

## Recommended Actions from the CAP Working Group

<b>Category 1: Minimize Scope 1 Emissions</b>
Review of Maintenance Schedule Policies for Existing Buildings and Scope 1 Related Equipment
Review of Proposed Equipment Upgrades and Maintenance Improvements on an Annual Basis
Implement a Campus Wide Program to reduce Peak Energy Demand
Conduct a Fleet Use Evaluation Study
Implement a Vehicle Anti-Idling Policy
Improve Fuel Efficiency in the University Fleet using lifecycle cost analysis that includes fuel type and efficiency
Conduct a Study to determine the least carbon intensive sources for Scope 1 Energy Sources such as CHP, and Cogeneration
Reduce VMT's and Fuel Consumption
Develop a Waste to Energy / Biofuels / Methane Capture Project or Energy Enhancement Project such as the Bloom Box on Campus
Switch to Cleaner Fuels in the University Fleet
Increase the number of hybrid vehicles in the University Fleet
Make public a scalable commitment for the use of alternative fuels in vehicle feet.
Explore commercial/research partnership to bring alternative fuel vehicles and alternative fuel stations, i.e. Charging Stations to Campus
Work with the City of Chattanooga to enhance Chattanooga's alternative fuel infrastructure
Increase the number of bikes on campus being used for university fleet needs, including industrial bikes such as the Rhodes Bikes.
Consider other alternative transportation options for forklifts, golf carts and lawn mowers including electric vehicles, segways, and electric.
Comprehensive Energy Audit of All Facilities
Complete Building Retro-Commissioning on Campus Buildings
Conduct a Building Automation Performance Study
Install Building Occupancy Sensors in Campus Buildings
Install Energy Efficient Lighting in Campus Buildings

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Retrofit HVAC Units and Improve HVAC Efficiency
Program HVAC Systems to minimize run times for fans and equipment
Improve Fume-Hood Ventilation Systems (variable air volume and heat recovery)
Engage with an ESCO for expanded energy efficiency projects
Engage in a long term renewable energy contract or onsite generation partner program (First Solar)
Develop a Campus Demonstration Project for Onsite Renewable Energy Generation
Require Life Cycle Costing and ROI Analysis for each onsite generation project
Develop Student Research Projects centered on analyzing the potential deployment of on-site energy generation on campus (solar, wind, geothermal, N.G. and cogeneration) projects.
Develop a Campus Space Utilization Policy to promote flex spaces, multimedia classrooms, infill development, green infrastructure, low impact development and open space.
Establish Sustainable Purchasing Guidelines for all energy using equipment
Develop Campus Wide Energy Efficiency Policies
Adopt LEED Gold or LEED Platinum Building Standards for new construction and retrofits that include passive lighting, transportation minimization, waste reduction and native vegetation.
Develop a Presidential Sustainability Award for faculty who exhibit thought leadership on sustainability in research, curriculum, or application.
Develop a Presidential Sustainability Award for a student who exhibits thought leadership on sustainability in research, curriculum, or application.
Develop a Campus Sustainability Incentive Program for departments who reduce energy usage.
Install Smart Meters and Time of Use Metering at the building level
Develop a branded "Energy Awareness Program" across the entire campus
Participate in TVA's 1000 MW Reduction Program outline in the IR Plan
Participate on available and appropriate boards/steering committees for TVA and NGO's
Establish a Campus Wide Energy Committee
Hire a Campus Energy Manager
Reevaluate the effectiveness of current waste mitigation recycling efforts by conducting a Recycling Effectiveness Study

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Annual Recycling and Waste Reporting
Develop a Waste and Recycling subcommittee or environmental task force/sustainability committee to manage waste and recycling continuous improvement
No longer allow delivery of bulk items and junk mail
Implement a Campus-Wide double sided printing policy
Encourage the use of online and e-materials for classroom and operational use
On-Campus compost for dining center waste, and other food waste - Use Compost for on-campus garden or local community gardens
Study Food Waste in the Campus Dining System
Develop Off-Campus Compost partnerships with organizations such as those being explored with the City of Chattanooga, Crabtree, and Niedlovs
Send grounds waste to city's current grounds waste facility
Continue Food donation program and study expansion possibilities
Expand recycling to all university functions through the exploration of corporate sponsorships for recycling programs, such as Waste Management, particularly at athletic events
Redeploy recycling efforts to increase material uptake based on information uncovered in recycling effectiveness study
Expand recycling to include additional materials such as glass
Institute campus recycling competitions potentially at the building level
Administer a landscaping policy that takes into account natural irrigation, drought tolerant grasses, etc.
Reduce lawn areas that need grass cutting and watering, opting for native vegetation instead, reducing mowing, and onsite water use
Take Stormwater Credits, city's stormwater initiative and resource costs increase into consideration in planning
Expand the installation of water fountains that are designed to refill reusable water bottles
Develop a Branded Conserve Water/Water Conservation Campaign
Install inexpensive water retrofits in campus toilets and faucets
Prioritize Options for Alternative Transportation and Reduced Transportation options in master planning, including the adoption of design requirements.
Expand Campus Bike Share program to include program and link with the pending community program in the City of Chattanooga

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Research the opportunities to bring ZIP Cars or similar business models to campus and surrounding region
Consider Virtual Classrooms and Improved IT Technologies for faculty and staff to reduce campus travel
Incentivize the use of alternative transportation or no transportation opportunities including discounted parking for ULWV vehicles.
Expand Education Efforts for Alternative Transportation or no transportation opportunities
Develop a CARTA Sustainability Internship for UTC Student
Integrate CARTA Information with Student Affairs Information to inform students about CARTA Options
Engage with CARTA to expand and modify transportation options on-campus to reduce campus travel.
Reduce Unnecessary travel by implementing a no cars for freshman policy and requiring freshman students to live on campus
Promote the redevelopment of surrounding areas and encourage students to live, work and play in this area. Advocate for sustainable transportation options between this area and campus.
Develop a policy to consider costs, lifecycle costs, and commutes in transportation options between this area and campus
Develop a Policy to consider reduction of airline miles to conferences, meetings, etc. Evaluate feasibility of using alternative means of attendance (online, IT based) for nonessential conference/air travel.
Gain Offset Credits from University Land Use.
Strategically Purchase Credits and Offsets
Reduce lifecycle impacts of food services by promoting healthy, local, seasonal and organic foods
Develop a Student Discount Program at the Farmer's Market, Greenlife, or other sustainable food options for students, faculty and staff.
Study Food Deserts for Campus Students based on campus living options
Encourage students and others to eat "lower on the food chain" by emphasizing the health and cost benefits.
Incentivize the use of sustainable materials in kitchen operations including recycled content, paper products, reusable containers in food service and the nonuse of trays
Establish Sustainable Purchasing Guidelines for all kitchen purchases
Develop a Student Sustainability Internship with US Foodservice, Sysco or CPG.

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Address energy and health implications of vending machines and quick snack options and consider working with vending to install energy efficient vending machines with no lights

Address energy use of kitchen and dining operations beginning with an energy audit of kitchen equipment

Establish Procurement Standards for Food Service Vendors that include energy, recycling, sourcing and waste reduction

Develop a holistic and consolidated sustainability messaging campaign targeted to reduce behavioral impacts of campus community while both on and off campus

Develop a campus website to promote energy conservation and sustainability including tools and tactics for reducing the impact and consumption of students

Develop a Campus Consumption Meter to show students how they are performing as a campus body. Similar to the Number of Earth's Model

Become an active partner in the sustainability programs of the city and county by using a similar message and campaign and carrying that message community wide at events such as the Eco-Expo and Earth Day.

Support Alumni value opportunities deployed through the alumni board that include student engagement or internship opportunities

Develop internships, work study, special projects and courses that support climate neutrality and sustainability to provide career based student educational opportunities in sustainability.

Partner with local businesses and community organizations on sustainability education programs and opportunities. Create a network that promotes the two way flow of information and encourages career based student educational opportunities in sustainability.

Connect Environmental Science and business students outside the classroom through existing student groups (EDGE, EGA, Entrepreneurship Club) or new groups (Net Impact)

Inventory current classes that are sustainability focused or have a sustainability theme to them to align curriculum offerings across colleges.

Develop and offer courses on sustainability and climate change including the environment, policy and economic issues focusing on "real-world" examples of the implementation of sustainability, not just the theory.

Design interdisciplinary project-based courses/programs that solve real problems on campus (for example - water retention system at Challenger Center, Drainage/east end amphitheater outside engineering building), fund for such projects could come out of green fee fund through current proposal mechanism.

Reach out to incoming students early by making sustainability information at orientation available and/or as a topic for 1-hr courses (For Freshman)

Develop sustainability expected learning outcomes by Department and College

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Provide Continuing Educational Opportunities and training for Faculty and Staff in sustainable campus operation and in development of sustainability in the learning experience by developing guidelines for training, start at the administrative levels.

Promote and incentivize interdisciplinary research in sustainable technologies and services

Highlight sustainability research through existing campus communication mechanisms beginning with an inventory of current research.

Establish dedicated funds for research related to climate neutrality, sustainability. Use a portion of institution's endowment to support climate research initiative, education and innovation.

Create standard sustainability and climate change language to be included in all purchasing RFPs and RFQ

Consider Sustainability and Climate Change Risk and Opportunities in Financial Planning and Purchasing and include those risks in Annual Reports

Develop Energy Star and minimum "green" standards for all purchasing categories

Create an evaluation matrix for products based on life-cycle cost, including durability, reusability, content type, hazardous materials EE, packaging, location of shipping, longevity, reusability

Develop "quick reference list" for buyers

Develop and Host Sustainable purchasing seminars for interested vendors

Develop a system in which a departments surplus goods can be used by another department, thus limiting the need to purchase goods

Create the appointment of dedicated sustainability professionals and staff/interns dedicated to the implementation and tracking of sustainability program while allocate budget to do so.

Develop an information network of students, faculty, and staff from every office and department on campus to help spread the word. Charge of group from Chancellor and housed close to his office

Create Accountability measurements for Sustainability and climate action on campus

Participate in creditable sustainable evaluation and reporting programs including AASHE Stars, College Sustainability Report Card.

At a minimum, biannually monitor GHG emissions and progress and report publicly (as required by ACUPCC).

Develop Standard Message Points and encourage that sustainability stories be a staple in campus communications and public outreach efforts.

Tie sustainability into speaking engagements, including an annual sustainability focused event, or State of Campus Sustainability Event.

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Include Sustainability Criteria in evaluation system for yearly review for facilities, faculty, operations and administration. Incentives if all goals and objectives are met.
Use SGA Observation committee campus walk to promote sustainability options on campus. Begin with training of the committee
Promote the coordinated efforts of current student groups on campus related to sustainability, through a student sustainability roundtable.
Promote Sustainability within Greek Organizations
Create Campus Suggestion system so that students faculty and staff can quickly submit actions and ideas that UTC can take to improve the overall nature of the campus including sustainability criteria.
Develop a campus wide resource conservation campaign to promote awareness and social norms (small signs to communicate, i.e. save water sign at a water fountain, save energy sign at light switch)
Offer grants to students to develop a Resident Hall "sustainable" living training suite of tools for residents living on campus.
Adopt a building program offered to student groups related to conservation efforts
Use social events as a means to promote sustainability on campus. Training or informational material may need to be provided to event organizers.
Make a central building a model for sustainability systems and occupant behavior
Develop a Campus Sustainability Award to incentivize submission of "sustainable idea" (individual, department, group)
Develop opportunity for alumni to give to green fund through an aggressive external campaign through Alumni Affairs
Consider past grant and private funding as an avenue to for sustainability fundings (Ex. Lupton grant gave money for lab, classroom and art upgrades)
Develop a revolving loan program from UC Foundation and payback with savings
Develop funding partnerships from power providers or the State Energy Office.
Identify sources of revolving funds to open new avenues for internal energy project funding.