University of New Hampshire

WILDCAP (CLIMATE ACTION PLAN) UPDATE

Executive Summary

WRITTEN BY THE UNH ENERGY TASK FORCE

www.sustainableunh.unh.edu/wildcap

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the sustainability institute

Executive Summary

This report is an update to the first version of the University of New Hampshire Durham's Climate Action Plan, WildCAP. The report describes policies and projects the university has undertaken -- and new ones it can consider -- to meet its goals of reducing greenhouse gas emissions (GHGE) 50% by 2020 and 80% by 2050 en route to climate neutrality by the end of the century, as compared to a 2001 GHGE baseline.

UNH's Scope 1 GHGE are expected to continue their downward trajectory in coming years as a result of on-campus energy efficiency projects tied to our Energy Efficiency Fund (EEF). As we lower Scope 1 emissions, Scope 3 emissions -- in particular faculty and staff commuting and air travel -- become more prominent pieces of our overall emissions portfolio. As a result, while UNH will continue to invest in policies and practices that lower Scope 1 emissions, the university also will put a stronger focus on policies and practices that help faculty, staff and students lower emissions in their daily lives on campus.

All recommended policies and practices listed below are explained in more detail in the full version of WildCAP. More information can be found at www.sustainableunh.unh.edu/wildcap.

Category	Action
Campus Buildings	• Install Lighting and Lighting Controls • Continue Retro-Commissioning Program • Review Demand Controlled Ventilation • Review Feedback Mechanism to Modify Heating Controls (Central Plant HW) • Install Occupancy Controls • Explore Distribution Piping Insulation (Mechanical Spaces) • Research Remote Building Energy Management Systems • Explore Mini Back Pressure Steam generation • Pursue Fuel Conversions to Natural Gas from Oil and Propane
Information Technology and Plug Loads	• Promote Energy Smart Purchasing and Working Guidelines for Faculty and Staff • Research Projects / Case Studies to Assess Plug Loads • Identify and Act Upon Easy Wins / Higher Draw Plug Loads • Implement IT/Plug Load Awareness Campaign • Investigate Network Based Energy Monitoring • Create and Implement and EPEAT Purchasing Policy Across Campus • Create Enterprise IT Energy Guidelines for Labs, Servers and Data Centers
Transportation	• Submit for FTA Bus-Livable Community Grant Funding • Fine-tune and promote NextBus (real-time transit systems) • Expand use of targeted email, social media, and UNH application suite for promotion of Wildcat Transit and other alternative transportation services at UNH • Redesign western Campus Connector routes to use West Edge Connector Road • Submit Pettee Brook/Quad Roundabout CMAQ grant application • Pursue Wildcat Transit Fleet Replacement

Category	Action
	• Develop South Drive Transitway • Expand Bicycle Facilities and Route Accommodation in Repavement and Reconstruction Projects • Expand CNG Station Storage and Backup Power • Introduce Pay and Display Technologies to UNH Parking Facilities • Enhance Fiscal Sustainability of the UNH Transportation System Through User Revenue Enhancements and Value-Based Pricing Strategies • Continue evaluation of opportunities to modernize the UNH parking permit system • Implement an incentivized Infrequent User parking permit program • Evaluate electric vehicle (EV) charging infrastructure and UNH EV niche fleet • Expand Cat Cycles and or other projects to improve bike culture at UNH • Strengthen anti-idling provisions • Increase allocated funding for UTS annual marketing program of transit and other non-SOV alternatives • Build Out the Intermodal Transit Center • Review the Possibility of a Wildcat Transit: East-West Connection (UNHM and Concord • Pursue ongoing streetscape improvements to improve the mobility of the campus with a focus on transit, walkable and biking modes.
Energy Production and Renewables	• Explore Solar Thermal • Explore a Wood Chip/Bioreactor Heating System at Fairchild Dairy • Explore Photovoltaic/Wind at Offsite Locations • Research Energy Storage/Load Shifting • Explore Mini Back Pressure Steam Generation • Explore Fuel Conversions to Natural Gas from Oil and Propane • Explore Hydropower
Behavior/Culture	• Expand and Improve Bike, Carpool and Transit Schedules and Outreach • Establish an Employee Air Travel Policy • Expand Power Down Outreach • Expand and Improve Waste and Recycling Signage • Explore Infrequent Parking Permits • Expand Faculty and Staff Engagement through Partnerships with Other UNH Offices • Expand Student Engagement Online and Through Student-Focused Offices • Conduct a Cost/Benefit Analysis of and Outreach around Bottled Water • Integrate Sustainability Information into Other Campus Communications
WALRUS (Waste and Recycling, Offsets/Sinks, and Land Use)	• Finalize Waste and Recycling Audit and Develop a Management Plan • Institutionalize Trash 2 Treasure • Maintain and Expand the UNH Composting Program • Research Offsets and Sinks
Adaptation	• Form a cross-campus adaptation subcommittee of the ETF. • Research and write a report detailing the climate change impacts UNH may face and suggested policies and actions for how to address them.

Overall Implementation and Evaluation

Implementation of recommended actions will require coordination across all units of the campus. At the beginning of each academic year, the ETF will review the list of recommended actions and select priority items for implementation in that year. Priority actions will be determined using the following criteria:

- Overall emissions reductions
- Cost saving potential
- Ease of implementation
- Relation to other campus activities (e.g., a building renovation would prioritize any actions associated with that building)
- Additional criteria that may speed the implementation of the project.

Selected actions for the year will be brought to the President's Cabinet for approval to proceed. A subcommittee consisting of ETF members as well as key faculty, staff, and students essential to implementing the action, will be established for each selected action. Subcommittees will report monthly at the ETF meetings until the action is completed. Actions that will require a long implementation process will be broken into definite, achievable goals that can be completed over the course of one academic semester.

UNH has established procedures for the development of institutional policy that are already in place. These guidelines can serve as the basis for implementation teams working to develop one of the recommended actions in the previous sections into an instituted policy. Additionally, the university has processes in place for the review of constructions projects, submission of projects for funding under the repair and renovation budget process, and other mechanisms that can be utilized by an implementation team to help bring a recommended policy to completion.

Financing

Actions will be financed through two primary mechanisms. The university's Energy Efficiency Fund (EEF) will be used as a primary source for ongoing funding of energy savings projects with a significant cost savings that can be recouped by the fund. Additional funding will need to be prioritized within existing internal funding mechanisms and external sources as available as part of implementation.

The landfill gas utilized by the EcoLine project is classified as a renewable resource, enabling electricity generated from it to be sold as Renewable Energy Certificates (RECs) for purchase by entities needing to meet regulatory or voluntary commitments for emissions reduction or renewable energy development. The purpose of RECs is to further the development of renewable energy and reduce overall energy consumption in the region. This WildCAP update assumes that the RECs generated by EcoLine will be sold through 2020. Revenue from these sales will go towards paying the cost of the EcoLine project. Additional revenues will be added to the energy efficiency fund to finance additional projects on campus.

Evaluation

The progress made on this plan will be evaluated in the following ways:

Greenhouse Gas Emissions Inventory

The university's greenhouse gas emissions will continue to be tracked annually by UNHSI and presented to the university in a biannual report developed by the ETF. This report will serve as the basis for UNH's reporting requirements to the ACUPCC.

Individual action evaluation plans

Each area of this plan has embedded within it a plan for evaluation. As actions are implemented, they will be tracked and evaluated by the implementation teams. Progress will be reported on a regular basis to the ETF.

Annual report to the President's Cabinet

The ETF will report at the end of each academic year to the President's Cabinet regarding the progress made that year on its WildCAP goals.

Comprehensive, 10-year evaluation report

In 2019 the ETF will conduct a comprehensive evaluation of its progress to date beginning with the establishment of WildCAP in 2009. This evaluation report will highlight successes and challenges encountered over the past decade, and will identify the key next steps moving forward. The report will be presented to the President's Cabinet and to the university community.