USM’s Guide to
A Climate-Neutral Education

Impact of Sea Level Rise on Portland, ME
“…each of us shares in the responsibility for sustaining the life forces, cycles, and processes upon which all life depends.”

- from a joint statement of the University of Southern Maine Faculty

Introduction

With a history beginning in 1878, the University of Southern Maine has succeeded because it was built from the natural resources of our beautiful region with the perseverance, intelligence and creativity of many generations. Today, we respond to the call of future generations for us to apply University resources to heal and sustain the “cycles and processes upon which all life depends.”

Toward this goal, the University of Southern Maine has made a public commitment to take actions to create a climate-neutral campus. The University is pleased to support the State of Maine’s Climate Action Plan and the City of Portland’s Sustainability Plan by committing to end net emissions of University-related climate-disrupting gases by 2040. By doing its share to improve the atmosphere today, the University understands it will reduce both the cost and severity of unwanted and inequitable greenhouse gas impacts on current and future generations. The best available science, including a study of Greenland’s melting glaciers carried out by the University of Maine’s Climate Institute, supports the need to make greenhouse gas reduction a high priority.

As an institution of higher learning, USM recognizes that it teaches not only by what is offered in the classroom, but by how classrooms and the entire University environment are designed, built, maintained and powered. The campus itself is a powerful teaching tool. USM recognizes the importance of the fundamental ethical value of meeting the needs of the University without limiting the ability of others to meet their own needs. We are convinced that the University can better meet its mission without using fossil fuels, but the transition will require a purposeful, sustained effort. With the development and implementation of this Climate Action Plan, the University seeks to establish a framework that will integrate thoughtful consideration of the greenhouse gas impacts of proposed University actions into University decision processes. Based on the successful implementation of a wide variety of greenhouse gas reduction projects in both recent and coming years, we are confident this effort will also result in financial savings for the University.

The respected Stern Review (http://www.hm-treasury.gov.uk/sternreview_index.htm) on the costs of climate disruption has determined that the immediate implementation of successful greenhouse gas reduction strategies will be considerably less costly than delaying such efforts. The McKinsey Report (https://www.mckinseyquarterly.com/A_cost_curve_for_greenhouse_gas_reduction_1911) on the costs of ghg reduction practices indicates that the majority of currently available ghg reduction improvements offer savings, not costs. Unfortunately, many of the costs associated with unmitigated ghg emissions have not been internalized. Ultimately, until such time as the external costs of climate disruption are fully internalized, achieving carbon neutrality will present financing challenges that must be addressed.

The University pays roughly $150 a ton for disposal of solid waste. Management of University sewage costs USM roughly $3 a ton. Today, there is no significant direct cost to the University to release a ton of CO₂ into our atmosphere. It is the opinion of many that in due time this is likely to change. In Europe, the cost of emitting a ton of CO₂ is already exceeding $18. In New England, which as a region is participating in the Regional Greenhouse Gas Emission Initiate or better know as RGGI (pronounced Reggie) certain CO₂ emitters recently bid more than $3/ton for emissions allowances. In the near future it
is likely that there will be fees or taxes for emitting carbon which the University would have to pay similar to the way it currently pays to dispose of solid and water waste. This plan outlines strategies to reduce the University’s risk as it enters this carbon-constrained society.

While it is important that the University model climate neutral practices and reduce unnecessary costs, it is equally important that thousands of USM students graduate with the ability to create homes, businesses and an environment that mimics much of the policy that the University has and plans to implement. By reducing its contribution to climate disruption, the University will better meet its academic mission and will attract and retain excellent students and faculty who seek association with a university that engages in sustainable practices. Recognizing the critical value of informing students of the University’s goal of climate neutrality, this plan supports efforts to build on progress that has been made by over 660 universities across the nation to integrate an understanding of greenhouse gas impacts across the curriculum. Student participation in modifying and implementing the plan is strongly encouraged.

As this plan moves beyond its first few years of recommended actions, it is offered more as a guide - a “living document” - rather than as a definitive plan. While we do not pretend to know what innovative materials and energy delivery systems will be available in ten, twenty, or thirty years, we do believe that effective implementation of an action plan is fundamental to ensuring the University meets its greater mission to be of “public service for the benefit of the citizens of Maine and society in general.”

1. Joint statement of the USM faculty excerpted from “Expected Results of a University Education”, USM Undergraduate Catalog 2009-2010

**Definition of Climate Neutrality**

It is the University’s goal to reduce emissions specified in our Greenhouse Gas Baseline inventory by at least 80% by 2040 and to offset any remaining emissions. To offset emissions is to effectively cancel out difficult-to-avoid University emissions by taking actions to reduce or capture emissions that would otherwise occur at a different location. Emissions not specifically covered in our baseline inventory, such as food service, are expected to become of greater concern in the future. Without setting specific goals to include measurement and reduction of these sources, this Climate Action Plan hopes to initiate discussion and other positive action to begin to address such emissions.

**University Greenhouse Gas Emissions Report**

The President’s Council on Climate Neutrality, (PCCN) a committee appointed by USM’s President to define our greenhouse gas inventory, and strategies to become carbon neutral, selected FY 2006 as its baseline greenhouse gas (ghg) reporting year. This was the first year for which emissions data was reasonably available and against which comparable data is now being collected for comparison. While the greenhouse gas that contributes the overwhelming majority of USM’s measured ghg emissions in this report is carbon dioxide (CO₂), the Kyoto Protocol specifies that the ghg impact of certain other gases also be tracked. In this baseline report, identified emissions of nitrous oxide (N₂O), methane (CH₄) and some refrigerant gases (HFCs) are also included. In future years, reports may include other sources of emissions. Based on the global warming potential of each gas, the ghg impacts of gases other than CO₂ are reported as an equivalent quantity of CO₂, or carbon dioxide equivalent (CO₂e).

The format used to present the data separates emissions into three “scopes”:
• Scope 1 emissions (42% of reported emissions) are those created by on-site combustion systems that use fuel and due to direct university-related releases of specified greenhouse gases, which also includes refrigerants that leak into the atmosphere from air conditioning systems.
• Scope 2 emissions (29%) are restricted to greenhouse gas emissions related to the University’s use of purchased electricity.
• Scope 3 emissions (29%) included in this report are those resulting from paid university travel (faculty attending conferences, travel by USM athletic teams, study abroad travel and the like), employee commuting, emissions related to electricity transmission losses and the greenhouse gas impacts of managing the University’s solid waste stream.

The University’s FY 2006 baseline carbon footprint is 23,692 metric tons. This is roughly equivalent to the emissions due to the use of electricity by 10,000 Maine households in 2006. In that year, a typical Maine household was responsible for roughly 2.3 tons of power-related emissions annually. Compared to many other American colleges and universities, USM’s greenhouse gas emissions are fairly modest on a per student basis. This is especially true considering that USM maintains facilities in three towns separated by 10, 29 and 37 miles which adds significant transportation-related emissions to the inventory.
Table 1: Detailed Greenhouse Gas Inventory By Scope

<table>
<thead>
<tr>
<th>Scope 1</th>
<th>CO₂-e</th>
<th>CO₂</th>
<th>N₂O</th>
<th>CH₄</th>
<th>HFCs</th>
<th>PFCs</th>
<th>SF₆</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary, On-site Fuel Combustion</td>
<td>9,592</td>
<td>9,560</td>
<td>0.055</td>
<td>0.642</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>University Vehicle Use (gasoline)</td>
<td>254</td>
<td>252</td>
<td>0.003</td>
<td>0.036</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Fugitive Refrigerants (only in CO₂e)</td>
<td>59</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>metric tons</td>
</tr>
<tr>
<td>SCOPE 1 TOTAL</td>
<td>9,905</td>
<td>9,813</td>
<td>0.058</td>
<td>0.678</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope 2</th>
<th>CO₂-e</th>
<th>CO₂</th>
<th>N₂O</th>
<th>CH₄</th>
<th>HFCs</th>
<th>PFCs</th>
<th>SF₆</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased Electricity (State Emissions)</td>
<td>6,827</td>
<td>6,692</td>
<td>0.294</td>
<td>2.07</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>SCOPE 2 TOTAL</td>
<td>6,827</td>
<td>6,692</td>
<td>0.294</td>
<td>2.07</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope 3</th>
<th>CO₂-e</th>
<th>CO₂</th>
<th>N₂O</th>
<th>CH₄</th>
<th>HFCs</th>
<th>PFCs</th>
<th>SF₆</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Travel</td>
<td>4,078</td>
<td>4,058</td>
<td>0.035</td>
<td>0.449</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Employee Commute</td>
<td>2,893</td>
<td>2,874</td>
<td>0.032</td>
<td>0.421</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Transmission Loss from Electricity</td>
<td>436</td>
<td>427</td>
<td>0.019</td>
<td>0.132</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Transmission Loss from Cogeneration</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Transmission Loss from District Cooling</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
<tr>
<td>Waste (only calculated in CO₂e)</td>
<td>-446</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>metric tons</td>
</tr>
<tr>
<td>SCOPE 3 TOTAL</td>
<td>6,960</td>
<td>7,358</td>
<td>0.086</td>
<td>1.002</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>metric tons</td>
</tr>
</tbody>
</table>

2006 Emissions Totals*  

<table>
<thead>
<tr>
<th></th>
<th>CO₂-e</th>
<th>/FTE</th>
<th>/MM Sq Ft</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>9,905</td>
<td>0.99</td>
<td>TBD</td>
<td>metric tons</td>
</tr>
<tr>
<td>Indirect</td>
<td>13,787</td>
<td>1.38</td>
<td>TBD</td>
<td>metric tons</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23,692</td>
<td>2.37</td>
<td>TBD</td>
<td>metric tons</td>
</tr>
</tbody>
</table>

* Direct emissions indicate scope 1 emissions; indirect emissions indicate scope 2 and 3 emissions

The largest cumulative contributor to University ghg emissions is on-site combustion of fuels for heating (38%). The single greatest contributor of ghg emissions within this category is use of #6 residual fuel oil in our Portland central heating plant. Use of this fuel contributes over 15% of all reported University ghg emissions. The next greatest source of University-related ghg emissions results from the University’s use of electricity (28% -purchased electricity + transmission losses). University-paid travel contributes 17%
of total emissions and employee commuting adds 12%. Several small sources contribute a total of another 5% of the University’s reported ghg emissions. The following chart shows how emissions associated with heating fuels and electricity have changed between the 2006 base year and 2009.

### 2012 Update

In the 2010 ghg inventory and again in the 2011 inventory, different methodologies were used to calculate university and employee travel, bringing the estimates down from 17% in 2006 to 3% in 2010. This dramatic reduction aligns USM better with peer institutions and is a more accurate portrayal of travel emissions. Another more accurate methodology is currently being designed utilizing GIS and will be used going forward in all ghg inventories.

Chart 1: GHG contribution by major fuel category.

Overall, Chart 1 shows that emissions have trended down during this period, largely due to a gradual shift from residual and distillate oil to natural gas. The following two charts show the reduction in oil usage during this period (Chart 2) as well as the increase in natural gas usage (Chart 3). Electricity usage has largely been flat over this period. (Chart 3)
2012 Update

The downward trend in emissions between 2006 and 2009 has continued through 2010, 2011 and 2012 as shown on the annual ghg inventories reported to the ACUPCC. This is due to transitioning Portland’s central heat plant and other buildings to natural gas as well as energy efficiency and ghg reduction projects. Further detail on progress of specific goals is provided in each section of this document under the heading ‘2012 Update’.

What is not included in this inventory?
Emissions due to student commuting and the flights out-of-state students make to and from campus are not included in this report. The University understands both the emissions and costs associated with this student travel can be considerable. In partial response to these concerns, the University is actively increasing the number of blended, short semester, and online courses it offers. However, along with the emissions related to a student’s off-campus use of electricity, water heating and space heating, emissions due to student commuting is expected to become evident in a student’s personal carbon footprint.

The “embodied” emissions related to the purchase of furniture, building materials, food or supplies are not included. Emissions due to the use of lodging services by University employees while on University business off campus are not included. Emissions or reductions due to University land use practices are not included. The emissions related to the University’s use of vendors and delivery services are not included. Relative to the University emissions identified in this report, most of these emissions sources are nominal and are most properly accounted for in someone else’s inventory, but recent reports indicate that emissions related to the amount and choice of foods served for University purposes are significant. Future University ghg reports might be improved by tracking such emissions.

What are sources of uncertainty?

The calculations used to create this inventory are based on various assumptions and widely-used “emissions factors” for the fuels and emissions sources included in the report (see appendix). With the partial exception of the emissions factor used for electricity, emissions factors used in this report do not include “upstream” ghg emissions related to the use of energy to mine, process, refine and distribute fuels or power. These emissions might reasonably be expected to show up in the ghg inventories of the energy companies that sell these fuels. While the President’s Council on Carbon Neutrality’s transportation surveys had high response rates, the respondents were not a true random sample. Data for some emissions sources was lacking or was calculated rather than measured. University air travel figures were based on calculations and contain uncertainty.

2012 Update

Competitive Energy Services, the University’s partner in energy and utility management, uses a proprietary carbon calculating model similar in nature to the Clean Air Cool Planet carbon calculator endorsed by the ACUPCC. Data gathering techniques for both and transportation and waste emissions have improved since the 2006 and 2009 survey. Although there is still uncertainty and estimates, the Office of Sustainability feels that the new methodology provides more accurate information. More detailed information about data gathering and reporting for transportation is addressed on pages 11, 13, 14, and for waste on pages 16-18.

USM’s Climate Action Plan Reduction and Mitigation Strategies

General Recommendations

1. Integrate the goal of ghg emissions reductions and net carbon neutrality into the University’s Master Plan and Strategic Planning Process and documents. The PCCN recommends that the administration solicit the services of the Muskie School’s Community Planning and Development Program (CPD) students to research such efforts at other institutions and offer a process to implement this recommendation. Just as the legislature requires a “fiscal note” for proposed legislative actions, the goal
of this recommendation is that all significant University choices be made only after the ghg emission implications of considered actions are fully understood.

2012 Update
While there may be future strategic plans at USM, there are no current plans for a new strategic direction. A University facilities master plan effort is currently underway with the actual planning process expected to be done during calendar years 2013-2014. The effects future plans will have on ghg will be a prime consideration during this planning process.

2. Accept the Muskie School’s CPD offer to have Master’s level students research the feasibility of creating a budgeting and accounting system that charges units, departments or colleges within the University for their actual use of space and utilities.

3. As the University has established a mandatory diversity planning requirement for each department and unit, begin a similar but voluntary program based on volunteer department or unit ghg reduction advocates who will work with the University Sustainability Coordinator to champion department – initiated practices that offer ghg reductions. Coupled with this effort will be the launch of a public online “Building Users Manual” that focuses on reducing costs and ghg emissions while maintaining or improving occupant satisfaction. Each unit or department will be required to develop a plan to ensure that lights and electronics not identified as required to remain powered are turned off during non-core hours when space under their supervision is not occupied. Facilities Management will distribute clearly labeled identification stickers to senior unit or department heads. Custodial Staff and University Police will be directed to turn off lights and equipment not marked with stickers.

2012 Update
The Office of Sustainability has engaged the staff and faculty at the University in campus-wide waste reduction efforts and heightened the awareness of recycling and waste-related issues with campus events and the Tiny Trash Initiative. The next step is to establish a sustainability committee composed of interested and motivated students, staff, and faculty, and organized around the principle of encouraging the University community to operate in a more sustainable manner. A popular and successful initiative to build awareness and change behaviors at other institutions of higher education is the Eco Rep Program which will be implemented at USM in the near future as well.

4. Ask the Environmental Science and Policy Departments and the Community Planning and Development Program to work with members of the University community to draft an Environmental Mission Statement for the University.

Goals and Mechanisms to reduce Scope 1 GHG Emissions

Interim goal – reduce Scope 1 emissions by 20% by 2025

2012 Update
The Council recognizes that in order to make substantial progress the University needs to establish short-term goals toward reaching climate neutrality in addition to the long-range goals required by the ACUPCC. To this end, the Council will spend the next year developing aggressive one- and five-year goals to be included in the January 2014 Progress Report.
1. Create and implement a written comprehensive space-conditioning program that establishes “core-operating hours” for all buildings.
2. Turn heat down during non-core hours and end overheating during core hours.

2012 Update

Interim goals one and two: The PCCN is motivated to affect change in this area and realizes that overheating, overcooling, and the heating and cooling of unoccupied space represent an enormous opportunity. Historically, the desire to eliminate temperature complaints has held much more weight than has cost or carbon footprint considerations. As a result, most of the campus space is maintained at close-to-occupancy-ready temperatures 100% of the time in spite of occupancy rates that are often 30% or less. A shift in leadership expectations would allow for a reasonable compromise between the need for comfort, cost reduction, and climate neutrality. Heating setbacks and cooling setups of 15 degrees are common nationally and should be considered at USM.

Our master planning process, which will focus on planning for renovations and current facilities adaptive reuse, will provide the means to correct deficiencies in our outdated HVAC systems, building automation systems, and deteriorated building envelopes (which is by far the most significant source of inefficiencies) and will allow for much better control of temperature setpoints. In the shorter term, the Council is considering ways to deploy the Building Automated System as well as an awareness campaign in order to minimize the use of HVAC energy in unoccupied space.

3. When natural gas becomes available at the location, assign a high priority to switch the Portland campus central heating plant to a dual fuel capability, allowing the University to make the most appropriate choice of fuel considering both emissions and financial impacts.
4. Provided natural gas is available, establish a written policy to replace the many distributed oil fired-boilers with natural gas fired units as they reach the end of their useful life and/or based on the prevailing economic conditions that may increase the implementation of converting these oil fired-boilers to natural gas.

2012 Update

Interim goals three and four: In December 2010 the central heat plant on the Portland campus began running on natural gas after a new pipeline was installed by Unitil. The University is on track to reduce its annual carbon emissions by 1048 metric tons CO₂ due to the switch away from #6 fuel oil. Not only does natural gas cost less than oil, but it can be extracted domestically, emits less carbon when burned, and because it is delivered by pipeline it reduces the transportation fuel and air pollution associated with hauling fuel to campus. The University has also transitioned three additional buildings on the Portland campus and four on the Gorham campus to natural gas from #6 fuel oil. These emissions savings will be reflected on ghg inventories going forward.
5. Establish a written policy to improve the fleet fuel efficiency of University vehicles. The goal would be to improve fleet fuel efficiency both through operations and by requiring replacement vehicles to offer improved ghg emissions impacts.

**2012 Update**

Facilities Management has taken an active role in maintaining and inventorying the University’s fleet of vans, trucks, cars, and other utility vehicles by implementing a Vehicle Management Plan. As vehicles reach the end of their life, they are replaced with the smallest and most fuel efficient financially feasible option. Many trucks and full-sized vans have been replaced with Ford Transit Connects and small electric on-campus vehicles have been piloted to transport supervisors around campus.

6. As technologies continue to improve, resources become available and existing heating systems reach the end of their useful service life, explore the expanded use of engineered geothermal, biomass, and district heating and cooling possibilities.

**2012 Update**

There is currently a funded project planned for construction during the summer of 2013 for the replacement of the Gorham Central Heat Plant. While many fuel source options were considered, the most viable option, considering ghg reduction and financial limitations, was natural gas. Though burning the same fuel as the previous CHP there will still be an estimated 7% ghg reduction. In addition, and in conjunction with this CHP replacement, we are removing the steam load for Brooks Dining Center and the domestic hot water load from several buildings on the heating distribution loop and replacing those loads with independent local heat sources. This will allow summer shutdown of the CHP, significantly reduce loop circulating temperature and heat loss during the heating season and further reduce ghg emissions.
Final goal – Reduce Scope 1 emissions by no less than 75% by 2040

Mechanism - As feasible, but no later than 2040, switch to ghg-free sources of energy that are currently met by on-site combustion of fossil fuels.

Goals and Mechanisms to reduce Scope 2 GHG Emissions

Interim goal – Reduce Scope 2 emissions by 25% by 2020

1. Create, promote, and implement a written, comprehensive University energy conservation policy that includes written space lighting guidelines and a space-conditioning policy
2. Set air conditioning to highest acceptable set points during core and non-core hours
3. Install no new air conditioning systems that increase net University ghg emissions until a written comprehensive space conditioning policy is adopted
4. Establish a process to ensure that USM’s Energy Star purchasing policy is implemented and that it ensures the most efficient equipment is used for new and repair work
5. Ask USM lab faculty and staff to formally evaluate and, if warranted, adopt and implement use of Labs21 best management and practice. (see appendix)

Interim goal #2 – reduce Scope 2 emissions by 50% by 2025

Mechanism - Procure a minimum of 50% of electricity, not including Maine’s Renewable Portfolio Standard requirement, from ghg-free sources by 2025

1. Electricity Procurement - The Council recommends that USM formally investigate opportunities to enter into a long-term power-purchase arrangement to meet a percentage of the University’s annual demand from a renewable source. The goal would be to create a request for proposals. Such an arrangement could assume many forms. There could be advantages to both the University and the University of Maine System if the System entertained a system-wide approach to collectively procure a percentage of the demand of some or all of the systems’ institutions, perhaps inviting the participation of Maine community colleges as well. Such an arrangement offers many advantages including:

   a. Hedges against likely higher commodity power costs in the future, and, if based on a fixed price, reduced price volatility.
   b. Avoids the certain risks associated with use of fossil fuel based energy sources.
   c. Creates a prudently diversified power portfolio.
   d. Takes advantage of the current economic contraction and its impact on power demand and prices. This is a historically good time to negotiate a long-term purchase of power.

2012 Update

The University is investigating the feasibility of installing a large solar power array on the Gorham Costello field house to serve the whole athletic complex. Low energy rates from Central Maine Power made this project economically disadvantageous in the past, but Revision Energy has developed a new model where the University may rent-to-own an installed alternative energy system. Similar arrangements have been very successful at Thomas College in Waterville, Maine.

Final goal – reduce Scope 2 emissions by 100% by 2040
Mechanism – As soon as feasible, but by no later than 2040, generate or procure ghg-free electricity for 100% of University demand.

**Systems and Processes to Reduce Scope 3 GHG Emissions**

**Interim goal – reduce Scope 3 emissions by 20% by 2025**

1. Adopt a campus-wide reduced-idling policy (see draft policy in appendix)

**2012 Update**

*Draft vehicle idling policy is being presented to the new University President, Theo Kalikow, for re-authorization.*

2. Complete a feasibility study of the benefits and possible costs of changing space use, schedules and policies that would reduce the need for intercampus transport. (Muskie CPD program – Professor Sam Merrill contact)

**2012 Update**

*Due to the work done by the Gorham Task Force, synthesized in the Gorham Task Force Report, more first year student classes are being held on the Gorham campus than in past years. First year residential students now have a decreased need to travel to Portland for classes. Additional work needs to be done on this issue to address new transportation challenges and more data needs to be gathered to determine the true impacts of the change.*

3. Arrange to have a Muskie CPD class complete a formal study of the federal “Commuter Choice” program and propose implementation of this or other effective incentive strategies, including telecommuting, to reduce unwanted University employee or student intercampus travel impacts. Included in this assessment, and under the direction of USM’s Parking and Transportation Committee, will be a feasibility study of offering incentives for employees who carpool, bike, walk or take public transportation.

**2012 Update**

*In the spring of 2012 the Office of Sustainability worked with Muskie Community Planning and Development students in the Sustainable Communities class taught by Sam Merrill. Scott Workman completed a project and a set of recommendations to increase student and staff transit to campus by vanpool, carpool, and public transportation. Bryan Hill facilitated discussions with groups of stakeholders including University Administration and staff of the City of Portland and PACTS to identify needs, resources, and strategies to encourage bicycling and walking to and from the Portland campus.*

*Within the Rise Up University of Maine System Employee Wellness program there is also room to incentivize active modes of transport. The Office of Sustainability has had ongoing discussions with the City of Portland and PACTS about developing a Transportation Demand Management plan based on the success of such a plan at Maine Medical Center and other large organizations and institutions.*

*The USM Parking and Transportation Committee no longer exists.*

4. Ensure that the next USM contract for intercampus buses requires that buses not idle at stops expected to last longer than 2 minutes (empty, load and leave only). Shore power, auxiliary power units or other cost-effective technologies could avoid the waste of significant amounts of fuel currently burned during
idling time. Ending this unnecessary idling would reduce costs and bus-related ghg emissions by roughly 20 metric tons per year.

5. Conduct a study to determine if alternative buses, that have much better emission systems, can be utilized as the current fleet of buses get retired. Analysis should include both compressed natural gas buses and/or electric buses. A potential partnership with the City of Portland should be explored.

2012 Update

Interim goals four and five: A committee generated an RFP to replace the existing contract for campus transportation including the inter-campus shuttle bus. Custom Coach started providing service to the University community on July 1, 2012 and has an internal company policy to reduce idling at stops. During the RFP process alternative fuels (compressed natural gas and biodiesel) were explored but found to not be viable at this time. The University’s vehicle idling policy is being presented to the new president, Theo Kalikow, for re-authorization.

6. Establish a climate-neutral policy goal for University travel, including athletic travel and off-campus study programs, to be implemented by 2015. Adopt athletic, winter session and summer session travel policies that reduce or offset emissions as possible. With assistance from the Sustainability Office, this might be arranged at no net cost.

7. Establish a formal mechanism for reporting University-related travel by faculty, administration, athletics, study abroad programs and the like.

2012 Update

In fiscal year 2011 The Office of Purchasing and Payables in conjunction with the Office of Sustainability and the University of Maine System instituted a new way for employees of the University to report in- and out-state car mileage as well as other modes of in- and out-state transportation. Previously employees grouped all travel expenses together on travel vouchers preventing a precise estimation of various modes of transportation including air, train, bus, and rental vehicle. Because each type of transportation produces different CO2 emissions, it was important to separate the modalities. The first year’s data will be included in the 2012 ghg inventory. This improvement allows for increased accuracy of calculations though more detailed information could be gathered and there remains a level of estimation necessary.

Summary of Goals and Mechanisms to Reduce Emissions

The following chart (Chart 5) shows in graphical form how the successful implementation of the goals and mechanisms discussed above will reduce the University’s emissions between now and 2040. The chart shows a business-as-usual scenario in blue that depicts what emissions would be if the University did not take any action to reduce its emissions. Because the University does not expect to grow significantly during this period, either in the number of students or size of the campus, the business-as-usual scenario is projected to be flat between the FY 2006 base year and 2040 at 23,692 gross metric tons of CO2e. Net emissions during the FY 2006 base year were 23,068 - lower than gross emissions by 624 metric tons - due to voluntary purchases of Green-E certified renewable energy credits. The chart also shows expected reductions off net FY 2006 base year emissions for each scope by year. The University currently projects that after implementing all of the goals and mechanisms discussed above, an additional offset will be required to achieve full neutrality in 2040. Although it is impossible to know with any certainty the exact size of this offset, the University is currently projecting that a purchase will be required to offset about 3,700 tons of CO2e in 2040.
Projected GHG Emissions 2006-2040

Chart 5: USM’s Target Trajectory to Achieve Neutrality. This chart assumes that emissions will remain constant at the FY06 baseline if no action is taken.

Procurement Policy:

1. Build on USM’s excellent Energy Star/EPEAT Purchasing Policy. The goal will be to develop a process to create an overall “Life-Cycle Based Procurement Policy” that actively considers the full life-cycle costs, including ghg emissions, of goods and services. Facilities Management (FM) can start by developing a formal written policy designed to ensure that the letter and spirit of our Existing Energy Star Policy is implemented and that FM purchases of paper and cleaning supplies have fewer unwanted impacts.

2012 Update

Further and repeat education is needed of all USM staff to ensure USM’s Energy Star Purchasing Policy is being followed. Final approvers within the online purchasing system verify that applicable items meet the Energy Star criteria before approving the purchase. In the future the University hopes to utilize the tools in MaineStreet Marketplace to feature and highlight items which are of a more sustainable nature and have lower ghg emission potential within vendor catalogues. Current contract language within the Architecture and Engineering branch of Facilities Management contracts require contractors to perform life cycle analyses on products being recommended for purchase including carpet, paint, wood and agricultural fibers, etc.
In 2011 the Facilities Management Custodial Department led the transition to greener cleaning chemicals which were also adopted by the Residential Life cleaning staff. Of the five Genesan cleaners provided by Clean-o-Rama, Enzysan 2000 is EcoLogo certified, Delta Mild is Green Seal certified, and LinPol Green is Ecolabel certified. Dining Services works with Ecolab to purchase green cleaners as well. The Department of Athletics has not yet made the transition to green cleaners. Using the guide recently released by the Healthy School Campaign the Office of Sustainability is continuing to investigate less impactful cleaning options to ensure the health and safety of employees, building occupants, and the environment.

2. Identify and adopt contract specifications known to reduce the ghg impact of University Food Service operations including food service equipment purchases, operations, and encouragement for a “lower-carbon” menu. (Aramark, the University’s current food service vendor, and their Sustainability Coordinator, have indicated a willingness to develop such opportunities.)

3. Work with the University of Maine System and/or other University campuses throughout the State to centralize purchasing functions where applicable, in order to maximize the purchase of paper, office supplies, etc, with the highest possible recycled content, lowest ghg potential, and at the lowest cost consistent with responsible purchasing guidelines and State directives.

2012 Update
The Office of Sustainability and the Facilities Management Custodial Department is working to centralize purchasing of various custodial supplies including waste bin liners, paper towels, toilet tissue, cleaning supplies (see above) and light bulbs. Decisions on products are based on utility, cost, and environmental sustainability (ghg implications, resource use, life-cycle analysis, end-of-life disposal). Currently the University is working to dramatically reduce use of paper towels and their associated waste, reduce costs, and save labor time by transitioning to energy-efficient forced air hand dryers where appropriate. Also under investigation is a reusable cardboard box program through office supplier Office Max and development of similar programs for other freight especially that for Dining Services and the trades.

The transition to a new e-procurement system in 2010 has dramatically reduced the need for paper, toner, and electricity. The system stores documents and records that in the past may have been printed. MaineStreet Marketplace allows commodities to be purchased through a centralized contract. Education around the purchase of items with lower ghg footprints is planned, potentially utilizing the ability to flag more sustainable products so they are easily identifiable by shoppers.

Waste Reduction Policy

The larger goal is not to recycle but to reduce throughput. Reducing unnecessary throughput offers an organization the best opportunity to reduce both costs and “embodied” ghg emissions. While recycling is part of such a process, reducing the need to manage wastes by improving processes and purchases “upstream” is widely recognized as best practice. With the notable exception of food waste impacts, the low ghg impacts of this sector indicated that the opportunity to improve USM’s carbon footprint here is small. The priorities listed below offer promising cost savings:

1. Fully implement the university’s goal to remove “general purpose” waste collection containers in all general-service locations (bathrooms excepted). Remove all general purpose collection containers from classrooms. Regular sampling by University staff and students has clearly demonstrated that these collection points are a significant barrier to improved recycling rates. Ensure that collection points match
demand in areas where collection containers are removed from classrooms. Provide a minimum of one waste container (brown preferred) and one blue resource recovery container at every typical collection point.

2012 Update
Standalone trash receptacles have been nearly eliminated on the Portland, Gorham and LAC campuses with the exception of bathrooms and some lab areas. In 2011 new standardized waste collection stations were purchased to replace mismatched and insufficient collection equipment in public access areas and corridors across all three campuses. New signage accompanied the waste stations to educate about single stream recycling, which had been implemented in 2010.

After some investigation and by working with the Campus Police and the Grounds Department the majority of outdoor trash receptacles on the Portland campus have been removed to reduce the cost burden of handling neighborhood trash, reduce the amount of recyclable materials going into the trash, reduce the number of bin liners used and disposed of, reduce litter, and reduce the labor hours needed to maintain outdoor receptacles. Three outdoor waste stations remain, each of which is paired with a recycling bin. If appropriate, similar steps may be taken in Gorham and LAC.

Waste bins of all varieties have been removed from classrooms. My Tiny Trash has been implemented with great success in staff and faculty office areas on the three campuses. The Tiny Trash program encourages staffers to recycle more by replacing large desk side trash cans with small desktop trash containers and ensuring each space has a desk side blue recycling container. Staffers have to think twice about how they dispose of items and are asked to empty their own Tiny Trash. This has increased awareness of recycling and waste, reduced usage of bin liners, reduced custodial labor time previously used to empty trash cans, and encouraged employees to stand up from their desk, reducing work-related health concerns.

2. Establish a process, including review and modification of the food service RFP language, to identify and implement best practices in food waste reduction for University food service operations. The goal of this recommendation is to reduce the quantity of food purchased and food waste management costs, not just improve how the University manages food waste that is created.

2012 Update
The University’s food service provider, Aramark, recently launched a program to increase kitchen efficiency, cut costs, and reduce waste. Food Production Management requires dining staff to carefully follow recipe guidelines, minimize waste during production, cook only the appropriate amount, and weigh and characterize production waste. The system encourages precision in the kitchen, reduces pre- and post-consumer food waste, ensures that posted nutritional information is accurate, and rewards employees for efficient practices.

The Office of Sustainability has worked with Dining Services to collect used coffee grounds in Portland and Gorham which are then used on campus as a neutral amendment to nourish and build up compacted soil. Facilities Management picks up the grounds collected by the food service staff and the Grounds Department distributes them around campus. Pre- and post-consumer food waste from the Gorham Residential Dining Room in Brooks Student Center is and has been collected for use as animal feed. Through a partnership with a new company called Garbage to Garden, post-consumer waste generated in the Portland Food Court in Woodbury Campus Center and through catering operations is being collected and anaerobically digested or composted. These changes have reduced not only the amount of organic waste generated on campus but have also diverted usable resources from the trash and therefore reduced the amount of trash that leaves campus for the incinerator.
3. Modify the current Recycling Coordinator job description to a Waste Reduction Coordinator position. Centralize the management, placement and purchase, including Athletics, Lewiston Auburn, and Residential Life, of all material recovery collection containers under this position. Standardizing resource-recovery efforts across the USM campuses and departments will effectively maximize recovery rates and reduce costs (see appendix for details).

2012 Update
In the fall of 2011 Facilities Management created a new job position within the department to report to the Assistant Director for Sustainable Programs and be responsible for managing the University’s waste program. Steve Sweeney was hired as the Resource Recovery Supervisor and has made dramatic progress in streamlining processes, reducing waste, boosting recycling rates, spreading awareness, facilitating teamwork, and generating significant cost savings. He works with all departments to further the University’s goal of waste minimization.

Offsets

1. USM will seek to reduce the need to purchase offsets by first exhausting opportunities to employ the most efficient technologies in the most conservative possible manner. University policy can also play a powerful role in reducing the need to procure offsets. USM student travel programs employ various selection criteria and could improve student learning by adding ghg emissions to criteria to be considered in the trip selection process. There are valuable learning opportunities regarding “Gold Standard” offsets available in other countries that could be selected for study by USM’s foreign travel students and also used to offset trip-related ghg emissions.

2. USM’s Muskie program in Community Planning and Development will assist in developing a proposal to offset emissions that are not otherwise avoided by the Climate Action Plan. USM MBA and/or Muskie CPD students will assess options and develop a plan to procure high-quality third-party certified offsets. This marketplace is immature and changing rapidly. Recent developments suggest it may be possible for USM to work with Maine forest owners to assume the ghg sequestration benefits or “credit” of well-managed acreage through the emerging mechanism of Reduced Emissions from Deforestation and Forest Degradation (REDD). While the Council does not anticipate USM purchasing offsets (other than continuing our small commitment to RECs for LEED buildings) for some years, circumstances may change and the University should be prepared to make best use of the offset opportunities that are available.

Final goal – reduce Scope 3 emissions by 75% by no later 2040

Mechanism – USM will continuously strive to adopt “best practice” to reduce Scope 3 emissions.

Mechanisms for tracking progress on goals and actions.

USM Facilities Management will issue an annual ghg emissions report that includes emissions of scope 1, 2 and 3 ghg emissions as then defined by the ACUPCC. These reports will be posted on a publicly accessible University web site and on the ACUPCC web site. The University will establish a standing Climate Action Plan Assessment and Implementation Committee comprised of at least ten individuals including students, staff, faculty and administrators, including a member of the President’s staff, or designee. The committee will meet a minimum of six times a year. Every two years, this committee will issue a written progress report and offer recommendations to University Administration for revisions and
additions to the University’s Climate Action Plan. These reports will be posted on a publicly accessible University web site and be made available to members of the University community. Professor Travis Wagner has committed to have students in at least one ESP class participate in the implementation of USM’s ghg reduction plan and it is likely some will help measure progress. Master’s students in the CPD program may also help research and develop assessment proposals.

2012 Update

The President’s Council on Climate Neutrality was dormant and then reconvened under former President Selma Botman in the spring of 2012. The PCCN now reports to current University of Southern Maine President Theo Kalikow. The duties of the above mentioned Climate Action Plan Assessment and Implementation Committee are being performed by the PCCN which meets six times a year. The American College and University President’s Climate Commitment organization requires a progress report be submitted every two years. The University submitted its first progress report in January 2012, which is publicly available on the ACUPCC Reporting website. The PCCN decided to update the Climate Action Plan in the fall of 2012 in order to establish a baseline from which to move forward with implementation. The next progress report is due to the ACUPCC and the University administration January 2014 and the PCCN hopes to re-write the Climate Action Plan in 2015.

<table>
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<tr>
<th>Emission source</th>
<th>Unit</th>
<th>FY2006 Amount</th>
<th>tons of CO₂e</th>
<th>Percent of Subtotal</th>
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<tr>
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<td>gallons</td>
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<tr>
<td>Total emissions</td>
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<td>23,692</td>
<td></td>
</tr>
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</table>

Table 2: Year-to-year tracking of carbon sources and emissions.

Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
1. Provided grant funding continues, continue to support USM’s nationally recognized Maine Watersheds Project. The Project, now entering its sixth year, speaks well for USM’s willingness to take a leadership role in “greening the curriculum”. The Maine Watersheds Project is a grant-funded two-day faculty development workshop designed to help faculty identify the principles of sustainability most relevant to their disciplines and integrate study of these principles into their courses. The project has played important roles in encouraging and supporting the development of the CONHP Sustainability Committee, supported the creation of a Sustainable Business Concentration in USM’s Business School and has supported faculty interest and action on the Lewiston Auburn Campus (LAC) in the form of LAC’s Sustainability Committee.

Maine Watersheds has provided assistance to area high school teachers and faculty from other Maine university campuses. With outside funding that may continue, strong support for the program from the Provosts office could play an important role in assuring that more of USM’s faculty will join the 73 that have already participated in the workshop.

**2012 Update**

Unfortunately the USM Maine Watersheds Project is being discontinued this year. The Planning Board was unable to fill the vacated Faculty Advisor role. The project educated dozens of USM and University of Maine faculty as well as local high school teachers on how to integrate sustainability into their curriculum.

2. Continue the following Sustainability Office functions:

a. Providing campus tours of USM’s LEED Gold buildings to school groups, professional associations, school trustees, area hospital administrators, and community groups.

**2012 Update**

The Assistant Director for Sustainable Programs continues to be available to give tours of USM’s LEED certified structures and has provided tours to King Middle School, Portland High School, three groups of Russian visitors from Portland’s Sister City in Russia, journalists, Maine Watershed Project workshop attendees, Upward Bound, University classes and more. Self-guided walking tours are being developed for all of these buildings and will be available on the Sustainability @ USM website spring 2012.

b. Improve and Expand the Wishcamper Center’s “Green Spot Tour” project to other buildings on campus.

**2012 Update**

Wishcamper’s Green Spot Tour is still displayed throughout the building but the Office of Sustainability is in the process of updating the presentation of the tour to better reflect the high level of community and academic accomplishments of the Muskie School and Osher Lifelong Learning Institute, as well as the caliber of workmanship of the LEED Gold Wishcamper Center itself. A similar, but digital, tour using QR codes is being investigated for the John Mitchell Center in a partnership with the Communications and External Affairs office in the College of Science, Technology, and Health.

c. Have the Sustainability Coordinator provide a minimum of 14 presentations to departments, units, faculty meetings, community groups, classes and other audiences at USM, area libraries, radio stations, and churches per semester on ghg reduction strategies.
d. Continue the Sustainability Office’s efforts to arrange and participate in programs for the campus community area high schools, and junior high programs.

**2012 Update**

**Goals c and d:** The Assistant Director for Sustainable Programs, Tyler Kidder, spends a significant amount of time doing outreach both on and off campus including being a panelist for Casco Bay High School’s annual Sustainability Showcase, hosting King Middle School Students, creating and giving tailored presentations for USM classes, Upward Bound, and Cape Elizabeth Middle School students, advising undergrad, grad and non-degree students on numerous class and service learning projects, designing on-campus projects for USM’s annual Day of Service, and employing work study students. The Free Press has featured the work of the Office of Sustainability numerous times and the office has a recurring ‘Sustainability & ME’ column in the newspaper. Tyler also is the staff advisor for both the USM Cycle Club and the Students for Environmental Awareness and Sustainability Club.

3. Social Marketing Plan – The PCCN has discussed and supports the idea of an All-Campus Energy & Climate Disruption Convocation event. This event could be an Earth Day event and held during the Spring semester, although the Committee recognizes the difficulty in planning and scheduling such events. USM Administration has not sponsored a campus-wide Earth Day activity since the Gloria Duclos Convocation on Environmental Sustainability events were held in 2004. Such an event would help signal to students, staff, and faculty the University’s commitment to create an institution that offers a better education because of its commitment to the environment and the reduction of greenhouse gasses. While the short-term objective of the proposed convocation would be to encourage greater personal participation in University energy conservation efforts, the committee also views the event as a student retention and recruitment activity: (see appendix for details)

**Actions to expand research or other efforts necessary to achieve climate neutrality.**

1. Establish a system to encourage and track curricular efforts and research that incorporate or otherwise address ghg emissions reductions. USM currently lacks this capacity.
2. Take advantage of opportunities for the Office of Public Affairs to promote USM’s LEED Gold buildings, and ghg-related research and projects carried out at USM. An example of a current project of considerable interest is the Center for Environmental Finance’s film and report on the economic impact that sea-level rise is expected to have on coastal towns in Maine.

**USM’s Sustainable Building Program**

Improve the existing Sustainable Building Policy and include the following five actions:

1. The University of Southern Maine will research the feasibility of developing and implementing, as practical, a budgeting and accounting system that places a direct cost for both space and energy use at the department, unit or College level. An understanding that heating, air conditioning, and electric costs compete directly with faculty travel or staff development budgets is perhaps the best energy-efficiency and conservation “education program” that can be designed.

2. The University’s goal will be for all new construction to be climate neutral (For four years, the CEC easily met this standard and, until the REC contracts run out, the Wishcamper building nearly makes this
standard today.) At a minimum, major new construction and renovations will meet the goals of the AIA 2030 Challenge, now adopted by the USGBC and ASHRAE.

3. The University will adopt a written space-conditioning policy that, at a minimum, meets current University system policies and establishes building-specific core hours of occupation and adjust temperature set points appropriate to these hours. The University of Southern Maine will adopt the federal and UMS office set point goals of 68°F for occupied hours during the heating season and will strive to air condition to no lower than 78°F. During “non-core” hours, set points appropriate to the space will be determined on a space by space basis with a goal of a heating season set back to 58°F and a summer set-up temperature goal of 88°F whenever practical.

2012 Update
Strict adherence to these goals is probably not practical as comfort is a complex phenomenon dependent upon multiple parameters. The Council recommends that a heating season set back and a summer set up temperature goal of at least 15 degrees F wherever practical should be considered during unoccupied (or ‘non-core’) hours. However, setbacks of this magnitude are complicated by deteriorated building envelope and infiltration issues.

4. The university will establish a process to determine the Energy Star Building Benchmark (Portfolio Manager) scores of all campus buildings by 2015.

5. Do not expand, but continue to buy Green-e certified RECs for USM’s LEED buildings and continue USM’s existing participation in the EPA Green Power Partnership.

2012 Update
Beginning in 2011, the University began purchasing Renewable Energy Certificates to offset 20% of the electricity load of the three campuses. Fifteen percent (3,000,000 kWh) is provided by Worumbo Hydropower Project, a Low Impact Hydropower Institute certified dam in Lisbon Falls, Maine. The other 5% (1,000,000kWh) is provided by Green-e Certified national wind power blend through Sterling Planet and qualifies USM to be a Green Power Partner with the EPA. These RECs expire December 2012 and the University expects to continue to offset 20% or greater of campus electricity in this way going forward.

Funding

Greenhouse gas reduction strategies that quickly result in avoided costs and require little or no initial cost beyond modest staff time allocation can be viewed as self-funded.

Required replacement of inefficient equipment that has reached or exceeded its expected service life should be funded out of existing maintenance or building accounts except for incremental costs associated with purchase of equipment that offers desired additional efficiency or ghg reductions beyond the institution’s minimum purchasing guidelines.

Other projects, measures, and programs that reduce ghg emissions can be paid for by a variety of funding mechanisms including:
• Use of the appropriate utility’s budgets to fund projects that pay back within the given budget year (or over a longer period to be determined) as defined by USM's Green Fund program
• Self-financing performance contracts
• Revolving funds that are replenished by savings generated by conservation measures as well as perhaps annual budget allocations or class gifts (life-cycle savings are a more accurate measure of savings than utility savings alone)
• Grants, earmarks, or donations from government, foundations, business partners or donors
• Energy efficiency and renewable energy incentives provided by government or utilities
• Student “green energy” or sustainability fees

The Council believes it is important that consideration for funding ghg-reduction projects that offer significant financial savings will be given higher priority than routine non-essential capital projects, or projects with no ghg-reducing component. The Council encourages the University to pursue efforts to establish a more systematic decision-making process that considers life-cycle costs, long-term feasibility, implications to the entire University, and ensures that purchase, renovation, and construction decisions are prioritized using these more global criteria, rather than individual departments or units making decisions that could have significant implications beyond the department level. The Council believes the University would be best served to avoid underestimating the costs and risks of moving further into the carbon-constrained economy as a high-emitter of ghg emissions.

APPENDICES

I. UMS BOT “Agenda for Action” item #3 “Environmental Stewardship” (January 2008)
“Goal: UMS will be recognized as one of the most environmentally responsible university systems in America.” “Become one of the first university systems to have each university carry-out the President’s Climate Commitment…”

II. Section 1002 Environmental and Safety Policy revised 1/13/03
(http://www.maine.edu/policy1002.html)
“…demonstrate environmental leadership by maintaining the highest standards and serving as an example to our students as well as the community at large.”

II. ACUPCC _www.presidentsclimatecommitment.org/

III. Tailloires Declaration http://www.usm.maine.edu/sustain/pages/Talloires.htm

IV. Governor’s Carbon Challenge www.maine.gov/dep/innovation/gcc/

V. Clean Air-Cool Planet Partnership http://www.cleanair-coolplanet.org/for_campuses.php

VI. EPA Green Power Partnership http://www.epa.gov/grnpower/partners/index.htm

VII. TRANSPORTATION SURVEY (copy of survey available from Professor Nancy Artz, School of Business)
VIII. IDLING POLICY

Draft Vehicle Idling Policy for University of Southern Maine

WHEREAS the U.S. Environmental Protection Agency has found that exposure to diesel exhaust, even at low levels, is likely to pose a risk of lung cancer, as well as other respiratory risks;

WHEREAS diesel emissions are well documented as an asthma trigger;

WHEREAS air inside university buildings begins as air immediately outside the buildings;

WHEREAS diesel emissions frequently pervade portions of the university campus when vehicles are idling on campus properties;

WHEREAS unnecessary idling contributes to engine wear, fuel waste and unnecessary releases of climate disrupting gases and other air pollutants;

WHEREAS the University of Maine System Board of Trustees Environmental Policy (Section 1002) requires the university to operate all facilities in a manner that encourages environmental responsibility and promotes sustainable development on campus properties and in local communities; and

Work cooperatively with government, industry and other organizations in developing reasonable and cost-effective environmental, health and safety legislation and regulations that protect the human health and the environment.

NOW THEREFORE, University of Southern Maine enacts the following policy relating to the operation of buses, vans, automobiles, delivery, service, construction, and trade vehicles (gas or diesel) on university property or as stated:

Section 1. All buses will warm up their engines, only as necessary for safe operation of the bus, at a location at least 50 feet from a university building doorway or building ventilation air intake. The intent of this section is to discourage unnecessarily long warm-up periods and avoid situations where vehicle exhaust gases move into nearby buildings.

Section 2. Unless ambient air temperature is below 20 degrees Fahrenheit and the wait is expected to be more than two minutes, all buses dropping off passengers must turn off their engines immediately upon arrival at university bus stops and leave engines off until the buses depart. Special events buses that have been waiting to load may operate their engines for no more than ten minutes immediately prior to departure time if provision of air conditioning or heating services is considered reasonable by the bus driver.

Section 3. Other than buses, all private and university vehicles servicing the university, and private vehicles on university property, will turn off their engines when the vehicle is expected to be parked, stopped, or standing for more than one minute. This provision includes university-owned vehicles operated at any location, on or off university property.
Section 4. When engine operation is needed to provide a required service, such as an emergency vehicle, cherry-picker, back hoe, cement truck, lift gate operation, or fuel delivery truck, idling longer than one minute is permitted only if the vehicle is performing such a service or the temperature is below 20 degrees Fahrenheit. Except as noted above in Section 2 and as needed to defrost or clear windows of any vehicles, this policy does not permit engine operation when the primary purpose of such operation is to heat or air condition a vehicle.

Enforcement: The posting of “Idle-Free Campus for Cleaner Air” signs is encouraged in areas where idling vehicles have generated valid complaints about air quality in the past. Abbreviated wording will be incorporated into contracts with University vendors and the full policy will be made available on the University website. Non-compliant University vehicles and their drivers will be handled through normal disciplinary procedures similar to any University policy violation. Other non-compliant vehicles will be subject to receiving informational “tickets” possibly printed in the form of a parking citation.

IX. Labs21 mission statement www.epa.gov/lab21gov


XI: ENERGY & CLIMATE CHANGE CONVOCATION for Faculty, Staff, and Students

A convocation will be held in the spring and will be an educational event that will feature a keynote speaker. The purpose of symposium will be to deepen the campus community’s knowledge about the importance of reducing energy costs and meeting the goals of USM's Climate Commitment with the ACUPCC.

Event Activities:

1) A keynote address

2) Concurrent discussion sessions on:
   * university energy costs
   * American College and University Presidents Climate Commitment
   * curricular innovations

Event Logistics:

1) This is a voluntary event that will be publicized widely

2) The event might be held on Earth Day or on a date reasonably close in time

3) A committee should be formed to plan and execute the event, determine the budget, invite the speaker, arrange for logistics, etc.