

Sociotechnical Synthesis

STS 4600 – Dylan Cudahy

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The University of Virginia does not have a plan to address the carbon footprint of the living spaces of students that live off-grounds. I hoped to shed light on that problem through my efforts in STS 4500 and 4600 this year. Both my technical project and STS Research were on the carbon footprint of off-grounds housing at UVA. These two endeavors were closely coupled, which allowed me to let the research from one feed into the efforts of the other.

My STS Research proposed a process to reduce the carbon footprint of off-grounds housing. I proposed that the process of achieving this can be reduced to three simple steps: reduce the energy usage in homes, electrify everything, and secure a renewable energy source. This tracks with what I have studied in my time at UVA. That being said, I also folded in the concepts of Scope 1, 2, and 3 emissions, which help to clarify the entirety of the footprint of the sector. Finally, I touched on the importance of systems thinking being applied to this endeavor, rather than any individual technology or innovation. This ties into the idea of different scopes of emissions. Without considering every aspect of the system's impact, we will not be effective in addressing its flaws.

My Technical project put these ideas into practice, although not altogether effectively. My design team envisioned the Greener Housing Coalition. The GHC would be a contracted independent organization at UVA, dedicated to reducing the energy burden and carbon footprint of off-grounds housing. The membership would be students who live off-grounds. We would work with students to identify areas of their living space that draw energy, and hope to teach them best practices for sustainable living as we gather data to create a more accurate model of the emissions related to off-grounds housing. We explored many avenues related to making improvements in individual homes, but these efforts were stalled. Funding sources we were made aware of dried up, and we were forced to navigate significant levels of bureaucracy in order to rework our project. However, that has since been rectified as the GHC has received \$5000 in funding through the UVA Equity and Environment grant. We intend to funnel this money into tangible improvements to off-grounds housing. The GHC will become a fully-functioning CIO next fall.

The ability to achieve a clean energy future is at our fingertips. However, it is shocking the extent to which informed consumers, such as UVA students and professors, are still making unsustainable choices when it comes to their everyday lives. We can do better. The Greener Housing Coalition hopes to be an embodiment of what a large group of dedicated citizens can achieve when devoting a portion of their day to a worthwhile cause. I am going to end this summary of our efforts with our team's mission statement: "To recruit, empower, and educate our peers to improve the sustainability of their housing. We strive to make sustainable decision-making the norm at the University of Virginia. In the long-term, we aim to serve as an example of the universal attainability of affordable, sustainable housing."