

CLIMATE ACTION PLAN

ACUPCC Implementation Plan



SUBMITTED BY:
GREEN BY 2019 TASK FORCE

(September 2010)

**AUGSBURG
COLLEGE**

"The Augsburg College community is deeply committed to what it means to build a sustainable urban environment. We are uniquely situated in a city neighborhood and are privileged to have a variety of opportunities to explore the interconnectedness of urban life with both human and natural forces. Our relationships with our diverse neighbors, with the Mississippi River, and with other neighborhoods in our vibrant city are opportunities for learning, for civic engagement, and for faithful service. We are proud of what we do to honor sustainability, but also deeply aware of the need for ongoing vigilance and wise stewardship of the gifts of our environment."

-President Paul C. Pribbenow

I. BACKGROUND

As a Lutheran college in and of the city, Augsburg College imagines environmental stewardship as central to its mission. Augsburg's mission statement reflects the significance placed on this core value: *"Augsburg College educates students to be informed citizens, thoughtful stewards, critical thinkers and responsible leaders."* Featured in our curriculum and grounded in our daily practices, attention to ecological concerns shapes much of our work, both on campus and off. Because humanity continues to struggle with the difficult work of living sustainable lives in a finite environment, even our efforts to shape vocations in the world draw on the insights of green thinkers and doers. A longstanding commitment to service and immersion experiences alongside more traditional forms of teaching and learning means we pay close attention to our surroundings, whether they be in the neighborhood or on the other side of the world.

Augsburg College became a charter signatory to the American College & University Presidents' Climate Commitment (ACUPCC) in 2007. In signing this agreement, the president of the college, Paul C. Pribbenow, affirmed this institution's long-standing commitment to sustainability that has been fueled by the hard work, determination, and commitment of this college community, primarily through the leadership of the Environmental Stewardship Committee (ESC) and our students. For many years, ESC (formerly known as the Environmental Concerns Committee) comprising faculty, staff and students, has dedicated itself to greening Augsburg College. The ESC, vested with the important task of helping the college to become a sustainable environment, supports and sponsors environmentally-oriented initiatives and activities that continue to transform the Augsburg culture. Such efforts resulted in curriculum changes, transit fairs, fair-trade campaigns, Earth Day celebrations, campus-wide energy and waste audits, workshops for faculty, students, and staff, speakers on environmental issues, green purchasing, inter-campus sustainability initiatives, and other stewardship activities on campus. The ESC is one of two standing committees that reports directly to the president.

Sustainability reaches across the globe as well. For nearly 30 years, the Center for Global Education (CGE) at Augsburg College has provided cross-cultural educational opportunities that foster critical analysis of local and global conditions so that personal and systemic change takes place leading to a more just and sustainable world. Programs are offered at permanent sites in Central America, Southern Africa, and Mexico as well as with partner organizations in other

areas of the world including Bolivia and Vietnam. In order to work towards a more just and sustainable world, Augsburg's CGE strives to follow socially responsible and sustainable practices in each site. Our commitment includes the following areas:

- Environmental practices/stewardship – Whether through recycling, composting, or asking participants to use reusable water bottles, the CGE programs are committed to minimizing the environmental footprint of all our participants and sites where we work. The Center for Global Education has installed several ecological dry toilets in our Mexico study center. We make a conscious effort to buy sustainable, local, and fair trade food and other items as much as possible. In addition, the cooks at the Center for Global Education's Mexico site are trained in vegan and vegetarian cooking and often use herbs grown in their own garden.
- Programming – Issues of social responsibility are at the heart of all of our programming. Participants are asked to reflect on their impact on the environment and world. Courses may include looking at environmental footprints and speakers embody voices that are often underrepresented in the community.
- Green America - The Center for Global Education has been approved for membership in the Green America Business Network and pledges to conduct business according to standards that reach beyond contemporary practices in addressing the needs of consumers, employees, communities, and the environment.

II. OVERVIEW OF CURRENT INITIATIVES

Augsburg's commitment to environmental sustainability is reflected throughout the College. Among the many successful initiatives, one of the most noteworthy was a student-led movement to switch to a renewable energy source for all main campus buildings. In 2008, the student government launched a campaign to purchase the equivalent of 100% wind energy for all main campus buildings from Xcel Energy¹. This could have been a cost-prohibitive initiative, but the students voted to fund half of the required amount (\$72,000/year) through additional student fees (approximately \$15.00/semester for undergraduate full time students and \$5.00/trimester for undergraduate weekend students). The resolution passed by a wide margin and has continued to be supported by the student body. The Wind Source program reduces our carbon emission by approximately 10,000 tons of carbon emissions per year -- about 40% of our total emissions. As of 2010, Wind Source provided 95% of the College's total energy use; the remaining 5% is linked to energy used for lighting of a few streets and parking lots owned by the College .

¹ According to Mother Nature Network (May 19, 2010), Augsburg College is the largest purchaser of wind energy from Xcel's Wind Source, the biggest provider in the U.S. See, http://www.mnn.com/earth-matters/energy/stories/minneapolis-college-plans-to-be-emissions-free-by-2019?magic_tabs_comment_callback_tab=2&referer=node%2F57468&args=a%3A1%3A%7Bi%3A0%3Bs%3A5%3A%2257468%22%3B%7D.

Other major categories of sustainability activities at Augsburg include:

- Waste Reduction
 - ✓ Active recycling program that includes cans & bottles, paper, cardboard and electronic equipment
 - ✓ Trash audits by students to measure effectiveness of recycling program
 - ✓ Composting of all yard waste through Allied Waste
 - ✓ Composting of dining hall organic waste through Allied Waste and Hennepin County
 - ✓ Elimination of trays in the dining hall to reduce water use and food waste
 - ✓ Increased awareness by campus groups planning events to adhere to environmentally-friendly practices (e.g., re-using decorations; using biodegradable products)
- Energy Reduction
 - ✓ Electricity use reduction contests in residence halls to educate students on energy conservation.
 - ✓ Student and staff collaboration to stop and educate the campus about vampire energy
 - ✓ Ongoing energy reduction projects by facilities department
 - ✓ Use of the most efficient fluorescent lights available for all public areas on campus and increased use of compact fluorescent lamps on campus in offices and residences
 - ✓ Energy efficient washers and dryers in all residence halls
- Transportation
 - ✓ 50% discount on all transit passes for all faculty, staff and students
 - ✓ HOURCAR hub location on campus
 - ✓ Enhanced student bike sharing program (e.g., installation of bike shelters on campus)

- ✓ Nice Ride Minnesota – Minneapolis’ newest bike-sharing program modeled after program in Paris; Augsburg one of several founding sponsors (More information at <http://www.niceridemn.org/>)

- Community and Local Food Services.
 - ✓ Community garden shared by faculty, staff, A’viands (campus food service provider) and neighborhood residents
 - ✓ Campus Kitchens program that prepares food for the elderly and poor using food from campus that might otherwise be discarded
 - ✓ Increased use of local foods by A’viands and increased variety of vegetarian and vegan meal options
 - ✓ Sponsor and site of West Bank Farmers Market during the summer (organized by Campus Kitchens coordinator)

- Conservation
 - ✓ 30% post consumer paper used in all copiers and printers
 - ✓ Printer monitoring system to help reduce paper use
 - ✓ Use of low flow fixtures on most sinks, showers and toilets on campus
 - ✓ Use of hydrogen peroxide base cleaning chemicals for most general cleaning on campus including floors, windows, general surface cleaning. Use of hydrochloric and phosphoric acids reduced to only most difficult cleaning jobs. Increased use of microfiber cloths to reduce use of paper towels for cleaning
 - ✓ Plans for online applications and brochures for study abroad programs by Fall 2010 to reduce paper use in the office as well as the number of printed brochures/catalogs that the study abroad programs will need to print
 - ✓ Use of “green” graduation gowns beginning in 2010 (gowns made from recycled materials; reusing gowns from year to year)

- Environmental Design
 - ✓ Native plant rain gardens and storm water catchment basins
 - ✓ Plans for new LEED-certified Center for Science, Business, and Religion which will serve as a focal point for the campus work on sustainability

III. GREENHOUSE GAS INVENTORY

Augsburg’s greenhouse gas inventory includes measurements of the total greenhouse gas (GHG) emissions from all sources on the main campus in Minneapolis, Minnesota for fiscal years 2001 through 2008. This inventory utilized the Clean Air-Cool Planet calculator (CA-CP) which was designed and is maintained by Clear Air-Cool Planet, Inc. Based on calculator results, Augsburg’s overall GHG emissions for FY 2007 from all sources were 25,200.5 metric tons of CO₂ + CO₂ equivalents (eCO₂) of NO₂, CH₄, and HFC (hydroflorocarbons). By source, the emissions averaged approximately:

- 40% electricity
- 22% purchased steam
- 8% refrigerant
- 3% natural gas
- 5% faculty and staff commuting
- 10 % student commuting
- 3% air travel
- 1% paper
- 1% waste
- 5% T&D losses (transmission and distribution related to electricity)

The full text of the inventory can be found on the ACUPCC website at:

http://acupcc.aashe.org/site_media/uploads/ghg/2022-2008-inventoryreports.pdf.

IV. CLIMATE ACTION PLAN

Augsburg College submitted its Greenhouse Gas Inventory to the ACUPCC in January 2009. The president appointed the “Green by 2019” committee and charged it with the task of developing a feasible climate action plan for Augsburg’s Minneapolis campus (the main campus) to become carbon neutral by 2019, the year of Augsburg's sesquicentennial. Members of the committee were:

Kathy DeKrey (MPIRG rep)
 Andrea Dvorak, Coordinator, International Programs
 David Draus, Director of Facilities

Scott Krajewski, Director, Information Technology Services
Amanda Erdman, Director of Student Housing
Michael Lansing, Assistant Professor
Kevin Myren, (former) Vice President of Business and Finance and CFO
Tom Ruffaner, Supervisor, Custodial Services
Sam Smith, Student Government President (2009-2010)
Christine Szaj, Vice President and Chief of Staff (Committee Chair)

Using the valuable information gathered in this inventory, the Green by 2019 Task Force held a series of meetings and conversations with representatives from across campus and discussed strategies that allowed for a continuation of the momentum built over the past several years and for identification of new and innovative ideas to achieve our goals. Drafts of the action plan were shared with various college constituents, including the Board of Regents.

Our goal of achieving carbon neutrality by 2019 is an admittedly ambitious goal but we believe that if we make sustainability a core ingredient of the College's ongoing facilities and financial planning processes, we will find imaginative and feasible ways to get there. As discussed in the following paragraphs, we have identified three core components of our action plan: Energy Reduction; Curriculum, Research, and Other Educational Opportunities; and Cultural Transformation.

A. Reduction in Carbon Emissions

The results of the GHG emissions study revealed that 70% of our emissions comes from three sources: electricity (40%), purchased steam (22%), and refrigerant (8% - associated with an aging refrigeration system in our ice arena). In conducting the emissions inventory, we learned that electricity usage remained fairly stable between 2001 and 2006 but rose sharply in 2007 and 2008 when two new buildings were brought online. Some of this increase was offset by implementing a number of measures such as energy efficient light bulbs; adding motion detection equipment in classrooms, restrooms, and hallways; installing variable frequency motors to reduce HVAC use of electricity; and tearing down college-owned, vacant houses which were hooked up to utilities. These offsets, while effective, are somewhat diminished by the increase in student-owned computers, appliances, and electronics (the latter two in residence halls) and an overall increase in computer and other electronic "gadget" use by faculty and staff.

The College substantially reduced its carbon emissions in 2008 when the College switched to a renewable energy source (wind) for 100% of electricity (with the exception of street lighting and parking lots referenced above) resulting in a 40% reduction in Augsburg's carbon footprint. Wind energy is expensive, however, and the challenge of financing this beyond 2011 when the current contract expires will have to be addressed.

The other two sources (steam heat and refrigerant) present more difficult issues to resolve. Several of our older buildings currently are dependent on steam heat, which is produced at a nearby facility and is supplied through a multi-year contract that does not expire until 2017. Additionally, Augsburg has two ice rinks that are maintained by an aging direct refrigeration system. Notwithstanding these challenges, the College is committed to the following initiatives, some of which are in progress:

- Implement energy efficient measures throughout campus (replace existing roofs with white roofs; lighting; washers/dryers in residence halls; HVAC changes)
- Install IT upgrades to reduce energy consumption in computer labs and offices
- Invest in new energy management system (EMS), financed through St. Paul Port Authority. 3-year loan repayment linked to anticipated savings from lowered energy costs linked to expected 14% overall reduction in energy usage.
- Replace campus vehicles with energy efficient models (e.g., purchase of electric cars; installation of charging station on campus; use of bio-diesel, etc.)
- Implement student-driven energy conservation program (“Auggies go Green”) with goal of reducing campus electricity consumption by 5% from current levels (as distinct from EMS reductions)
- Obtain LEED certification planned for new Center for Science, Business, and Religion Center
- Pursue LEED certification for existing building/residence hall
- Establish definite plan by 2015 to produce renewable energy (either on or off campus) to replace steam when current contract expires in 2017 (e.g., potential for bio-diesel co-generation plant using fuel produced with McGyan technology and/or use of geothermal heat pumps)
- Increase commuting by transit, walking, biking, and carpool by 50% by 2019, through continuing support of these forms of commuting vis a vis single-occupancy car commuting.
- Incorporate sustainability principles/goals into master campus plan (beginning 2010),
- Minimize the leakage of coolant from the ice rink refrigeration system at the soonest possible date with savings in related energy use and cost of replacing coolant. A feasibility study of this will be completed by the end of 2011.

During this next year, the Environmental Stewardship Committee will organize and facilitate a series of discussions with various campus groups to consider additional means to encourage a reduced reliance on cars for transportation.

To the extent that we must still rely on some fossil fuel consumption (for things such as at least some of our heating during the long Minnesota winters), we further recognize the need to “pay for” the impact of those carbon emissions through some kind of offset program. This is clearly a choice of last resort, but has to be considered as part of our commitment to these goals.

B. Curriculum, Research, and Other Educational Opportunities

In the Fall of 2008, Augsburg began offering both a major and a minor in Environmental Studies. The environmental studies program pursues a multifaceted examination—across the natural sciences, social sciences, humanities, and professional studies—of the interdependence shared by people and nature. It provides an understanding of the material world as well as the ecological, social, and cultural processes and problems that bind that world together. Augsburg College’s location in the city offers a particular opportunity for the close study of complex urban environments. Although many equate environmental issues with rural areas, most people live in cities. Urban residents shape nature in innumerable ways through energy, food, and water consumption, transportation, and industrial production. In turn, cities often serve as the settings in which environmental injustice flourishes. With that in mind, Augsburg’s environmental studies program fosters the simultaneous study of ecological quality and social justice. The program also encourages experiential and problem-based learning through internships and nontraditional assignments. The latter often emphasize creating social and ecological change on campus—including the reduction of Augsburg’s carbon footprint.

Other efforts to green Augsburg’s curriculum include the new “integrated term,” an innovative learning community for first semester, first year students, which began in the fall of 2009. Titled “Fate of the Earth: Consumption of Food, Fuel, and Media in Contemporary Culture,” the class draws on the talents of five professors from across the humanities and social sciences to offer enrollees experiential learning and narrative evaluation in a problem-based educational setting. Special attention is paid to questions of climate change. Finally, study-abroad students have the opportunity (every other year) to take a class titled “Sustainable Cities in North America,” taught by two members of the Metro-Urban Studies faculty. The class directly compares greening efforts in Minneapolis, Minnesota, Portland, Oregon, and Vancouver, British Columbia and offers students the opportunity to engage with citizens, policy-makers, academics, and businesspeople working on sustainability initiatives in each location.

The scope and scale of the changes necessary for our campus (and our society) to shift away from fossil fuels and toward a post-carbon economy are such that they provide great opportunities for research, class-based projects, and puzzles to bring into our courses. A

number of classes in the Environmental Studies program are already using climate change as a central topic, as are some of the campus research projects through the Undergraduate Research and Graduate Opportunity (URGO) and the McNair Scholars programs. Some current or possible future projects include the following:

- 1) The potential for various forms of feedstock, such as algae, for bio-fuels, and for smaller-scale and mobile McGyAn processor;
- 2) The potential for carbon sequestration on campus or as part of a joint ACTC initiative, perhaps in partnership with Great River Greening or similar urban reforestation groups;
- 3) Ongoing dialogue and discussion about the “culture of consumption” which fuels a large portion of our carbon footprint;
- 4) A study of best management practices (BMPs) for decreasing single-occupancy-vehicle commuting;
- 5) Continued study of how to reduce our trash and increase recycling and composting on campus;
- 6) A formula for calculating the carbon/dollar ratio for various campus investments, i.e. how much of a reduction in our GHG emissions we would gain for each dollar invested in the various projects being considered, such as the ice rink refrigeration system repairs, further incentivizing use of mass transit, decreased paper use, and the like;
- 7) A study of the quality and significance of RECs and carbon offsets, in order to better assess the value of this option for our carbon-neutrality goals; and
- 8) The question of embodied carbon in the products or new structures on campus, such as new concrete.

Likewise, there are exciting opportunities for job training and skills related to the new green economy. The challenge for us will be to think more creatively about green jobs on campus, and train our students in the skills necessary to contribute to transition to a post-carbon economy. As well, plans for the new Center for Science, Religion, and Business promises great potential to foster the kinds of collaborative, interdisciplinary work that will be necessary to train students effectively in this area.

C. Cultural Transformation

As evidenced by the ongoing changes and initiatives described above, Augsburg College is evolving into a community where sustainability is at the core of who we are and what we do as a college in this urban community. We are headed in the right direction but believe that the true test of our success lies in our ability to transform our culture so that sustainability is not

treated as an “overlay” or an addendum, but rather as a durable part of our fabric. How do we accomplish this?

First, we will continue to cultivate an atmosphere that encourages innovative ideas; an environment that is multi-dimensional and in motion. That is, we should allow many people to get involved on multiple levels to generate as many ideas as possible. Although the Environmental Stewardship Committee will provide general oversight for implementation of our climate action plan, the dynamic nature of the plan will call for the participation of a broad spectrum of the campus. Ideas will be solicited and permission will be given to try new things.

Second, we will continue to educate and inform the Augsburg community and beyond through events such as the student-led “Sustainability Awareness Month” and forums sponsored by our Centers of Excellence. The Sabo Center sponsored a successful forum on alternative energy in March 2010, and Augsburg has hosted a number of conferences and meetings on Urban Sustainability in the Twin Cities. Ongoing work by student groups, such as MPIRG and Student Government, includes efforts to reduce energy use on campus (the “Auggies Go Green” initiative) and reduce bottled water consumption (the “Think Outside the Bottle” campaign). Students in the ENV 100: Environmental Connections, and POL 461: Environmental Activism course have engaged in various campus greening projects aimed at raising awareness and educating the campus community about water and energy use, trash and recycling, and food consumption. A number of Convocations have centered on environmental themes, including those by Bill McKibben, Bryant Terry (co-author of *Grub*), theologian Larry Rasmussen, and climate scientist Stephen Schneider. The work of the Batalden Program for the next two years will likewise have a strong environmental focus. There is a second year ongoing environmental-focused living groups on campus where students living together talk about environmental issues, as well as work on different initiatives on campus to teach students about a more sustainable lifestyle.

Third, we will build staff and faculty commitment to the Green by 2019 Climate Action Plan through diverse and targeted educational offerings that stimulate community and commitment around our shared campus greening initiative. Faculty and staff are crucial members of this initiative, as we are the constituents who make day to day decisions about how the resources of the College are expended. By creating and implementing faculty- and staff-led educational offerings, we solidify our commitment to this initiative and assure the integration within the daily operations and practices of the College. In May of each year the college commits to educational opportunities that enhance and inspire the ongoing work of living out our mission. Our annual commitment to this work will continue with the development of the Green by 2019 conference held each May for faculty and staff to remind and recommit their work to environmental sustainability. Further, we will collaborate with faculty, students, and staff on ways to change individual behaviors related to resource conservation. How do we inspire people to leave cars at home and ride mass transit or a bike to campus? How do we coax faculty and staff to adjust layers of clothing rather than thermostats to achieve personal comfort levels? What kinds of policies should we enact to eliminate energy-consuming appliances and electronics that students are so fond of moving into campus residences?

These are just a sample of the kinds of ordinary decisions that Augsburg students, faculty and staff will be asked to evaluate.

Fourth, sustainability will be integrated into our medium- and long-range financial planning and our facilities and space planning processes. This means that a different calculus must be developed to factor in cost-savings associated with implementing various energy-efficient measures (some of which require an initial investment of funds) – something that our current budget process does not easily accommodate.

Fifth, we will develop an effective communication strategy that will serve to connect the many subparts of our sustainability efforts into a coherent message that is consistent with the College's mission.

These five components are not exhaustive but represent important focus areas that will contribute to transforming the culture at Augsburg in the next decade.

V. CONCLUDING REMARKS

Augsburg College is committed to reducing its environmental impact and carbon footprint as much as possible by 2019, within the bounds of our existing resources and budgetary constraints. With creativity, commitment, and smart investments, such as those already made in wind power purchasing, the college can live out its commitment to stewardship and environmental responsibility in this era of climate change and increasing concerns about our collective impact on the globe's ecosystems. These environmental issues can be addressed in ways that support and align with the other goals and values of the College, thus providing new opportunities to maintain the financial health of the college, attract new students, and provide them with an excellent education.