Work has begun on the plan that will get the University to carbon-neutral by 2040

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Efforts are underway to wean the University of Arizona off fossil fuels and go carbon-neutral by 2040 – perhaps even sooner. As a first step toward that goal, the Office of Sustainability is leading the development of the University's first Sustainability and Climate Action Plan.

"About five years ago, the University moved up our goal of achieving carbon neutrality from 2050 to 2040," said Trevor Ledbetter, director of the Office of Sustainability and co-chair for the Action Plan process. "This action plan will be instrumental in providing us with a road map to reaching that goal and will help us to do the same for other areas such as water usage, teaching and learning, research and more."

From July 2021 through June 2022, the University emitted 166,000 metric tons of greenhouse gas emissions, equivalent to approximately 37,000 passenger vehicles driven for one year, according to the Environmental Protection Agency.

Carbon neutrality is achieved by eliminating the use of fossil fuels – coal, natural gas and oil – which all supply energy with the cost of emitting greenhouse gases into the atmosphere. Organizations reach carbon neutrality when their greenhouse gas emissions are reduced to zero and/or are balanced with renewable energy certificates and carbon offsets – investments that reduce greenhouse gas emissions elsewhere. Some ways to do this include funding renewable energy technology or reforestation projects.

Before exploring carbon offsets, the action plan will prioritize strategies that reduce the University's emissions.

At a kickoff event held April 11 – less than two weeks before Earth Day, which is celebrated annually on April 22 – faculty, staff, students and members of the broader community learned about the collaborative process being followed to develop the action plan and were invited to consider and contribute ideas.

"Having a formal plan for sustainability gives us the opportunity to reach out to stakeholder groups and receive their support and input," said Sabrina Helm, associate professor of retailing and consumer science and faculty co-chair for the action plan.

During these early stages, specific initiatives to lead the University toward its goal are being hammered out. Future strategies will aim to reduce greenhouse gas emissions, energy and water use, promote sustainability-related teaching and research activities for faculty and students, and implement sustainable practices as guiding principles across campus operations.

In the meantime, Ledbetter and Helm are focused on feedback from stakeholders, which will be obtained through workshops over at least the next six months. The development of a budget and a formal plan will begin this summer. Between September and October, the first draft of the plan will be shared with the campus community. The final action plan is expected in December.

According to Ledbetter and Helm, some recommendations could include replacing two cogeneration turbines and supplementary boilers on the Tucson campus, all which run on natural gas. Additional actions may include incentives to decrease emissions from travel.

A recent United Nations climate change report emphasized the catastrophic impacts of out-of-control carbon dioxide emissions on the rising global temperature, farming, infectious diseases and natural disasters.

"Now is the time to act more swiftly in reducing emissions," Ledbetter said, explaining that unsustainable practices have wrought devastating impacts to the most vulnerable communities.

"The topic of climate change is always open to disagreeing voices, and we expect a wide variety of opinions and ideas," Helm said. "But, as we conduct surveys and brainstorm specific practices, our ultimate goal is to help our current and future community flourish on this planet."

According to Ledbetter and Helm, actions to create a more sustainable campus could include new campus infrastructure that primarily uses sustainable energy sources.

"While these changes will be expensive, they'll be done at the same time as other much-needed investments to update campus infrastructure," Ledbetter said, explaining that the timing of the plan offers the opportunity to transform projects that have already been earmarked into sustainable and carbon-neutral improvements.

In addition to construction that would improve the energy efficiency of campus buildings, other measures could seek to educate and encourage staff, faculty and students to make sustainable choices on their own.

"We trust that our campus sustainability efforts will be aided through systemic behavior changes of students and staff," Ledbetter said, "We are considering how to better stimulate this by incorporating sustainability and climate topics into the teaching and learning on campus."

When it comes to the nitty-gritty details of reducing carbon emissions on a large college campus, Helm believes it is beneficial to consider what has gone well at other institutions. Such benchmarking allows for increased efficiency and speed in identifying and implementing effective projects, she said.
University leaders have echoed the widespread student support and approval, Ledbetter said, which he finds both exciting and somewhat unique.

“They are ready to have bold conversations about what it will financially and systematically take to reach carbon neutrality and other sustainability goals,” Ledbetter said. “Even in the absence of this action plan, our campus has already had a lot of success in becoming more sustainable. Just imagine what we can accomplish with a formal plan.”

One example of sustainability success is the University’s partnership with Tucson Electric Power, in which campus leadership negotiated an agreement that enables the Tucson campus to procure 100% of purchased electricity from renewable solar and wind resources. This enhancement decreased carbon emission from the Tucson campus by about 30%.

Additionally, the Office of Sustainability and the Arizona Institute for Resilience oversee programs that advocate for “green” living, such as the Campus Sustainability Fund, Compost Cats, the University of Arizona Community Garden, the Students for Sustainability program and the Earth Grant program.

“The action plan is designed to add on to these exciting programs, aligning all of these disparate efforts in the same direction,” Ledbetter said.

While the action plan will initially prioritize advancements on the Tucson main campus and Phoenix Biosphere Core, Ledbetter and Helm hope to eventually apply similar goals and approaches to satellite properties such as Biosphere 2 and the UA Tech Park at Rita Road.

“Because of financial and logistical limitations, it is impossible for us to implement every change all at once, even though we would love to,” Helm said. “Certain actions will have to be prioritized in the first round to ensure we reach our goal of carbon neutrality, while other important sustainability goals may only follow at a later stage.”

The campus community is invited to weigh in and participate in the beginning stages of the Sustainability and Climate Action Plan, Ledbetter said. Those who would like to get involved are encouraged to participate in the first round of stakeholder workshops. Members of the campus community can also complete a short survey, which is available through the end of April.

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