
INTEROFFICE MEMORANDUM

TO: PROFESSOR CASHMAN
FROM: GANNON CARROLL
SUBJECT: SERC AND CCAT SITE VISITS
DATE: DECEMBER 2, 2016

Purpose

The purpose of this memorandum is to discuss my trip to SERC and CCAT the projects that each is currently involved in, the environmental benefits and cost of the projects, and how I might involve myself one of their design project.

Discussion

The purpose of the trip was to visit the sites of SERC and CCAT and receive information regarding the workings and projects that they partake. First visiting the Campus Center for Appropriate Technology (CCAT), the tour took me along the sites various projects that are displayed for community members as appropriate technology. Second, I visited the Schatz Energy Research Center (SERC), and was given a tour and description of the technologies they use along this the purposes of their projects that involve some of those technologies.

One project being conducted by SERC is to produce bricks of solidified and concentrated biomass. The biomass is being concentrated from slash that is left as a remnant of logging. They are attempting to optimize the utilization of the slash rather than just have it burnt. The bricks of solid biomass produced can be used as a substitute for coal. A project being conducted by CCAT involves the rainwater catchment system that has been set up for water reuse. This involves collecting the water off the roof in a system, though it filters out the first ten minutes of water collected, as that often is considered Blackwater. Blackwater is unusable as it carries much of the pollutants that have collected on the roof, so they only keep the greywater, which is recyclable and reusable.

I could be involved in SERC through the DOCENT Program, which is a school outreach program that performs small labs or demonstrations in front of classes of students. One project that interested me at the Schatz Energy Lab is their usage and testing of the hydrogen fuel cells. They produce the hydrogen used within these with an electrolyzer in the lab.

The most interesting thing I learned on the field trip is that CCAT has a small trailer called MEOW, which stands for Mobile Energy On Wheels. MEOW provides power for all CCAT's events on campus.

Conclusion

Overall, my experience was very enjoyable and knowledgeable while attending the tours for both CCAT and SERC. While in attendance, I learned much about renewable energy from the tour guide at CCAT, involving many of the projects that they took part in with hydrogen fuel cells. From SERC, I learned how much of their time is spent on finding ways to use appropriate technology and all the different opportunities they provide. I am glad that we had this lab to learn about all the ways I can get involved to both better our campus and the environment.