategic plan for siting renewable power projects in existing and new facilities. The plan will include demonstration projects for photovoltaic systems and other renewable energy systems, such as landfill gas fueled electricity generation or thermal energy production. The strategic plan will include criteria for evaluating the feasibility of a variety of projects, such as incorporating photovoltaic systems in replacement roofing projects and in new buildings, as well as forecasting the accommodations necessary for eventual installation of photovoltaic systems. The University will assess the progress of renewable energy technology improvements, both in terms of cost and technical efficiency. To achieve the renewable power goal, the University will maximize the use of available subsidies and negotiate pricing reductions in the marketplace, and will develop funding sources for financing the costs of renewable energy measures.

d. With a goal of reducing systemwide non-renewable energy consumption, the University will develop a strategic plan for implementing energy efficiency projects for existing buildings and infrastructure to include operational changes and the integration of best practices. The University will monitor industry progress in energy retrofits and implement technical improvements as they become available. As with renewable energy projects, the University will develop funding sources and establish a program for financing retrofit projects. The initial goal for energy efficiency retrofit projects will be to reduce systemwide growth-adjusted energy consumption by 10 percent or more by 2014 from the year 2000 base consumption level. The University will strive to achieve even greater savings as additional potential is identified and funding becomes available.

e. The University will continuously evaluate the feasibility of other energy-saving measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. In particular, campuses will strive to implement the Sustainable Transportation Practices described in Section III, below.

f. The University will develop a variety of funding sources and financing alternatives for energy efficiency, renewable energy, and clean energy projects that will enable campuses to be flexible in addressing their energy needs.

g. The University will pursue marketing of emissions credits as a means to bridge the cost-feasibility gap for green power projects.

**Implementation Procedures for Clean Energy Standard:**

- The University will initiate progress towards a level of grid-provided electricity purchases in 2004 by purchasing 10 percent of grid-supplied electricity from renewable sources, subject to funding availability, and will track progress annually toward achievement of the year 2010 goal.

- Campuses will provide strategic plans for implementing energy efficiency projects by identifying opportunities to incorporate energy retrofit projects into major building
renovations as funding is available, and to initiate standalone retrofit projects as justified by future energy savings.

III. Climate Protection Practices

a. With an overall goal of reducing greenhouse gas (GHG) emissions while maintaining enrollment accessibility for every eligible student, enhancing research, promoting community service and operating campus facilities more efficiently, the University will develop a long term strategy for voluntarily meeting the State of California’s goal, pursuant to the “California Global Warming Solutions Act of 2006” that is: by 2020, to reduce GHG emissions to 1990 levels. In addition, consistent with the Clean Energy Standard sections a., b. and c. of this document, the University will pursue the goal of reducing GHG emissions to 2000 levels by 2014 and provide an action plan for becoming climate neutral as specified in the Implementation Procedures below.

Implementation Procedures for Climate Protection Practices:

- By December 2008, the University will develop an action plan for becoming climate neutral which will include: a feasibility study for meeting the 2014 and 2020 goals stated in the Policy Guidelines, a target date for achieving climate neutrality as soon as possible while maintaining the University’s overall mission, and a needs assessment of the resources required to successfully achieve these goals. Climate neutrality means that the University will have a net zero impact on the Earth’s climate, and will be achieved by minimizing GHG emissions as much as possible and using carbon offsets or other measures to mitigate the remaining GHG emissions.

- Each UC campus will pursue individual membership with the California Climate Action Registry. The Senior Vice President, Business and Finance, in coordination with campus administration, faculty, students and other stakeholders will form a Climate Change Working Group that will develop a protocol to allow for growth adjustment and normalization of data and accurate reporting procedures. The Climate Change Working Group will monitor progress toward reaching the stated goals for GHG reduction, and will evaluate suggestions for programs to reach these goals.

IV. Sustainable Transportation Practices

Metrics and Benchmarking

a. In implementing a most efficient and effective economic and environmental strategy for campus fleets, campuses shall implement practicable and cost-effective measures, including, but not necessarily limited to, the purchase of the cleanest and most efficient vehicles and replacement tires, the use of alternative fuels, and other conservation measures.
b. Campuses will be encouraged to collect data on Average Vehicle Ridership (AVR) of commuters.

c. The Senior Vice President, Business & Finance has made a written request to major automobile manufacturers expressing both the University’s commitment to work with industry to provide vehicle and fuel choice, and the expectation that industry will provide these choices to the fullest extent possible.

d. Using the time period 2004-2005 as a baseline, campuses will strive to increase the percentage of low (PZEV) or zero-emission vehicles (ZEV) by 50% by the year 2009-2010, or to increase the number of PZEV and ZEV vehicles by 20% by the year 2009-2010, whichever is more feasible, and/or to convert campus vehicles to 50% non-carbon based fuel by year 2009-2010.

e. The University will work with regulatory agencies and other entities (e.g., regional transit agencies, air quality management districts) to speed the development, approval, and implementation of programs and technologies that support the goals of sustainable transportation as related to the increased use of biodiesel or other alternative fuel sources.

Implementation Procedures for Sustainable Transportation Practices:

- With the goal of measuring all campus fleet vehicles fuel consumption reduction, campuses will collect and report fuel consumption annually to the Office of the President beginning in 2005-06.

- AVR is defined as the number of trips to campus divided by the number of automobiles used for those trips (AVR = trips/# automobiles). Campuses may use this data to set goals for reduction of fuel consumption. AVR data may also be used in conjunction with transportation mode split data to develop maps of distance “zones” surrounding the campus, and to model each zone’s proportionate share of various commuting modes (e.g., percentage of bicycle or single-occupancy vehicle trips within 0-2 miles from the central campus core).

- The Sustainable Transportation Working Group will continue to work with State agencies to facilitate the purchase and use of LEV, ZEV, and alternative fuel vehicles by the campuses, and to find solutions for increasing the availability of an affordable supply.

Transportation Programs

a. The University will continue to facilitate the sharing of best practices within the University and among other educational institutions.

b. The University will develop a mechanism for ongoing involvement of undergraduate and graduate students in efforts toward achieving sustainable campus transportation. The means may include but are not limited to undergraduate and graduate internships and/or scholarships for relevant conference attendance.
c. By January 2009, each campus will implement a pre-tax transit pass program to facilitate the purchase of transit passes by University employees, or will establish a universal access transit pass program for employees.

d. The University will pursue the introduction of ride-share programs at each campus for all eligible program participants, where available. In conjunction with this effort, campuses will engage in advocacy efforts with local transit districts to improve routes in order to better serve student and staff ridership.

e. To the extent practicable, campuses will develop a business-case analysis for any proposed parking structure projects.

Implementation Procedures for Transportation Programs:

- The University will continue to participate in Transportation Sessions at the annual UC/CSU/CCC Campus Sustainability Conference.

- The Office of the President will begin funding an internship for one to two students in Academic Year 2005-06 and continuing until Academic Year 2009-10 or longer. At that time, the program’s results will be reviewed and the Senior Vice President, Business and Finance, or other delegated administrator, will determine whether or not to extend the program.

V. Sustainable Operations

a. For existing buildings, the University will explore the development of a standard methodology for sustainable practices and standards for facilities management, by assessing the LEED for Existing Building (LEED-EB) evaluation tool as described in b. through g. below.

b. For existing buildings, the University of California will develop a plan to operate and maintain all scope eligible campus buildings at a minimum standard equivalent to a LEED for Existing Buildings (LEED-EB) “Certified” rating. The implementation for certification will be carried out in a comprehensive campus approach vs. an individual building basis, except for exceptions noted below.

c. The University will incorporate these Sustainable Operations Policy Guidelines into existing facilities-related training programs, with the aim of promoting and maintaining the goals of the Policy.

d. The University will work closely with the U.S. Green Building Council (USGBC) to address the needs and concerns of campuses in the further development of the LEED-EB rating system and the USGBC’s “Portfolio Program.” As information and requirements are
determined from the USGBC’s “Portfolio Program”; the University will update this policy as appropriate.

e. Campuses will explore ways to connect the buildings it certifies through LEED-EB with the University’s educational and research mission, using the buildings as living, learning laboratories.

f. Eligible scope buildings for the purpose of this policy will be all buildings on-site at the ten campuses; except the following buildings or building types: acute care and patient care facilities; buildings scheduled for demolition, replacement, or major renovation; any building not located on the main campus; and any building less than 50,000 maintained gross sq. ft.

g. A timetable for full campus implementation will be further evaluated after completion of the interim milestones listed in Implementation Procedures below.

**Implementation Procedures for Sustainable Operations:**

- Each campus will submit for certification one pilot building at a LEED-EB “Certified” level or higher by July 1, 2008

- To facilitate the implementation steps for the policy, campuses will develop an inventory of buildings that meet the scope eligibility requirements above, and then group these eligible buildings into categories of buildings with similar operational and maintenance needs.

- Campuses will submit proposed core credits for one of the building type groupings identified above and any campuswide core credits to the U.S. Green Building Council by July 1, 2009. A core credit is a credit that will be sought for either all scope eligible buildings on a campus, or for all buildings within a building type group.

- By July 1, 2009, the University will evaluate efforts to date and develop an implementation plan and funding strategy toward a goal of achieving campus wide LEED-EB certification.

### VI. Recycling and Waste Management

a. In response to Public Resources Code Section 40196.3 which states that the Regents of the University of California are encouraged to comply with code Chapter 18.5, the “State Agency Integrated Waste Management Plan” and in support of the California Integrated Waste Management Board’s goal for a “zero waste California”, the University voluntarily adopts the following waste diversion goals:

- 50% by June 30, 2008
- 75% by June 30, 2012
- Ultimate goal of zero waste by 2020
b. All campuses will develop an Integrated Waste Management Plan (IWMP) and funding mechanism by June 30, 2007.

c. Waste reduction and recycling elements shall be integrated in Green Building Design and Sustainable Operation implementation goals and into campus operations as they are developed.

d. The University will seek to develop funding sources for financing waste reduction projects.

Implementation Procedures for Recycling and Waste Management:

- The IWMP will include current and future programs, dates of implementation, funding, and exact diversion numbers intended to meet goals

- For purposes of reporting, the medical centers (and other traditionally exempted entities) (Satellite locations) at various campuses will be required to report solid waste and recycling tonnage to the campus entity collecting data for the report. Medical Centers and other exempted facilities are also required to meet diversion requirements. Exceptions will be considered for those entities which represent less than 1% of the overall campus solid waste tonnage.

VII. Environmentally Preferable Purchasing Practices

Sustainable Economy

a. The University will utilize its purchasing power and academic and research excellence to advance the development of sustainable technologies by pressing markets to continually improve resource productivity.

b. For products and services that do not currently offer environmentally preferable alternatives, the University will work with its existing and potential suppliers to develop options.

c. “Cradle to cradle” is the preferred purchasing standard and is defined as accountable, responsible, and environmentally preferable supply chain management from material extraction, production, marketing, sale, use, disposal, collection, re-use and the web of closed loop cycles and processes.

d. The University will continue to transition all locations toward electronic and paperless processes and utilize web-based catalogs and programs.

e. The University will incorporate the credit requirements set forth by LEED (Leadership in Energy an Environmental Design) into product and service sourcing and procurement.
f. The University evaluates total cost of ownership including purchase price, operating cost, maintenance, collection and disposal, and recycling costs when selecting suppliers.

**Energy and Water**

a. For product categories that have ENERGY STAR© rated products available, the University will focus its procurement efforts only on products with an ENERGY STAR© rating, consistent with the needs of UC researchers.

b. For all electronic equipment, the supplier will deliver the items to the University with energy efficiency and conservation features enabled.

c. The University will utilize its strategic purchasing program to negotiate better pricing for rated commodities.

d. The University of California shall establish an ongoing partnership with the ENERGY STAR© Program administered by the EPA, and continually press the market for greater energy efficiency for the products and services regularly purchased by the University.

e. For products and services requiring the use of water, the University will give preference to technologies that ensure the efficient use of water resources.

**Implementation Procedures for Energy and Water:**

- For those goods already in use across the system, available energy conservation features shall be ENERGY STAR© enabled by a designated party (e.g. IT, department MSO).

**Recycled Content**

a. The University will phase out the use of virgin paper and adopt a minimum standard of 30% Post Consumer Waste (PCW) recycled content paper for all office supplies.

b. For uncut paper uses, including but not limited to janitorial supplies, the University will adopt a standard of 100% PCW recycled content paper.

c. The University will utilize its strategic purchasing program to negotiate better pricing for commodities with recycled content as compared to commodities without recycled content.

d. The University will continually work towards increasing the procurement of products with high recycled content.

e. Outside suppliers and consultants shall be encouraged to print proposals and reports on both sides, using recycled content paper. Furthermore, the documents shall be clearly marked to indicate that they are printed on recycled content paper.
Green Seal Certified Products

a. The University will work to phase in Green Seal certified products, as specified in the Implementation Procedures.

Implementation Procedures for Green Seal Certified Products:

- The University will work to phase in Green Seal certified products through its Strategic Sourcing and local campus procurement programs in coordination with EH&S, Facilities Management, and Housing and Residential Services.

Reduction of Hazardous Electronic Waste

a. All desktop computers, laptops, and computer monitors purchased by the University are required to have achieved Bronze registration or higher under the Electronic Products Environmental Assessment Tool (EPEAT).

b. Additional consideration will be provided for electronics products that have achieved EPEAT Silver or EPEAT Gold registration. The registration criteria and a list of all registered equipment are provided at [http://www.epeat.net](http://www.epeat.net).

c. The University will recycle all electronic waste in a responsible manner, as specified in the Implementation Procedures.

Implementation Procedures for Reduction of Hazardous Electronic Waste:

- The University will require all recyclers of the University's electronic equipment to have signed the Electronics Recyclers Pledge of True Stewardship, agreeing to a rigorous set of environmental criteria. The Pledge, and a list of recyclers who have signed, is available at [http://www.ban.org/pledge1.html](http://www.ban.org/pledge1.html). In cases where the University has established recycling “take-back” programs, the University will ensure that the manufacturer adheres to similarly high standards of responsible recycling.

Environmentally Responsible Packaging

a. Packaging for electronics products should be designed, produced, and managed in an environmentally sustainable manner, as specified in the Implementation Procedures.

b. The University will specify that all packing materials abide by at least one of, and preferably all of, the criteria listed in the Implementation Procedures:

c. The University will work with its suppliers to ensure effective waste management and recycling programs are in place for all business operations.
Implementation Procedures for Environmentally Responsible Packaging:

- The University requires that a take-back program be offered for packaging of electronics products and will give preference to take-back programs that are provided free of charge. The University will also give preference to packaging that is reusable, contains a minimum of hazardous and non-recyclable materials, and meets or exceeds the recycled material content levels in the US EPA Comprehensive Procurement Guidelines for Paperboard and Packaging.

- Specify that all packing materials abide by at least one of and preferably all of the criteria listed below:
  
  - Made from 100% post-consumer recycled materials and be recyclable, reusable, or non-toxic,
  - Be biodegradable,
  - Be produced with the minimum of resources and sized as small as possible, while still maintaining product protection during shipping. Where feasible, packaging materials should be eliminated, if unnecessary.

- The University will work with its suppliers to ensure effective waste management and recycling programs are in place for all business operations.

Effective Recycling and Manufacturer Take-Backs

a. The University will work to incorporate effective end-of-life recycling programs into each commodity as applicable.

b. The University will work with its suppliers to establish, re-use or recycling “take-backs” at no extra cost to the University, and in compliance with environmental standards that abide by Federal, State, and local legislation regarding waste disposal.

Supply Chain Environmental Responsibility

a. The University will encourage suppliers to demonstrate environmental stewardship through their Environmental Management Programs.

Evaluating Environmental Claims

a. Suppliers citing environmentally preferred product claims shall follow requirements specified in the Implementation Procedures below.
Implementation Procedures for Evaluating Environmental Claims:

- Suppliers citing environmentally preferred product claims shall provide proper certification or detailed information on environmental benefits, durability, and recyclable properties.

Training and Annual Plan and Report

a. The University will incorporate the Environmentally Preferable Purchasing Policy into existing strategic sourcing and other training programs, with the aim of promoting and maintaining the goals of the policy. The University shall provide training seminars, supplier fairs, and workshops on purchasing environmentally preferred products and establish educational programs and materials for faculty, staff, and students.

b. An annual plan and report shall be completed by each campus to define their environmental purchasing plan and report their efforts.

Implementation Procedures for Training and Annual Plan and Report:

- UC campus Sustainability Committees will be responsible for reporting to the Sustainability Steering Committee on an annual basis. The Sustainability Steering Committee and the Sustainable Purchasing Working Group will maintain responsibility for determining the format and data to be submitted in the annual report, and the form for the annual plan.

VIII. Authority and Report Schedule

On an annual basis, the President will provide a report to The Regents detailing the impact of the University’s sustainability efforts on the overall capital program, University operating costs, energy use, greenhouse gas emissions, solid waste diversion, campus environmentally preferable purchasing and campus transportation practices. The University’s sustainability guidelines will be subject to continuous review. The Policy Guidelines for Sustainable Practices and Implementation Procedures will be reviewed at a minimum every three years, with the intent of developing and strengthening implementation provisions and assessing the influence of the guidelines on existing facilities, new capital projects, plant operating costs, fleet and transportation services, and campus accessibility, mobility, and livability. The University will provide means for the ongoing active participation of students, faculty, administrators, and external representatives in further development and implementation of the Policy on Sustainable Practices.


Creators and Original Signatories

Jean Mayer, President
Tufts University, U.S.A.
(Conference Convener)

Pablo Arce, Vice Chancellor
Universidad Autonoma de Centro America, Costa Rica

L. Ayo Banjo, Vice Chancellor
University of Ibadan, Nigeria

Boonrod Binson, Chancellor
Chulalongkorn University, Thailand

Robert W. Charlton, Vice Chancellor & Principal
University of Witwatersrand, Union of South Africa

Constantine W. Curris, President
University of Northern Iowa, U.S.A.

Michele Gendreau-Massaloux, Rector
l’Academie de Paris, France

Mario Ojeda Gomez, President
Colegio de Mexico, Mexico

Adamu Nayaya Mohammed, Vice Chancellor
Ahmadu Bello University, Nigeria

Augusto Frederico Muller, President
Fundacao Universidade Federal de Mato Grosso, Brazil

Calvin H. Plimpton, President Emeritus
American University of Beirut, Lebanon

Wesley Posvar, President
University of Pittsburgh, U.S.A.

T. Navaneeth Rao, Vice Chancellor
Osmania University, India

Moonis Raza, Vice Chancellor Emeritus
University of New Delhi, India

Pavel D. Sarkisov, Rector
D. I. Mendeleev Institute of Chemical Technology U.S.S.R.

Stuart Saunders, Vice Chancellor & Principal
University of Cape Town, Union of South Africa

Akilagpa Sawyerr, Vice Chancellor
University of Ghana, Ghana

Carlos Vogt, President
Universidade Estadual de Campinas, Brazil

David Ward, Vice Chancellor
University of Wisconsin-Madison, U.S.A.

Xide Xie, President Emeritus
Fudan University, People’s Republic of China
AASHE Resource Center

Parts of the AASHE Resource Center are still under development. Items that are not underlined represent resources that we intend to develop, but have not yet completed. Items followed by a lock icon are (or will be) members-only resources, since we depend on member dues to support their development and maintenance.

AASHE Publications

- AASHE Bulletin archives
- AASHE Digest: An Annual Review of Campus Sustainability
- Campus Sustainability Officer Position and Salary Surveys
- How-to Guides

General Resources for Campus Sustainability

- Funding mechanisms for sustainability in higher education
- Assessment tools, reports, and indicators
- Campus sustainability profiles
- Organizations and higher education associations
- Articles, journals, books, etc. (general)
- Discussion lists and electronic newsletters
- Calendar of campus sustainability events

Institutional Commitment

- Strategic plans that include sustainability
- Master plans that include sustainability
- Campus sustainability policy bank (campus sustainability policies by category)
- Campus sustainability officers (salary survey, directory, job descriptions)
- Campus sustainability websites

Academics

- Academic programs related to sustainability
- Academic centers related to sustainability
- Courses on 'campus sustainability'
- Syllabi
- Sustainability Faculty Development Workshops
- Teaching resources (maps, posters, videos)

Operations

- Building
- Energy & global warming
- Food & dining
- Groundskeeping/landscaping
- Investment
- Purchasing/procurement
- Recycling & waste minimization
- Transportation and parking
- Water

**Campus Culture**

- Dorm vs dorm sustainability competitions (an AASHE-hosted best practices sharing website)
- Outreach materials for campus sustainability (posters, flyers, tabletop signs, etc.)
- Student organizations focused on sustainability
- Peer to peer sustainability outreach campaigns (Eco-Reps etc.)
- Sustainability themed housing and model dorm rooms
- Surveys of sustainability awareness, attitudes, and values
- Alumni sustainability networks

*Please email additions, updates and suggestions for improving this resource to resources@aashe.org.*

Source: http://www.aashe.org/resources/resource_center.php
COLLEGE SUSTAINABILITY REPORT CARD

A Review of Campus & Endowment Policies at Leading Institutions

2008

SUSTAINABLE ENDOWMENTS INSTITUTE
SUSTAINABLE ENDOWMENTS INSTITUTE

The Sustainable Endowments Institute is a Cambridge-based nonprofit organization engaged in research and education to advance sustainability in campus operations and endowment practices. Founded in 2005, the Institute is a special project of Rockefeller Philanthropy Advisors.

SUPPORTERS

Rockefeller Brothers Fund
The Rockefeller Brothers Fund promotes social change that contributes to a more just, sustainable, and peaceful world. Through its grantmaking, the Fund supports efforts to expand knowledge, clarify values and critical choices, nurture creative expression, and shape public policy. The Fund’s programs are intended to develop leaders, strengthen institutions, engage citizens, build community, and foster partnerships that include government, business, and civil society. Respect for cultural diversity and ecological integrity pervades the Fund’s activities.

V. Kann Rasmussen Foundation
The V. Kann Rasmussen Foundation emphasizes environmental grantmaking to strengthen environmental research and education, and to further the involvement of an informed public in environmental decision making. In all of their grants, the trustees seek to emphasize collaboration across disciplines and among institutions and peoples. Working with the grantees, the Foundation hopes to achieve results that benefit society, and that reflect the integrity, seriousness and innovative spirit that were distinctive marks of Villum Kann Rasmussen.

Nathan Cummings Foundation
The Nathan Cummings Foundation is rooted in the Jewish tradition and committed to democratic values and social justice, including fairness, diversity, and community. The Foundation seeks to build a socially and economically just society that values and protects the ecological balance for future generations; promotes humane health care; and fosters arts and culture that enriches communities.

Cover Image: Watercolor of Convolvulus by Andreas Friedrich Happe (1733-1802)
Courtesy of Hunt Institute for Botanical Documentation,
Carnegie Mellon University, Pittsburgh, Pennsylvania
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>4</td>
</tr>
<tr>
<td>Snapshot of School Grades</td>
<td>8</td>
</tr>
<tr>
<td>Sustainability Innovator Awards</td>
<td>10</td>
</tr>
<tr>
<td>Overview of Categories</td>
<td>12</td>
</tr>
<tr>
<td>School Profiles</td>
<td>28</td>
</tr>
<tr>
<td>Methods</td>
<td>228</td>
</tr>
<tr>
<td>Indicators</td>
<td>230</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>234</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

The College Sustainability Report Card is the only comparative evaluation of campus and endowment sustainability activities at colleges and universities in the United States and Canada. In contrast to the academic focus on sustainability in research and teaching, the Report Card examines colleges and universities, as institutions, through the lens of sustainability.

Sustainability signifies meeting the needs of the present without compromising the ability of future generations to meet their own needs. Are these considerations guiding how resources are managed in campus operations and endowment practices? The Report Card is designed to identify colleges and universities that are leading by example on sustainability. The aim is to provide accessible information for schools to learn from each other’s experiences and establish more effective sustainability policies.

Just as the grading system serves as an incentive in the classroom, the Report Card’s grading system seeks to encourage sustainability as a priority in college operations and endowment investment practices by offering independent yearly assessments of progress. The focus is on policies and practices in eight main categories:

- Administration
- Climate Change & Energy
- Food & Recycling
- Green Building
- Transportation
- Endowment Transparency
- Investment Priorities
- Shareholder Engagement

Now in its second year, the College Sustainability Report Card covers the colleges and universities with the 200 largest endowments in the United States and Canada, representing more than $343 billion in endowment assets, or more than 80 percent of all university endowments. It doubles the number of schools included in the first edition of the Report Card and provides insights into recent trends.

TRENDS

As prominent institutions of higher education, these 200 schools have resources to become leaders in aligning sustainable campus and endowment practices with their educational missions. Have they made progress in this regard? For the schools that appear in both the 2007 and 2008 editions of the Report Card, the trend is generally positive:

- More than two out of three schools (68 percent) improved their overall grade. More schools are taking action on sustainability measures, in part reflecting increasing concern about climate change and the realities of rising oil and gas prices. Overall school grades improved from a “C” average to a “C+” average with 13 percent of schools improving by at least one full letter grade (e.g. from “C-” to “B-”). See list on page 7 and Snapshot section on pages 8–9.

- Schools are taking on climate change through aggressive carbon reduction commitments. A significant shift occurred in addressing climate change, with the proportion of schools committing to reductions in carbon emissions more than tripling (from 14 to 50 percent). Notably, more than 25 percent of the schools have committed to achieving carbon neutrality in the long term by signing the American College and University Presidents Climate Commitment. For more details, see page 14.

- Increasing use of local food drives significant grade improvement. The number of schools reporting that they buy at least some food from local farms/producers grew from 63 to 84 percent. The “A” grades in Food & Recycling almost doubled, jumping from 20 to 38 percent. For more details, see page 16.

- Green building policies are becoming more widespread. The percentage of schools with green building policies increased from 48 to 69 percent. For more details, see page 18.

- Endowment investments in renewable energy funds increased dramatically. The percentage of schools with current endowment investments in renewable energy funds, or similar investment opportunities, more than tripled from 9 to 31 percent. Partly because of these investments, the “A” grades in the Investment Priorities category increased from 13 to 38 percent. For more details, see page 24.

- Some schools have lower grades due to assessment of new category and indicators. Roughly 10 percent of schools had a slight decline in their overall grades, but none dropped by a full letter. The reasons for this drop varied, but in most cases reflected the increasing rigor of the evaluation indicators and the addition of the Transportation category.

To find out how these trends are reflected in specific schools, refer to the Snapshot section on pages 8–9, which provides a list of all 200 schools along with their overall grades. Arrows indicate whether the grade has improved or declined for schools covered in both editions of the Report Card.
KEY FINDINGS

In the 200 schools surveyed this year, the level of campus sustainability initiatives far outpaces that of endowment sustainability activity. The chart (at right) illustrates the percentage of “A” grades in each of the eight categories. For all schools in the College Sustainability Report Card 2008, key findings include:

- **Almost one in three schools earned an overall grade of “B-” or better.** The cumulative grade distribution is as follows: 3 percent of schools earned “A” level grades, 28 percent earned “B” level grades, 41.5 percent earned “C” level grades, 25.5 percent earned “D” level grades and 2 percent earned “F” level grades.

- **Campus sustainability initiatives outshine endowment sustainability activity.** Strong performance across all five campus categories resulted in a collective total of only 106 “F” grades. In contrast, a widespread lack of endowment sustainability activity resulted in 131 “F” grades in the Shareholder Engagement category and 116 “F” grades in the Endowment Transparency category.

- **Six schools are recognized as overall College Sustainability Leaders.** Schools whose campus operations and endowment practices merited an overall grade of “A-” qualify as College Sustainability Leaders—our highest recognition. The schools are: Carleton College, Dartmouth College, Harvard University, Middlebury College, University of Vermont, and University of Washington.

- **More than two dozen schools attained Campus Sustainability Leader status.** High marks for all 5 campus categories resulted in 25 colleges and universities achieving the Campus Sustainability Leader designation. All such schools received an average grade of “A-” or better for the campus categories. See sidebar on page 7.

- **Only three schools qualify as Endowment Sustainability Leaders.** Carleton College, Dartmouth College, and Williams College were the only schools to receive an average grade of “A-” or better across the three endowment categories.

- **A significant percentage of schools have endowment investments in renewable energy funds.** Currently, 19 percent of schools report having endowment investments in renewable energy funds. An additional 17 percent report exploring endowment investments in this area. As a result of this and other factors, 22 percent achieved “A” grades in the Investment Priorities category. For more details, see page 24.

- **Schools are weakest in Shareholder Engagement and Endowment Transparency categories.** The weakest category was Shareholder Engagement, with an average grade of “D-”; 66 percent of schools received an “F” grade while only 11 percent attained an “A.” Similarly, schools fared poorly in the Endowment Transparency category, receiving an average grade of “D”; overall, 58 percent of schools received an “F” grade, while only 4 percent earned an “A” grade. For more details, see pages 22 and 26.

- **Schools perform best in Food & Recycling category.** An impressive 29 percent of schools earned an “A” grade in this category while only 3 percent of schools received an “F” grade. Notably, 70 percent of schools devote at least a portion of food budgets to buying from local farms and/or producers. For more details, see page 16.

- **More than one in three schools have full-time staff dedicated to sustainability.** A considerable number of schools have recognized the need for full-time campus sustainability administrators. Currently, 37 percent report having dedicated sustainability staff with several additional schools announcing imminent hiring plans. For the Administration category as a whole, 21 percent of schools achieved an “A” grade. For more details, see page 12.

- **Increased attention to climate change reflected in aggressive carbon reduction commitments.** With the urgency of confronting climate change receiving increasing attention, almost half the schools have made a commitment to carbon reduction.

Two out of three schools (68 percent) improved their overall grade.
Almost one in three schools have committed to achieving carbon neutrality in the long term by signing the American College and University Presidents Climate Commitment. Many schools are already taking action with 37 percent purchasing at least some renewable energy while 34 percent have onsite wind and/or solar energy production. For more details, see page 14.

- **Three in five schools have green building projects.** A substantial 61 percent of schools have at least one building certified through the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system or are in the process of constructing one. Notably, however, only 18 percent received an “A” grade in the Green Building category because many schools lack comprehensive green building policies. For more details, see page 18.

- **The Transportation category, new this year, shows significant positive activity.** Hybrid or electric vehicles can be found in fleets at 42 percent of schools. Biodiesel is made and/or used at 31 percent of schools, and 23 percent of schools have bicycle-sharing programs, encouraging the use of alternative transportation. For more details, see page 20.

For further facts and analysis, please refer to the eight category summaries on pages 12–27 and the individual school profiles. The category summaries provide descriptions of each category and brief highlights of leading schools in each group. Each category also recognizes leadership by including a list of schools that received an “A” grade.

In all, 88 percent of schools participated in at least one of the three research surveys.

**ABOUT THE SCHOOLS**

The *College Sustainability Report Card 2008* evaluates the colleges and universities in the United States and Canada with the 200 largest endowments. The schools are located in 44 states, the District of Columbia, and 4 Canadian provinces.

Policies were reviewed at 129 private institutions with $251 billion in combined endowment assets and at 71 public institutions with $92 billion in combined endowment assets. The total endowment assets of the schools equal more than $343 billion. The 200 schools are a mix of large and small institutions of higher education. Together, they count more than four million currently enrolled students.

For more information on the selection process, please refer to full Methods section page 228.

**OVERALL COLLEGE SUSTAINABILITY LEADERS**

<table>
<thead>
<tr>
<th>Carleton College</th>
<th>Middlebury College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dartmouth College</td>
<td>University of Vermont</td>
</tr>
<tr>
<td>Harvard University</td>
<td>University of Washington</td>
</tr>
</tbody>
</table>

**METHODS OVERVIEW**

Data collection for the report took place from June through September 2007. For the five sections related to campus management (Administration, Climate Change & Energy, Food & Recycling, Green Building, and Transportation), information was gathered first from publicly available documentation. Then, three surveys were sent to each school: 1) A Campus Survey covering the Administration, Climate Change & Energy, Green Building, and Transportation categories; 2) A Dining Services Survey covering the Food & Recycling category; and 3) An Endowment Survey covering the Endowment Transparency, Investment Priorities, and Shareholder Engagement categories.

The response rate to the Campus Survey was 75 percent, whereas 65 percent completed the Dining Services Survey and 45 percent responded to the Endowment Survey. In all, 88 percent of schools participated in at least one of the three surveys.

All 39 indicators used for grading are described in the Indicators section of this report on page 230. Each school earned numerical points in proportion to its policies and practices for each indicator. A predetermined scale, based on points earned for the indicators, was then used to determine letter grades for each of the eight categories. To simplify grading, only full letter grades (i.e., no plus or minus) of A, B, C, D, and F were given in the five campus management categories and the three endowment-related categories. The eight equally weighted category grades were totaled to calculate a grade point average (GPA) on a 4.0 scale. The GPA was then translated into an overall sustainability grade, ranging from “A” to “F,” using a standard grading scale. See page 228 for further information about methods.

**THE SUSTAINABILITY LEADERSHIP CHALLENGE**

Renowned management expert Peter Drucker once recommended that, “The best way to predict the future is to create it.” By highlighting the need for vision and commitment, this observation epitomizes the sustainability leadership challenge faced by colleges and universities. It entails embracing a long-term perspective and a willingness to encourage a participatory problem-solving process. This empowering approach to creating a sustainable future characterizes the schools that the Report Card recognizes as leaders.
Applying Drucker’s insights requires leading by example and making difficult choices about the allocation of resources. For instance, lessons learned about sustainability in the classroom, in the library, and in the laboratory are reinforced when they take place in energy-efficient buildings, powered by renewable energy and accessed via biking/walking paths or mass transit. The Report Card looks at whether schools prioritize such sustainability criteria in campus operations and planning.

“The best way to predict the future is to create it.”
- Peter Drucker

Incorporating a preference for sustainability in campus operations is an investment bringing both returns in energy savings and improvement in quality of life. Adopting this perspective also presents educational opportunities for participation in decision-making on a variety of sustainability options on campus.

Leadership in undertaking these initiatives does not necessarily require large financial resources. As the Report Card illustrates in each category’s section on “Leading by Example,” many smaller or less wealthy schools have made impressive strides. This point is highlighted by the Sustainability Innovator Awards given only to schools that had noteworthy sustainability policies but did not have endowments large enough to be included in the Report Card.

The Report Card regards endowment practices as a vital component of a school’s sustainability efforts. Choices about the transparency of the endowment, its investment priorities, and shareholder decisions are all expressions of a school’s values and priorities—the type of future it is helping to create with its financial resources. For example, how many schools “connect the dots” between supporting campus sustainability and leading by example in shareholder engagement to advance energy efficiency and other corporate sustainability policies?

Meeting the sustainability leadership challenge in relation to endowment practices and campus operations requires acknowledging that maintaining the status quo is a choice. While it may be more due to inertia than to active consideration, such a choice has repercussions on the sustainability of both the endowment and the overall economy. As oil climbs toward $100 a barrel, the synergy between economic realities and sustainability in endowment investment practices is becoming more evident. These developments are reflected in the trend that the Report Card documents towards increased endowment investments in renewable energy funds. Looking ahead, the question about campus operations and endowment practices is: In what other ways will colleges and universities help create the future by rising to the sustainability leadership challenge?
### SNAPSHOT (A - R)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Institution Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Agnes Scott College</td>
</tr>
<tr>
<td>D+</td>
<td>American University</td>
</tr>
<tr>
<td>B</td>
<td>Amherst College</td>
</tr>
<tr>
<td>B-</td>
<td>Arizona State University</td>
</tr>
<tr>
<td>D+</td>
<td>Auburn University</td>
</tr>
<tr>
<td>B-</td>
<td>Bates College</td>
</tr>
<tr>
<td>C+</td>
<td>Berea College</td>
</tr>
<tr>
<td>D+</td>
<td>Berry College</td>
</tr>
<tr>
<td>C</td>
<td>Boston College</td>
</tr>
<tr>
<td>C</td>
<td>Boston University</td>
</tr>
<tr>
<td>B-</td>
<td>Bowdoin College</td>
</tr>
<tr>
<td>C</td>
<td>Brandeis University</td>
</tr>
<tr>
<td>B+</td>
<td>Brown University</td>
</tr>
<tr>
<td>C+</td>
<td>Bryn Mawr College</td>
</tr>
<tr>
<td>C-</td>
<td>Bucknell University</td>
</tr>
<tr>
<td>C</td>
<td>California Institute of Technology</td>
</tr>
<tr>
<td>A-</td>
<td>Carleton College</td>
</tr>
<tr>
<td>B-</td>
<td>Carnegie Mellon University</td>
</tr>
<tr>
<td>C</td>
<td>Case Western Reserve University</td>
</tr>
<tr>
<td>C-</td>
<td>Claremont McKenna College</td>
</tr>
<tr>
<td>B</td>
<td>Clark University</td>
</tr>
<tr>
<td>C+</td>
<td>Clemson University</td>
</tr>
<tr>
<td>C+</td>
<td>Colby College</td>
</tr>
<tr>
<td>D+</td>
<td>Colgate University</td>
</tr>
<tr>
<td>C</td>
<td>College of the Holy Cross</td>
</tr>
<tr>
<td>D-</td>
<td>College of the Ozarks</td>
</tr>
<tr>
<td>D-</td>
<td>College of William &amp; Mary</td>
</tr>
<tr>
<td>C</td>
<td>Colorado College</td>
</tr>
<tr>
<td>B+</td>
<td>Columbia University</td>
</tr>
<tr>
<td>B</td>
<td>Cornell University</td>
</tr>
<tr>
<td>D</td>
<td>Creighton University</td>
</tr>
<tr>
<td>A-</td>
<td>Dartmouth College</td>
</tr>
<tr>
<td>C</td>
<td>Davidson College</td>
</tr>
<tr>
<td>D-</td>
<td>Denison University</td>
</tr>
<tr>
<td>D-</td>
<td>DePaul University</td>
</tr>
<tr>
<td>D+</td>
<td>DePauw University</td>
</tr>
<tr>
<td>B+</td>
<td>Dickinson College</td>
</tr>
<tr>
<td>D+</td>
<td>Drew University</td>
</tr>
<tr>
<td>C-</td>
<td>Drexel University</td>
</tr>
<tr>
<td>B+</td>
<td>Duke University</td>
</tr>
<tr>
<td>C+</td>
<td>Earlham College</td>
</tr>
<tr>
<td>B-</td>
<td>Emory University</td>
</tr>
<tr>
<td>C-</td>
<td>Florida State University</td>
</tr>
<tr>
<td>D</td>
<td>Fordham University</td>
</tr>
<tr>
<td>C</td>
<td>Franklin &amp; Marshall College</td>
</tr>
<tr>
<td>D-</td>
<td>Franklin W. Olin College of Engineering</td>
</tr>
<tr>
<td>B-</td>
<td>Furman University</td>
</tr>
<tr>
<td>D+</td>
<td>The George Washington University</td>
</tr>
<tr>
<td>B-</td>
<td>Georgetown University</td>
</tr>
<tr>
<td>C</td>
<td>Georgia Institute of Technology</td>
</tr>
<tr>
<td>D-</td>
<td>Gettysburg College</td>
</tr>
<tr>
<td>B</td>
<td>Grinnell College</td>
</tr>
<tr>
<td>C+</td>
<td>Hamilton College</td>
</tr>
<tr>
<td>A-</td>
<td>Harvard University</td>
</tr>
<tr>
<td>C</td>
<td>Haverford College</td>
</tr>
<tr>
<td>F</td>
<td>Howard University</td>
</tr>
<tr>
<td>D</td>
<td>Illinois Institute of Technology</td>
</tr>
<tr>
<td>C</td>
<td>Indiana University</td>
</tr>
<tr>
<td>C</td>
<td>Iowa State University</td>
</tr>
<tr>
<td>B-</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td>F</td>
<td>The Juilliard School</td>
</tr>
<tr>
<td>D+</td>
<td>Kansas State University</td>
</tr>
<tr>
<td>D-</td>
<td>Lafayette College</td>
</tr>
<tr>
<td>D+</td>
<td>Lehigh University</td>
</tr>
<tr>
<td>C-</td>
<td>Louisiana State University</td>
</tr>
<tr>
<td>D+</td>
<td>Loyola Marymount University</td>
</tr>
<tr>
<td>C-</td>
<td>Loyola University of Chicago</td>
</tr>
<tr>
<td>D-</td>
<td>Loyola University of New Orleans</td>
</tr>
<tr>
<td>B</td>
<td>Macalester College</td>
</tr>
<tr>
<td>C-</td>
<td>Marquette University</td>
</tr>
<tr>
<td>B+</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>B-</td>
<td>McGill University</td>
</tr>
<tr>
<td>C+</td>
<td>Miami University (OH)</td>
</tr>
<tr>
<td>B</td>
<td>Michigan State University</td>
</tr>
<tr>
<td>A-</td>
<td>Middlebury College</td>
</tr>
<tr>
<td>D</td>
<td>Mississippi State University</td>
</tr>
<tr>
<td>B-</td>
<td>Mount Holyoke College</td>
</tr>
<tr>
<td>D-</td>
<td>National University</td>
</tr>
<tr>
<td>C+</td>
<td>New York University</td>
</tr>
<tr>
<td>D</td>
<td>North Carolina State University</td>
</tr>
<tr>
<td>B</td>
<td>Northeastern University</td>
</tr>
<tr>
<td>C+</td>
<td>Northwestern University</td>
</tr>
<tr>
<td>B+</td>
<td>Oberlin College</td>
</tr>
<tr>
<td>D+</td>
<td>Occidental College</td>
</tr>
<tr>
<td>C+</td>
<td>Ohio State University</td>
</tr>
<tr>
<td>D+</td>
<td>Oklahoma State University</td>
</tr>
<tr>
<td>B-</td>
<td>Oregon State University</td>
</tr>
<tr>
<td>B</td>
<td>Pennsylvania State University</td>
</tr>
<tr>
<td>D-</td>
<td>Pepperdine University</td>
</tr>
<tr>
<td>B</td>
<td>Pomona College</td>
</tr>
<tr>
<td>B-</td>
<td>Princeton University</td>
</tr>
<tr>
<td>C</td>
<td>Purdue University</td>
</tr>
<tr>
<td>C</td>
<td>Queens University</td>
</tr>
<tr>
<td>C+</td>
<td>Reed College</td>
</tr>
<tr>
<td>F</td>
<td>Regent University</td>
</tr>
<tr>
<td>C-</td>
<td>Rensselaer Polytechnic Institute</td>
</tr>
<tr>
<td>C-</td>
<td>Rhode Island School of Design</td>
</tr>
<tr>
<td>C-</td>
<td>Rhodes College</td>
</tr>
<tr>
<td>C+</td>
<td>Rice University</td>
</tr>
</tbody>
</table>

Overall College Sustainability Leader
- Campus Sustainability Leader
- Endowment Sustainability Leader
- Higher Grade Than Last Year
- Lower Grade Than Last Year
- Unchanged Grade From Last Year
### SNAPSHOT (R - Z)

<table>
<thead>
<tr>
<th>Grade</th>
<th>University Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-</td>
<td>Rochester Institute of Technology</td>
</tr>
<tr>
<td>C</td>
<td>The Rockefeller University</td>
</tr>
<tr>
<td>D+</td>
<td>Rollins College</td>
</tr>
<tr>
<td>D-</td>
<td>Rush University</td>
</tr>
<tr>
<td>C</td>
<td>Rutgers, The State Univ. of New Jersey</td>
</tr>
<tr>
<td>D-</td>
<td>Saint Louis University</td>
</tr>
<tr>
<td>F</td>
<td>Samford University</td>
</tr>
<tr>
<td>B-</td>
<td>Santa Clara University</td>
</tr>
<tr>
<td>C</td>
<td>Sewanee: The University of the South</td>
</tr>
<tr>
<td>B-</td>
<td>Smith College</td>
</tr>
<tr>
<td>C-</td>
<td>Southern Methodist University</td>
</tr>
<tr>
<td>D+</td>
<td>Southwestern University</td>
</tr>
<tr>
<td>D-</td>
<td>Spelman College</td>
</tr>
<tr>
<td>C-</td>
<td>St. John's University (NY)</td>
</tr>
<tr>
<td>B-</td>
<td>St. Lawrence University</td>
</tr>
<tr>
<td>C-</td>
<td>St. Olaf College</td>
</tr>
<tr>
<td>B+</td>
<td>Stanford University</td>
</tr>
<tr>
<td>B-</td>
<td>Swarthmore College</td>
</tr>
<tr>
<td>B-</td>
<td>Syracuse University</td>
</tr>
<tr>
<td>C-</td>
<td>Texas A&amp;M University</td>
</tr>
<tr>
<td>D+</td>
<td>Texas Christian University</td>
</tr>
<tr>
<td>D</td>
<td>Texas Tech University</td>
</tr>
<tr>
<td>D-</td>
<td>Trinity University (TX)</td>
</tr>
<tr>
<td>B+</td>
<td>Tufts University</td>
</tr>
<tr>
<td>C</td>
<td>Tulane University</td>
</tr>
<tr>
<td>C+</td>
<td>Union College (NY)</td>
</tr>
<tr>
<td>B-</td>
<td>University at Buffalo &amp; SUNY</td>
</tr>
<tr>
<td>D+</td>
<td>University of Alabama</td>
</tr>
<tr>
<td>C-</td>
<td>University of Alaska</td>
</tr>
<tr>
<td>C</td>
<td>University of Alberta</td>
</tr>
<tr>
<td>C+</td>
<td>University of Arizona</td>
</tr>
<tr>
<td>C</td>
<td>University of Arkansas</td>
</tr>
<tr>
<td>B+</td>
<td>University of British Columbia</td>
</tr>
<tr>
<td>B+</td>
<td>University of California</td>
</tr>
<tr>
<td>C-</td>
<td>University of Chicago</td>
</tr>
<tr>
<td>C+</td>
<td>University of Cincinnati</td>
</tr>
<tr>
<td>B-</td>
<td>University of Colorado</td>
</tr>
<tr>
<td>C</td>
<td>University of Connecticut</td>
</tr>
<tr>
<td>D+</td>
<td>University of Dayton</td>
</tr>
<tr>
<td>C-</td>
<td>University of Delaware</td>
</tr>
<tr>
<td>B-</td>
<td>University of Florida</td>
</tr>
<tr>
<td>D</td>
<td>University of Georgia</td>
</tr>
<tr>
<td>D</td>
<td>University of Houston</td>
</tr>
<tr>
<td>B-</td>
<td>University of Illinois</td>
</tr>
<tr>
<td>B-</td>
<td>University of Iowa</td>
</tr>
<tr>
<td>C-</td>
<td>University of Kansas</td>
</tr>
<tr>
<td>C</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>C+</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>C+</td>
<td>University of Maryland</td>
</tr>
<tr>
<td>C+</td>
<td>University of Massachusetts</td>
</tr>
<tr>
<td>C+</td>
<td>University of Miami</td>
</tr>
<tr>
<td>B+</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>B</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>D-</td>
<td>University of Mississippi</td>
</tr>
<tr>
<td>C</td>
<td>University of Missouri</td>
</tr>
<tr>
<td>D+</td>
<td>University of Nebraska</td>
</tr>
<tr>
<td>B</td>
<td>University of New Hampshire</td>
</tr>
<tr>
<td>C</td>
<td>University of New Mexico</td>
</tr>
<tr>
<td>B-</td>
<td>University of North Carolina</td>
</tr>
<tr>
<td>C</td>
<td>University of Notre Dame</td>
</tr>
<tr>
<td>C</td>
<td>University of Oklahoma</td>
</tr>
<tr>
<td>B-</td>
<td>University of Oregon</td>
</tr>
<tr>
<td>B</td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td>C-</td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>C</td>
<td>University of Richmond</td>
</tr>
<tr>
<td>C</td>
<td>University of Rochester</td>
</tr>
<tr>
<td>D-</td>
<td>University of South Alabama</td>
</tr>
<tr>
<td>D+</td>
<td>University of South Florida</td>
</tr>
<tr>
<td>C+</td>
<td>University of Southern California</td>
</tr>
<tr>
<td>C-</td>
<td>University of St. Thomas (MN)</td>
</tr>
<tr>
<td>C+</td>
<td>University of Tennessee</td>
</tr>
<tr>
<td>B-</td>
<td>University of Texas</td>
</tr>
<tr>
<td>B</td>
<td>University of Toronto</td>
</tr>
<tr>
<td>D</td>
<td>University of Tulsa</td>
</tr>
<tr>
<td>C</td>
<td>University of Utah</td>
</tr>
<tr>
<td>A-</td>
<td>University of Vermont</td>
</tr>
<tr>
<td>B-</td>
<td>University of Virginia</td>
</tr>
<tr>
<td>A-</td>
<td>University of Washington</td>
</tr>
<tr>
<td>B+</td>
<td>University of Wisconsin</td>
</tr>
<tr>
<td>C</td>
<td>University of Wyoming</td>
</tr>
<tr>
<td>C+</td>
<td>Vanderbilt University</td>
</tr>
<tr>
<td>B</td>
<td>Vassar College</td>
</tr>
<tr>
<td>C</td>
<td>Villanova University</td>
</tr>
<tr>
<td>C-</td>
<td>Virginia Commonwealth University</td>
</tr>
<tr>
<td>C+</td>
<td>Virginia Polytechnic Institute and State U.</td>
</tr>
<tr>
<td>D-</td>
<td>Wabash College</td>
</tr>
<tr>
<td>D</td>
<td>Wake Forest University</td>
</tr>
<tr>
<td>B-</td>
<td>Washington and Lee University</td>
</tr>
<tr>
<td>C+</td>
<td>Washington State University</td>
</tr>
<tr>
<td>C</td>
<td>Washington University in St. Louis</td>
</tr>
<tr>
<td>C+</td>
<td>Wellesley College</td>
</tr>
<tr>
<td>B</td>
<td>Wesleyan University</td>
</tr>
<tr>
<td>C-</td>
<td>West Virginia University</td>
</tr>
<tr>
<td>C-</td>
<td>Wheaton College (IL)</td>
</tr>
<tr>
<td>C-</td>
<td>Whitman College</td>
</tr>
<tr>
<td>C+</td>
<td>Willamette University</td>
</tr>
<tr>
<td>B+</td>
<td>Williams College</td>
</tr>
<tr>
<td>D-</td>
<td>Worcester Polytechnic Institute</td>
</tr>
<tr>
<td>B+</td>
<td>Yale University</td>
</tr>
<tr>
<td>C-</td>
<td>Yeshiva University</td>
</tr>
<tr>
<td>C-</td>
<td>Yeshiva University</td>
</tr>
</tbody>
</table>
While the College Sustainability Report Card 2008 highlights the schools with the 200 largest endowments in the United States and Canada, sustainability innovators among colleges and universities with smaller endowments also merit recognition.

Accordingly, the Sustainable Endowments Institute solicited nominations for schools not included in the Report Card 2008. The Institute accepted nominations—consisting of a detailed description of sustainability initiatives—for any college or university in the United States or Canada that was not one of the 200 schools featured in the Report Card. For more details on the nomination and selection process, please see the Methods section on page 228.

The awards recognize school initiatives for either a comprehensive sustainability strategy or a specific category in the Report Card.

After reviewing the nominations, the Sustainable Endowments Institute chose four winners for the 2008 Sustainability Innovator Awards:

- **College of the Atlantic** (Maine)
  Comprehensive Sustainability Strategy

- **Grand Valley State University** (Michigan)
  Comprehensive Sustainability Strategy

- **University of Calgary** (Alberta)
  Comprehensive Sustainability Strategy

- **Seattle University** (Washington)
  Food & Recycling

**COLLEGE OF THE ATLANTIC**

**Comprehensive Sustainability Strategy**

College of the Atlantic strives to reduce carbon emissions and its overall footprint on the planet. Offering only one degree, human ecology, the entire college community is centered on the concept of sustainability. The college has committed to going carbon neutral by the end of 2007 through reducing emissions and purchasing offsets. As part of this commitment, the college recently signed a three-year contract with an in-state, low-impact hydroelectric power plant to provide 100 percent of its electricity needs.

The campus features recycling stations and compost bins (including Green Cones conveniently placed around campus for composting small amounts of food waste from dormitories). Other sustainability measures include fluorescent lightbulbs, fresh local farm produce in the dining hall (some of it from the college’s own farm), and student dorms under construction that will be heated with wood pellets.

When making practical decisions regarding sustainability, the entire college is involved. The community meets in a small auditorium to decide which trees need to be removed for the new dorms, what furniture is the most sustainable, and how to make this year’s Earth Day celebration even more successful.

In relation to the endowment, the college recently created a shareholder advisory committee. It supports shareholder proposals that foster sustainability and reduce carbon emissions at the companies in which the college’s endowment is invested.
**GRAND VALLEY STATE UNIVERSITY**
**Comprehensive Sustainability Strategy**

Grand Valley State University (GVSU) began its comprehensive planning to become a sustainable campus in 2004. A “triple bottom line” report based on environmental, social, and economic factors was developed in 2005. In the past year, the university’s president signed the Talloires Declaration and the American College and University Presidents Climate Commitment.

Net energy use per square foot has decreased for the past five years; dining services has reduced water use by eliminating trays; and a student-developed sustainability guide is given to all incoming first-year and MBA students. Energy conservation competitions between student living centers have been developed, with winners choosing sustainability projects funded by the money saved.

GVSU hired a campus sustainability director, who, in turn, helped create a Community Sustainability Partnership, including more than 125 businesses, nonprofit organizations, educational institutions, and the city of Grand Rapids. The stakeholders in the partnership share best practices in sustainability, a process facilitated by quarterly summits.

The university has committed to LEED-certified construction procedures for all new buildings, and has established a bus shuttle system to connect its different campuses, reducing private vehicle use. Through these and other initiatives, GVSU has developed an overall commitment to sustainability that integrates campus operations, student involvement, curricular development, and community engagement.

---

**UNIVERSITY OF CALGARY**
**Comprehensive Sustainability Strategy**

In 2006, the University of Calgary embarked on a comprehensive strategy for campus sustainability. Under the organizational structure of the Sustainability Stewardship Working Group, chaired by the director of campus sustainability, 13 interdisciplinary teams have a mandate to research, identify, implement, and report on initiatives that directly address priorities for campus sustainability.

The teams address the following issues: governance and senior administration; curriculum and research; participation, collaboration, and communication; student clubs; procurement; transportation and mobility; energy and atmosphere; water management; land planning and new buildings; operations and maintenance; solid waste management; and health, safety, and wellness.

Each team is comprised of students, faculty, and staff representing a cross section of faculties and departments, and will soon be co-chaired by both a staff and a faculty member. By including all campus stakeholders, important cross-disciplinary solutions are developed, pan-campus dialogue is fostered, opportunities for leadership emerge, and the journey toward sustainability is furthered in a comprehensive way.

The university envisions a model of continuous improvement. Research enhances campus operations; operations provide opportunities for applied research; and the new knowledge informs curriculum development and the creation of future leaders.

---

**SEATTLE UNIVERSITY**
**Food & Recycling**

Seattle University proves that even urban campuses in large cities can run successful composting programs. Between 1995 and 2002, the university collected preconsumer food waste, waxed cardboard, and coffee grounds from campus restaurants and cafés, all of which was sent to a nearby compost facility. In 2002, the university built its own compost facility, which helped its new LEED-certified student center achieve a LEED innovation point.

Located just off campus, adjacent to an apartment building and restaurants, in a neighborhood of homes and businesses, the compost facility has now operated for five years without odor or rodent issues. The facility annually turns 15 tons of kitchen food waste and landscaping waste (both from campus operations and local landscaping companies) into compost, which is applied on planting beds to improve soil quality. A full-time recycling/composting technician position was added to the staff to help manage the program. This person gives frequent tours to students, staff, and faculty, as well as to other universities seeking to model Seattle University’s program.

The compost facility closes the recycling loop on campus, reduces greenhouse gas emissions by eliminating the need for a truck to haul food waste and compost between the campus and a facility elsewhere, and produces compost of exceptional quality—better than the university could purchase commercially, according to lab analysis.

---

In relation to the endowment, the College of the Atlantic recently created a shareholder advisory committee. It supports shareholder proposals that foster sustainability and reduce carbon emissions at the companies in which the college’s endowment is invested.
The Administration category primarily addresses action regarding sustainability by colleges and universities at the administrative or trustee level. This includes policies or commitments to sustainability in the institution’s mission statement or master plan, and also commitments to local, national, or international sustainability agreements. Points are awarded to schools that have institutionalized the position of sustainability coordinator; those that have an active advisory council to guide the administration on campus sustainability; and those that have an office or center specifically focused on achieving campus sustainability goals. Green purchasing policies are also examined, along with the level of student involvement in campus sustainability efforts. Additionally, schools receive points for having a website that serves as a resource for community involvement and education on sustainability.

KEY FINDINGS

- More than one in three schools have full-time staff dedicated to sustainability. A considerable number of schools have recognized the need for full-time campus sustainability administrators. Currently, 37 percent report having dedicated sustainability staff, while several additional schools have announced imminent hiring plans.

- More than one in five schools have an office of sustainability. An office or center specifically focused on achieving campus sustainability goals exists at 22 percent of schools.

- Almost two in three schools have a website dedicated to campus sustainability. An increasing number (65 percent) of schools use a website to communicate, both to the campus community and to the public, about sustainability initiatives.

- More than two in three schools have a campus advisory committee on sustainability. A large majority of schools (68 percent) have a committee with multiple stakeholders (e.g., faculty, staff, students) that advises the administration on issues of campus sustainability.

- Increased attention to climate change is reflected in aggressive carbon reduction commitments. An impressive 45 percent of schools have made a commitment to carbon reduction.

- A majority of schools are members of the Association for the Advancement of Sustainability in Higher Education (AASHE). More than half the schools (51 percent) are among the 300 campus members of AASHE.

- A small group of schools have implemented innovative EcoRep programs. EcoRep programs designate a group of students to serve as sustainability advocates in college residences. These students are often considered “green” residence advisors. A partial list of schools with EcoRep programs includes Brown University, Carnegie Mellon University, Columbia University, Rice University, Tufts University, University of Texas, and University of Vermont.

- The average grade for the Administration category was “C+.” For a full account of school performance by grade, please refer to the chart on the next page.

LEADING BY EXAMPLE

The list of Administration Leaders is comprised of 42 schools that earned “A” grades in this category. Below is a sample of six very different institutions that all qualified for the list. These summaries are based on data from each school’s profile page.

In 1996, Berea College made an institutional commitment to embody sustainability in various aspects of its overall operation. Twelve full-time employees, including a sustainability coordinator, as well as student work-study positions, are assigned to further the college’s sustainability initiatives. A stated goal of achieving a 45 percent reduction in campus energy use by 2015 demonstrates Berea College’s effort.
Harvard University has one of the largest campus sustainability programs in the country. The Harvard Green Campus Initiative (HGCI) is responsible for implementing Harvard’s campus-wide sustainability principles and has a staff of 20 full-time professionals and 40 part-time student interns, offering various campus sustainability support services, a project research and advocacy function, an extensive website, two courses, and a revolving $12 million Green Campus Loan Fund. The HGCI has responsibility for over 12 university committees and steering groups, all of which were established to promote sustainability initiatives on campus and encourage student involvement. Successes of the HGCI include a high-performance building service for both new and existing buildings; a range of effective behavioral change programs that have produced substantial energy savings in residential dorms and laboratories; large purchases of renewable energy; on-campus solar panels; biodiesel in all campus shuttles; green cleaning in custodial services; a committed dining services policy that has resulted in a 57 percent reduction in waste thanks to aggressive recycling; and a recycling rate of over 45 percent.

Middlebury College has enshrined environmental stewardship in the second sentence of its new mission statement. The college has signed the Presidents Climate Commitment and the Talloires Declaration. Middlebury employs a sustainability coordinator and six student interns, as well as a recycling coordinator. The college has a standing environmental council that advises the president, and the trustees adopted a policy of environmental mindfulness and stewardship in 1995. The campus sustainability coordinator conducts an orientation session every other week throughout the calendar year in order to inform new employees about how to incorporate a sustainability ethic into their work.

The University of British Columbia has a sustainability office with seven permanent staff and four to five student positions, as well as a president’s sustainability advisory committee with fourteen senior administrators. In addition, 145 sustainability coordinators and 50 student residence coordinators promote sustainability across campus.

The University of California has one of the broadest-ranging sustainability initiatives of any state university system. The UC system president has signed the Presidents Climate Commitment and a University Policy on Sustainable Practices. The system-wide policy is overseen by a sustainability steering committee, which has working groups in the areas of sustainable transportation, climate change, green building renovations, sustainable operations, sustainable purchasing, recycling and waste reduction, and sustainable food systems. Each campus has an advisory committee on sustainability in addition to sustainability staff, and several campuses have complementary policies of their own. Four campuses have joined the California Climate Action Registry (CCAR) and are cataloging greenhouse gas emissions; other campuses are exploring joining the CCAR.

The University of New Hampshire established its Office of Sustainability in 1997, making it the oldest endowed university sustainability program in the country. The office is headed by a chief sustainability officer, who oversees three full-time, and four part-time, staff.

GRADE DISTRIBUTION

A 21%
B 28.5%
C 24.5%
D 13%
F 13%

ADMINISTRATION LEADERS

Arizona State University
Berea College
Bowdoin College
Carleton College
Clark University
Cornell University
Dickinson College
Duke University
Emory University
Furman University
Harvard University
Johns Hopkins University
Middlebury College
MIT
New York University
Oberlin College
Ohio State University
Oregon State University
Pennsylvania State University
Santa Clara University
St. Lawrence University
Univ. at Buffalo & SUNY
Syracuse University
Tufts University
University of Arkansas
University of British Columbia
University of California
University of Colorado
University of Florida
University of Maryland
University of Massachusetts
University of Michigan
University of New Hampshire
University of North Carolina
University of Oregon
University of Pennsylvania
University of Toronto
University of Vermont
University of Washington
Washington & Lee University
Willamette University
Yale University
Climate Change & Energy

The Climate Change & Energy category focuses on initiatives to improve energy efficiency and conservation, as well as on efforts to obtain energy from renewable sources. This may include conservation campaigns that encourage college community members to monitor their energy consumption; retrofits of appliances or power plants to make use of energy-efficient technology; conducting a carbon emissions inventory and committing to emissions reduction goals (such as signing the American College and University Presidents Climate Commitment); and making use of renewable energy, either through direct purchases of renewable energy credits or through onsite installation of clean energy resources. Points are also given to colleges that have made renewable energy investments with the potential to benefit the community beyond campus, such as public-private partnerships for off-campus development of renewable energy projects.

Almost half the schools have made a commitment to reducing their carbon emissions.

Key Findings

- Almost half the schools have made a commitment to reducing their carbon emissions. Thirty percent of schools have committed to carbon neutrality in the long-term by signing the Presidents Climate Commitment, while an additional 15 percent have made other pledges to reduce their respective carbon footprints.

- More than one in three schools purchase renewable energy. A significant number of schools (37 percent) either purchase renewable energy directly from their utility provider or buy renewable energy credits equivalent to a percentage of their campus energy use.

- Seven schools purchase 100 percent of their electricity consumption from renewable sources. Bowdoin College, Colby College, New York University, Oregon State University, University of California–Santa Cruz, University of Oklahoma, and University of Washington derive 100 percent of their electricity consumption from renewable sources (mostly wind and small-scale, low-impact hydroelectric) or compensate for their fossil-fuel derived electricity use by purchasing renewable energy credits (i.e., an investment in renewable energy equal to the amount of energy purchased from the grid).

- Over a third of schools produce renewable energy on campus. Facilities for producing solar, wind, or geothermal energy exist at 34 percent of schools.

- The average grade for the Climate Change & Energy category was “C.” For a full account of school performance by grade, please refer to the chart on the next page.

Leading by Example

The list of Climate Change & Energy Leaders is comprised of 28 schools that earned “A” grades in this category. Below is a sample of seven very different institutions that all earned high marks. These summaries are based on data from each school’s profile page.

A carbon emissions inventory has been completed at Arizona State University and will be used to develop a strategic plan to reach carbon neutral status; President Crow is a co-founder of the Presidents Climate Commitment. ASU recently issued a mandate for building temperatures to be raised two degrees in the summer and lowered two degrees in the winter. The new cogeneration plant on campus received an award from the EPA for its superior energy efficiency. Two additional solar arrays are currently under construction, with a 4-megawatt system being developed.

At Cornell University, 10 percent of the entire campus electrical use has been eliminated through the use of Lake Source Cooling to air condition campus buildings. Currently, 16 percent of electricity used by Cornell is sustainably produced, and the university is planning a combined heat and power project that will improve energy efficiency by nearly 50 percent. President Skorton has also signed the Presidents Climate Commitment.

As part of New York City’s PlaNYC 2030 Initiative, New York University has pledged to reduce greenhouse gas emissions by 30%.
At Cornell University, 10 percent of the entire campus electrical use has been eliminated through the use of Lake Source Cooling to air condition campus buildings.
FOOD & RECYCLING

The Food & Recycling category looks primarily at the policies and practices of dining services in relation to sustainability. Points are given based on the quantity and availability of locally grown food, as well as organic and sustainably produced food. The utilization of reusable dishware and eco-friendly to-go containers is also taken into consideration. The category also examines programs on recycling (campus-wide and dining specific) and composting (food as well as landscape waste).

KEY FINDINGS

- Schools perform best in Food & Recycling out of all eight categories. An impressive 29 percent of schools earned an “A” grade in this category while only 3 percent of schools received an “F” grade. The average grade for the Food & Recycling category was “B-.” For a full account of school performance by grade, please refer to the chart on the next page.

- More than two out of three schools buy food from local sources. An impressive 70 percent of schools devote at least a portion of food budgets to buying from local farms and/or producers.

- More than one in four schools offer cage-free eggs. Cage-free eggs are available at 27 percent of schools.

- More than a third of schools buy from a local dairy. A local dairy supplies dining halls at 39 percent of schools.

- A significant number of schools compost food waste or landscape waste. Food composting programs exist at 42 percent of schools, while 43 percent of schools report composting landscape waste.

- Electronic waste recycling is available at 29 percent of schools.

LEADING BY EXAMPLE

The list of Food & Recycling Leaders is comprised of 57 schools that earned “A” grades in this category. Below is a sample of 10 very different institutions that all received high marks in the Food & Recycling category. These summaries are based on data from each school’s profile page.

Carleton College purchases from 15 to 20 local farmers and producers. Dining services buys grass-fed meat and 100 percent organic flour is used in all baking. Carleton has adopted a single-stream recycling program that is expected to increase recovery rates and overall efficiency. The college has also begun composting food waste and other products made out of biodegradable material.

Iowa State University’s Farm to ISU program includes a five-year plan, which aims to have 35 percent of food purchases be sustainable, local, and organic, in addition to raising community awareness and establishing connections with Iowa farmers.

Smith College’s dining services purchases organic produce, in addition to dairy and honey, from 18 local farms. The college has removed bottled water from one to-go location and, instead, will distribute polycarbonate bottles to be refilled and reused by...
students. Produce from the college’s major supplier comes in large plastic totes to eliminate packaging waste. Food scraps are brought to a local farm to be composted.

The University of Chicago’s dining services currently purchases 11 percent of its products from local women/minority-owned businesses. Organic, fair-trade coffee is also available in the residence halls. Postconsumer food waste is composted at all residential dining locations. Facilities services operates several specialized recycling programs devoted to automotive batteries, motor oil, and other automobile-related fluids; fluorescent bulbs; waste paint; and other materials.

The University of Pennsylvania purchases from 15 to 20 local producers and offers fair-trade and organic products. Students can use their meal plans to purchase local produce at a farmers market on campus, supporting regional farmers and reducing food miles. Biodegradable to-go containers have replaced Styrofoam in the dining halls and reusable bags are offered in retail locations. Penn operates an Earth Tub composting program and will begin sending preconsumer food waste to a composting facility this year.

At Santa Clara University, 80 percent of the produce served in the dining halls comes from local farms. Fair-trade coffee, cage-free eggs, and hormone-free milk are served. Students can use their meal points to buy locally grown produce at the campus farmers market.

Tufts University’s Food Education and Action for Sustainability at Tufts (FEAST) educates the university community about food production and promotes the benefits of local farms, organic growing methods, and fair trade. Dining services purchases local apples, squash, pears, and tomatoes, as well as numerous organic items.

Washington and Lee University purchases some local food, as well as cage-free eggs and organic produce. Uncooked food is composted on site and the compost is then used on campus. Dining services uses biodegradable to-go containers and offers discounts with a reusable mug. Waste grease is used as biodiesel for the campus motor fleet, and the recycling program has a 45 percent diversion rate. The university participates in the Campus Kitchens Project, a community service initiative aimed at turning unused food from college dining halls into nourishing meals for those in need.

At Whitman College, the Low Carbon Diet program is designed to educate students about the connection between food choices and climate change. As part of the program, dining services will reduce the amount of beef it purchases by 25 percent.

Williams College spends 17 percent of its annual food budget on local purchases from numerous local producers. Purchases include grass-fed beef and pork; fair-trade coffee and bananas; cage-free eggs; milk from grass-fed, hormone-free cows; and organic produce. Williams has begun using reusable dishware and utensils for larger outdoor picnics. Dining services composts its food waste.
Three in five schools have green building projects.

At Furman University, LEED requirements were mandated by the trustees in 2001 for all new construction and building renovations. Hipp Hall is the only LEED Gold building in South Carolina. Five buildings are currently registered for LEED certification, in addition to Cliffs Cottage, a residence under construction that will be carbon neutral and LEED Platinum-certified.
In 2006, the Oberlin College trustees adopted a policy stating that all new buildings must be built to LEED Silver standards. The first new facility being designed under the policy is on track to earn LEED Gold certification. The college’s Center for Environmental Studies was selected by the Department of Energy as one of the 30 “milestone” buildings of the twentieth century, and would be LEED Platinum-certified had it not been built before the advent of the LEED system. An innovative “living machine” provides a closed-loop water use, cleansing, and re-use system.

Pennsylvania State University requires LEED certification for all new buildings and major renovations. The School of Architecture building achieved a Gold rating and the Forest Resources building achieved a Silver rating. The Rec Hall Fitness Center project will achieve a Silver rating and Penn State’s Lubrano Park will be the first ever LEED-certified baseball stadium.

Union College has a green building policy and Energy Star-rated buildings. In addition, Union has renovated one of its apartment houses as a sustainable living lab including water reclamation, solar power, green construction and plant material, low-flow toilets, and computer-monitored metering to allow students to compare energy use.

The University of Florida has five LEED-certified buildings, two of which have achieved Gold certification. The facilities planning and construction department requires that all new building be LEED-certified. Currently, 17 new buildings and 35 existing buildings are seeking LEED certification.

The University of Minnesota is pursuing LEED certification on the new 50,000-seat TCF Bank Stadium. The university follows the state of Minnesota’s Sustainable Building Guidelines, which adapt the LEED building policy to specific regional issues, resulting in the equivalent of a LEED Silver rating. The university’s sustainability and energy efficiency policy requires sustainable design guidelines be applied to all major new construction and renovation projects.

The University of North Carolina green building guidelines require that new buildings be designed to LEED Silver standards. Three buildings are seeking LEED Platinum certification. There are 14 LEED-accredited professionals on staff. The university’s new campus, Carolina North, is being designed as a carbon neutral campus with alternative energy sources and building design guidelines considerably above the LEED Silver level.

More than half of schools have adopted green building policies.
The Transportation category looks primarily at the policies and practices of facilities management and the administration in relation to how schools promote alternative transportation options. Points are awarded based on the level of planning and implementation of policies that promote a pedestrian-friendly and/or bike-friendly campus; the availability of bike-sharing programs is also assessed. The utilization of alternative fuel as well as hybrid technology in vehicle fleets is taken into consideration. The category also examines incentives provided by a school to students, faculty, and staff for carpooling or for the use of public transit. Finally, the category looks at how schools provide access to public transit or to popular off-campus destinations through the use of shuttles or similar systems.

key findings

- Bicycle-sharing programs have been instituted at 23 percent of schools.
- Car-sharing programs are available at 17 percent of schools.
- Reduced-fare passes for public transit are offered at 38 percent of schools.
- Biodiesel is made and/or used at 31 percent of schools.
- Hybrid or electric vehicles are used in 42 percent of school fleets.
- The average grade for the Transportation category was “C+.” For a full account of school performance by grade, please refer to the chart on the next page.

leading by example

The list of Transportation Leaders is comprised of 34 schools that earned “A” grades in this category. Below is a sample of 11 very different institutions that all have innovative transportation initiatives. These summaries are based on data from each school’s profile page.

At Bates College, pedestrian-friendly planning and a Zipcar program, which offers hybrid vehicles for rent, reduce the number of cars on campus. For an annual fee, students, faculty, and staff can join the Bike Co-op and receive a key to access bicycles parked around campus.

Through Davidson College’s shared bike program, the school restores abandoned bicycles and offers them for use to the campus community. Davidson owns four hybrid vehicles and provides a free shuttle to local retail areas three days per week during the school year. The landscape master plan restricts traffic to the campus perimeter.

Emory University has a free shuttle bus service throughout campus and surrounding neighborhoods that is 100 percent alternatively fueled; the buses run primarily on biofuel made from used cooking oil from the campus cafeterias and hospitals.
The Swarthmore College campus is a pedestrian zone with parking lots limited to the perimeter of the campus. Just over 100 student parking permits are issued each year, limiting the number of cars on campus.

University of California–San Diego has a fleet with over 225 electric vehicles and 30 hybrids. UC–Irvine uses 100 percent biodiesel in all of its campus shuttles; Santa Barbara and Davis students receive free public transportation; and Santa Cruz has a bicycle shuttle program.

As part of the Rural Initiative at the University of Nebraska–Lincoln, Chancellor Harvey Perlman mandated in 2005 that UNL’s fleet of 870 vehicles be powered by biodiesel or an ethanol-blend fuel produced primarily from Nebraska crops.

The University of New Hampshire’s transportation program includes free bike rentals, a carpool lot and program, and free shuttles that circulate around campus and connect to off-campus destinations and transportation hubs. In addition, a fleet of eight buses run on a 20 percent biodiesel blend, there are six compressed natural gas shuttle buses and an all-electric utility van, and hybrid vehicles are available for rent by the campus community.

At the University of Tulsa, changes in parking regulations were implemented to restrict residents from parking in lots other than those at their dorm or apartment. Shuttles utilizing compressed natural gas provide students and employees with an alternative mode of transportation. A bike program implemented in 2006 now has 268 free bicycles.

Virginia Tech’s alternative transportation program is supported by a full-time manager who serves to encourage members of the campus community to bike, walk, or use public transit. Faculty, staff, and students can travel on public transit fare-free by showing their university ID card and there are other incentives to use alternative modes of transportation. Virginia Tech has received over $400,000 in federal enhancement grants to build bike trails and bike lanes, as well as to provide other bicycling amenities on campus.

At Willamette University, gas-powered work vehicles are being replaced with electric vehicles, and hybrids are used for campus security vehicles. A campus bike shop provides free services to the community. A car-sharing program is open to all students, faculty, and staff. A rideshare webpage connects carpoolers.

As part of Yale University’s commitment to the implementation of a campus-wide transportation demand management system, the university hired a director of sustainable transportation in the spring of 2007. Currently, the shuttle fleet is running on an ultra-low sulfur diesel and 20 percent biodiesel blend. There are seven hybrid vehicles on campus, utilized by several departments including parking and transit and grounds maintenance.

### Grade Distribution

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17%</td>
</tr>
<tr>
<td>B</td>
<td>30.5%</td>
</tr>
<tr>
<td>C</td>
<td>27.5%</td>
</tr>
<tr>
<td>D</td>
<td>12.5%</td>
</tr>
<tr>
<td>F</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

### Transportation Leaders

- Berea College
- Brown University
- Carnegie Mellon University
- Dickinson College
- Duke University
- Emory University
- Johns Hopkins University
- Michigan State University
- Middlebury College
- MIT
- Northeastern University
- Oregon State University
- St. Olaf College
- University of Arizona
- University of British Columbia
- University of California
- University of Colorado
- University of Florida
- University of Iowa
- University of Kentucky
- University of Maryland
- University of Michigan
- University of Minnesota
- University of New Hampshire
- University of New Mexico
- University of North Carolina
- Univ. of Southern California
- University of Texas
- University of Utah
- University of Vermont
- University of Washington
- University of Wisconsin
- Vanderbilt University
- Virginia Tech
ENDOWMENT TRANSPARENCY

The Endowment Transparency category looks at how colleges control information about endowment investment holdings and shareholder proxy voting records. In accordance with the academic tradition of fostering a free flow of information, universities are encouraged to apply similar openness to endowment investments. Access to endowment information is needed within a college community to foster constructive dialogue about opportunities for clean energy investment, as well as shareholder voting priorities. Points are awarded to schools for providing proxy voting records and lists of investment holdings to the campus community or a wider audience, and for the ease with which they make this information available.

KEY FINDINGS

- Almost a quarter of schools make lists of endowment holdings available to the campus community. Members of the school community can obtain a list of endowment holdings at 23 percent of schools.
- Fifteen percent of schools make proxy voting records available to the campus community.
- The average grade for the Endowment Transparency category was “D.” For a full account of school performance by grade, please refer to the chart on the next page.

LEADING BY EXAMPLE

The list of Endowment Transparency Leaders is comprised of seven schools that earned “A” grades in this category. Below is a sample of eight very different institutions that all earned high marks. These summaries are based on data from each school’s profile page.

Dartmouth College’s Advisory Committee on Investor Responsibility makes its annual report available to the college community and any interested outside party on the school’s website. Any Dartmouth community member can view a hard-copy listing of all publicly traded shares that the college directly owns by visiting the college’s investment office.

Michigan State University makes a list of its investment holdings available to the public on the Office of the Controller’s website. Proxy voting records are sent to individuals upon request.

Pennsylvania State University provides a list of all investment holdings each year, available to the university community and also to the public in the investment office. The Office of Investment Management would also make available proxy voting records upon request.

For the University of Illinois, the University of Texas, and the University of Wisconsin, open records law requires that proxy voting records and a list of endowment holdings be available to the public. Illinois and Texas send this information to individuals upon request, while Wisconsin makes it available via the web.

The University of Toronto makes its proxy voting records and a list of endowment holdings available to the public on the website of the university’s investment management subsidiary, the University of Toronto Asset Management Corporation.

Endowment holdings and proxy voting records at the University of Washington are available to faculty, staff, students, and the general public upon request as per open records law. The investment office typically meets with parties interested in the investment program to provide additional context and research support.
Dartmouth College’s Advisory Committee on Investor Responsibility makes its annual report available to the college community and any interested outside party on the school’s website. Any Dartmouth community member can view a hard-copy listing of all publicly traded shares that the college directly owns by visiting the college’s investment office.
INVESTMENT PRIORITIES

The Investment Priorities category focuses on three areas: prioritizing return on investment, investing in renewable energy funds, and investing in community development loan funds. Points were awarded to all schools for aiming to optimize investment return, one component of a sustainable endowment. Therefore, no school received less than a “C” grade in this category.

Other elements of long-term endowment sustainability are investments related to clean energy and to the community. Accordingly, points were given to schools that investigated, or currently invest in, renewable energy funds or similar investment vehicles. Points were also given for investigating or investing in community development financial institutions. Such portfolio diversification at the local level strengthens communities that surround schools and contributes to their sustainability.

Approximately one in five schools invests part of its endowment in renewable energy funds.

KEY FINDINGS

- Approximately one in five schools invests part of its endowment in renewable energy funds. Nineteen percent of schools currently have endowment investments in renewable energy funds or similar investment opportunities, while an additional 17 percent are exploring endowment investments in this area.

- A small number of schools invest part of their endowment in community development funds. Six percent of schools currently have endowment investments in community development funds or similar investment opportunities, while an additional 1 percent are exploring endowment investments in this area.

- The average grade for the Investment Priorities category was “B-.” For a full account of school performance by grade, please refer to the chart on the next page.

LEADING BY EXAMPLE

The list of Investment Priorities Leaders is comprised of 43 schools that earned “A” grades in this category. Below is a sample of 10 very different institutions that all qualified for the list. These summaries are based on data from each school’s profile page.

Brown University has created a social choice donor option that considers environmental/sustainability investment factors.

Duke University is currently invested in renewable energy and community development loan funds. In 2006, the university announced a $5 million investment in the Latino Community Credit Union based in Durham, North Carolina. This investment is in addition to an initial investment of $400,000, which made Duke one of the credit union’s first and largest investors.

The Georgia Institute of Technology has made several investments in alternative energy, most of which are in venture capital funds.

Grinnell College selects investments and investment managers whose conduct is consistent with the core values of the college. The college is currently invested in renewable energy investment funds or similar investment vehicles as well as in community development organizations.

Since 2001, Oberlin College has offered two Calvert funds that take into account environmental and social factors as alternative investment vehicles for donors making leadership gifts.

The Rockefeller University invests with a number of external managers with initiatives in green and/or clean energy technology.
The **University of Utah** makes a TIAA-CREF managed social/environmental investment available to donors.

The **University of Washington** is currently invested in renewable energy funds and energy-conscious real estate funds. The investment policies follow a set of ethical considerations, which state that due consideration shall be given to the degree of corporate responsibility exercised by the companies in which investments are made.

**Washington University in St. Louis** is invested with managers whose mandates include renewable energy, and has also invested in and loaned funds to others in order to invest in real estate for neighborhood revitalization in several local areas.

**Williams College** is invested in community development financial institutions or loan funds. Additionally, the college is exploring renewable energy investment funds or similar investment vehicles. The Williams Social Choice Fund allows individuals to direct donations to a special endowment fund that screens investments based on environmental and social criteria.

Duke University is currently invested in renewable energy and community development loan funds. In 2006, the university announced a $5 million investment in the Latino Community Credit Union based in Durham, North Carolina.
At Earlham College, a committee (consisting of three trustees, three faculty members, and three student representatives) deliberates, and makes recommendations or decisions, on proxy votes.

Approximately one in eight schools have an advisory committee on shareholder responsibility.

KEY FINDINGS
- Approximately one in eight schools have an advisory committee on shareholder responsibility. Thirteen percent of schools have a committee of multiple stakeholders (e.g. students, faculty, staff, alumni) to help inform the trustees’ decision on shareholder proxy resolutions.
- The average grade for the Shareholder Engagement category was “D-.” For a full account of school performance by grade, please refer to the chart on the next page.

LEADING BY EXAMPLE
The list of Shareholder Engagement Leaders is comprised of 21 schools that earned “A” grades in this category. Below is a sample of 10 very different institutions that all qualified for the list. These summaries are based on data from each school’s profile page.

At Clark University, a committee (consisting of three students, three faculty, four trustees, one staff, and one alumnus) deliberates, and makes recommendations or decisions, on proxy votes.

Students, faculty, and alumni serve on Columbia University’s Advisory Committee on Socially Responsible Investing, which makes proxy voting recommendations to the board. The committee
also hosts an annual town hall meeting at which the school community can voice its opinion on issues facing the committee or on issues that the committee should address.

At Earlham College, a committee (consisting of three trustees, three faculty members, and three student representatives) deliberates, and makes recommendations or decisions, on proxy votes.

Harvard University has two committees to assist the university in addressing its ethical responsibilities as a large institutional investor: the Corporation Committee on Shareholder Responsibility (CCSR) and the Advisory Committee on Shareholder Responsibility (ACSR), which includes faculty, students, and alumni. The CCSR publishes an annual report that provides details on the work of the two committees.

The Committee on Investor Responsibility (CIR) at Smith College, created in 1979, formulates guidelines for Smith’s money managers to follow when voting proxies. The CIR consists of two students, two faculty, two administrators, and two members from the board of trustees.

Swarthmore College’s Committee on Investor Responsibility (CIR) serves as advisor to the Investment Committee of the board of managers, and consists of four students, three staff, and two members of the board’s Investment Committee. The CIR prepares proxy recommendations on social and environmental issues and has filed several shareholder resolutions.

The Social Concerns Committee of the University of Minnesota annually reviews all shareholder resolutions concerning social issues for which the university holds stock and recommends votes for these resolutions. The Social Concerns Committee includes academic, alumni, civil service, faculty, and student representatives.

The University of Vermont has a committee composed of two representatives each from the staff, faculty, alumni, students, and trustees, plus one administrator. The committee makes recommendations to the Budget, Finance, and Investment Committee of the board of trustees. The board has always accepted the recommendations of the committee.

The Campus Investment Responsibility Committee at Vassar College includes two students, two alumni, two faculty members, and two administrators. It makes recommendations to a trustee investor responsibility committee on shareholder resolutions, policy statements, and other actions as appropriate. This process is recognized in the college’s by-laws and has been in existence for many years.

The Advisory Committee on Shareholder Responsibility at Williams College deliberates, and makes recommendations or decisions, on proxy votes. The committee is comprised of two members from each of the following groups: faculty, administrators, students, and alumni.
In all, 88 percent of schools participated in at least one of the three research surveys.

After preliminary information was obtained for the campus management section, the presidents at all 200 schools were contacted via email. Each president was sent a survey that included SEI’s initial findings about his or her respective school in the Administration, Climate Change & Energy, Green Building, and Transportation categories, along with a request to add to, update, or correct the data. The survey was also sent to the sustainability coordinator, or a similarly designated sustainability professional, at the schools at which such a position exists.

If individuals did not respond promptly, SEI made several additional attempts to contact each school—specifically, sending at least two separate follow-up emails and placing at least two phone calls to each school. In total, 149 of the 200 schools (74.5 percent) responded to the campus survey. If more recent information was not provided, but a school had responded to the Report Card 2007 campus survey, this previously collected information was used and is noted at the bottom of the profile. Since dining services are often contracted to an independent vendor, a separate dining services survey was sent to the director of dining services, or equivalent professional, at each institution. Of the 200 dining services surveys sent, 130 (65 percent) were completed.

Many schools submitted extensive and detailed responses. Due to space limitations, SEI regretfully had to edit them to fit within the profile format. The points assigned for their grades, however, were based on all information submitted.

DATA COLLECTION & VERIFICATION: ENDOWMENT MANAGEMENT

For the three endowment-related sections (Endowment Transparency, Investment Priorities, and Shareholder Engagement), a multiple-choice survey was sent via email to an official whose duties pertain to endowment management. Typically, this individual was a chief investment officer, chief financial officer, vice president for investments, vice president for finance, director of investments, or another person with similar responsibilities.

Because comparatively little information is publicly available on endowments, SEI was unable to conduct the same type of initial background research that was employed for the campus survey. Consequently, a multiple-choice survey format was chosen to accurately capture endowment policies and practices. Responses were received from 90 of the 200 schools (45 percent) after following up by both phone and email. Whenever possible, data and information collected from publicly available sources were incorporated into each school’s profile and results. If more recent information was not provided, but a school responded to the Report Card 2007 endowment survey, this previously collected information was used and is noted at the bottom of the profile.

GRADING

For both the research and the grading processes, SEI was careful to avoid any potential bias or conflicts of interest by assigning members of the research team to schools with which they have no current or previous affiliation. Furthermore, each school’s complete information was reviewed by at least two evaluators who worked independently and did not confer about their evaluations. In a small number of cases, when the resulting grades from both sources were not identical, a third evaluation was conducted independently of the first two assessments, to resolve the disparity.

All 39 indicators used for grading are described in the Indicators section of this report on page 230. Each school earned numerical points in proportion to its policies and practices for each indicator. A predetermined scale, based on points earned for the indicators, was then used to determine letter grades for each of the eight categories. To simplify grading, only full letter grades (i.e., no plus or minus) of A, B, C, D, and F were given in the five campus management categories and the three endowment-related categories. The eight equally weighted category grades were totaled to calculate a grade point average (GPA) on a 4.0 scale (where A = 4, B = 3, C = 2, D = 1, and F = 0).

The GPA was then translated into an overall sustainability grade, ranging from “A” to “F,” using a standard grading scale. No school received an “F” in the Investment Priorities category because all schools were awarded a minimum grade of “C” for aiming to optimize investment return. When schools did not respond to the questionnaires or inquiries, or declined to participate, grades were derived from research of publicly available sources, as well as responses to the Report Card 2007 surveys, if applicable.

While there is a high degree of diversity among the schools in the Report Card, many of the best practices can be applied to all colleges and universities, be they large or small, public or private. In the research and grading, factors that might be primarily attributed to size or geographic location were taken into account and those categories were graded accordingly. For example, in the Food & Recycling category for the University of Alaska, SEI included in its evaluation the fact that locally grown food would not be easily available because of the short growing season in Alaska.

Among the potential formats for presenting research findings, the system of assigning letter grades was thought to be appropriate for educational institutions. A comparison of grades in the 2007 and 2008 editions of the College Sustainability Report Card provides a readily accessible way to track progress among schools. In future years, multi-year comparisons will help provide a longer-term picture of sustainability trends in higher education.
INDICATORS

The College Sustainability Report Card 2008 grades are determined through the following process: Every school evaluated was awarded points according to its level of activity for each indicator within all eight categories listed in this section. When appropriate, school size and geographic setting are taken into consideration. Maximum points vary by indicator. For each category, point totals are used to determine the grade. The eight main categories are weighted equally in calculating the school’s GPA on a 4.0 scale and then translated into the overall letter grade.

The following 39 indicators are based on thorough research of sustainability best practices in higher education concerning campus operations and endowment policies. While these indicators take a broad range of policies and programs into consideration, they do not encompass all college and university sustainability efforts nor do they include teaching, research, or other academic aspects concerning sustainability.

39 INDICATORS

ADMINISTRATION

Sustainability Policies

- Demonstrating a commitment to campus sustainability by the president and senior administrators.
- Adopting sustainability-related mission statements, master plans, and/or endorsements of local, national, or international agreements (e.g., American College and University Presidents Climate Commitment, Talloires Declaration).

Sustainability Staff

- Designating staff to help develop, facilitate, and oversee sustainability programs and policies.
- Supporting the sustainability staff, as indicated by level of authority and funding.

Green Purchasing Policies

- Prioritizing the purchase of reusable materials, green-certified materials, eco-friendly cleaning products, bulk items, and/or products requiring minimal packaging.

Advisory Council

- Integrating multiple stakeholders into an active advisory council to guide the administration on issues of campus sustainability.

Student Involvement

- Facilitating student involvement in institutional decision making on sustainability issues.
- Supporting active student environmental organizations.

Center

- Maintaining an office or center specifically focused on achieving campus sustainability goals.

Website

- Operating an Internet resource for community education on sustainability.
- Offering a school website to facilitate involvement in campus sustainability initiatives.

CAMPUS OPERATIONS

Administration

Climate Change & Energy

Food & Recycling

Green Building

Transportation
Eight main categories are weighted equally in calculating the school's GPA on a 4.0 scale and then translated into the overall letter grade.

**CLIMATE CHANGE & ENERGY**

**Carbon Emissions Inventory**
- Completing a campus carbon emissions inventory.

**Commitment to Emissions Reduction**
- Instituting efforts to reduce carbon emissions.
- Committing to climate neutrality, either through the American College and University Presidents Climate Commitment or through another similar pledge.

**Energy Efficiency**
- Using energy-efficient technology.
- Installing equipment such as vendor misers on vending machines to decrease electricity consumption, motion sensors to automatically turn off lights when a room is not in use, and compact fluorescent bulbs to replace incandescent lightbulbs.

**Energy Conservation**
- Facilitating programs that provide incentives for members of the campus community to reduce energy use.

**Renewable Energy Purchase**
- Purchasing electric power from renewable sources or purchasing renewable energy credits.

**Renewable Energy Investment**
- Installing or planning solar, wind, geothermal, or other alternative sources of power.
- Investing in renewable energy technology with the potential to benefit the community beyond campus.

**FOOD & RECYCLING**

**Local Food**
- Purchasing food from local farmers and producers.
- Participating in farm-to-school programs and food production on campus.
- Geographical location and seasonal availability is taken into consideration.

**Organic and Sustainably Produced Food**
- Incorporating organic, fair-trade, or other sustainably produced foods in the menu.
- Making available organic and fair-trade products in other campus food facilities such as cafés and stores.
- Supporting organic food production on campus.

**Reusable Dishware and Eco-friendly To-go Containers**
- Decreasing dining hall waste by encouraging the use of reusable dishware.
- Eliminating the use of Styrofoam products.
- Offering to-go containers made from recycled, biodegradable, or eco-friendly materials.

**Food Composting**
- Implementing a composting program to manage dining hall food waste. Diversion rates are noted.

**Recycling Program for Dining Halls**
- Administering a recycling program for dining hall recyclables, such as bottles, cans, and cardboard. Diversion rates are noted.

**Recycling Program for Office Waste**
- Providing recycling receptacles for items such as paper, printer cartridges, and batteries.
- Encouraging recycling of office materials by faculty, staff, and students. Diversion rates are noted.

**Composting of Landscaping Waste**
- Composting landscaping waste.
- Recycling landscape waste into mulch for use on campus.
The Transportation category, new this year, shows significant positive activity.

GREEN BUILDING

Green Building Policy
• Committing through a formal policy to the use of green building criteria in all construction and renovation.

LEED Certification
• Seeking certification by the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system.
• Requiring all new buildings to be LEED certified.

New Construction
• Incorporating green building standards into specific new building projects.

Renovation and Retrofits
• Renovating existing buildings in accordance with green standards.
• Installing various retrofits such as low-flow plumbing equipment to conserve water.

TRANSPORTATION

Alternative Vehicle Fleet
• Maintaining vehicle fleets or a campus shuttle running on clean-burning fuels or electricity, either for campus maintenance or for use/rent by faculty, staff, and students.

Mass Transit
• Providing transportation or access to public transportation systems around campus or to local destinations.

Incentives for Carpooling or Using Public Transportation
• Creating incentives for the campus community to carpool or to use public transportation.

Bicycle Program
• Encouraging bike use by providing more bicycle racks and offering repair services and bicycle rental or sharing.

Planning
• Planning and implementing a pedestrian-friendly and/or bike-friendly campus.
• Creating parking policies to encourage the use of alternative modes of transportation.
ENDOWMENT PRACTICES
Endowment Transparency
Investment Priorities
Shareholder Engagement

ENDOWMENT TRANSPARENCY

Investment Holdings
• Making lists of investment holdings available to the school community or to a wider audience.

Proxy Voting Record
• Making proxy voting records available to the school community or to a wider audience.

Accessibility
• Making investment holdings and proxy voting records available based on the following priorities:
  1. Providing information via a publicly accessible website.
  2. Providing information via a password-protected website.
  3. Sending information, upon request, via email or post.

SHAREHOLDER ENGAGEMENT

Proxy Vote Decisions
• Providing ways for the school to exercise its shareholder rights.
• Advising trustees on proxy voting by a proxy voting advisory committee or similar committee structure.

Stakeholder Involvement
• Incorporating multiple stakeholders into the investment advisory process.
• Including faculty, student, and alumni representation on an advisory committee to the trustees.

School Community Input
• Encouraging members of the school community to provide input via open forums or a website.

Sustainability Voting Record
• Voting in favor of sustainability-related shareholder proposals (when school proxy voting records are available for review).

INVESTMENT PRIORITIES

Renewable Energy and Sustainable Investment
• Using environmental sustainability criteria in selecting all or part of endowment investments.
• Investing in renewable energy funds or actively investigating the option.

Community Investment
• Making investments in community development loan funds or other community development financial institutions or actively investigating the option.

Optimizing Investment Return
• Investing to optimize long-term profit—a vital aspect of maintaining endowment sustainability.
ACKNOWLEDGMENTS

As a project of the Sustainable Endowments Institute, the College Sustainability Report Card 2008 would not have been possible without the commitment of many individuals and organizations. Some were a source of ongoing advice and support, while others were involved directly with bringing this initiative to fruition. Since our founding in 2005 as a Special Project of Rockefeller Philanthropy Advisors, we have benefited enormously from the visionary guidance of RPA Senior Vice President Doug Bauer.

Rockefeller Brothers Fund
V. Kann Rasmussen Foundation
Nathan Cummings Foundation

As the Institute has grown, members of our outstanding board of advisors have continued to offer their expertise in many aspects of higher education, sustainable development, corporate governance, endowment policy, and fiduciary responsibility. We deeply appreciate their gracious willingness to share experience and insight that are so vital to the work of the Institute.

We especially wish to thank those who have provided generous financial support to the Report Card: The Rockefeller Brothers Fund, the V. Kann Rasmussen Foundation, and the Nathan Cummings Foundation. We also wish to acknowledge those who have provided financial and moral support to further the Institute’s work: Energy Action, Foundation for Civic Leadership, Jessie Smith Noyes Foundation, Roy A. Hunt Foundation, and Rudolf Steiner Foundation. In addition, the friendship and generous contributions of individual donors, including Scott McDonald and Tiffany Schauer as well as Robert A.G. Monks inspired and empowered our efforts. While these foundations, organizations, and individuals did not have direct involvement in the Report Card project, they have helped advance our endeavors in sustainable endowment research and outreach.

A terrific team of research fellows undertook the daunting task of researching the Report Card. We are grateful for the dedicated efforts of Elizabeth Ginsburg, Sarah Lang, and Samantha Weaver, who brought enthusiasm and talent to help forge a new understanding of sustainability in higher education. In addition, Elizabeth Ginsburg and Jordan Goldwarg each took on bold and important projects with great discernment and resourcefulness.

Senior Research Fellow Jenna Smith’s passionate pursuit of excellence and her grace under pressure helped overcome challenges and weave together an impressive collection of data.

We also wish to thank the superb teams at the gabbegroup and the Better Days Alliance. Jennifer Robinson and Scott Addison provided invaluable advice and expertise as well as numerous hours helping with outreach about the Report Card. Andrée Hight Duggan and Will Duggan brought fresh ideas to the project and did a spectacular job in producing top-notch visual images.

We appreciate the hard work of the graphic designer and editors who ensured that the graphics and text were accurate and effective. Jamie Hunt’s Of Balance design studio focuses on the interface between design and the environment. His creative eye and ability to ascend seemingly insurmountable obstacles produced a compelling new design. The clarity of the text was enhanced immeasurably by the knowledgeable, caring, and dedicated work of editor Lisa Goodman, as well as by the constructive criticism of wordsmiths at EcoMotiva.
Our project never would have gotten off the ground without the consistent and extraordinary behind-the-scenes assistance of Gage Weekes and Summer Greenstein at Rockefeller Philanthropy Advisors who graciously handled hundreds of administrative matters. Thank you!

We also wish to acknowledge the assistance at various important moments from Ben Bolger, Walter Corey, Annie DiMartino, Andy Eggers, Beth Fischer, Seth Fiur, Peter Hult, Jamie Hunt, Lexie Hunt, Brent Kazan, Vivian Orlowski, Billy Parish, Seth Pietras, and from Cindy Esposito at CSRwire.

We are particularly grateful to the hundreds of college and university officials who took time to respond to the Institute’s emailed questionnaires and phone inquiries. Their feedback contributed tremendously to the accuracy and completeness of this report and helped to ensure the proper representation of their school’s policies in the profiles.

The Institute regrets any possible omissions or misinterpretations of the data that were collected independently or that schools provided. We welcome additions or corrections to the school profiles and intend to update the Report Card, as posted on our website, with necessary changes and adjustments.

While the inspiration for the College Sustainability Report Card can be traced to many sources, we would like to acknowledge the dedication of those who are committed in their work and in their lives to making sustainability an integral part of higher education.

Mark Orlowski
Executive Director
Sustainable Endowments Institute
University of Nevada, Las Vegas
Policy Library

Issuance Date: July 1, 2008
Expiration Date: Until Rescinded

Sustainability Policy for UNLV

Vision

The vision for The University of Nevada, Las Vegas (UNLV) is to be a model in all aspects of its academic and administrative programs, including environmental sustainability and energy/water efficiency.

Policy Statement

UNLV is committed to continually improve its advocacy for sustainable and energy/water efficient technologies in the classroom, in research, and in the facilities. Innovative ideas and best practices will be utilized to achieve this aspiration within limits of funding and resource availability. In addition, since UNLV is a co-signer of the American College & University Climate Commitment all initiatives and actions will comply with that commitment.

UNLV will develop appropriate systems for managing environmental, social, and economic sustainability programs with specific goals, objectives, priorities, and processes.

UNLV policies, practices and curricula should, when possible, embody approaches that reduce life cycle costs, restore or maintain the functioning of natural systems, and enhance human well-being. All decisions and actions will be guided by the University’s mission coupled with The University’s resources and the Campus Master Plan.
Reason for Policy

The Nevada Board of Regents *NSHE Energy and Sustainability Policy* requires UNLV to develop a comprehensive sustainability policy that can then be approved by the Board of Regents.

Scope of Policy

This policy applies to all UNLV campuses.

Goals of Policy

1. Academics: UNLV will strive for excellence in sustainability education and research by integrating sustainability concepts into curricula; supporting interdisciplinary scholarship, research and faculty hires; increasing faculty and student awareness of sustainability issues; and enhancing sustainability educational offerings. UNLV aims to produce scholars who are literate in sustainability, research that illuminates and advances sustainability, and graduates who will carry the mission of sustainability into the state, the nation and the world.

2. Operations: UNLV will comply with all relevant environmental laws and regulations and aspire to go beyond compliance by integrating values of sustainability, stewardship, and resource conservation into activities and services; make decisions, including staff hires, to improve the long-term quality and regenerative capacity of the environmental, social and economic systems that support UNLV’s activities and needs; engage in pollution prevention activities and develop and promote practices that maximize beneficial effects and minimize harmful effects of operations, research and activities on the surrounding environment; assess environmental impacts associated with activities; and develop and track measures of progress. UNLV’s goal is to maximize the efficiencies of its operations and services while minimizing its wastes and footprint.

3. Campus Planning: UNLV will evaluate the impact of its construction projects; incorporate green building and design methods; and consider the needs of future generations of the University community, including its greater Las Vegas setting, in campus planning, with the goal of minimizing the environmental footprint of the campus.
4. Administration: UNLV will have sustainability goals that inform administrative policies and procedures in the areas of planning, decision-making, assessment, reporting, and alignment. These policies and procedures shall rely on scientific and technical analysis and support efforts to develop objectives and targets for operations, indicators, and measures to assure accountability, and reports on progress, with the overall goal of integrating knowledge of sustainability with actions to promote it.

5. Outreach: UNLV will share with outside communities the knowledge generated from sustainability research, education, and practice; help promote environmental awareness and natural resource conservation; interact with the global community through on and off-campus activities; and pursue efforts, including providing incentives, to engage outside communities in developing research and education programs that respond to their interests and needs for sustainable well-being, with the goal of promoting a global culture of sustainability.

6. Implementation: UNLV will establish near and longer term procedures and mechanisms, including an oversight structure, to review the status of each element of this policy and to ensure its implementation, with the goal of integrating informed and evolving practices for sustainability with UNLV’s mission of creating a disciplined culture of excellence.

Entities Affected by This Policy

All UNLV Colleges, Departments, Auxiliaries, Organizations, Contractors, or Personnel using UNLV facilities, owned or leased

Who Should Read This Policy

- Provost and Vice Presidents.
- Deans.
- Directors.
- Faculty.
- Staff.
- Students.
- Anyone interested in sustainability and energy efficiency.

University of Nevada, Las Vegas
Implementation Procedures for the Sustainability Policy for UNLV

Implementation Procedures Statement

To support the UNLV Policy on Sustainability, this document will be used as a guide for implementation. It is not intended to be all inclusive and therefore should be considered as a minimum requirement. Innovative ideas and best practices will be utilized to supplement this guide as available and appropriate within limits of funding and resource availability. In addition, since UNLV is a co-signer of the American College & University Climate Commitment all initiatives and actions will comply with that commitment.

The academic curriculums in all the Colleges will at least consider sustainability and incorporate it as appropriate. Energy and water efficiency, along with waste management education will be provided to the users of campus facilities.

To maximize the energy efficiency of UNLV the facilities and buildings will be constructed, renovated, and maintained using LEED® as a guideline. The standards for new construction will require LEED-NC™ or equivalent at the silver level but not necessarily LEED® Certification. The standards for existing buildings will require LEED-EB™ or equivalent at the silver level but not necessarily LEED® Certification.

UNLV will contribute to the reduction of the waste streams to the landfills through aggressive recycling and reuse of waste materials.
As a resident in the Desert Southwest, UNLV will utilize all means to reduce water use. Turf reduction and water efficient appliances/fixtures are only examples.

Alternative modes of transportation will be used or encouraged as appropriate. Carpooling and use of public transportation are examples for which incentives could be provided for encouragement.

Food and other consumable products will be selected based upon the least impact to the environment and use of renewables in the production stream.

New technologies, processes and procedures for improved sustainability will be reviewed and considered. Renewable energy technologies are constantly evolving.

Entities Affected by These Implementation Procedures

All UNLV Colleges, Departments, Auxiliaries, Organizations, Contractors, or Personnel using UNLV facilities, owned or leased

Who Should Read These Implementation Procedures

- Provost and Vice Presidents.
- Deans.
- Directors.
- Faculty.
- Staff.
- Students.
- Anyone interested in sustainability and energy efficiency.
General Procedures

The following areas are addressed in the general procedures section. More detailed direction and guidance are provided in the UNLV Sustainable Buildings Instructions and Guidance and the Sustainability and Energy/Water Efficiency Policy for Existing State Funded Buildings.

I. Preliminary Tasks
II. Energy Efficiency and Renewable Energy
III. Environmentally Sound Purchasing
IV. Construction
V. Transportation
VI. Curriculum
VII. Waste Management
VIII. Water Conservation

I. PRELIMINARY TASKS

- Fitting all buildings on campus with technology able to provide a continuous stream of energy data to Facilities Management is a very important first step. This has already occurred in the majority of buildings and the energy data available is public information capable of being shared with interested students and faculty.
- Using energy data, a campus wide, comprehensive energy audit is imperative as soon as possible to determine a baseline for future energy reductions.
- UNLV shall hire a full time sustainability coordinator as budgets permit as soon as possible.

II. Energy Efficiency and Renewable Energy

A. Greenhouse Gas Inventory
   a. Using the information gained through the previously mentioned energy audit, a complete greenhouse gas inventory shall be completed. With this information, baselines can be established for reduction of emissions of carbon dioxide, methane, and other greenhouse gases.
   b. This inventory can be compiled by students working with professors and other facilities professionals in many different departments campus-wide.

B. Load Reduction
   a. While the University is expected to continue growing for the seeable future, the energy demand does not have to grow in kind. Much of the energy flowing into campus is presently wasted through inefficient practices. Simple orientations for faculty, staff, and students shall be put
in place to encourage energy load reduction practices, such as the manual powering down of equipment when not in use.

b. Motion and light sensors shall be installed in existing buildings and new construction so that lighting is not wasted on unused space. In spaces with much natural sunlight, indoor lighting may be completely unnecessary for many days of the year in our climate.

c. Inefficient equipment such as air handlers, motors, and boilers are not very visible to the greater campus community, but make a huge impact on energy use. In all possible cases, aging, inefficient equipment shall be replaced with high energy efficient models.

C. HVAC Controls
a. Temperature set points must be addressed in every building. The Nevada State Energy plan recommends temperature set points of 78 degrees in summer and 68 degrees in winter. These guidelines will be considered to define the specific requirements stated in the Sustainability Policy for Existing Buildings.

b. Regular inspection of HVAC equipment improves its function as well as avoids unintended interruptions of service. All equipment shall be inspected and cleaned regularly following the Facilities Management preventative maintenance plan.

D. Lighting
a. As of January 1, 2012, Nevada Assembly Bill 178 will be in effect. AB 178 bans all incandescent bulbs. The University is well on the way to replacing incandescent fixtures campus-wide. Fluorescents, compact fluorescents, and LED’s are all examples of replacements for incandescent bulbs.

b. Decorative lighting will be kept to a minimum.

c. Ambient light sensors can be used to dim lights at the brightest part of the day so that natural light can be used at no cost.

b. Outdoor lighting systems will utilize the latest technologies in efficiency and “dark skies”. Replacements/retrofits will follow these same requirements as appropriate.

E. Renewable Energy
a. By 2020, UNLV shall have a goal of producing on site or purchasing at least 25% of its energy needs from renewable sources. Achieving this goal is dependent favorable factors from: utility provider practices, utility costs, and technology costs.

b. To meet this goal, a variety of projects must be pursued. The Greenspun building for the College of Urban Affairs has a grid-tied photovoltaic array in place compensating for a percentage of energy that the building uses. Many other buildings on campus could be retrofitted with photovoltaic or solar thermal arrays as well.

c. Biomass and wind power are also feasible options that will be considered.

d. The purchase of renewable energy from the grid is another option in which many other universities have invested.
e. Partnerships with student organizations and residents on campus will be established to support and fund these renewable sources.

f. Consideration will be given to parking structures constructed with photovoltaic panels on the top deck to provide the dual benefits of shaded parking spots and on-site power production. Due to the long payback periods and technology cost creative processes will be reviewed to make these viable options. Partnering with the utility companies or other contractors are possible avenues and will be investigated.

g. UNLV construction standards for new and existing buildings will consider require consideration for adding alternative fuel sources such as solar and other renewable technologies.

III. Environmentally Sound Purchasing

As a major purchaser of goods and services, UNLV has the opportunity to make environmentally positive impacts with each purchase. In order for this purchasing policy to work, all staff possessing P-cards will need an orientation on environmentally sound purchasing.

a. Purchasing Policies will include a requirement that “Energy Star certified products will be purchased in all areas for which such ratings exist.

b. In such cases where environmentally friendly products function as well as and are cost-competitive with traditional products, agents of the University will choose the environmentally friendly product.

c. Long term savings likely to be accrued from a purchase will be taken into account when comparing products. A traditional product may cost less at the outset, but the life-cycle cost of such a product may greatly exceed that of the environmentally friendly choice.

d. Local goods and services shall be supported whenever possible.

e. The purchasing department shall operate a web page with the most current list of vendors providing preferable products. In this way, all employees making purchases for the University will find needed information in one place.

f. When available “Green Seal” approved chemicals, materials, and supplies will be purchased. Examples are the new “Green Seal” cleaning and maintenance supplies.

IV. Construction

With more than 30,000 students, faculty, and staff, the University of Nevada, Las Vegas demands many buildings. Some of these structures are aging and will eventually be replaced, while others are currently under construction or have not yet been realized. Every square foot of space on campus consumes energy and the goal of this policy is to reduce that demand as much as is possible while maintaining high occupant comfort and safety levels.
To this end, the President has committed the campus to the equivalent of LEED® Silver level for all facilities and major renovations, with specific focus on Mechanical, Plumbing, and Electrical systems that provide strong paybacks from the initial investments.

A. New Construction
a. While there are several sustainable building certification programs in the United States, the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) certification program is considered the industry standard. In order to achieve LEED® standards, builders must acquire points for design features such as renewable energy installments, waste-water reuse, and use of recycled and/or local construction materials. LEED® certification entails complete third party review of all sustainable construction practices and offers a seal of approval when construction is completed. The Greenspun College of Urban Affairs building and the Science and Engineering building are built to certification requirements.

b. In order to ensure the lowest possible lifetime cost of buildings, each new structure constructed at UNLV shall be at least LEED® Silver equivalent.

B. Existing Building Renovation
a. The USGBC also offers a LEED® certification for renovations in existing buildings (LEED-EB™). All major renovations shall attain a LEED-EB™ Silver equivalent.

C. Life Cycle Cost Analyses
a. While the initial cost of constructing a building on a university campus scale usually runs into the millions of dollars, the life-time cost of maintaining, heating, cooling, and lighting the building can run into the hundreds of millions. While choosing more efficient equipment and more sophisticated design elements that utilize natural benefits such as sunlight or wind patterns usually requires a greater initial cost, the payback for such choices in the life of the structure is significant.

b. A life cycle cost analysis models the cost of a building over its entire lifetime, taking into account fuel and initial construction costs, as well as any other expenditures likely to be incurred. When the life cycle cost of a conventional building is compared to that of its sustainably constructed counterpart, the savings accruing over decades can truly be seen.

c. Each new construction project at UNLV shall undergo a thorough life cycle cost analysis so that the benefits of LEED® equivalency can be quantified.

V. Transportation
While the majority of energy consumed on campus is used by buildings; students, faculty, and staff use varying forms of transportation to arrive on campus daily. As a west coast city, Las Vegas is inevitably more convenient for individual vehicles than for public transit. If UNLV is to contribute to the sustainability of Las Vegas as a whole, we must begin to provide the means to change the single occupancy vehicle commute status quo.

A. Alternative Modes of Transportation
   a. More bicycle racks and indoor bicycle storage areas should be integrated into campus. The Recreation Center has ample locker and shower space for bicycle commuters and this space should be advertised as such. Actual bicycle lockers could also be installed for use at a nominal fee.
   b. UNLV shall work with the Regional Transportation Commission (RTC) to upgrade express bus routes traveling to the University from across the Valley. A multi-modal transportation center should be located on campus so that more routes originate and end here. Preceding this document, UNLV has played an integral part with RTC in acquiring federal grant funding to study the placement of such a facility, which should prove valuable in making such a center a reality. At least one route should be planned to penetrate the inner campus so that students do not have to venture to the periphery to catch a bus as is now the case.
   c. Carpooling shall be encouraged through incentives such as permit sharing (creating a reduced parking cost to the drivers) and ride matching capabilities with the assistance of RTC.

B. Reduction of Parking Lots
   a. Due to the heat island effect caused by large surface parking lots, parking garage construction, when financially feasible, should be considered in the future. This will only reduce the heat island effect, but to also save valuable land space, reduce traffic congestion, and centralize parking for easier access.
   b. Any future parking structure design should investigate the financial feasibility of photovoltaic panels on the top deck to provide shaded parking stalls and on-site power production.

VI. Curriculum and Research
As an institution of higher education, UNLV has the opportunity to incorporate many of the ideas presented in this document into curriculum across the campus. A sustainability initiative will only work if supported by students, faculty, and staff.

A. Orientation
   The idea of sustainability and how UNLV plans to further sustainability on and off campus shall be presented to students and faculty alike at their respective orientations. Furthermore, smaller orientations for groups of
deans, specific colleges, and departments should be planned so that the whole campus community can understand not only what sustainability is, but how they can help contribute.

B. Classroom Instruction
a. An effort is being made by faculty members in various colleges and departments to collaborate and share research so that sustainability efforts being made are not stranded in their department of origin. The University shall support these efforts and encourage collaboration on energy related research whenever possible.

b. The cross-listing of sustainability related classes helps to increase the number of students reached and shall be strongly encouraged.

c. Innovation in curriculum and the creation of new classes relating to sustainability shall also be encouraged.

C. Research
a. To nurture a world-class environment for research, scholarship, graduate education, the arts, and engagement by becoming an active member of the global sustainability community.

VII. Waste Management

In the early 1990’s UNLV had a partnership with Silver State Disposal (currently Republic Services) for recycling. In 1995, UNLV implemented an in-house recycling program that is a national leader. Waste management and recycling can be increased and improved. In order for UNLV to accomplish the goal of achieving a 50% diversion rate by 2020, the following guidelines should be adopted.

A. Expanded Recycling Program
a. Provide the infrastructure to make recycling convenient for the campus user. Every public waste container on campus should be accompanied by a recycling bin. Studies have shown that with more convenient recycling comes higher recycling rates. Therefore, periodic reviews will be made to increase the number of recycling stations adjacent to waste receptacles especially in the academic mall and classroom areas.

b. Special events on campus should contact the Rebel Recycling Program to inquire about recycling services for their event. Language to this effect should be written into agreements with UNLV departments, community groups, agencies or non-profits who utilize the campus for walk-a-thons or other events.

c. In terms of organic waste, landscape waste should be converted to mulch on site. In the future, an in-vessel composter should be considered for landscape, food waste and corn-based disposable utensils and plates.

d. Athletic events are conspicuous, high-volume garbage creating events that have no infrastructure or recycling process. A study of the recyclable that could be diverted from these events should be conducted.
B. Student and Staff/Faculty Waste Management Education

   a. New student orientation should address the recycling program in detail. All pertinent information about waste management on campus should be detailed. The Rebel Recycling website should be updated to be more interactive and include information on how UNLV students can participate in Reduce, Reuse and Recycling activities on campus and at home. An educational video with the Rebel Recycling Program's history, operation and achievements should be developed to show in classrooms and on the web page.

   b. Volunteer opportunities with the Rebel Recycling Program should be listed on the web page and with Rebel Service Council. Interested students can sign up to help the Rebel Recycling Program with projects, and in some cases, use the project for credit in a class. The Rebel Recycling Program should work with interested professors to conduct projects relating to solid waste and recycling.

   c. The Rebel Recycling Program should conduct at least one open house/tour of the Rebel Recycling Program per semester in conjunction with a Sustainability Tour of the whole campus.

   d. Assist with the educational mission of the University by providing information on environmental and sustainability issues to students, faculty staff and the community. Implement a Sustainability and/or Recycling/Composting classes through Continuing Education to teach individuals how to be sustainable in the home, in their professional life and on campus (eco-friendly cleaning products and baby products, lifestyle and fashion choices, backyard composting, recycling habits, water and energy conservation, hazardous materials proper disposal, etc.).

   e. Information about the Rebel Recycling Program should be included in the Faculty and Professional Staff Orientation Handbook as well as in any orientation seminars.

   f. New faculty and staff should be issued a desk-side recycling bin.

VIII. Water Conservation

As an urban campus in a city with many East Coast transplants, UNLV has traditionally been landscaped with grassy “quad” areas and plenty of trees. First recognizing that Las Vegas is a part of the Mojave Desert, we as a community must treat water as a scarce resource and it will be essential to our water conservation efforts.

A. Grass to Xeriscape Conversion Projects

   a. “Xeriscaping” is landscaping for areas prone to drought, such as Las Vegas. The use of native plants is encouraged and the low-flow drip lines leading to each plant reduce water use dramatically over turf. UNLV has a xeriscape garden on display outside of the Marjorie Barrick Museum.
Students and faculty alike consider the garden to be an oasis of natural beauty on campus.

b. Turf reduction is crucial to water use reduction on campus and will be accomplished wherever appropriate. Each square foot of grass replaced with xeriscape reduces water consumption by 55 gallons per year. The Southern Nevada Water Authority (SNWA) currently offers rebates for turf reduction. The university will continue to take advantage of this rebate program to help fund further projects.

B. Greywater Irrigation

a. In the interest of saving the water that is used on campus, UNLV will use greywater whenever possible for irrigation. “Greywater” is the water drained away from sinks, washing machines, and other non-waste containing liquid plumbing streams.

b. Retrofitting plumbing systems in older buildings may be problematic, but all new construction should separate waste water streams so that greywater can be recovered for landscape irrigation purposes and “blackwater,” from toilets and dishwashers, can flow through to the public sewage system.

C. Other Conservation Measures

a. UNLV shall follow all drought watering restrictions put in place by SNWA. As a member of the greater Las Vegas community, the university shall lead by example with water conservation.

b. Equipment using excess water shall be replaced with models using less whenever possible. Energy Star labels for water efficiency will be used.

c. New water saving technologies will always be considered for new construction, renovations and maintenance.
UNLV SUSTAINABILITY TASK FORCE
FACILITIES COMMITTEE REPORT

Campus Facilities, Maintenance, Purchasing, Disposal, and Resource Management

June 23, 2008
UNLV
Sustainability Task Force Committee Report
On Campus Facilities, Maintenance, Purchasing, Disposal, and Resource Management

I. COMMITTEE GOAL
The goal of the Committee is to assess current practices in context of best practices, and provide recommendations for immediate actions and 1, 5, 10 and 20 year planning.

II. COMMITTEE PURVIEW
This committee will be responsible for assessing the following categories.

- Construction and maintenance of buildings and grounds.
- Water use and disposal.
- Electricity and other energy resources.
- Vehicles used on campus.
- Equipment and materials for:
  - Laboratories.
  - Janitorial services.
  - Maintenance services.
  - Computing services.
  - Reprographics.
- Waste management.
- Purchasing.

III. REPORT OBJECTIVES
To report on the Purview Assessments by addressing the following topics.
1) Current practices.
2) Suggested immediate actions.
3) Suggested actions for 1, 5, and 10 years.
4) How UNLV can be sustainable in 20 years.

IV. COMMITTEE MEMBERS
Jim Wilhelm, Facilities Management, Chairman
Rolando Mosqueda, Purchasing

V. REPORT CONTRIBUTORS.
Tara Pike, Recycling
Bob Dincecco, Planning and Construction
VI. FACILITIES MANAGEMENT

This report will assess the materials and energy use on the UNLV Campus by category. Past, present and future actions and endeavors will be presented.

A. Construction and maintenance of buildings and grounds,

1. Current practices
   - New Construction –
     - Current LEED Projects
       - Science & Engineering Building.
         - Goal is Silver Certification.
         - 33 – 38 Points Required.
         - 34 Targeted
       - Greenspun CUA Building.
         - Goal is Gold Certification.
         - 39 – 51 Points Required.
         - 43 Targeted.
   - Existing Buildings
     - Building renovations and changes consider energy and the environment.
     - Utilize the maintenance management system to monitor maintenance trends.

2. Suggested immediate actions
   - Implement a UNLV Sustainability Policy.
   - Implement a UNLV New Construction Policy and Standards
   - Implement an Existing Buildings Policy and Standards.
   - Require the purchase of Energy Star Certified products in all areas for which such ratings exist.
   - LEED principles are incorporated into design, energy efficiency is an integral part of any building design on campus.

3. Suggested actions for 1 year
   - New Construction –
     - Plans for new construction projects will take into consideration LEED Silver equivalency.
   - Existing Buildings –
     - Require the purchase of Energy Star Certified products in all areas for which such ratings exist.
     - Renovations will be based on energy efficiency and “Green” products.
4. Suggested actions for 5 years
   • New Construction –
     • Plans for new construction projects will include LEED Silver equivalency.
     • Renewable energy and reusable water will be a major consideration in the design.
     • New technologies in “Green” and energy efficiency will always be considered.
   • Existing Buildings –
     • Require the purchase of Energy Star Certified products in all areas for which such ratings exist.
     • Renovations will be based on energy efficiency and “Green” products.
     • Renovations will use LEED Existing Buildings equivalency as a guide to becoming a “Green” campus.
     • New technologies in “Green” and energy efficiency will always be considered in renovations and maintenance.

5. Suggested actions for 10 years
   • New Construction –
     • Plans for new construction projects will include LEED Silver equivalency.
     • Renewable energy and reusable water will be a major consideration in the design.
     • New technologies in “Green” and energy efficiency will always be considered.
   • Existing Buildings –
     • Require the purchase of Energy Star Certified products in all areas for which such ratings exist.
     • Renovations will be based on energy efficiency and “Green” products.
     • Renovations will use LEED Existing Buildings equivalency as a guide to becoming a “Green” campus.
     • New technologies in “Green” and energy efficiency will always be considered in renovations and maintenance.

6. How UNLV can be sustainable in 20 years
   • New Construction
     • All buildings will be “Green” and LEED Silver Equivalency.
   • Existing Buildings –
     • All buildings will be “Green” and LEED Silver equivalent.
B. Electricity and other energy resources

1. Current practices

- **Lighting Retrofits** - Most of the campus is retrofitted with high efficiency T-8 technology lighting.
- **Occupancy sensors** – As time and resources permit, occupancy sensors are being installed as appropriate. For example all of Grant Hall has occupancy sensors.
- **Installation of higher efficiency equipment such as chillers** - High efficiency equipment is selected as replacement when practical. For example a replacement for the Physics Laser Loop system will have a higher efficiency unit than the previous.
- **Installation of high efficiency motors** - All replacements are high efficiency latest technology design.
- **Installation of energy management control systems** - Throughout the campus Energy Management Control Systems (EMCS) are installed in the main buildings. These are for the most part the latest technology and capabilities.
- **Operational schedules** - Since the most energy efficient methodology is to just turn it off, we use the EMCS to shut down systems during periods of un-occupancy.
- **Adjusted cooling set points from 74o to 76o F** - Understanding that for every 1 degree of temperature setting, we can realize a 1 – 2% saving in energy use, the temperature settings were changed from 74 degrees to 76 degrees for increased energy efficiency and budgetary needs.
- **Campus metering and Energy Accounting systems provide data and analysis of energy consumption** - To properly determine energy efficiency we need to track historical date, determine a baseline and then compare the latest data to the baseline. We do this through the campus metering system and a commercially available energy accounting system called FASER.

2. Suggested immediate actions

- **Lighting Retrofits** – To evaluate LED technology as replacement for fluorescent lamps.
- **Installation of energy management control systems** - To upgrade the room controls in WHI & CEB for improved efficiency and comfort.
- **Energy Accounting System** – An upgrade is planned to better analyze data and forecast trends.
3. **Suggested actions for 1 year**
   - Occupancy Sensors – Plan to install about 400 occupancy sensors in buildings to be determined. Probably CSB.
   - EMCS – Upgrade the communications for better control and operator interface.
   - Photovoltaics Array – To investigate a good location to install a possible PV array. Partner and/or work with vendors to make viable and successful projects.

4. **Suggested actions for 5 years**
   - Occupancy Sensors – Plan to install occupancy sensors in 25% of the buildings to be determined.
   - EMCS – Bring 5 additional existing buildings under EMCS control.
   - Renewable energy– To generate 25% of the campus load with renewable energy sources.

5. **Suggested actions for 10 years**
   - Occupancy Sensors – Plan to install occupancy sensors in 25% of the buildings to be determined.
   - EMCS – Bring all additional existing buildings under EMCS control.
   - Renewable energy– To generate 50% of the campus load with renewable energy sources.
   - New technologies – Utilize as appropriate.

6. **How UNLV can be sustainable in 20 years**
   - Occupancy Sensors – Plan to install occupancy sensors in 25% of the buildings to be determined.
   - EMCS – Bring all additional existing buildings under EMCS control.
   - Renewable energy– To generate 50% of the campus load with renewable energy sources.
   - New technologies – Utilize as appropriate.

C. **Water use and disposal**

1. **Current practices**
   - Xeriscape Projects throughout the Campus – These projects resulted in an estimated water savings of 37 Million gallons per year.
   - Turf Reduction Rebates from SNWA – UNLV received over $319,000.
   - Water efficient appliances and fixtures – many of the restrooms have automatic water fixtures and low flow devices.

2. **Suggested immediate actions**
   - Turf Reduction – The grass and sod berms at the Thomas and Mack are being replaced with water smart landscaping. This should save over six million gallons of water each year.
• Waterless urinals – A test is being done to determine the practicality of these devices in restrooms. In addition to water savings, the evaluation will also include the potential problems of: odors, crystallization, cleanliness, and maintenance.
• Dual Flush Toilets – An evaluation, will be accomplished to determine the advantages and disadvantages of these systems

3. **Suggested actions for 1 year**
   • Turf Reduction – Identify locations for Turf reduction opportunities.
   • Grey Water Use – Identify any possible areas for recycling grey water in existing buildings.

4. **Suggested actions for 5 years**
   • Turf Reduction – Target a 50% replacement of the remaining turf on campus.
   • Grey Water Use – Target a 10% increase in use.
   • Dual Flush Toilets – Target 50% of toilets to be dual flush.
   • New Technologies – Utilize as appropriate.

5. **Suggested actions for 10 years**
   • Turf Reduction – Target a 100% replacement of the remaining turf on campus.
   • Grey Water Use – Target a 30% increase in use.
   • Dual Flush Toilets – Target 100% of toilets to be dual flush.
   • New Technologies – Utilize as appropriate.

6. **How UNLV can be sustainable in 20 years**
   • New Technologies – Utilize as appropriate.

D. **Waste management**

1. **Current practices**
   • Recycling Program –
     - UNLV Rebel Recycling Program started in July 1995. Initially, an off-campus recycling company was used. In March 1997, the Rebel Recycling Program started internally collecting and processing materials. In 2007, 653 tons of materials were collected, which was a 10% increase over 2006. We collect all the traditional recyclables such as paper, cardboard, aluminum, plastic #1 & #2, pallets, ink jet cartridges, toner cartridges, cell phones and pallets. We also collect clothing and other reusables from the Residence Halls during May Move-Out. We collect from all the departments on campus. We have a total of 114 student recycling bins (102 indoor bins and 12 outdoor receptacles).
   - General Waste is picked up by Republic Services
Hazardous Waste is disposed of through qualified contractors.

2. Suggested immediate actions
   • Recycling Program –
     • Provide recycling to the students living in the Residence Halls through Walk Up and Drop Off Program utilizing recycling dumpsters or recycling trailers.
     • Start recycling at UNLV Men’s and Women’s Basketball Games in the Thomas and Mack.

3. Suggested actions for 1 year
   • Recycling Program –
     • Creating an office supplies exchange program on campus (Reusable Office Supply Exchange).
     • Creating and promoting a system for the campus community to report wasteful practices and offer suggestions for waste reduction.
     • Creating active program to educate employee and students about waste minimization practices (e.g. incorporating waste minimization information into new employee / new student orientation programs; giving regular presentations to campus groups and departments; setting up public displays, etc.).
     • Research possibility of on-campus waste consolidation system to save money on solid waste disposal. Re-invest savings into waste reduction and recycling.
     • Add another full-time staff member to the UNLV Rebel Recycling Crew. General Waste – Investigate any opportunities to divert waste from the landfill.

4. Suggested actions for 5 years
   • Recycling -
     • Provide the Rebel Recycling Program with a new site location and building. Ensure that the building is designed to accommodate current recycling levels and future recycling potential/demand. Ensure the building is set up and equipped properly to increase efficiency in material handling, sorting, baling and storing.
     • Acquire more stationary outdoor student recycling bins.
     • Require all events on campus to incorporate recycling into their event (Special Event recycling). Ensure that all beverages provided at UNLV events or events held on campus are in recyclable packaging.
     • Provide recycling at UNLV Football games and tailgate events.
     • Implement a reusable mug program with a discount for use of mug (at Starbucks, dining facilities, Sidewalk Cafe, etc).
UNLV
Sustainability Task Force Committee Report
Campus Facilities, Maintenance, Purchasing, Disposal, and Resource Management

- Implement a canvas bag discount at the Rebel Bookstore.
- Implement a Sustainability and/or Recycling/Composting classes through Continuing Education to teach individuals how to make a difference in the home and professional life. The class could discuss a wide variety of topics from eco-friendly cleaning products and baby products, lifestyle and fashion choices, backyard composting, recycling habits, water and energy conservation, hazardous materials proper disposal, etc.

5. Suggested actions for 10 years
   - Recycling –
     - Purchase an in-vessel composter of landscape and food waste similar to the University of Ohio.
     - Ensure that all new buildings on campus or associated with campus (MidTown UNLV) incorporate recycling into their building design (i.e. provide space for recycling, install collection equipment, etc)
   - General Waste – To reduce the waste stream to the landfill by 25%.

6. How UNLV can be sustainable in 20 years
   - Recycling - By maintaining recycling and reduction of solid waste and striving for a 50% to 70% reduction in waste sent to the landfill. By striving to educate faculty, staff, students and community members about their individual commitment to sustainability as well as promote UNLV’s commitment.
   - General Waste – To reduce the waste stream to the landfill by 50%.
   - New Technologies – Utilize as appropriate.

VII. PURCHASING

A. Vehicles used on campus

1. Current practices
   - 90% of vehicle acquisitions are required to be alternative fuel vehicles.
   - Electric cart use for inter-campus transportation is a very widespread practice drastically reducing automobiles use.
   - As part of the universities waste management plan, used oil and antifreeze is placed in dual wall storage tanks which are then recycled by a contracted vendor.
   - All spent lead acid batteries are returned to the vendor for recycling.
   - A spill response policy and team is in place to handle accidental gas, oil, or other related vehicle fluid spill.
   - Biodiesel refilling stations are located on campus which cuts down on travel to and from refilling locations.
Regularly scheduled vehicle maintenance contributes to the efficient running of the university vehicle fleet. The universities’ vehicle parts washer is an industrial parts washing tank where the fluid is cleaned and used reused.

2. **Suggested immediate actions**
   - Identify suppliers that can provide key materials and solutions in the areas of alternate fuel and recycling. Require the purchase of Energy Star Certified products in all areas for which such ratings exist.
   - Continue to utilize natural gas vehicles when applicable.

3. **Suggested actions for 1 year**
   - Locate an offsite filling station for E85 flex fuel vehicles using the Rebel Gas cards through the current supplier for fuels.
   - Update the emissions testing program. The updated program will consist of new hardware and data communication capability.
   - Implement the Multi-modal Transportation Plan for the Campus. To obtain RTC pass cards for students at low or no cost to be negotiated. UNLV to provide RTC passes to Faculty and Staff.

4. **Suggested actions for 5 years**
   - Eliminate all use of gas carts on campus.
   - Analyze the use of each vehicle being purchased to ensure the engine size fits the vehicle’s long term use. This will reduce fuel consumption.

5. **Suggested actions for 10 years**
   - Continue to explore new ways to introduce fuel advancement into the strategy for buying and maintaining campus vehicles.
   - Execute agreements that allow the university to obtain optimal pricing for the latest fuel technologies.

6. **How UNLV can be sustainable in 20 years**
   - Support and increase investment in alternative fuel markets, ethanol fuel production, gas-electric hybrid vehicles in the vehicle fleet, and hybrid hydrogen internal-combustion engine technology.

**B. Equipment and materials for Laboratories**

1. **Current practices**
   - There is not a centralized sustainable laboratory effort across campus.
   - The Purchasing department has met with our lab supply vendors to increase awareness and ask that they offer alternative sustainable products when quoting departments.
UNLV
Sustainability Task Force Committee Report
Campus Facilities, Maintenance, Purchasing, Disposal, and Resource Management

- Some sustainable products purchases are being made in the labs across campus but it is currently very challenging to track these purchases and to quantify.

2. Suggested immediate actions
- Form a UNLV campus wide “sustainable labs” working group to begin the process of determining a more thorough inventory of current practices in terms of products purchased, energy saving efforts, and recycling opportunities. Purchasing will lead this endeavor.
- Adopt an energy efficient purchasing policy requiring the purchase of Energy Star Certified products in all areas for which such ratings exist.

3. Suggested actions for 1 year
- Policy implementation to shut off computers at night. The average computer uses 100 watts so if only four desktop computers are shut down at night a lab could keep a maximum of 700 kilograms of carbon out of the atmosphere each year.
- Where applicable, defrost lab freezers regularly. The frost insulates the coils and makes the compressor work harder to pull heat away resulting in higher energy usage.
- Implement a campus wide lab policy to shut off all unneeded lights in labs every night.
- Create a “green labs” program where each purchase of materials and supplies is made using a listing of environmentally friendly alternatives.
- Have the Purchasing office host green purchasing training to alert the lab staff of ways to identify, request, and process green product purchases.

4. Suggested actions for 5 years
- Explore opportunities for recycling of used and unused chemicals.
- Streamline pipette brands used in the labs. This will allow manufactures to take back the pipette tips and boxes for recycling.
- Implement environmental training for everyone working in the labs which would include product selection, recycling, energy efficiency, and best practices.
- Incorporate sustainability requirements into all new solicitations and contracts with lab supply vendors.

5. Suggested actions for 10 years
- Incorporate eco-friendly designs into new construction of labs.
- Maintain contracts with sustainability requirements with our lab supply vendors.
6. **How UNLV can be sustainable in 20 years**
   - Monitor industry and other universities to update university lab environments as well as design.

C. **Equipment and materials for Janitorial services**

1. **Current practices**
   - Sustainable supplies are purchased primarily through the campus wide contract with Brady Industries by the Facilities Maintenance organization.
   - Green and Sustainable supplies are also purchased from Grainger.
   - Janitorial and Maintenance staff is currently being trained on Green Cleaning pending the opening of the new LEED buildings.
   - Facilities Management and the Purchasing office are continuously meeting with janitorial product suppliers to keep aware of the latest sustainable product offerings and to stress the need for our suppliers to support the university's push toward sustainability.

2. **Suggested immediate actions**
   - Convert major cleaning chemicals to Green Seal approved products.
   - Switch to Microfiber products (such as mop heads) to replace cotton products.
   - Review cleaning frequencies to utilize staff and supplies more efficiently.
   - Work with janitorial product suppliers to showcase their sustainable cleaning products to campus users making purchases.
   - Increase the visibility of green janitorial products from our strategic suppliers through the use of online cataloguing.
   - Educate departmental leadership on the need to consider and purchase everyday sustainable cleaning products and supplies.
   - Adopt an energy efficient purchasing policy requiring the purchase of Energy Star Certified products in all areas for which such ratings exist.

3. **Suggested actions for 1 year**
   - Test green floor care products and equipment for use in areas supported by our janitorial staff.
   - Develop a strategic plan to leverage resources in a more efficient manner to better utilize cleaning supplies, frequency, and staff.
   - Develop a sustainable product listing with our janitorial product suppliers for ease of use and identification by campus users.
   - Campus wide communication to ensure that all stakeholders participate in identifying and using sustainable janitorial supplies especially cleaning products.
   - Identify and organize students in the various schools and departments to assist in promoting sustainable purchases of cleaning supplies.
4. Suggested actions for 5 years
   - 75% of new janitorial product purchases will meet sustainable cleaning standards.
   - All janitorial equipment and machinery purchased will be Energy Star compliant when made available.
   - Be prepared to adjust staffing levels to student population.
   - Evaluate and formulate an approach to more efficient cleaning methods, products, and scheduling to accommodate the increase in building space and student population.
   - Require all contracted janitorial supply vendors to have an online presence which incorporates a sustainable product search feature to better facilitate locating sustainable products; require that the vendor website contains sustainable product information including any third party product certifications; and require that all quotes and other related documentation be made available to UNLV users electronically.
   - Increase by 50% the use of sustainable janitorial supplies campus wide.
   - Require all janitorial product suppliers to package product delivered to UNLV in 100% recycled content packaging and to eliminate where feasible unnecessary packaging.
   - Include in all quotes and formal solicitations that products offered the university are sustainable, recycled content, recyclable, and/or third party certified.

5. Suggested actions for 10 years
   - Identify new cleaning procedures and equipment that will improve employee productivity and decrease the amount of product usage required.
   - Play an integral role in LEED certification efforts for all construction projects. 95% of new janitorial product purchases will meet sustainable cleaning standards.
   - Manage and maintain exclusive “green” contracts through the Purchasing office for janitorial supplies.
   - Recycle cleaning fluids to decrease waste stream contamination.

6. How UNLV can be sustainable in 20 years
   - Review the advantages v. disadvantages of maintaining full scale janitorial operations with opportunities to source operational activity to qualified partners.
   - Adopt a 100% sustainable janitorial product policy for all of campus.

D. Equipment and materials for Maintenance services

1. Current practices
   - Currently inserting language in each formal solicitation for all maintenance providers to provide reporting on their sustainable services and practices.
Meeting with current service providers to alert them to the renewed effort to incorporate sustainable products and services into all that is done on the UNLV campus.

Purchasing is meeting with vendors to identify sustainable products (such as janitorial, industrial, electrical, furniture, etc.) and relay that product offering to campus departments.

The Purchasing Department is working to secure optimal pricing on all sustainable maintenance service products made available to UNLV by our suppliers.

2. Suggested immediate actions
   - Negotiate each contract to include specific sustainable requirements and alternatives for maintenance services for UNLV.
   - Review each requisition submitted for maintenance services and related parts and equipment for sustainable equivalent parts.
   - Adopt an energy efficient purchasing policy requiring the purchase of Energy Star Certified products in all areas for which such ratings exist.

3. Suggested actions for 1 year
   - Make mandatory for all formal solicitations sustainable or “green” submissions to be included in vendor responses to IFBs and RFPs.
   - Increase the purchase of sustainable maintenance service oriented parts, material, and labor by 20%.
   - Host campus workshops for employees to showcase the product selection for maintenance service parts such as janitorial supplies, printer maintenance supplies, computer maintenance supplies, etc.
   - Require that all vendors coming on campus for maintenance service of any kind combine trips in order to decrease the amount of travel involved for UNLV service visits.

4. Suggested actions for 5 years
   - Commit to 80% of purchases for sustainable maintenance service oriented parts, material, and labor.
   - All contracts for maintenance service parts, equipment, and material will included a provision for sustainable product and service alternatives to be offered UNLV.

5. Suggested actions for 10 years
   - Commit to 95% of purchases for sustainable maintenance service oriented parts, material, and labor.

6. How UNLV can be sustainable in 20 years
   - Provide continued purchasing support for best in class maintenance service practices by campus departments.
E. Equipment and materials for Computing services

1. Current practices

- Energy Star and EPEAT certified computers and monitors are made available through our strategic computer suppliers.
- Older model or end of use computers and related equipment are available for public purchase as surplus at the campus warehouse thus avoiding landfills.
- Some servers in OIT are virtualized, which means they serve many applications and data from one machine, rather than placing each service on its own server thereby reducing energy consumption.
- Each evening OIT shuts off all computers in campus labs.
- OIT reuses computers. About 1/3 of the computers in UNLV classrooms and labs were originally purchased for another lab or facility and are now reused even after their warranties are discontinued.
- Each evening projectors are shut off in classrooms, which saves energy and increases bulb life.
- OIT uses recycled paper in computer labs and encourages double sided printing; OIT also charges for printing in computer labs which discourages waste.
- OIT has made a strong attempt at replacing all CRT monitors on campus with LCD computer monitors. LCD are much more energy efficient.
- OIT offers Web Campus, an online course tool that allows students to take classes from home. Since all activities may take place online, travel and classroom use is minimized.
- OIT provides video conferencing facilities which reduce airplane travel.
- OIT is considering purchasing a utility called Power Save which would allow for the Management of energy being drawn from all the computers in labs and classrooms.
- OIT is also considering working with audio-visual consultants who are LEED certified. These individuals would help UNLV develop more sustainable classroom technology systems. Classroom equipment will turn off automatically, use natural light, and yet be dark enough at the front of the room for projection.

2. Suggested immediate actions

- Commitment to 100% recycling of all cardboard and packaging for incoming computer shipments.
Draft a comprehensive sustainability policy that looks into all facets of the OIT day-to-day operations.

Begin dialogue with our strategic computer suppliers to identify opportunities for them to showcase on the UNLV portal to their website Energy Star and EPEAT certified computers monitors.

Make more efficient use of campus servers through virtualization. Also, consider centralizing server support rather than hosting multiple server operations at one university.

Adopt an energy efficient purchasing policy requiring the purchase of Energy Star Certified products in all areas for which such ratings exist.

3. Suggested actions for 1 year
   In advisement, consultation, or project lead roles with campus projects or departments, OIT will commit to raising the sustainable model of computers available and highlight the long term energy efficiency and savings.

4. Suggested actions for 5 years
   Narrow hardware standards to include only that model of hardware that are Energy Star, EPEAT, or other sustainable industry standards.

   Create solicitations and enter into contracts with sustainable requirements for all computer hardware offered UNLV.

   Secure from our vendors 100% recycled content packaging on all items shipped to UNLV.

5. Suggested actions for 10 years
   Purchasing support of OIT efforts towards sustainable practices in service, support, and technology by providing contractual possibilities for stated OIT goals.

6. How UNLV can be sustainable in 20 years
   All technology equipment should meet government and, where applicable, third party certification standards for energy efficiency and recycled content, and all suppliers of technology equipment should have programs for recycling end of life hardware and provide documentation of proper disposal of such equipment.

F. Equipment and materials for Reprographics
   1. Current practices
      Current contracts provide significant pricing incentives for the use of recycled content paper products.
Most of the paper used by Reprographics is recycled content and post consumer waste.

All excess or discarded paper is recycled using the UNLV Rebel Recycling program.

Aluminum printing plates and toner cartridges are also recycled.

Vendor contact has been initiated in order to develop short term sustainable alternatives for Reprographics.

Paper products purchased from using vendors who have received forestry certification.

Partnering with Xerox to pick up and recycle used toner and fuser cartridges for all plan participants.

Recently converted from the traditional negative-to-plate workflow to computer-to-plate technology, thereby streamlining offset printing preparation and completely eliminating the need for harsh developer and fixer chemicals once used to produce printing negatives.

Acquisition of a digital press, the iGen, replacing older, chemical producing presses.

Consulting departments on ways to minimize or eliminate on printed material based on need and projected targeted market.

2. **Suggested immediate actions**
   - Continue current practices and expand use of recycled content and post consumer product where applicable.
   - Adopt an energy efficient purchasing policy requiring the purchase of Energy Star Certified products in all areas for which such ratings exist.

3. **Suggested actions for 1 year**
   - Explore opportunities for continued sustainable practices in departmental processes and services.
   - Keep up to date in industry standards for clean tools and equipment.
   - Provide purchasing support for Reprographics in their efforts to secure agreements that promote their sustainable goals.
   - Experiment with different products to find the least hazardous combination that will continue to ensure quality output for campus customers.

4. **Suggested actions for 5 years**
   - Continue to integrate technology to produce more efficient systems that require less paper.
   - Maintain best in class practices that exceed industry standards.
   - Purchasing will work with the Reprographics department to increase recycled content paper requirements in contracts.

5. **Suggested actions for 10 years**
   - Replicate best in class practices and implement at UNLV.
UNLV
Sustainability Task Force Committee Report
Campus Facilities, Maintenance, Purchasing, Disposal, and Resource Management

6. How UNLV can be sustainable in 20 years
   • Monitor the industry and other universities to update the Reprographics product and service offerings.
   • Adopt a 100% recycled content paper product policy for all of campus generated jobs.
University of Nevada, Las Vegas
Policy Library

Issuance Date: July 1, 2008
Expiration Date: Until Rescinded

Policy Statement
The mandate for The University of Nevada, Las Vegas (UNLV) is to be the beacon concerning environmental sustainability and energy/water efficiency. Best practices will be utilized to achieve the goals of sustainability within limits of funding and resource availability.

Reason for Policy
Although many of the actions for and energy/water efficiency are the responsibility of Facilities Management, overall environmental stewardship is a campus wide mandate and needs to be viewed as such. To be good stewards of our environment and protect our natural resource, UNLV must have a primary objective directed toward sustainability. It is imperative that the campus adopts a sustainability and energy/water efficiency policy to promote efficient use of energy and water while protecting the environment. Effective Sustainability could result in savings that can be reinvested into UNLV high priorities, in addition to conserving our natural resources. Although energy conservation is the focus of this policy, comfortable work and study conditions must also be achieved.
Entities Affected by This Policy

All UNLV Colleges, Departments, Auxiliaries, Organizations, Contractors, or Personnel using UNLV facilities, owned or leased

Who Should Read This Policy

- Provost and Vice Presidents.
- Deans.
- Directors.
- Faculty.
- Staff.
- Students.
- All who are interested in sustainability and energy efficiency.

Procedures

Introduction

The Senior Vice President for Finance and Business (VPF&B), with Facilities Management as his agent, has the overall responsibility for Energy and Water Efficiency for buildings at UNLV. The SVPF&B together with Facilities Management and Planning and Construction are in campus leadership roles to help promote and support overall environmental sustainability goals. The purpose of this procedure is to provide understanding, guidance, and direction to all who are involved in campus buildings.

Project Initiatives

Sustainable and Renewable Energy Sources ---

To investigate pending funds, determine resource availability, and then implement sustainable and renewable projects. These would include all technologies available such as Photovoltaics, Solar Collectors, Bio-waste products, Ground Source Heat Pump Systems, and Water Smart Landscaping (Xeriscaping).
To obtain all available rebates or subsidies from any sources to make these endeavors more economically viable. Examples are Nevada Power’s Solar Generations and Sure Bet Programs, or Southern Nevada Water Authority’s landscaping rebate.

**Leadership in Energy and Environmental Design Existing Buildings (LEED-EB™)**

To use LEED-EB™ as a guideline to apply to existing building renovations, replacements and repairs, as well as new construction.

**“Green” Products, Services and Equipment**

During the planning and installation of all renovations, replacements, new construction, and repairs, Priority consideration must be given to high efficiency and environmentally friendly products and services. Examples of which are; lighting, motors, HVAC, etc.

To purchase Energy Star appliances and equipment if available.

To purchase “Green” products such as cleaning supplies.

**Communications**

To support overall campus environmental sustainability goals and to engage the UNLV Community (Faculty, Staff, and Students) in sustainability and energy efficiency. Any media options may be used “To get the word out”

To continue to participate in programs which encourage the public to do their part. The Energy Star “Change a Light Campaign” is an example.

**Process**

**UNLV Temperature Guidelines —**

To maintain reasonable comfort and lower energy expenditures, UNLV has adopted the State of Nevada Energy Conservation Plan recommended standards for comfort heating and cooling. Summer thermostat settings (air conditioning) are to be 76 to 78 degrees F. Winter settings (heating) are to be 68 to 72 degrees F. Exceptions to these guidelines must be approved.
Building Resource Management —

Windows and doors need to be kept closed during the heating season and during the summer in those areas that have mechanical cooling. Every member of the UNLV community will be asked to assume the responsibility of closing windows, turning off personal (desktop) computers and other office equipment when not in use, and shutting off the lights when leaving a room. Energy management devices and strategies will continue to be added. Schedulers of classes, meetings, and other campus activities will endeavor to minimize energy use. Evening and weekend classes will be concentrated in the fewest buildings possible, and where appropriate, the buildings used will be those that already have late night temperature setback. Use of stairs rather than elevators, except for the physically challenged and persons transporting heavy equipment or materials, is encouraged.

Lighting —

In compliance with Nevada Assembly Bill 178, which states that by January 2012, all incandescent bulbs will be banned in the state of Nevada, interior lighting will be energy efficient technologies such as fluorescent or LED as appropriate. New energy-saving fixtures, lamps and ballasts will be used to replace existing less efficient lighting whenever economically feasible and appropriate. Exterior lighting will be high-pressure sodium or metal halide (metal halide is preferred) whenever possible, and will meet minimum current safety requirements. Decorative lighting will be kept to a minimum. Lighting levels recommended by the most recent edition of the IES (Illuminating Engineering Society) Lighting Handbook shall be used as guidelines. Where it makes economic sense, occupancy/motion sensors (ultrasonic or infrared) wired to area lighting will be installed to reduce and/or turn off lights in unoccupied, vacated areas. Day-lighting controls will be installed to automatically adjust lighting levels as appropriate. Task lighting, such as desk lamps, is recommended to reduce overall ambient lighting levels. Desk lights will be of the fluorescent type, which are now readily available.
Space Heaters —

Only electric space heaters purchased and owned by UNLV are allowed for use in campus buildings. In addition, the use of space heaters is only for emergency and temporary conditions. This requirement is necessary for fire safety and energy efficiency. All space heaters used on campus must be approved for fire safety, as classified by the National Fire Protection Association. No liquid fueled space heaters (e.g., kerosene heaters) shall be used on the UNLV Campus. Some electric space heaters also pose an unacceptable fire hazard. All space heaters must meet the following four specifications: Heaters must (1) be UL approved, (2) have elements that are protected from contact, (3) be tilt-proof (when tipped over, heater goes off), and (4) be thermostat-controlled. The issue of energy efficiency is also important — electric space heaters are a very costly means of heating. If a member of the campus community feels that a space heater is necessary for adequate warmth, this may indicate that the central heating system needs repair. Facilities Management will be consulted if the central heating system is incapable of meeting comfort requirements. Facilities Management will also be contacted if a space heater is to be used to offset excessive air conditioning. State regulations require that UNLV follow ASHRAE Standard 90.1, which says that heating and cooling are not allowed simultaneously in the same space for the sole purpose of achieving comfort. Excessive cooling of a space on campus below the summertime UNLV Temperature Guidelines will be reported to UNLV Facilities so that air-conditioning levels can be adjusted.

Window Air Conditioning Units

The use of window air conditioning/heat pump units is discouraged except in cases of last resort, which require Facilities approval. They cause damage to the buildings, have high life cycle cost (energy and maintenance), and are noisy. Facilities Management must approve a new application of a window unit. Specific petitions for installation will be reviewed only after Facilities Management has determined that the primary heating/cooling source is not capable of meeting UNLV Temperature Guidelines.
Switchover from Heating to Cooling and Cooling to Heating —

Facilities personnel perform required changeover from heating to air-conditioning in the spring. Because of the varying equipment installed throughout the campus, buildings must be changed over individually. Because there are many old systems on campus that require manual intervention between the heating and cooling seasons, Facilities performs the changeover on the basis of priorities established to maintain required temperatures to protect equipment and research in progress, and serve the greatest number of individuals and activities. Cooling (Air Conditioning) may not begin until outside temperature is at or above 75 degrees F for three consecutive days. Temperature projections are also considered. Heating may not begin until the high outside air temperature has dropped below at least 55 degrees F for three consecutive days. The wide swings in temperature during the spring and fall of the year and the difficulty in switching between heating and cooling make this policy necessary. Special problems or hardships with this policy will be addressed to Facilities Management.
Creating a sustainable future for UNLV requires the participation of everyone on campus. The people that are a part of UNLV perform a variety of functions. For this reason, the Faculty, Staff and Student Life category covers a wide range of topics.

The Association for the Advancement of Sustainability in Higher Education (AASHE) uses the Sustainability Tracking, Assessment & Rating System (STARS) program to rate universities’ sustainable practices and programs in the areas of ‘Education and Research,’ ‘Operations’ and ‘Administration and Finance.’ Since it is the faculty, staff and students of UNLV that are the backbone of success in these areas, their sustainable practices are evaluated in all three. We will use the rating categories outlined by the STARS program to evaluate UNLV’s current practices in the context of what are considered the best practices in each area.

I. Co-curricular Education

AASHE describes sustainability-related co-curricular education as peer-to-peer learning, outside the formal curriculum, which helps students apply the principles of sustainability in their daily lives. This may be facilitated through student groups or events held at the university. The STARS program includes three examples of co-curricular education in its rating system: student sustainability outreach programs, sustainability-related competitions and the promotion of sustainability in new-student orientation.

Student sustainability outreach programs are overseen by the university to foster peer-to-peer activities and learning. While UNLV does house a chapter of the Sierra Student Coalition, this group is not formally counseled by the university.

Examples of sustainability outreach programs in other institutions are:

- The “Take it Or Leave It” program at Ithaca College in Ithaca, New York collects reusable household items and small appliances residents leave behind at the end of the year, diverting 2.5 tons from the waste stream; re-sale of those items to incoming residents provides the Ithaca College Environmental Society with funding for educational and social programs.
- The Campus Dining Service Recyclers at Oberlin College in Oberlin, Ohio work to educate students and staff in the dining halls about reducing food and packaging waste, conducting audits, and over-seeing a food waste recycling program.
Sustainability-related competitions supported by the university may be conducted between departments, residence halls, or within the entire university in some other way. Inter-university competitions may be conducted as well. UNLV has not conducted or participated in this type of competition.

Examples of successful programs are:

- The Recycle-mania competition is inter-university. It is a fun, proactive competition that has universities track their recycling and waste rates to promote student and staff awareness. The results are tracked and posted online.

- At Duke University, the “Eco-Olympics” is a dorm vs. dorm sustainability competition that includes a suite of events promoting recycling, energy and water conservation, environmental education and other sustainable practices.

The promotion of sustainability in new-student orientation promotes an environment of conservation and a proactive attitude at the outset of the collegiate experience. Covered topics include campus activities and initiatives, environmental organizations present on campus as well as what is expected of new students in order that the university may have a sustainable future.

Currently, UNLV does not devote a portion of new-student orientation to sustainability topics.

II. Faculty and Staff Development and Training

Like the student sustainability outreach programs, an employee sustainability outreach program would foster peer-to-peer learning on sustainability topics. These organizations are supported by the university.

Currently, UNLV has no such organization.

The promotion of sustainability in orientation for new faculty and staff members promotes an environment of conservation and a proactive attitude. It demonstrates the university’s commitment to sustainability and describes steps the university is taking toward that goal. It also describes what role each person on campus plays in the campus sustainability plan.

Currently, UNLV does not devote a portion of new employee orientation to sustainability topics.
III. Dining Services

The STAR program gives credit for three things under the category of dining services: the amount of locally-produced food purchased by the university, the amount of organic food served and the availability of fair trade coffee. The university should include food that is served in residence hall cafeterias as well as university-catered functions. On-campus franchises, vending machines, etc. are not included in the assessment for these categories.

Several universities already participate in all three of these activities. Some of them are: University of California-Santa Cruz, University of Colorado and University of Washington.

Currently UNLV does not include any of these practices in its standard purchasing policies for dining services.

Other practices that act toward sustainability in dining services, that are not included in the AASHE STAR program are:

- North Carolina State University has done away with using trays as a method of reducing water usage.
- Ithaca College dining Services incorporates “zero waste” options in catering operations and utilizes compostable plastic packaging.
- University of Washington food Service has an agreement to have all used cooking oil picked up by a local producer of biodiesel fuel. Also, anyone bringing their own mug gets a reduced on price on beverages.

IV. Materials, Recycling and Waste Minimization

A prerequisite for the STARS programs is that the applying university must have a recycling program already in place. UNLV’s recycling program is funded by a yard sale it conducts once a year.

While UNLV has such a program, the placement of recycling containers is not equal to the placement of waste containers like it is at many universities. This leaves room for great improvement at UNLV.

To gain credit in the STARS program, the university will measure its waste generation. This may be done by weight or volume. The university tracks its waste sent to landfills or incinerated and waste that is recycled or composted.

To minimize waste is to minimize the amount of material incinerated, sent to a landfill or to a recycling or composting facility. The university should show a downward trend in waste generated over a period of years, to achieve the goal of minimizing its waste.
To divert waste is to minimize the amount of waste that is sent to a landfill or incinerated. Diverted waste is recycled, reused or composted. The percentage of waste diverted is the amount of waste diverted divided by the entire amount of waste generated.

The university should also have a recycling program for electronic waste. The recycled electronics should include both university-purchased items and student–purchased electronics. Electronics collected are refurbished, donated or recycled domestically.

UNLV has no program for recycling electronic waste generated on campus.

The university will also have a program in place to ensure that all hazardous materials are tracked and disposed of properly.

Currently UNLV tracks the generation and disposal of its hazardous waste.

Examples of waste reduction and monitoring at other universities are:

- At Ithaca College in Ithaca, New York, the “Take it Or Leave It” program collects reusable household items and small appliances residents leave behind at the end of the year, diverting 2.5 tons from the waste stream; re-sale of those items to incoming residents provides the IC Environmental Society with funding for educational and social programs. Also, an on-site residence hall furniture restoration program keeps residence hall furniture in service, saving on new purchases. Mattresses are purchased from a supplier that takes back old mattresses to refurbish and resell or recycle them. The composting program works with local business to compost some of the organic waste produces on campus.
- The University of Washington Food Service Department has an agreement to have all used cooking oil picked up by a local producer of biodiesel fuel.

V. Transportation

Four areas are evaluated by the STARS program: fleet greenhouse gas emissions, commute modal split, commuter options and air travel.

Evaluating fleet greenhouse gas emissions means tracking the amount of greenhouse gases emitted by university owned and operated vehicles. Emissions are calculated per passenger mile travelled. Credit is given by the program for .5 pounds or fewer carbon dioxide equivalent per passenger mile travelled.

The university will also evaluate what percentage of commuter travel is accomplished by means other than single passenger vehicle. Other modes of transportation include mass transit, carpooling, bicycling and walking. The STAR program gives credit for percentages of alternative transportation achieved.
The university should report the options it provides for commuters. The STAR program gives credit for incentives and programs that encourage students, staff and faculty to walk, bike, carpool or use other forms of transportation, excluding single passenger vehicle.

Last, the university should track the amount of greenhouse gas emissions from university-funded air travel.

Currently UNLV does not have programs in place to monitor or encourage any of these activities.

Examples of programs that encourage sustainable transportation at other universities are:

- Arizona State University provides free bus passes for students and staff between campuses and greater Phoenix area. The university also promotes a rideshare service, funds a shuttle between campuses and operates a rental program for fuel efficient vehicles with parking on campus.
- To reduce the university’s amount of air travel, The University of Minnesota has invested in user-friendly videoconferencing technology, and have started to experiment with ways to replace carbon-based forms of collaboration, at least in cases where live conferencing is difficult or unwarranted.
- The University of Texas system has also taken a strong lead in academic videoconferencing.
- American College & University Presidents Climate Commitment includes an inventory of carbon emitting activities, including air travel sponsored by the school.

**VI. Immediate Actions**

The university’s first task should be the establishment of a permanent committee for sustainability. There is great potential for improvement within the university, particularly under the guidance of programs such as the AASHE STARS program. What UNLV needs to achieve the goals set forth by such programs is an overseeing body whose job is to organize and enact sustainability efforts on campus.

Also, the university should take part in an evaluation program such as STARS. The STARS program provides goals and guidelines for sustainable practices. It also requires specific documentation from applicant universities for each evaluation category, ensuring correct practices.

The first steps toward sustainability are the things that can be accomplished immediately. This should include actions that can be stopped. For faculty, staff and student life, this would include actions such as the elimination of trays from the cafeteria or partnering
with the Ecological Mail Coalition to reduce the amount of junk mail received by each department. An inventory of these cost-free strategies should be conducted as soon as possible.

**VII. Looking Forward**

*1-Year Actions:*

To fund future actions, UNLV should propose a ‘sustainability fee’ to students as part of their fee structure at enrollment.

The university should oversee, promote and participate in student and staff motivational activities such as inter-collegiate recycling competitions or sustainability competitions between departments or dormitories. UNLV should also begin to include sustainability topics and actions it is taking in new student and new employee orientation.

UNLV should begin assessing the cost of more sustainable purchasing options and where possible purchase the more sustainable product. Examples include: recycled copy paper, toilet tissue, electronic products such as printer cartridges, fair trade coffee and organically grown produce.

Also, within a year UNLV should increase recycling efforts to include paper, aluminum and glass recycling containers everywhere that a waste container is present.

UNLV can begin to monitor its greenhouse gas emissions using one of the conversion programs outlined by the STARS program.

UNLV needs to examine its potential for alternative forms of transportation for student, staff and faculty. Some of these options could be promoted within a year at very little cost to the university. For example, the university could promote carpooling with a parking pass and associated parking spots for carpoolers.

*5-year actions*

Within five years, UNLV should have established support for co-curricular sustainability-oriented organizations. Sustainability-related activities, such as Recyclemania, should be common, annual activities that students, staff and faculty participate in.

In dining services, dining halls and other university-supported catered events should offer the option of organically-produced food. Also, the university should partner with local business to have cooking oils collected. A composting program should be in place to minimize kitchen waste and provide the university with fertilizer.

All office materials will be 100 percent post-consumer recycled material. This should apply to bathroom products, such as toilet tissue as well.
Waste reduction strategies that might be accomplished on this time frame include: the promotion of waste reduction on campus, the purchasing of products that minimize packaging and programs to encourage reuse, such as the “Take It or Leave It” furniture program, previously mentioned.

In five years, the university should have a partnership with local mass transit to supply reduced price of free bus fair for all members of the university, a more extensive shuttle schedule. UNLV should also offer a privileged parking option for carpoolers. The university should at this time be monitoring the greenhouse gases emitted by the university owned and operated fleet.

10-year actions

At the 10-year point, the university should have well established the actions outlined above. Purchasing practices should be firmly rooted in sustainable options in office supply, dining services, dormitories and other areas of faculty, staff and student life.

More dramatic and costly measures should be examined. For example, at this point, UNLV’s transportation fleet could be converted to electric, hybrid or, at the very least, fuel efficient vehicles.

UNLV should examine the potential for the use of renewable energy sources on campus. Whether it is a direct source, like solar power, or the purchase of credits, there should be a significant portion of energy on campus supplied through renewable resources.

The university will have significantly lowered its carbon footprint.

UNLV at 20 years

Ideally, at the 20 year point, UNLV will have incorporated sustainable options into all areas of its operation. Not only will these options be offered, but they will be accepted and practiced as the norm.

The student’s sustainability fee will provide a base for making sustainable purchases.

UNLV will also have partnered with community entities to promote sustainable practices in the city.
The Committee on Research and Education was charged with assessing all aspects of research and education on campus and associated with the campus. The committee was asked to base its assessment on the current state of the campus as well as to project out the university’s aspirations in these areas over the next 20 years.

I. RESEARCH PROJECTS

A. Current Efforts

UNLV faculty are currently involved in a number of interesting sustainability-related research projects. A brief sampling include below. Please note that this list is NOT exhaustive and there are other faculty on campus conducting research related to sustainability.

Environmental Sustainability

- Mechanical Engineering Professor Bob Boehm and several of his colleagues are exploring numerous ways of using solar energy in Southern Nevada. They have partnered with the Las Vegas Valley Water District to develop a solar-powered hydrogen fueling station, conducted research on a zero-energy house, and partnered with Solargenix on advanced development of the a solar power plant in Eldorado Valley, just to name a few.

- Architecture Professor Alfredo Fernandez-Gonzales is developing marketable systems for passive solar heating and cooling and the mapping of energy consumption and carbon dioxide emissions of the residential sector in the Las Vegas Valley.

- School of Architecture Director Michael Kroelinger and Mechanical Engineering Professor Bob Boehm are creating a model solar home that will be monitored for energy savings.

- Several UNLV life sciences professors conduct arid lands research.

  - Professor Dale Devitt conducts research on urban ecology/ecosystems (vegetation, wildlife, soils, horticulture, etc.); his projects have focused on plants and their water needs and usage, particularly on golf courses and at selected residential sites, as well as the White River Valley and Spring Valley.
  - Dr. Jeff Shen studies the genetic makeup of drought-tolerant plants to determine if the genes that enable them to survive in low-water conditions could be used to create more drought-tolerant turf grasses.
  - Dr. Scott Abella and Professor Stan Smith are working with the U.S. Department of Interior’s Joint Fire Science Program to identify native species that will help improve the restoration of arid lands following uncontrolled wildfires.
- Professor Brett Riddle studies the biogeography of desert mammals and how their distributions are determined by aridity patterns.
- Dr. Allen Gibbs studies desert fruit flies and how they are adapted to desert environments.

- Mechanical engineering professor Daniel Cook has designed a series of sculptures that mimic flowering plants, using solar cells and hydrogen to power the moving pieces. The goal of the project is to use animatronic technology to educate citizens about the potential of solar and hydrogen energy.

- A team of UNLV faculty and staff has worked to combine and create a list of best practices related to the sampling of adult quagga mussels using passive and active sampling techniques, incorporating work currently being conducted at the Lake Mead National Recreation Area and published information found in the scientific literature. They have created a color-coded map of the current sampling locations for quagga mussel adults.

- Dr. Klaus Stetzenbach of the Harry Reid Center for Environmental Studies and Dr. Oliver Hemmers of the Office of Strategic Energy Programs are jointly coordinating development of a proposal between UNLV, Siemens, General Electric and Intel to secure UNLV as the site of a National Renewable Energy Lab (NREL).

- Dr. Tom Nartker’s research to construct control software for a small unmanned aerial vehicle (UAV) for the U.S. Department of Defense may make it possible for UNLV to begin offering curriculum in UAV pilot training. There are many possible UAV applications that could significantly reduce traffic congestion in the future.

- Dr. Tom Nartker is also working to create a micro-algae based bioreactor technology to achieve substantial reduction of CO2 emissions from coal fired power plants.

- Dr. Dale Devitt of the Center for Urban Horticulture and Water Conservation is assessing the salt, nutrient, and pharmaceutical content in the reuse water resulting from treated sewage effluent. This water is now being added to the water portfolios of most communities in the southwest. The $700,000 project is a joint study with the University of California-Riverside, Desert Research Institute, UNLV and Southern Nevada Water Authority.

- Professor Chulsung Bae of the Chemistry Department is engaged in materials research that can play a key role in alternative energy and sustainable environment. One of the major focuses in his group is development of novel polyelectrolyte materials for fuel cell membrane, biofuel production, and artificial muscle applications. The fuel cell membrane project is currently supported by U.S. Department of Energy and will be continuously supported by a National Science Foundation CAREER AWARD from fall 2008. In another area of Professor Bae’s research on sustainability, his group is working on development of recoverable/recyclable metal catalyst system that is of crucial importance to the future of green chemistry.

- Professor Bret Birdsong of the Boyd Law School is working on the second edition of his casebook, *Natural Resources Law: A Place-Based Book of Problems and Cases*. He also
recently published two sustainability articles: *Adjudicating Sustainability* and *Seances, Cienegas, and Slop*.

- Law Professor Douglas Grant is working on a paper titled “Conjunctive Management of Hydrologically Connected Surface Water and Ground Water: The Problem of Sustainable Use” for a continuing legal education seminar sponsored by the Rocky Mountain Mineral Law Foundation. The foundation will publish the paper as part of a book in 2009.

- In October 2007 the Saltman Center for Dispute Resolution at the Boyd School of Law held a one-day conference about sustainability issues related to the Colorado River. The presenters included scientists, law professors, environmentalists, and dispute resolution experts. The conference papers, which included presentations by Law Professors Jean Sternlight, Douglas Grant, and Bret Birdsong, will be published by the Nevada Law Journal.

- Mechanical Engineering Professor Darrell Pepper and his students are analyzing the potential of wind energy in Nevada by measuring wind speeds and directions from four meteorological towers in the Nellis Dunes area near Las Vegas. These data are being used to determine wind energy classification for the potential placement of wind turbines in the area and to assist the Geoscience Department in evaluating the dispersion of dust from the site. They are also working with Alterngen, an energy company located near Kingman, Arizona, to assess winds in northern Arizona, along with the employment of flexible solar panels in support of solar-powered water pumps. One pump is already located at the Nevada Test Site with the purpose of drawing water from as deep as 5000 feet.

- Environmental Studies Professor Helen Neill is providing research support to the Nevada Test Site Community Advisory Board, funded by five-year U.S. Department of Energy grant, to study groundwater contamination from underground tests on Pahute Mesa and low level waste disposal, including transuranic waste in the trenches, removal and shipment of stored transuranic waste to the Waste Isolation Pilot Plant in Carlsbad, NM, and measurement of public attitudes in the rural communities about environmental management decisions that affect present and future generations.

- Professor Alfredo Fernandez-Gonzalez in the School of Architecture is conducting research projects on:
  - Thermal evaluation of roofponds.
  - Viability and thermal analysis of green roofs in the Las Vegas metropolitan area.
  - Energy consumption and carbon dioxide emissions baseline and reduction targets for the residential sector in the Las Vegas metropolitan area.
  - Water consumption baseline for the residential sector in the Las Vegas Metropolitan Area.

- In 2007 the Natural Energies Advanced Technologies Laboratory in the School of Architecture produced an interactive DVD, *The 2030 Challenge: Environmental Design in the Face of Climate Change*, that was sent to all NAAB-accredited architecture programs in North America and to the Las Vegas Springs Preserve library branch.
• Professor Michael Kroelinger in the School of Architecture is developing a Renewable Energy Center for Southern Nevada in collaboration with Mechanical Engineering Professor Robert Boehm. He is also studying the daylighting performance of window strategies in buildings.

• The Public Lands Institute, in conjunction with the School of Life Sciences, has the following research projects underway:
  - Measuring the vegetation recovery of areas burned by wildlife in Clark County from the 1970s to the present. The Institute also plans a follow-up study to assess soil carbon storage along this fire chronosequence to see how time since a fire relates to carbon dioxide emissions and climate change.
  - Assessing long-term vegetation change along an elevational gradient of the Newberry Mountains in southern Nevada. Chris Roberts, a graduate student in the School of Life Science and supported by Public Lands Institute, is re-measuring a network of long-term monitoring plots established in 1979 to assess 30 years of change in ecological communities through exotic species invasions, human use of the landscape, and climate change.
  - Developing revegetation techniques for arid lands by conducting a systematic literature synthesis on revegetation, conducting re-vegetation experiments with native plants salvaged from private lands in the Las Vegas Valley slated for development, and experimenting with techniques for germinating and growing a variety of desert plants.

• The UNLV Public Lands Institute is assisting federal agencies with an Interagency Science Strategy for Southern Nevada public lands. The strategy includes a natural resource goal, which covers issues related to fire, invasive species, watersheds and landscapes, and biodiversity. The strategy also includes a science goal related to the interaction of humans with their natural surroundings, which covers sustainability issues related to cultural resources, recreation, land use, and education on Southern Nevada federal public lands.

• Several faculty in the Department of Civil and Environmental Engineering are conducting studies related to water quantity and quality, and air quality.

  - Dr. Thomas C. Piechota is involved in various research projects related to climate change impacts on water resources of the Southwest. Currently, he is the PI on a National Science Foundation grant “Improved Hydrologic Drought Forecasting Using Climate Information” and a National Oceanic Atmospheric Administration grant “Improving Ensemble Streamflow Prediction Using Interdecadal/Interannual Climate Variability.” Lastly, he has recently served on the U.S. Bureau of Reclamation Climate Technical Work Group that compiled the latest climate change research for the Colorado River basin related to water resources, and provided recommendations on how to proceed with integrating climate change into short and long term decisions.
  - Dr. Sajjad Ahmad has conducted various studies (funded by NOAA and UNLV PRA) on climate change impacts on the operation of water resource systems in Florida and in the southwest U.S.
Dr. Jacimaria Batista has conducted various studies on the influence of perchlorate on the water quality of the Las Vegas Wash and Lake Mead. In addition, she works closely with the various wastewater treatment facilities on treatment processes.

Dr. David James has over 10 years of experience on air quality issues in the Las Vegas Valley. He has worked closely with local agencies on PM10 emissions and mitigating strategies.

- As part of the latest NSF EPSCOR grant for the state, an interdisciplinary group of NSHE faculty (PIs Thomas Piechota, Nick Lancaster, Scott Mensing, Gayle Dana) will be performing research on “Nevada Infrastructure for Climate Change Science, Education and Outreach” where faculty from Nevada System of Higher Education spanning colleges of science, engineering, urban affairs, and liberal arts are involved in evaluating the climate change impacts on Nevada. ($15 million over 5 years).

Economic Sustainability
- Center for Business and Economic Research Director Keith Schwer explores economic issues associated with sustainability. His research covers topics ranging from the economic implications of developing renewable energy technology to the costs of improving the high school dropout rate in Nevada. His goal is to educate the public and policymakers about the role economic factors play in important issues affecting quality of life in our community and state.

- Professor Helen Neill of the Department of Environmental Studies is conducting research to estimate dollar values for private and public environmental goods. These data are used to provide feedback to individual and community decision makers using alternative approaches for air quality, xeriscape, and perchlorate contamination.

Social-Cultural Sustainability
- Dr. Cynthia Carruthers in the Department of Recreation and Sport Management recently completed two studies of after-school youth development programs in an effort to enhance social sustainability in Southern Nevada. Her work recognizes that social sustainability requires members of a community, including youth-serving agencies, to work together cooperatively to advance the social good.

- Several UNLV faculty members are conducting research aimed at sustaining public health:
  - Dr. Shawn Gerstenberger, the chair of the environmental and occupational health department, is leading a team that helps identify lead levels in a variety of locations and products.
  - Professors Michelle Chino-Kelly and Mary Guinan have established an academic center for the study of health care disparities.
  - Dr. Chad Cross, director of the epidemiology and biostatistics program, is leading an effort to create the Nevada Center for Environmental and Health Surveillance, which will function as Nevada’s principal environmental health surveillance organization.
  - Dr. Linda Stetzenbach of UNLV’s Harry Reid Center is the principal investigator on research projects involving the study of indoor air quality in education and office buildings.
• The Center for Health Information Analysis, under Director Joseph Greenway, collects, analyzes, and distributes statewide health indicators based on patient intakes at Nevada hospitals.

• The Department of Sociology conducts an annual study of homelessness in southern Nevada. In addition, faculty (e.g., Robert Futrell, Barbara Brents, Christie Batson) from the department have been working with the City of Las Vegas on a sustainability and quality of life survey.

• Professor Bo Bernhard in the Department of Hotel Management is conducting a study on compulsive gambling and its social and health effects.

• Professor Ron Smith oversees the Midtown UNLV project, which seeks to redevelop the area surrounding the main UNLV campus to promote social interactions, mixed housing, and mixed-use development.

• Dr. Joe Lombardo is overseeing the installation of a Visualization and Decision Center in the Science and Engineering Building with supercomputer capacity and full library access to data for weighing decisions by scientists, municipalities, and quasi-government agencies on specific sustainability and planning issues.

• The Gerontology Program in the College of Fine Arts regularly presents a series of Research in Aging forums that highlight aging-related research being done by UNLV professors. Recent offerings in 2007-2008 include Modified Jazz Dance Effects on Balance, Cognition and Mood in Older Women; Factors Influencing Self Care Practices of Diabetic Elders; Culturally Competent End of Life Care, and Racial Differences in the Use of Long Term Care Services.

• The Gerontology Program is currently working in conjunction with the Cannon Survey Center to conduct a Respite Provider Survey for the State of Nevada on behalf of the Nevada Lifespan Respite Care Coalition.


• Dr. Andy Kirk of the Department of History directs the Preserve Nevada program, which advocates ecological design. The organization held a sustainability conference in Ely, Nevada, in Spring 2007, where historic preservation of buildings was discussed as a critical component of the national sustainability movement.

• Dr. Susan Miller, Professor in the Department of Special Education, is engaged in a programmatic research agenda related to the development of two new mathematics strategies for students with learning difficulties. The strategies are designed to help students develop conceptual, procedural, and declarative knowledge related to addition and subtraction that involves regrouping.

• For the last 15 years, the Department of Special Education, in collaboration with the Clark County School District, has worked to alleviate the teacher shortage in southern
Nevada. Under the direction of Dr. Kyle Higgins and Dr. Jeff Gelfer the department has offered two undergraduate programs (special education and early childhood education) in which educational assistants can attain a Bachelor's Degree and licensure in a one-year time period. At the graduate level, the department has offered four programs in special education (generalist, autism, early childhood special education, and mental retardation) and one program in early childhood education in which participants earn a Master's Degree and licensure in a one-year period. In 2007, there were approximately 400 participants in these programs.

- Dr. Nancy Sileo from the Department of Special Education has completed a number of studies examining HIV/AIDS prevention education behaviors among special education teacher educators and Native populations. She is working to develop HIV/AIDS Prevention Education strategies and curricula for students with disabilities.

- Dr. Tom Pierce has been investigating how inclusion of students with disabilities affects learning of all students. The project started with one school and has since increased to over 250 schools within CCSD.

- Dr. Steve Hackmyer in the Department of Advanced Education in the School of Dental Medicine recently received a Health Resources and Services Administration (HRSA) Grant for a total of $ 1,584,249 for 3 years to support the Advanced Education Program in Pediatric Dentistry with emphasis on meeting the needs of underserved and at-risk for oral disease children living in Nevada.

- Dr. Leslie Karns in the Department of Clinical Sciences in the School of Dental Medicine has received annual sub-grant awards from the Ryan White to provide dental services to Nevada citizens with HIV.

- Dr. Connie Mobley in the Department of Professional Studies in the School of Dental Medicine has been a co-investigator on the multi-site clinical trial to decrease risk of Type 2 diabetes mellitus in high-risk populations enrolled in US middle schools for the past four years. The Healthy study is supported by NIDDK within the National Institutes of Health and will be completed in 2010.

- Dr. Christina Demopoulos in the Department of Professional Studies in the School of Dental Medicine is conducting population based research on the prevention of Oral Health Cancer among children living in Nevada. Her research team has developed a data base representing risk based, demographic, and behavioral data on over 60,000 children living in Nevada from 2001 through the present.

- Drs. Mildred McClain, Marcia Ditmyer, Georgia Dounis and Connie Mobley in cooperation with the Nevada Department of Health have completed an extensive survey of dental and oral health needs among adults with special needs to develop service based initiatives through the dental school for those needing oral health care.

In addition, to the individual research efforts listed above, the Urban Sustainability Initiative was established by Ron Smith, Founding Director. The overarching goal of USI is to help build a sustainable Las Vegas, surrounding region, and state of Nevada. The office draws primarily on
faculty and professional staff with sustainability expertise, existing UNLV research and service
centers and institutes, and academic colleges that focus on various aspects of sustainability. The
support for USI is through external funding.

In the past year, USI has held the inaugural UNLV Urban Sustainability Conference held on
campus in Fall 2007 that had more than 450 attendees, established a listserv of faculty and
community experts specializing in urban sustainability issues at urban21.unlv.edu, hired a
Thomas Piechota, Director of Sustainability and Multidisciplinary Research, submitted an NSF
IGERT Proposal on urban sustainability, worked with the City of Las Vegas on urban
sustainability issues, secured external funding for USI Graduate Assistants (3 of them starting in
the Fall 2008) and seed grants for faculty teams, and setup an internship link for companies
interested in hiring students for sustainability related work.

B. Immediate Actions

- Conduct a campus wide assessment of sustainability research projects.

- Identify focus areas in sustainability where there is UNLV expertise and enthusiasms for
  interdisciplinary research.

C. Suggested Actions for 1 Year

- Write interdisciplinary research proposals to funding agencies such as NSF, NIH, DOE,
  DHS, Department of Education, etc.

- Provide seed grants for faculty to form interdisciplinary research teams focused on
  sustainability. Expectation is that they will conduct preliminary research and write at
  least one proposal.

- Discuss regional partnerships with other institutions interested in sustainability (e.g.,
  ASU, UC Riverside, and Southern Utah University).

- Discuss community partnerships with private and public sector (e.g., MGM Mirage,
  Molasky Group, City of Las Vegas, Regional Transportation Commission, U.S. Bureau
  of Reclamation, U.S. Bureau of Land Management).

- Develop a strategic plan for sustainability research at UNLV and with external partners.

D. Suggested Actions for 5 Years

- Regional partnerships are well established and thriving.

- Community partnerships with private and public sector are well established, successful,
  and increasing.

- A dedicated Computational Center supports a wide range of studies on complex urban
  sustainability problems, including disaster response, demographics and their impact on
  roads, airports, and rail, thermal impact of urban areas (the so called “heat island
effect”), and budgetary planning.
• A Visualization Theatre in the Science and Engineering Building allows teams of scientists as well as community professionals to draw upon visual images as well as our data capacities from the Computational Center and the Lied Library to examine problems of water, toxic waste, housing development, traffic congestion, and other sustainability challenges.

• UNLV is well known as an information resource for the entire community as well as professionals on urban research.

E. **Suggested Actions for 10 and 20 Years**

• The Focus 50-100 strategic plan lists sustainability as one of three research foci: “The issue of sustainability, including environmental, economic, and social sustainability, is particularly relevant for Nevada. Research opportunities in this field abound, such as in the areas of water resources, the hospitality industry, energy systems, health, and education.” Based on this research focus, the college deans and university faculty will identify future areas of study in sustainability, broadly interpreted, and the Executive Vice President and Provost will be forming implementation teams to ensure follow-through on goals and action items identified during the strategic planning process. These teams will be responsible for establishing timelines for implementation, recommending the appropriate benchmarks and metrics for monitoring progress, organizing existing relevant campus groups working in the area of interest, retaining consultants as needed, and recommending smaller *ad hoc* groups for detailed execution of the plans. The teams will periodically report their activities to the Provost and President.

II. **Sustainable Practices in Research**

A. **Current Efforts**

• At the present time, there appears to be no uniform effort to ensure that research laboratory practices are conducted in the spirit of sustainable goals nor a uniform effort to purchase materials that are green/sustainable. The Office of Research Compliance is currently conducting a survey of best practices in sustainable research practices. Results are expected in Summer 2008.

Examples of current sustainable research practices include the following:

• The School of Architecture uses recycled and donated materials in the construction of test rooms and prototypes.

• The Kingsley Lab in the School of Dental Medicine is an active and enthusiastic partner with the UNLV Rebel Recycling Program, embracing the mission based on the 3Rs: Reduce, Reuse and Recycle.

  ➢ **Reduce:** The lab focuses on submitting peer-reviewed articles via online paperless submission and publication; this eliminates the need to use/print multiple paper copies of each version of the manuscript. In addition, the lab also strives to reduce its carbon footprint by not only turning off any unused
equipment but also turning off the connected power supply during extended periods of non-use (holidays, vacation, etc.) to reduce power drains and overall power usage.

- Reuse items: If updates are needed for lab-specific manuals, the old manual is kept, if appropriate, printing and highlighting only the newest changes. In this manner, reprinting of an entire manual for a one-two word change becomes unnecessary.
- Recycle: The lab recycles all paper and paper-derivatives, such as out-of-date catalogs, manuals and journals using the Rebel Recycling canisters. Where deemed appropriate by the campus safety officers or the Animal Care and Use Committee, chemicals in containers are properly disposed of by the lab safety office.

- Dr. Hillyard in the Department of Biomedical Sciences in the School of Dental Medicine studies living animals, where it is essential that chemicals and lab practices do not involve toxins.

B. **Immediate Actions**

- The Office of Research Compliance plans to conduct a national survey of sustainable research practices. The results of this survey – along with the survey of best practices – can be used as a model for UNLV’s future goals in this area.

C. **Suggested Actions for 10 to 20 Years**

- Additional actions the university can take to become more sustainable in its research practices will be determined in consultation with the Office of Research and university faculty and staff. When the university hires a sustainability officer to oversee long-term efforts, it is anticipated that broader implementation of sustainable research practices would be a key goal.

### III. **Sustainability Research Funding Sources**

A. **Current Efforts**

- Currently, faculty research is supported by three university-wide competitive award programs open to all faculty members. Individual colleges and departments provide additional opportunities for research award funding.

  - Research Development Award – $100,000
  - Research Infrastructure Award – $1,000,000
  - President’s Research Award – $400,000

- The Applied Research Initiative Program funds additional research that directly benefits the State of Nevada.

- Directed federal appropriations are another source of research funding, but one on which the university must necessarily rely on less and less in the future. In federal fiscal year 2008, UNLV was awarded $16.9 million in directed appropriations.
• Current research being conducted by the Center for Urban Horticulture and Water is being funded by the Water Environment Research Foundation, the Water Reuse Foundation, United States Golf Association, and approximately 10 different Sanitation Districts in California, Nevada, and Arizona.

• Research in the School of Architecture is being supported by the Evelyn and Harold Hay Charitable Fund as well as the National Renewable Energy Laboratory.

• Faculty projects in the School of Dental Medicine are being funded by the U.S. Human Resources and Services Administration, UNLV Research Infrastructure Awards, National Institutes for Health, Funds for a Healthy Nevada, Trust Fund for Public Health, and American Legacy Foundation.

B. Immediate Actions

• Proposals for sustainability-related research have been submitted to the Lied Foundation, the National Science Foundation, and the Department of Energy through the Office of Urban Sustainability Initiatives.

• The University will be inviting the National Institutes of Health to present a one-day workshop for faculty in Fall 2008. Like the National Science Foundation workshop held in February 2008, the NIH workshop will be structured to help faculty learn how to write successful NIH proposals and give them an opportunity to network with NIH staff based in Washington, D.C.

• In Spring 2009 the University will host the U.S. Department of Energy to present a one-day workshop for faculty.

• In the Fall 2008, USI will host a Business Sustainability and Green Economy conference.

C. Suggested Actions for 1 Year

Looking into the future, the opportunities for urban sustainability funding can primarily be found within private foundations and federal agencies. UNLV can seek funding from:

✓ Lied Foundation
✓ MGM-Mirage Foundation
✓ Harrah’s Foundation
✓ Rockefeller Foundation
✓ Andrew Mellon Foundation
✓ Volvo Foundation
✓ Robert Wood Johnson Foundation
✓ Department of Housing and Urban Development
✓ Department of Energy
✓ National Science Foundation
✓ IGERT
✓ National Institutes of Health
✓ National Endowment for the Humanities
✓ Department of Education
✓ Department of Homeland Security

D. **Suggested Actions for 5 Years**

- Significantly increase the internal dollars allocated to Research Infrastructure Award, Research Development Award, and the President’s Research Award. In alternate years, have sustainability projects be the preferred topic for these awards.
E. **Suggested Actions for 10 to 20 Years**

- As a continuation of the Focus 50-100 strategic plan, the Executive Vice President and Provost will work with the college deans and university faculty to identify future areas of study in sustainability, broadly interpreted.

IV. **SUSTAINABILITY EDUCATIONAL OPPORTUNITIES AND COURSE REQUIREMENTS**

A. **Current Efforts**

- **Courses on Sustainability**: Several departments have created courses related to sustainability including CEM 480 Sustainable Construction, HMD 376E Green Hospitality/Sustainable Business Practices, LAW 790 Special Topics in Land Use, BIO 345 Urban Horticulture, BIO 441 Restoration Ecology.

- **Senior Design Projects in Engineering**: Cox Communications sponsors the competition and emphasizes innovation. Civil Engineering students have been asked to include sustainability as part of their projects.

- **Class Projects & Themes**: A growing number of UNLV classes incorporate sustainability in their content and/or class projects: AAD 495/695 Special Topics in Architecture included ideas for on-campus sustainability as an integral part of a class research project in Fall 2007. In fact, the School of Architecture requires that all studio classes address sustainability and the Architecture 2030 Challenge.

A small sampling of other UNLV classes that currently incorporate sustainability include:
  - HMD 395 Hotel Facilities Management
  - LAW 620 Water Law
  - LAW 651 Environmental Quality Law
  - LAW 654 Public Lands and Natural Resources Law
  - LAW 776 Natural Resources Law Field Seminar
  - LAW 790 Special Topics in Land Use
  - AAE 435 Sustainable Design
  - AAL 101 Design with Nature
  - AAL 330 Design with Climate
  - AAL 446/646 Land Use Planning & Controls
  - ABS 332 Environmental Control Systems
  - AAE 495/695 Special Topics in Sustainable Development
  - AAE 735 Developing Sustainable Design
  - AAE 770 Research Methods in Environmental Design
  - ABS 732 Solar Energy Applications in Architecture

- **Solar Minor**: Nevada Power Company has awarded a two-year $500,000 grant to UNLV to develop a Renewable Energy Minor that will be offered across campus.

- **Degree Programs**: The College of Business is developing a Ph.D. track in Business Sustainability that will address green products and services, green branding, energy, water, and architectural design efficiencies. The School of Nursing is building its entire
graduate program around the concept of community health sustainability and is looking to Arizona State University for a partnership and to share courses.

- **NSF IGERT Program**: An NSF Integrative Graduate Education Research and Training (IGERT) proposal will be submitted this year titled “Achieving Healthy Communities through Sustainability.”

- **NSF EPSCOR Climate Change Program**: UNLV will likely have a leading role in development of climate change education as part of the university’s latest NSF EPSCOR proposal.

- **Service Learning Internships**: UNLV professors in a variety of disciplines currently make service learning opportunities a key component of their classes.

- **Sustainability Internships**: The Office of Urban Sustainability Initiatives coordinates paid and unpaid internships for UNLV students to work on sustainability-related projects in the local business community. Currently, internships are being developed with MGM-Mirage, The Molasky Group, the Regional Transportation Commission, and the League of Women Voters.

- **Community Partnerships**: The School of Dental Medicine has established community partnerships with the Clark County School District, federal agencies, and health related foundations to provide oral health education, screening, and referral for children and adults in the Nevada community. The Public Lands Institutes employs graduate students and interns to work with the Bureau of Land Management, National Park Service, U.S. Fish & Wildlife Service, and U.S. Forest Service on a variety of projects related to preserving public lands in Nevada.

- **Educational Outreach**: People are more likely to participate and support sustainable practices if they have knowledge of the natural world, an appreciation for the natural world, a desire and motivation to protect the natural world, and the skills to do so. Sustainability mindsets are fostered through knowledge, experiences, and a positive connection to the natural world. The Public Lands Institute influences these variables through a variety of programs and projects, including:
  
  - Forever Earth educational field trips create knowledge of the natural world by allowing CCSD students to discover: How Colorado River water is allocated and used, especially by Las Vegas; compare water quality in Lake Mead with that of effluent at Las Vegas Wash; how non-native fish affect habitat and populations of native fish (particularly Razorback Sucker); how Quagga Mussel infestation has affected water quality and the ecology of the lake.
  - Discover Mojave programs provide students positive experiences in nature through supervised recreation, including bird watching, canoeing, kayaking, rock climbing, and fishing.
  - A Hispanic Outreach program to foster a cross-cultural connection between the Southern Nevada community and their environment through education and outreach.
  - A Nevada State Certification in Environmental Education and Interpretation. Working in museums, nature centers, public land sites and other nature- and
heritage-rich places throughout Nevada, participants in this certificate program will have the knowledge and skills needed to create an environmentally literate citizenry.

- There are thousands of citizens who volunteer to help preserve and protect public land sites each year. PLI is creating educational components that will give these volunteers the knowledge, awareness, and skills needed to be active stewards of the land.

**Caveat:** New opportunities and requirements in sustainability education and outreach need to be developed as an organic outgrowth of the strategic planning process. The following suggestions are provided merely as examples of actions the university might wish to take. None of these has been formally discussed with the vice presidents, college deans, or the faculty.

### B. Immediate Actions

- **New Student Orientation:** New students and their parents could be provided with specific information about sustainable products for residence hall living, campus recycling, educational opportunities, bicycles, carpooling, bus service, etc.

### C. Suggested Actions for 1 Year

- **First-Year Learning Experience:** A module on practical sustainable living could be offered as part of the newly developed first-year learning experience for UNLV freshmen.

- **Writing Across the Curriculum:** An emphasis may be placed on writing across the curriculum and one of the topics could be sustainability.

- **General Education Requirement:** Sustainability could become part of the General Education learning outcomes through a team-taught Sustainability Science 101 course.

- **Internships:** If internships become required for all students, then some of these could focus on sustainability-related businesses. Career Services could be expanded to include coordination of service-learning opportunities.

- **UNLV Study Abroad:** Potential international studies and internships on sustainability could be developed in UNLV’s programs in Italy, Costa Rica, and The Netherlands.

### D. Suggested Actions for 5 Years

- **Common Book Program:** If this idea becomes a required UNLV program, then one of the books assigned to all incoming freshmen could include sustainability as a focus.

- **MBA Concentration:** A sustainability concentration could be added to the existing MBA program through 3 to 9 credits of sustainability electives
• **Urban Planning Degree Program(s):** Both undergraduate and graduate degree programs could be developed.

• **Partnerships with University of Nevada Cooperative Extension:** UNLV has opportunities to expand its collaboration with Cooperative Extension to offer joint sustainability-related programs. A new program for training Natural History docents for local museums and outdoor sites is an example.

• **Train the Trainer Certificate Program:** The Division of Educational Outreach could develop a program to train the next generation of schoolteachers to incorporate sustainability topics into their lesson plans.

E. **Suggested Actions for 10 to 20 Years**

• The Focus 50-100 strategic plan calls for an educational program that provides students with “*Broad elucidation of sustainability as it impacts economic, environmental, and social concerns.*” To achieve this educational outcome, the college deans and university faculty will identify additional ways of weaving sustainability into the curriculum and co-curricular activities. In addition, the Executive Vice President and Provost will be forming implementation teams to ensure follow-through on goals and action items identified during the strategic planning process. These teams will be responsible for establishing timelines for implementation, recommending the appropriate benchmarks and metrics for monitoring progress, organizing existing relevant campus groups working in the area of interest, retaining consultants as needed, and recommending smaller ad hoc groups for detailed execution of the plans. The teams will periodically report their activities to the Provost and President.
Creating a sustainable future for UNLV includes the interaction of the university with the Southern Nevada community. UNLV is in a position to both educate and learn from citizens outside of the university.

The Association for the Advancement of Sustainability in Higher Education (AASHE) uses the Sustainability Tracking, Assessment & Rating System (STARS) program to recognize institutions that give back to their communities through community service, engagement, and partnerships.

I. Campus Impacts on the Physical and Social Environment, Services to the Community

Currently, UNLV engages the Southern Nevada community in sustainability efforts in the following ways:

- UNLV has enacted the Urban Sustainability Initiative (USI) with the goal of building “a sustainable Las Vegas, surrounding region, and state of Nevada that — for both now and the future — protects the physical environment (ecological sustainability), adds to an economy and to the lives of workers without jeopardizing the health of the ecosystem (economic sustainability), and promotes a supportive social/cultural way of life for all citizens (social and cultural sustainability).”

- As part of the USI, UNLV hosted an Urban Sustainability Conference on Oct. 24, 2007, where local and national experts discussed the challenges facing Las Vegas and the city's place among national trends.

- UNLV will continue to plan and host such events. Already planned are the National Clean Energy Summit in August of 2008 and the Business Sustainability and Green Economy Forum in September of 2008.

Examples of community service and engagement at other universities are:

- Since 2001, Michigan State University students have provided design options for more than 50 communities throughout Michigan in collaboration with those communities through the “Small Town Design Initiative.”

- Also at Michigan State, the Environmental Affairs and Environmental Studies Departments host a weekly luncheon seminar, open to anyone interested. The speakers present on a sustainability related topic and audience discussion follows.
At Green Mountain College in Poultney, Vermont, students run an after-school Nature Club at the local elementary school. The College annually hosts the Watershed Partnership’s Eco-Expo for 500 fifth- and sixth-graders each May for a series of interactive workshops about their watershed.

At Lane Community College, in Eugene, OR, sustainability staff are featured in the local media discussing such issues as water conservation, energy conservation, and recycling.

At Warren Wilson College in Ashville, North Carolina, students publish an annual environmental journal that is mailed to 15,000 readers and informs its readership of the environmental activities and achievements of students, faculty, and staff.

II. Immediate Actions

The university’s first task should be the establishment of a permanent committee for sustainability. There is great potential for improvement within the university, particularly under the guidance of programs such as the AASHE STARS program. What UNLV needs to achieve the goals set forth by such programs is an overseeing body whose job is to organize and enact sustainability efforts on campus.

Also, the university should take part in an evaluation program such as STARS. The STARS program provides goals and guidelines for sustainable practices. It also requires specific documentation from applicant universities for each evaluation category, ensuring correct practices.

III. Looking Forward

1-Year Actions:

UNLV should seek out partnerships with local parks and organizations (i.e. Desert Research Institute, the Springs Preserve, etc.) to facilitate sustainability and environmental education opportunities for the community on a regular basis.

Assess community service opportunities within sustainability-related curriculum.

5-year actions

Engage and educate the Southern Nevada community through weekly workshops and/or seminars on sustainability-related topics, both on and off campus.

Include community service opportunities within the curriculum.