

UVA ECONETWORK



Transportation

Transportation is a huge source of emissions at the University. In the past decade, other than transportation, all sectors of UVA's energy use have reduced their emissions output. In fact, the amount of emissions from the transportation sector within the UVA community has *increased*. This is representative of the state of Virginia as a whole, whose largest sector of emissions comes from transportation. This is mainly due to the amount of faculty that drive their own cars to work. Here is a [quote](#) from the [Parking and Transportation](#) site:

“Our recent modal survey reveals that 82% of all UVA staff and faculty commute to Grounds in their personal vehicles, which translates to over 14,000 vehicles daily. That many single-occupancy vehicles (SOVs) strains the University’s infrastructure, resulting in increased traffic congestion and parking demand. Given the University’s prospective growth, demand for parking is not expected to subside even as new parking structures are built, and it will

lead to even more vehicles on the road unless there is a course correction.”

Charlottesville is expensive to live in, and the poor planning of the city results in lots of cars having to drive long distances to Charlottesville, only to be stuck in traffic around the University.

CIOs/Clubs

- Solar Car Team

Relation to UVA's 2020-2030 Sustainability Goals

- Because of the addition of “Fossil Fuel Free by 2050” to the sustainability goals, this will mean that all UVA-run transportation will have to be zero carbon. This will likely come through electrifying the bus fleet.
- Impacts of UVA faculty, staff, and students commuting to Grounds every day may cease to be a part of the emissions calculations because this is more out of the hands of the University.
 - **Argument:** The University can in fact influence some of the decisions of its faculty, staff, and students when it comes to their transportation to Grounds. This comes in helping to support more affordable housing closer to Grounds to shorten commuting times, incentivizing electric cars by offering more charging infrastructure, as well as improving the biking infrastructure.

Resources for a Greener Ride to Grounds

- [Commute Concierge](#): Parking and Transportation will help you figure out not only how to keep CO2 out of the atmosphere, but also money in your wallet by helping you through your options for getting to Grounds!
- [CavPool](#): you can organize a carpool to Grounds in order to receive benefits from the University, such as cost-reduced/free parking

permits, premium parking spaces, and a guaranteed ride home in the event of an emergency. This not only can save you money, but also cut down on carbon emissions.

- [VanPool](#): this is for larger groups that might be further away from Grounds. It uses a shared passenger vehicle to avoid wear and tear on a personal vehicle. It requires at least 5 participants and can have as many as 15.
- [Zimride](#): a tool for UVA faculty, staff, and students to find others to carpool with from a specific area. It is great at communicating how much carbon is saved by making this switch!
- [UBike](#): you can sign up for a membership to use these bikes found at stations all around Grounds. Just return the bike to the station nearest your destination and you are good to go!

On-Grounds Transport Electric Busses

- The Energy Working Group, Transportation Working Group, and the Parking and Transportation Electric Bus Task Force have been working hard to figure out how UVA could switch over to electric buses.
- Main Challenges
 - Parking and Transportation had already purchased a significant number of new diesel buses only two or three years prior to 2019, replacing nearly half of their fleet, so they were not planning on buying another new bus for a while.
 - Charging infrastructure: it takes a lot of energy to charge an electric bus, and this would ultimately mean modifications to the electric grid in order to support this new capacity.
 - Lack of administrative support due to expense/lack of examples from other universities.
 - Maintaining contacts within Parking and Transportation
 - Claims that the buses are “too tall” to go under the bridge near the intersection of 14th with University Avenue. It is still to be determined whether or not this is valid, or if there are

no alternative solutions such as choosing different bus models or rerouting the buses.

Electric Scooters

- Riding electric scooters may not be as environmentally friendly as you might think. Here is a quote from [You Matter](#) on the issue: “In fact, regarding the carbon footprint, scooters emit about 202 g of CO₂ per km and per passenger over their entire life cycle. It’s about as much as a conventional car and 3,5 times more than an electric car.”

Biking

- Biking is the best way to avoid carbon emissions in your commute to Grounds. Many professors and students use this as their primary mode of transportation.
- A major obstacle to improving cycling infrastructure in Charlottesville/on Grounds is that many streets are actually owned by the state. This makes making changes to them more difficult. Furthermore, many areas are considered historic, and the streets are therefore constricted in width. This can make adding more protected bike lanes difficult.
 - **Argument:** Other places like New York and Washington D.C. that experience similar space constraints have been able to improve their biking infrastructure, so this may be a bit of an excuse.
- Bike maintenance stations exist in front of Clark Hall and in the walkway between the Materials Science building and Wilsdorf Hall on Engineering Grounds.

Faculty Interested in Improving UVA’s Transportation Sector

- James Groves
- Ethan Heil: Ethan Heil has also been involved in the push for more sustainable buses within the City of Charlottesville. Currently, the city is planning to get city buses to switch to natural-gas powered engines instead of diesel, which is a 20% emissions improvement.

- Deborah Lawrence: as a project in one of her classes, Professor Lawrence had students ride the buses and record how long they sat idling at different spots. This was meant to bring to the attention of Parking and Transportation how much fuel was being wasted as well as excess pollutants going into the air because of this practice.

Updated as of: 04/10/2020