

UVA ECONETWORK



Energy and Renewables

UVA's energy distribution consists of both fossil fuel and renewable energy sources. As part of the 2020-2030 Sustainability Goals, UVA is trying to increase the amount of renewable energy in its portfolio. At the moment, many students are not happy with the fact that UVA still operates a coal plant on-site (you can see it from the corner across the street from Roots).

UVA's Energy Portfolio

- UVA's energy is derived from a mix of primarily coal but also oil, gas, and renewable sources. The main sectors of energy use electricity, fuel, transportation, and operations support.
- Electricity:
 - Accounts for around **50%** of UVA's greenhouse gas emissions
 - Approximately **21%** of UVA's electricity comes from renewable sources.
- Fuel
 - Accounts for around **31%** of UVA's greenhouse gas emissions
 - Fuel includes on-Grounds stationary fuels used for heating. These sources include coal, natural gas, distillate oil, and propane gas.
- Transportation:

- Accounts for approximately **18%** of UVA's greenhouse gas emissions
- Transportation emissions include the impacts of the University's vehicle fleet, categorized as direct transportation, as well as the impact of UVA's faculty, staff, and student commuting practices.
- UVA has aimed to improve the sustainability of transportation through the use of biofuels in the University bus fleet.
- Operations Support
 - Accounts for less than **1%** of UVA's greenhouse gas emissions.
 - Operations support includes the emissions generated from the release of refrigerants and other chemicals into the atmosphere, off-gassing from fertilizers, and emissions associated with treating wastewater.
- The most recent goals from the University are to be carbon neutral by 2030 and fossil-fuel-free by 2050.
- The percentage of renewable energy making up UVA's portfolio has been increasing, and rose significantly with the development of power purchase agreements with utility-scale systems (more info on page 10 of UVA's GHG Action Plan linked below).
 - For more information about UVA's Energy goals, click [here](#).
 - UVA's Greenhouse Gas Action Plan as of May 2019 can be viewed [here](#).
 - For more information on UVA's greenhouse gas inventory, click [here](#).

Involved Student Organizations

- Darden Energy Club
- CVille Solar Project
- Green Grounds
- Solar Car Team at UVA

Involved Professors

- Bill Shobe
- James Groves

Rooftop Solar

- There are solar installations on a few buildings around Grounds. Read more about each of the installations, and see how the systems are performing in real time from the following link:
<https://renewableenergy.fm.virginia.edu/>
- UVA is in the process of building up the amount of solar in its portfolio. There has been mention of new solar Power Purchase Agreements (PPA).
- The best people to contact about this are Jesse Warren and Ethan Heil in the Office for Sustainability.
 - Jesse Warren: jmw4ub@virginia.edu
 - Ethan Heil: ekh7a@virginia.edu

Wind

- Forefront research on large wind turbine blade designs is being conducted in the MAE Department by Eric Loth. Read more here:
<https://engineering.virginia.edu/news/2017/10/revolutionizing-offshore-wind-energy>

Biofuels

- Biofuels are a controversial subject, as they can be produced through the growing of crops otherwise able to be consumed by humans. This may lead to increased use of arable land, as well as more deforestation. The benefits lie in the seemingly “cyclic” nature of these fuels, supposedly pulling carbon out of the atmosphere before they are burnt, thus releasing the carbon that was stored.
- Here is an article on UVA Today about the balance between using crops for biofuel vs. food:
<https://news.virginia.edu/content/fuel-or-food-study-sees-increasing-competition-land-water-resources>

Energy in Charlottesville

You can find links to companies in Charlottesville that relate to sustainable energy on the Charlottesville Sustainability page.

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