



University of Cincinnati Utilities Sustainability Master Plan

Overview

UC Utilities has developed and launched an initial Utilities Sustainability Master Plan as a roadmap for achieving long-term goals and strategies that support the mission and vision of the University of Cincinnati in its commitment to enhancing resiliency in a future that is sustainable for all.

Sustainability is a priority in Utilities. A number of noteworthy achievements in the advancement of sustainability have been accomplished over the last several years; and while much progress has been made, sustainability is a journey, not a destination, and there is much work yet to be done.

This plan is a living document, which will in support of the University's Strategic Direction, focus on furthering academic excellence, create a positive communal impact, and foster innovation to positively impact social transformation. In the process of doing so, we will reduce greenhouse gas emissions, strengthen resilience and the adaptive capacity to climate-induced impacts which face society today.

This plan will outline the Utilities program, activities supporting this program, and strategic partnerships we will utilize to guide us forward in planning, budgeting, operations, and all aspects of our business.

Based on lessons learned over the last five years, best practices gleaned from our peers and the private sector, this plan has been developed to focus on the following key issues:

- Simplify the Utilities vision and roadmap contained in this plan
- Develop goals for achieving the items in this plan which are measurable, and metric based
- Focus the scope on Utilities operations, projects, programs, and behaviors
- Utilize this plan to forge relationships with CEAS, DAAP, and other campus groups to build a stronger campus environment as well as commitment to grow efforts to expand sustainable and resilient behaviors
- Consider costs of projects and alternative funding strategies
- Report on progress and update this plan annually

Energy

Reduce Carbon Emissions Resulting From Operations, Energy Procurement, Energy Usage

Reduce Scope 1 and Scope 2 carbon emissions by 20% by close of FY24, with FY11 as the baseline year. This will be accomplished through a combination of production/distribution efforts, demand reduction strategies, energy procurement, and behavior changes.

Net Zero Energy Consumption

Cap Utility plant total energy consumption at FY11 levels. Accomplishment of this initiative will provide for an increase in campus gross square footage and energy usage while the energy consumed by utility plants to meet these campus needs remains at levels below that which was consumed in FY11. Utilities must continue to provide “world class” energy services to support the University of Cincinnati as a top public university in the United States.

Pursue 2000 kW of Solar Energy Supply on Uptown Campus

Pursue 2000 kilowatts of solar capacity on uptown campus by close of FY24. Renewable energy is the backbone of a low-carbon economy, which is the fast approaching future of our country. We will utilize creative financing and partnerships to bring renewable energy supply to campus in a positive manner, directly supplying into our electric grid behind the meter, such that

renewable energy generated on campus stays on campus and powers learning and research at the University of Cincinnati.

Energy Initiatives

Electric Vehicles (EV)

In the United States, the transportation sector currently accounts for the largest proportion of carbon emissions (roughly 29%), which is accelerating climate change. As progress is made in decarbonizing electric generation and supply to the electric grid, transportation is the next sustainability opportunity/challenge. Entities such as UC can make a significant contribution to reducing the threat of climate change by transitioning to electric fleet vehicles. Utilities has initiated the process of a complete transition to Electric Vehicles and will accomplish this transition by December 31, 2023.

EV Campus Infrastructure

The University of Cincinnati is embarking on a journey to, over the course of time, reduce its carbon footprint, improve campus resiliency, and provide for more sustainable utilization of energy in all aspects of our community.

As the University moves forward with the deployment of electric vehicles (EVs) it is imperative that utility electric infrastructure throughout campus be able to support the needs of not only a University fleet of EVs, but that of commuting students, faculty, and staff. As UC is essentially a small city, EV charging infrastructure must allow for a mass utilization of required electric vehicle charging. Combining this growing need with current campus electric demand requires a significant undertaking to assure all campus needs continue to be met at 100% reliability.

Organizations such as UC can make a significant contribution to reducing the threat of climate change by providing at-work charging for employees and/or turning parking facilities into EV-friendly spaces.

Utilities is working to identify the required infrastructure changes to enable the success of the University being prepared to meet the increasing needs of a sector transition to Electric Vehicles.

Lights Out!

Lights Out! is a volunteer program created to reduce energy waste from lights being left on, particularly at night and over the weekend across campus. Participants and volunteers are asked to turn off lights anytime they happen upon a room not being utilized.

In the second component of this initiative, volunteers are asked to spend just fifteen minutes of their time going from room to room in larger and potentially more impactful buildings on campus including.

Lights Out! is a program that reduces energy waste, saves money, and engages the campus community in working toward sustainability goals.

Submit notifications to Utilities personnel of rooms on campus where you have turned lights off and receive an official Utilities Sustainability Ambassador t-shirt or water bottle.

Please use the link below to send in pictures, or add stories about accomplishments achieved in this program, and we will place on the Utilities Sustainability website.

Please Tweet any photos, stories, or accomplishments to [@UcUtilities](#)

Or send to the following email address: hofmanmc@ucmail.uc.edu

Central Utility Plant

The Central Utility Plant employs a co-generation system (combined heat and power) that utilizes steam not only to provide heat to campus facilities but also to generate electricity and supply power to the chilled water production equipment that is used to cool campus facilities. Utilization of the co-gen system results in a roughly 50% decrease in energy consumption as compared to typical utility power plants.

Domestic Water

Reduce Utility Plant Water Consumption

Reduce potable water consumption used for plant operations and that used for irrigation by 20% by June 30, 2025 (FY25) on a gallon per campus square foot basis, with FY15 as the baseline year. Water is a critical resource to Utilities for the functioning of plant operations. A smart approach to critical resource management is to focus on the best use of this resource and in parallel eliminating waste.

Develop Strategies to Reduce Campus Stormwater Overflow

Develop strategies to reduce, to eventual elimination, the uptown campus stormwater overflow (CSO) system, using smart, green infrastructure interventions. Utilities will work to develop a long-term strategy to re-direct all stormwater systems to beneficial re-use.

Domestic Water Initiatives

Using targeted and smart irrigation systems combined with stormwater management, Utilities will identify sustainable supplies to the campus irrigation system.

Irrigation Systems

The following technologies, measures and initiatives have been or will be implemented to ensure that use of water for on-campus irrigation is controlled and recycled to the extent possible:

- Targeted Irrigation
- Irrigation Timers
- Central Irrigation Control System

Stormwater Management

Utilities created a Stormwater Management Plan to be released in late 2021, which includes the following key activities:

- Utilize campus detention tanks to manage off campus runoff during rainfall events, capture and re-use where possible, preserve Burnet Woods receiving pond, and promote groundwater recharge. Capturing the initial volume of runoff will also reduce the impacts of larger rainfall events.

- Work with CEAS, DAAP, and other student entities to develop beneficial utilization opportunities for capture and re-use of stormwater.

Just Recycle It!

Research has found that 94% of Americans support recycling and 74% say it should be a top priority. But only about 35% of people actually recycle. The primary reason people do not recycle is often inconvenience. The top reason Americans say they don't recycle is a lack of convenient access.

The benefits of recycling are numerous. Recycling reduces the amount of waste sent to landfills, conserves natural resources, mitigates pollution by reducing the need to collect new raw materials, and saves energy.

As a small city of more than 50,000 inhabitants, our campus offers a significant opportunity to accomplish all of the above benefits. If we could get each person to "do their part" the impact on our environment is tremendous. Our ask is to "do your part". Start small, remind those that sit near you, set an example for others to follow.

If you need a recycle bin/container please let us know and we will make sure you and your surroundings have what you need to begin your recycling program.

Look for the recycle symbol to the right to identify recyclable materials.



Purchasing New Products Made from Recycled Materials

Each of us, both on campus and elsewhere in our lives, can help close the recycling loop by buying new products made from recycled materials. There are thousands of products that contain recycled material. When you go shopping, look for the following:

Recycled-content product - The product was manufactured with recycled materials either collected from a recycling program or from waste recovered during the normal manufacturing process. The label will sometimes include how much of the content was from recycled materials.

Post-consumer content - Very similar to recycled content, but the material comes only from recyclables collected from consumers or businesses through a recycling program.

Recyclable product - Products that can be collected, processed and manufactured into new products after they have been used. These products do not necessarily contain recycled materials. Remember not all kinds of recyclables may be collected in your community so be sure to check with your local recycling program before you buy.

Some of the common products you can find that can be made with recycled content include the following:

Aluminum Cans

Motor Oil

Carpeting

Office Paper Products

Cereal Boxes

Paper Towels

Egg Cartons

Plastics (Pens, Cups, Containers)

Glass Products (Containers, Cups)

Trash Bags

Utilities Sustainability Ambassador

Everyone on campus, students, staff, faculty, and those who regularly visit campus have an opportunity to become a Utilities Sustainability Ambassador.

A Utilities Sustainability Ambassador is an individual who is passionate about the way we use our resources, one who through their actions, words, and/or behaviors promotes, informs, educates, or directly contributes to the reduction in energy usage on the University of Cincinnati campus.

We invite everyone to join us in our efforts to advance the University of Cincinnati as a global leader of change.

Our program empowers students, faculty, and staff to create sustainable lifestyle changes, forging conservation of energy and water resources, waste reduction, and take ownership of the way we use these resources.

Meeting these goals will require dedicated students, staff members, and faculty to work at all levels of the University to make a difference.

Become a Utilities Sustainability Ambassador by engaging with one of the programs described earlier. Reduce water usage, turn off lights when you leave a room or see a room which is unoccupied. Recycle items rather than throw them away. Lead by example. Inform and educate your friends and peers to do similarly. When you do these things, please let us know! When you let us know, we can spread the word throughout campus, and through your actions you will encourage others to do similarly.

Please Tweet any photos, stories, or accomplishments to [@UcUtilities](#)

Or send to the following email address: hofmanmc@ucmail.uc.edu



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