



# University of Wisconsin-Stout

**Climate Action Plan, 2009**

Wisconsin's Polytechnic University

**DRAFT**



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# Introduction

The UW-Stout 2009 Climate Action Plan provides the framework for the development of initiatives as UW-Stout moves toward the goal of campus climate neutrality. It provides a general guide for action, not a rigid prescription. The plan will utilize a rolling action plan with near-term and long-term initiatives, budget allocation reviews, and progress tracking. The purpose of the plan is to:

- Identify priority areas of interest, concern or opportunity in terms of achieving campus climate neutrality and overall sustainability;
- Set objectives and targets for action;
- Develop initiatives and estimated time frames to achieve targets;
- Allocate responsibilities and identify the necessary resources to enable realization of the plan;
- Establish mechanisms to monitor, evaluate, and report progress.

The following document provides a brief account of the background and context serving as the impetus for the plan, its guiding principles, scope and structure. The remainder of the report includes:

- A review of the 2008 Greenhouse Gas (GHG) Emissions Inventory reporting methodologies and results.
- A review of the 2009 Sustainability Focus Groups initiative and the resulting comments and identified priority areas of concern.
- A summary of recent and ongoing achievements and efforts in campus environmental sustainability.
- The identification of campus-wide Climate Action Initiatives.
- Prioritization of the 2009 action items and initiatives.
- A review of existing and potential funding scenarios for campus sustainability.
- A suggestion for methods of monitoring and evaluating progress, and means of ensuring continual improvement.

## Background and Context

### American College & University President's Climate Commitment (ACUPCC)

The American College & University President's Climate Commitment is a high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas emissions, and to accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth's climate.

Presidents signing the Commitment are pledging to eliminate their campuses' greenhouse gas emissions over time. This involves the development of a comprehensive plan to achieve climate neutrality as soon as possible:

- Within *two months* of signing this document, create institutional structures to guide the development and implementation of the plan (completed November 15, 2007).
- 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 (completed November 15, 2008).
- Within *two years* of signing this document, develop an institutional **Climate Action Plan** for becoming climate neutral, which will include:
  - A target date for achieving climate neutrality as soon as possible.
  - Interim targets for goals and actions that will lead to climate neutrality.
  - Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
  - Actions to expand research or other efforts necessary to achieve climate neutrality.

- Mechanisms for tracking progress on goals and actions.

On September 12th, 2007 UW-Stout became a Charter Signatory of the American College and Universities President's Climate Commitment. Chancellor Charles W. Sorensen signed the climate commitment indicating that UW-Stout agrees to reduce its greenhouse gas emissions on campus, with the eventual goal of leaving a neutral carbon footprint while at the same time providing education to students who will, in turn, help society to do the same.

### Clean Energy Wisconsin - A Plan for Energy Independence

In addition to the ACUPCC commitment, UW-Stout, as a member of the state-wide University of Wisconsin System, has been working to achieve aggressive energy reduction targets set by Governor Jim Doyle's energy independence plan. The *Clean Energy Wisconsin* plan is a comprehensive strategy to strengthen Wisconsin's energy future.

Primary initiatives of the plan include:

- *25 by 25* - Generate 25 percent of our electricity and 25 percent of our transportation fuel from renewable fuels by 2025. This goal will be accomplished through increasing production of renewable fuels and power, and improving the deployment of energy-efficient technologies.
- *10 percent of Renewables Market* - Capture 10 percent of the market share for the production of renewable energy and bioproducts.
- *Research Leadership* - Become a national leader in groundbreaking research that will make alternative energies more affordable and available to all – and to turn those discoveries into new, high-paying jobs for Wisconsin workers.

Executive orders derived from these initiatives have resulted in a reduction in energy consumption by state agencies and universities of 7.2 percent per square foot between 2005 and 2007. The state is expected to meet Governor Doyle's initiative of 10 percent less energy use by 2008, and is making progress toward a 20 percent reduction by 2010. For a detailed explanation of the plan, please refer to <http://cleanenergy.wi.gov/>.

According to the "Energy Use in State-Owned Facilities" report released annually through Wisconsin's Department of Administration, UW-Stout is the most energy efficient campus of all thirteen four-year campuses in the University of Wisconsin system. All UW campus's energy consumption is monitored through monthly utility bills and fuel consumption reports and converted to units of energy, or BTUs, per square foot, per year. This calculation makes campuses of different sizes comparable.

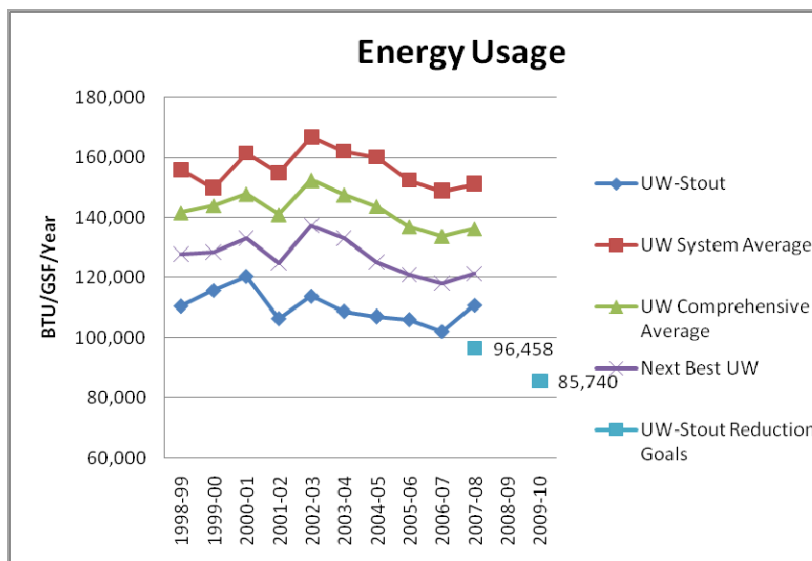


Chart in BTU's per square feet. UW-Stout statistics featured on the bottom line, with projected 10 and 20 percent reduction targets shown below.

In the last released report, UW-Stout was 25% more efficient than the UW System average and 8% more efficient than the runner up, UW-River Falls. UW-Stout has been the leader in UW System energy efficiency over the past decade.

## Guiding Principles

### Mission

The University of Wisconsin-Stout is a career-focused, comprehensive polytechnic university where diverse students, faculty and staff integrate applied learning, scientific theory, humanistic understanding, creativity and research to solve real-world problems, grow the economy and serve a global society.

### Vision

The University of Wisconsin-Stout will build on its position as a distinguished polytechnic institution and as an international leader in higher education. We prepare lifelong learners, ethical leaders and responsible citizens through collaborative programs that integrate applied learning, theory and research with business, education, industry, arts and government.

### Values

- The advancement of academic excellence;
- The nobility of spirit, a diversity of people, respect and inclusion for all;
- The pursuit of innovation, technology and sustainability with a constant eye to the future;
- The ideals of collaboration, competence and continuous improvement;
- The commitment to education as a means to illuminate the lives of all.

In addition, our 2007 designation as Wisconsin's sole polytechnic university commits UW-Stout to three distinct tenets:

- *Career Focus:* A polytechnic university offers a comprehensive curriculum that prepares graduates for professional careers.
- *Applied Learning:* A polytechnic university blends theory with practice to produce innovative solutions to real world problems.
- *Collaboration:* A polytechnic university works closely with business, industry and other educational institutions to benefit students and grow the economy.

In 2008, UW-Stout began a process of strategic planning to reflect our polytechnic designation and the realities of an ever-changing world. The effort, referred to as FOCUS 2015, has resulted in the development of 4 draft five-year goal statements for the university:

2. Advance diversity knowledge, skill sets, and dispositions in students, faculty and staff.
3. Expand early and ongoing experiential learning opportunities including undergraduate applied research and entrepreneurship
4. Develop and execute integrated enrollment management
- 5. Focus on sustainability: President's Climate Commitment and Classroom Initiatives**

These updated strategies and goals will help guide the Implementation of UW-Stout's Climate Action Plan.



## Scope and Priorities

The scope of the Climate Action Plan addresses environmental aspects and impacts over which UW-Stout has direct control, and also those over which UW-Stout can exert influence as a consumer of goods and services. The plan will focus attention on the following functional topics:

### Administration

1. **Management systems:** Systems required for the administration of the university's operational activities.
2. **Planning, design, and development:** The planning, design and development of the university's buildings and infrastructure.
3. **Pollution prevention:** Planning and management activities which minimize air and water pollution and contamination of land resulting from university activities.

### Education

4. **Knowledge systems:** Processes, such as teaching, research, and training, which build knowledge on environmental issues and sustainable behaviors.

### Infrastructure

5. **Energy management:** The energy-related aspects of the university's facilities - primarily heating, cooling, and lighting.
6. **Water management:** Aspects of supply, usage and disposal of water in the university's facilities.
7. **Materials management:** Services and activities which support the avoidance, recycling, and environmentally responsible disposal of waste materials.
8. **Transport:** Programs which promote and support walking, cycling, and public transport to work and other university-related travel.
9. **Biodiversity:** Management and maintenance activities which support conservation and enhancement of biodiversity and use of open space.

## Structure of Plan

The UW-Stout Climate Action Plan has been categorized into the three functional areas shown above, broken down further into the nine topics. This approach is intended to provide concentrated action items, while recognizing the interconnected relationships among the categories leading to improved overall campus environmental performance and sustainability.

The plan will identify objectives and targets based on appropriate performance indicators within each Topic. These targets will be incorporated into an annual rolling action plan providing the means for practical execution of the objectives.

# GHG Inventory

## Greenhouse Gas Emissions (GHG) Inventory Background

The completion of a campus-wide greenhouse gas inventory is one of the core components of the American College & University President's Climate Commitment. UW-Stout undertook its inventory activities from May through October

2008, investing over 600 hours in data collection and analysis. The inaugural report was submitted to the Association for the Advancement of Sustainability in Higher Education (AASHE) on November 15, 2008. Subsequent reports will be submitted on an annual basis to ease in data tracking and strategic planning.

The emissions inventory was conducted with the use of the Clean Air-Cool Planet (CA-CP) Greenhouse Gas (GHG) emissions inventory calculator, designed for specific use by universities. The calculator includes all six major greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), HCF-13A, HCF-404A, and sulfur hexafluoride (SF<sub>6</sub>), converting each into a common unit of measure - metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e). Emissions were recorded into three main categories:

- **Scope I** - Direct Emissions: natural gas, campus fleet, fugitive emissions from coolants
- **Scope II** - Indirect Emissions (electricity): purchased electricity, purchased steam
- **Scope III** - Indirect Emissions (other): business air travel, student commute, faculty/staff commute, solid waste, water consumption.

## 2008 GHG

Being the first comprehensive GHG study done on the UW-Stout campus, the 2008 report will serve as the baseline for future reduction targets. The primary purpose of the inventory is to allow UW-Stout to internally trend its progress. Due to differences in reporting methodology and scoping assumptions among universities, it is not meant to represent a benchmark to be used in external comparisons. Results of the 2008 inventory are shown below.

**Table 1 - Summary Statistics**

	<b>Total</b>	<b>Per Full-Time Enrollment</b>	<b>Per 1000 sq. ft.</b>	<b>% Offset</b>
Gross Emissions (I, II)	26,312 MTCO <sub>2</sub> e	3.1 MTCO <sub>2</sub> e	10.6 MTCO <sub>2</sub> e	0%
Gross Emissions (I, II, III)	37,532 MTCO <sub>2</sub> e	4.4 MTCO <sub>2</sub> e	15.2 MTCO <sub>2</sub> e	0%
<b>Net Emissions</b>	<b>37,532 MTCO<sub>2</sub>e</b>	<b>4.4 MTCO<sub>2</sub>e</b>	<b>15.2 MTCO<sub>2</sub>e</b>	<b>N/A</b>

**Table 2 - Emissions Data**

<b>Scope I Emissions</b>	
Stationary Combustion	12,128 MTCO <sub>2</sub> e
Mobile Combustion	181 MTCO <sub>2</sub> e
Process Emissions	0 MTCO <sub>2</sub> e
Fugitive Emissions	16 MTCO <sub>2</sub> e
<b>Total Scope I Emissions</b>	<b>12,325 MTCO<sub>2</sub>e</b>

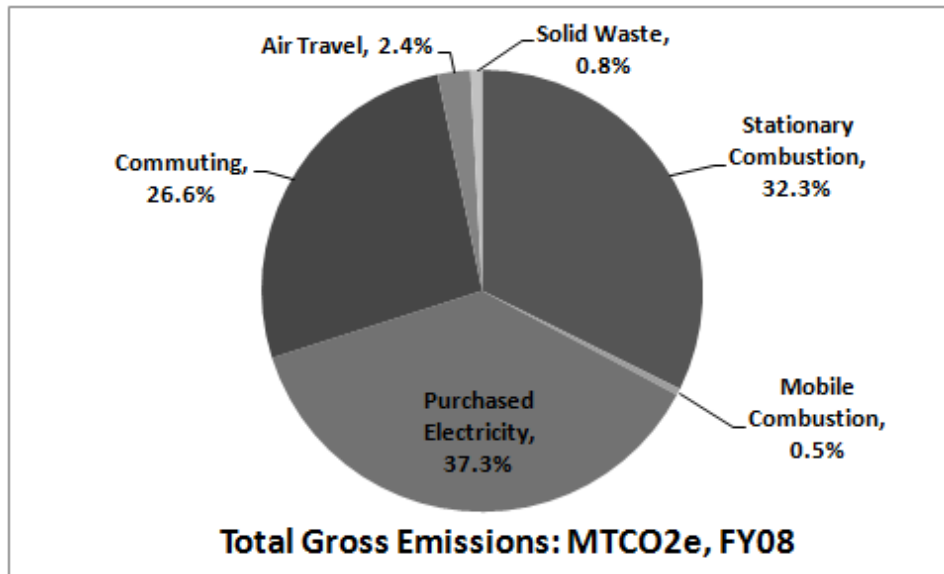
Scope II Emissions	
Purchased Electricity	13,987 MTCO <sub>2</sub> e
Purchased Heating	0 MTCO <sub>2</sub> e
Purchased Cooling	0 MTCO <sub>2</sub> e
Purchased Steam	0 MTCO <sub>2</sub> e
<b>Total Scope II Emissions</b>	<b>13,987 MTCO<sub>2</sub>e</b>
Scope III Emissions	
Commuting	9,998 MTCO <sub>2</sub> e
Air Travel	903 MTCO <sub>2</sub> e
Solid Waste	319 MTCO <sub>2</sub> e
<b>Total Scope III Emissions</b>	<b>11,220 MTCO<sub>2</sub>e</b>
Biogenic Emissions	
Biogenic Emissions from Stationary Combustion	N/A
Biogenic Emissions from Mobile Combustion	N/A

In fiscal year 2008 there were three primary sources of CO<sub>2</sub> emissions (see Figure below).

- The largest source of CO<sub>2</sub> emissions was from purchased electricity, which accounted for 37% of the total gross emissions.
- Stationary combustion – burning of coal, natural gas, and/or #2 distillate oil – accounted for 32% of total gross emissions
- Personal commuting activities accounted for another 27% of the total gross emissions.
  - Student commuting was 15% of the total gross emissions
  - Faculty and staff commuting was 12% of total gross emissions
- These three sources had the top three carbon emissions percentages throughout the data collection period of fiscal year 2001 to fiscal year 2008.

Mobile combustion – fleet vehicles – accounted for less than 1% of total CO<sub>2</sub> emissions in 2008.

UW-Stout had no carbon offsets in 2008.



## Sustainability Focus Groups

### Environmental Sustainability Focus Group Report

In an effort to obtain campus-wide input for the creation of UW-Stout's Climate Action Plan, a series of Environmental Sustainability Focus Groups were held during the spring semester of 2009. Eight groups were held, and 53 faculty, staff and students participated in the groups. Of the participants, 17 were 'experts' in fields related to sustainability (referring to their current involvement and knowledge in the area), 29 were students, and 9 were other faculty/staff. The full Environmental Sustainability Focus Group report can be found online at <http://www.uwstout.edu/bpa/ir/surveyresults/sustain09.pdf>

The purpose of the focus groups was to specifically identify actions that can be taken as a campus to begin moving toward carbon neutrality - the requirement of the American Colleges & Universities President's Climate Commitment. In the past, broader public forums were held to identify major areas of concern, while these sessions were meant to move the university toward measurable actions - those the campus would be most willing/able to support.

Participants were provided with a handout explaining the nine topical areas that UW-Stout's Climate Action Plan will address. They were initially asked to discuss their thoughts about all nine topics. Each person then voted on their top three topics, and the three topics that received the most votes across all group members were discussed in detail during the remainder of the focus groups.

The authors believe the data support the following conclusions:

Two types of sub-themes were identified, overall themes that cut across multiple topics, and themes associated with seven of the nine topics that participants were asked to discuss.

#### Overall Themes

Six "overall" sub-themes were identified. The two that were discussed in all eight focus groups and each had more than 50 comments were:

*Communication/Visibility*

- Need to increase awareness of sustainability-related topics; more publicity and an attempt to reach the average person; utilize multiple communication methods including word of mouth, website, blog, newsletters, news releases, discussions in classes, committees and student organizations.

*Senior Level Buy-In*

- Provide appropriate resources and incentives; implement university-wide policies related to sustainability; hold people accountable; fill the sustainability coordinator position; serve as a role model; identify sustainability as a priority.

**Themes associated with topics**

The topic with the largest number of comments was **Transport**. Transport was selected as a top three priority in five of the eight focus groups. The largest number of comments fell into the sub-theme of Parking Issues. Comments about parking were split into two main areas: 1) participants who said that there were not enough parking spaces, or were otherwise dissatisfied with parking, and 2) participants who said that we should make it harder for people to park their cars so that UW-Stout can encourage other modes of transportation.

*"We shouldn't make it more difficult for students with cars, but we should reward them for not having them."*

The topic with the second largest number of comments was **Energy Management**. Energy Management was selected as one of the top three priorities in five of the eight focus groups. The two sub-themes with these largest number of comments were:

- Individual Behaviors: eliminate or reduce coffee machines, refrigerators, microwaves, space heaters and fans; shut lights off and unplug appliances; feeling of general apathy.
- Campus-wide Energy Usage: UW-Stout is #1 in energy efficiency; make energy efficiency a priority; funding barriers at the campus and state level.

*"Temperature differentials need to be more closely monitored. For people who teach in the evenings it is very cold."*

The topic with the third largest number of comments was **Knowledge Systems**. Knowledge Systems was selected as one of the top three priorities in six of the eight focus groups. The three sub-themes with the largest number of comments were:

- Initiatives to Increase Knowledge: provide education; increase awareness
- Integrate Sustainability into Courses: integrate sustainability topics across all courses; communicate that sustainability is a priority
- Classes in Sustainability: implement sustainability majors, sub-majors, courses

*"I'm an avid cyclist. I am getting rid of my car and was thinking it would be a good idea to have classes on how to live car free - there is a huge educational opportunity."*

The topic with the fourth largest number of comments was **Materials Management**. Materials Management was selected as one of the top three priorities in three of the eight focus groups. The two sub-themes with the largest number of comments were:

- Recycle Bins-Waste Receptacles: need more bins; fine offenders; make trash cans smaller; implement student initiatives to encourage recycling

- Reusable Materials: need for washable or reusable dinnerware

*“More planning needs to be done within dorms. No one wants to walk down four flights of stairs to properly dispose of their recyclables.”*

The topics with the least number of comments were *Management Systems* (28 comments), *Planning, Design and Development* (16 comments), and *Water Management* (5 comments). Management Systems and Planning, Design and Development were each selected as a top priority in two of the focus groups, and Water Management was not selected as a top priority in any of the focus groups. The sub-themes within these topics that had the largest number of comments were: Networking Outside of UW-Stout, Purchasing Contracts, Green Space, Retrofitting, and Use of Sensors.

Two topics, *Biodiversity* and *Pollution Prevention*, were not identified as themes. Biodiversity was not selected as a top priority in any of the groups, and Pollution Prevention was only selected once.

## Climate Action Initiatives

### Climate Neutrality

Achieving climate neutrality is the ultimate goal of the American College & University President’s Climate Commitment. As a university, UW-Stout is actively in the process of managing ongoing sustainability initiatives, measuring and tracking our current impacts, and planning future strategies for environmental performance improvement.

Given UW-Stout’s status as a member of the University of Wisconsin System and the UW System as an agency of the State of Wisconsin, GHG reduction efforts can be dependent upon larger system-level and state-level partnerships and authorizations. At the date of writing, The University of Wisconsin-Stout is committing itself to the following reductions in year 2008 GHG emissions by **2015** (commitment Phase 1):

1. **Scope I - 1-3% reduction** in emissions derived from direct stationary and mobile sources (fleet vehicles).
2. **Scope II - 10-20% reduction** in emissions through energy conservation and renewable energy source purchasing.
3. **Scope III - 3-5% reduction** in emissions through non-energy generation university initiatives (transport, waste, water, etc)

At that time an evaluation of activities and results will take place, influencing the initiatives for our second commitment phase from 2015-2025. It is hoped for and expected that full climate neutrality can be achieved during this second phase.

### Current Mitigation Initiatives

UW-Stout is currently engaged in a wide variety of sustainability related initiatives. With the 2008 GHG Emissions baseline calculation being established, these ongoing initiatives will dovetail into our emerging Climate Action Plan to quickly make an impact.

Table 3 outlines our current initiatives, categorized to reflect the feedback and approach used during the Sustainability Focus Groups (see above). This is meant to aid in organization and communication, with the understanding that complex energy and environmental initiatives of this nature are never limited to narrow groupings

or topic headings. Each initiative includes a brief description of its involved activities, responsibility lead, proposed deadline, and current status level.

### Administration

This refers to those initiatives most closely dependent upon or guided by top-level management and administration. They include the topic areas of:

1. Management Systems
2. Planning, Design, and Development
3. Pollution Prevention

### Education

All academic teaching, learning, curriculum development and outreach initiatives are categorized here. It includes the topic area of:

4. Knowledge Systems

### Infrastructure

This is the 'nuts-and-bolts' of campus sustainability activity - initiatives that generally require technical expertise or other special scientific applications. They include the topic areas of:

5. Energy Management
6. Water Management
7. Materials Management
8. Transport
9. Biodiversity

**Table 3 - Current Sustainability Initiatives**

Administration					
Initiative	Topic	Action Item	Responsible	Deadline	Status
CA-CP Greenhouse Gas Emissions Inventory	Management Systems	Annual data collection and calculation.		9/15/2009 and each year following	In progress
Support Student Organization and Government	Management Systems	GreenSense SSA Sustainability Senators			
Green Roof Installation – Newly Constructed Science Building	Planning, Design, Dev.				
Energy Efficient Planning	Planning, Design, Dev.	Planning for more energy efficient lighting including motion sensors and LED lights and more efficient heating in all building projects.	Physical Plant		Ongoing
Parking Lot Design	Planning, Design, Dev.	All parking lots are being designed with aggressive storm water management.			

Administration					
Initiative	Topic	Action Item	Responsible	Deadline	Status
LEED Silver	Planning, Design, Dev.	Utilize LEED Silver guidelines for new construction and major renovations.			
Construction Commissioning and Recycling	Planning, Design, Dev.	State projects require commissioning (verifying systems) on all projects and recycling of construction materials (asphalt, metals, mercury, concrete)			
Pollution Prevention – Parking	Pollution Prevention	Submit the proposed pollution prevention program/implement project.		9/19/2009 3/19/2010	Ongoing
Pollution Prevention – Grounds	Pollution Prevention	Submit the proposed pollution prevention program/implement project.		9/19/2009 3/19/2010	Ongoing
Education					
Initiative	Topic	Action Item	Lead	Deadline	Status
Recycling Education	Knowledge Systems	Offer recycling training and education in the residence halls.	University Housing		
Stout Sustainable Technology and Energy Center (STEC)	Knowledge Systems	Professional outreach – various ongoing efforts.			Ongoing
The Green Learning Community	Knowledge Systems				Ongoing
Sustainable Management Degree	Knowledge Systems	Launch – Fall semester, 2009.			Complete
Minor in Sustainable Design and Development	Knowledge Systems	Launch – Fall semester, 2008.			Complete
Educational Campaign	Knowledge Systems	Educational Campaign in the Residence Halls.	University Housing		
Infrastructure					
Initiative	Topic	Action Item	Responsible	Deadline	Status
Energy Star Certified Products – New Purchasing	Energy Management	Ensure all new energy related equipment is energy star rated.			Ongoing
Xcel Energy Saver Switch Program	Energy Management		Physical Plant		Ongoing
Lighting Projects	Energy Management	Lighting and lighting control system replacements in the Sports and Fitness Center Building.	Physical Plant		Pre-design



Infrastructure					
Initiative	Topic	Action Item	Responsible	Deadline	Status
Drying Rack Pilot	Energy Management	Pilot the use of drying racks in residence halls.	University Housing		
Variable Speed Drives	Energy Management	Install variable speed drives in Forced Draft (FD) fans.	Physical Plant		
Residence Hall Desk Lights	Energy Management	Replace residence hall student desk lights with LED lights.			
Natural Gas	Energy Management	Switched to natural gas.	Physical Plant		
Pool Cover	Energy Management	Use a thermal pool cover.			
Door Sweepers	Energy Management	Added door sweepers to doors in the Memorial Student Center.			
Window Replacement	Energy Management	Replace windows from single pane to thermal pane and replace window seals with building projects.	Physical Plant		
Roof Replacement	Energy Management	Replace roofs on Heating Plant and Administration Building with energy efficient insulation.	Physical Plant		
Heating Controls	Energy Management	Convert heating controls to digital control.	Physical Plant		
Storm Water Quality Management	Water Management	AYERS – firm hired to develop SWM plan. Complete the elevation of flood control structures and assessment of compliance and submit the results.		9/19/2009	
Storm Water Management – Annual Report	Water Management	Submit annual report.		3/31/2009	Complete
Storm Water Management – Public Outreach	Water Management	Submit the proposed public education and outreach program/implement project.		4/19/2009	
Rain Garden Installation – Red Cedar Residence Hall	Water Management				
Sweeping of Parking Lots	Water Management	Parking lots are swept twice a year.			
Purchase Local Food	Materials Management	37% of the 1.58 million annual food budget goes to Wisconsin food production companies.	Dining Services		Ongoing

Infrastructure					
Initiative	Topic	Action Item	Responsible	Deadline	Status
Recycled Content Copier Paper	Materials Management	100% of copier paper made from recycled content (30% post consumer fiber/waste) Green Seal Certified/Sustainable Forestry Initiative.	Procurement and Materials Management		
RecycleMania Program	Materials Management				
Regional Food Waste Recycling Network	Materials Management				
Ecolab's "green" Chemicals for Manual and Machine Washing	Materials Management				
Waste Oil/Grease Recycled Locally by Small Entity for Bio-diesel fuel	Materials Management				
Convenience Copier Program	Materials Management	Utilize the convenience copier program to eliminate desktop printers and consolidate to copiers to save money and use less energy.	Procurement and Materials Management		Ongoing
Electronic Medical Records	Materials Management	Convert to electronic medical records to save paper and space.	Student Health Services		
Reduction of Paper Consumption	Materials Management	Reduce paper consumption: Migrate paper surveys to online, No longer provide paper handouts at listening sessions, stop paper scanning reports, and using digital signatures and electronic routing for the Budget Transfer and Space Request processes.	Budget, Planning and Analysis		
Cleaning	Materials Management	Replace scrubbers with new ECH20 units to allow for cleaning without the use of chemicals	Physical Plant		
Bookstore Products	Materials Management	Offer fair trade and recycled products in the bookstore.	Student Life Services		
Green Commuter Pledge	Transport				
Commuter Rideshare Board	Transport	Offer a commuter rideshare board.			
Zero-Emissions No Noise Vehicle (ZENN)	Transport	Purchased a ZENN fully featured electric car.			

Infrastructure					
Initiative	Topic	Action Item	Responsible	Deadline	Status
Fleet Vehicles	Transport	Reduced fleet by four vehicles.	Physical Plant		Complete
Native Plant Landscaping – Red Cedar Residence Hall	Biodiversity		Physical Plant		

## Mitigation Stretch Initiatives

On June 10, 2009, select UW-Stout operation managers met for an Environmental Sustainability Action Plan Retreat. The purpose of the retreat was to inventory potential new and long-term sustainability initiatives. Long-term initiatives were again classified into the topic area categories mentioned above, and each was given a 'performance indicator' by which the initiatives would be measured and tracked, and a brief list of action items that would need to be taken.

**Table 4 - Inventory of Potential New and Long-term Initiatives**

Administration			
Initiative	Topic	Performance Indicator	Action Item
<i>*Develop a personal behavior policy</i>	<i>Management Systems</i>		
<i>*Explore a 4-day work week policy</i>	<i>Management Systems</i>		
<i>*Enforce the thermostat policy</i>	<i>Management Systems</i>		
<i>*Establish green meeting guidelines and checklist</i>	<i>Management Systems</i>		
Eliminate all paper and pencil surveys	Management Systems		
Convert paper forms to electronic processing via ImageNow	Management Systems		
Propose a segregated fee to fund initiatives	Management Systems		

*\*Indicates potential initiatives to accomplish by 2015.*

Administration			
Initiative	Topic	Performance Indicator	Action Item
Provide incentives for faculty and staff to develop sustainability initiative	Management Systems		
Offset projects with Stout Tech Park	Management Systems		
Establishment of University environmentally preferred policy	Management Systems	Proportion of campus supplies and equipment purchase compliant with environmentally preferred selection criteria	Identify environmentally preferred purchasing contract options
UW-Stout Environmental Leadership Awards	Management Systems		Development of UW-Stout Environmental Leadership Award program and selection criteria
Create constant awareness campaign for campus sustainability activities	Management Systems		
Continuously integrate sustainability criteria into senior-level planning and decision-making	Management Systems		
Continuously measure and communicate campus carbon footprint data	Management Systems		
Achieve benchmark level of satisfaction for UW-Stout office and teaching spaces	Planning, Design, and Dev.	Proportion of recommendations adopted from post-occupancy reviews	Begin campus wide program of post-occupancy reviews
Increase level of campus greenspace by 10% by 2015	Planning, Design, and Dev.	Proportion of campus greenspace per total square foot	Identify areas for greenspace improvement
Conduct energy audits of all campus buildings	Planning, Design, and Dev.	Number of energy auditing buildings on campus	Train students in the basics of energy auditing to gather relevant data across campus

***\*Indicates potential initiatives to accomplish by 2015.***

Administration			
Initiative	Topic	Performance Indicator	Action Item
Implement use of faculty, staff and student "Design Charrette" to provide feedback to new construction and upgrade proposals	Planning, Design, and Dev.	Number of faculty, staff and students participating in new construction and upgrade "Design Charrette"	Work with various design and construction majors to develop program
Maintain full compliance with all environmental legislative and regulatory requirements	Pollution Prevention	Demonstrated compliance with local, state and national legal and regulatory requirements	Remain up-to-date on newly emerging environmental laws and regulations (carbon)
Education			
Initiative	Topic	Performance Indicator	Action Item
<p><b><i>*Improve communication methods by:</i></b></p> <ul style="list-style-type: none"> <li><b><i>Communicating where foods come from</i></b></li> <li><b><i>Communicating via paperless methods</i></b></li> <li><b><i>Establish a central point of contact for communication</i></b></li> <li><b><i>Use social networking tools for communication</i></b></li> <li><b><i>Create an energy dashboard</i></b></li> </ul>	<b>Knowledge Systems</b>		

***\*Indicates potential initiatives to accomplish by 2015.***

Education			
Initiative	Topic	Performance Indicator	Action Item
<p><i>*Hold educational seminars and events that include the surrounding community such as:</i></p> <ul style="list-style-type: none"> <li>• <b>Sustainability training</b></li> <li>• <b>Signage in public use areas</b></li> <li>• <b>Sustainability checklists</b></li> <li>• <b>Awareness campaigns</b></li> </ul>	Knowledge Systems		
Achieve sustainability training delivery to 50% current student body and 100% incoming student body	Knowledge Systems	Proportion of current and incoming student body receiving sustainability training	Development and delivery of student body sustainability training program
Achieve sustainability training delivery to 50% of current faculty and staff and 100% of incoming faculty and staff	Knowledge Systems	Proportion of current and incoming faculty and staff receiving sustainability training	Development and delivery of faculty and staff sustainability training program
Sustainable Construction Program	Knowledge Systems		
General Education requirement in Sustainability	Knowledge Systems	Proportion of student body enrolled in sustainability course work	Development of core Sustainability Gen Ed offerings
Establishment of University Wellness Center	Knowledge Systems	Number of faculty, staff and student visits to the University health clinic	Develop wellness programs and campaigns across campus to be formed into a University Center promoting sustainable living

*\*Indicates potential initiatives to accomplish by 2015.*

Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
<i>*Pilot a solar hot water heater</i>	<i>Energy Management</i>		
<i>*Sub-meter all buildings and engage residents in energy efficiency using a "stoplight" or energy dashboard</i>	<i>Energy Management</i>		
<i>*Retrofit existing lighting to more energy efficient lighting (natural light, LED, compact bulbs, motion sensors) including parking lots</i>	<i>Energy Management</i>		
<i>*Inventory and install steam blanket/insulation in all buildings</i>	<i>Energy Management</i>		
<i>*Burn less coal</i>	<i>Energy Management</i>		
<i>*Provide smart strips to encourage shut down of equipment when not in use</i>	<i>Energy Management</i>		
Hot water heat for pool using solar panels	Energy Management		
Replace sidewalk lights with solar lights	Energy Management		
Install and replace windows with more efficient windows	Energy Management		
Utilize window film to reduce solar gain	Energy Management		

***\*Indicates potential initiatives to accomplish by 2015.***

Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
Partner with Xcel Energy, UW-River Falls, and UW-Eau Claire to jointly build a wind turbine	Energy Management		
Residence Hall Renewal Plan includes all new windows, heating systems, lighting and plumbing	Energy Management		
Change out air handling equipment to more energy efficient equipment	Energy Management		
Replace motor controls with new and more efficient system	Energy Management		
Replace #2 and #3 FD fan drives with variable drive systems	Energy Management		
Re-insulate boilers #2 and 3 to reduce heat and improve efficiency	Energy Management		
Install sustainable roofs	Energy Management		
Convert to trayless food service	Energy Management		
Participate in UW System energy credit trading	Energy Management		
Work with Focus on energy to receive incentives and rebates	Energy Management		
Progressively rely on renewable energy sources	Energy Management	Proportion of UW-Stout energy derived from renewable energy sources	Begin technological and cost feasibility studies on viable options for renewable energy

***\*Indicates potential initiatives to accomplish by 2015.***



Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
Reduce on-campus demand-side energy use by 5% each year	Energy Management	Total energy usage per year	Implement energy conservation campaigns and target equipment and infrastructure upgrades to be pursued each year
Increasingly rely on remote monitoring and maintenance of campus heating, cooling and energy use	Energy Management	Level of campus sub-metering and remote-monitoring capabilities	Begin sub-metering of campus buildings
Install rain water tanks	Water Management		
Re-grade landscapes for storm water management	Water Management		
Installation of water saving equipment and fixtures in all on-campus restroom facilities	Water Management	Rate of replacement of existing water equipment and fixtures to low-flow/waterless alternatives	Begin equipment and cost feasibility studies on viable options for water saving fixture replacement
Reduce number of hot water taps by 50% across campus	Water Management	Rate of replacement of existing hot water taps and fixtures to cold-only options	Begin evaluation of potential taps for hot water removal
Reduce on-campus demand-side water use by 5% per year	Water Management	Total water usage per year	Implement water conservation campaigns and target equipment and infrastructure upgrades to be pursued each year
<b><i>*Develop and implement a regional/community composting program</i></b>	<b><i>Materials Management</i></b>		

***\*Indicates potential initiatives to accomplish by 2015.***

Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
<p><b><i>*Develop a more aggressive recycling program:</i></b></p> <ul style="list-style-type: none"> <li><b><i>Recycling incentives – deposits</i></b></li> <li><b><i>More recycling bins outside</i></b></li> <li><b><i>Place a recycling bin with each garbage can</i></b></li> <li><b><i>Traffic study to help determine where to place recycling bins</i></b></li> <li><b><i>Eliminate or reduce garbage cans</i></b></li> </ul>	<b><i>Materials Management</i></b>		
Review the use of food containers that are not compostable	Materials Management		
Use only low VOC paint for campus projects	Materials Management		
Buy a percentage of food locally	Materials Management		
Require all vendors to provide their sustainability action plan (ISO 140001)	Materials Management		
Achieve continuous reduction in municipal solid waste to landfill	Materials Management	Total waste to landfill per year	Begin aggressive waste reduction campaigns
Achieve continuous increase in solid waste to recycling	Materials Management	Total waste to recycling per year	Use recent Recyclemania results to inform campus improvements and campaigns

***\*Indicates potential initiatives to accomplish by 2015.***

Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
Increase number of recycling bins by 10%	Materials Management	Total number of recycling bins across campus	Obtain additional recycling bins to be distributed across campus
Increase ease, visibility and consistency of recycling bins across campus	Materials Management	Rate of replacement or upgrade of current recycling bin offerings and placement	Develop consistent "image" for UW-Stout recycling and apply to bins across campus
Implement campus food-waste composting program	Materials Management	Total food waste to composting per year	Continue grant project work on Regional Compost Network
<b><i>*Review campus and community non-motorized ability factors. Make recommendations including bike racks, moped parking and bike lanes.</i></b>	<b><i>Transport</i></b>		
Coordinate travel to Madison or same destination trips	Transport		
Issue bikes to freshmen (Ripon College) Ban Cars on campus for freshmen	Transport		
Get ethanol from local plant to use in flex-fuel fleet vehicles	Transport		
Purchase electric or hybrid vehicles for on-campus use	Transport		
Partner with WDOT or local transport company to start a rideshare van program	Transport		

***\*Indicates potential initiatives to accomplish by 2015.***

Infrastructure			
Initiative	Topic	Performance Indicator	Action Item
UW-Stout shuttle to Wal-mart and North Menomonie	Transport		
Maintain current level of parking space through 2025	Transport	Current square footage of parking space	Implement transportation alternatives and campaigns to reduce the demand for additional parking space
Create incentive systems for walking, biking, and carpooling to campus	Transport	Proportion of faculty, staff and student body arriving to campus without individual use of a car	Develop incentive programs and campaigns to promote alternative modes of transportation to the individual car
Convert 100% of fleet vehicles to use alternative fuels	Transport	Rate of replacement of existing fleet vehicle fuels to alternative, renewable fuels	Begin technological and cost feasibility studies on viable options for alternative fuel retrofits
Offset 100% of faculty travel and 75% of student travel	Transport	CO2 equivalent from faculty and student travel	Identify viable and preferred options for carbon offsets
<b><i>*Sell recyclable supplies in the bookstore.</i></b>	<b><i>Biodiversity</i></b>		
<b><i>*Create a community garden.</i></b>	<b><i>Biodiversity</i></b>		
Purchase more land for greenspace	Biodiversity		
Install more permeable surfaces	Biodiversity		
Return on-campus plantings to native species	Biodiversity	Rate of replacement of existing campus plantings to native species	Identification of native plant species for next season planting

***\*Indicates potential initiatives to accomplish by 2015.***

## FOCUS 2015 Mitigation Initiatives

Items from the above Inventory of Potential Initiatives list will be used in the creation of a FOCUS 2015 Sustainability Action Plan. This plan will be used as a sub-set of the university's Climate Action Plan and will contain key initiatives to be accomplished in the immediate and near-term. These will include potential 'low-hanging-fruit', high-impact and high-demand initiatives.

Discussion on the proposed climate action stretch initiatives were discussed at the FOCUS 2015 Strategic Planning Retreat, held on July 21-22, 2009. Table 5 includes the outcomes of these retreat sessions.

**Table 5 - FOCUS 2015 Sustainability Initiatives**

2009-2011				
Initiative	Topic	Action Item	Responsible	Deadline

## Funding Scenarios

(TBD)

## Tracking Progress

Monitoring and tracking the progress of the University of Wisconsin Stout's move toward carbon neutrality will be a continuous and shared effort from the entire campus community. As a top-level University Action Plan, progress reporting will occur through 6-month and 1-year report cycles as part of the university's strategic planning model <http://www.uwstout.edu/bpa/planning/stratplan/stratplanmod.pdf>

# Appendix A: ESSC Member List

## 2008/09 Environmental Sustainability Steering Committee

- Jeff Mullins - Sustainability Consultant
- Noah Norton - College of Arts, Humanities & Human Sciences
- Kimberly Martinez - College of Education, Health & Human Sciences
- Glendali Rodriguez - College of Science, Technology, Engineering & Mathematics
- Diane Olson - College of Management
- Jen Parker - Student Life Services
- Chris Lunde - Inter Residence Hall Council
- Suzanne Majkowski - Stout Student Association
- Tasha Sookochoff - GreenSense
- Amy McGovern - Senate of Academic Staff
- (Vacant) - Faculty Senate
- Zenon Smolarek - Physical Plant

### *Recycling Work Group:*

- Krista James - Professor in Biology Department
- Bob Dodge - Buildings and Grounds Superintendent (Academic Custodial, Moves and Recycling)
- Jake Pulfer - RecycleMania student co-coordinator
- Steve Zweber - RecycleMania student co-coordinator
- Hope Larsen - RecycleMania student co-coordinator
- Mark Baumgartner - Student heading a recycling education workshop funded by the UW-System Solid Waste Student Research Fund.

### *Composting Work Group:*

- Amanda Little - Assistant Professor in Biology Department
- Camille Thorson - Greensense Member/RecycleMania
- Noah Norton - Faculty Advisor for Project Eco Imagination
- Mike Smith - Grounds Maintenance Supervisor
- Denise Goers - Advisor dealing with Community Learning groups
- Mike Kuhlman - University Dining Services Rep.

### *Graphic Design Work Group:*

- Noah Norton - College of Arts & Sciences representative

### *Strategic Planning Work Group:*

- Anne Hoel - Business Department