

Memo

To: Professor Eileen Cashman

From: Tanner Sakurai

Date: October 9, 2015

Subject: SERT/CCAT Site Visits

Purpose

The purpose of this memo is summarize and reflect on the trip to CCAT and SERT that took place in Engineering 115 lab on October 1st

Discussion

The purpose of the trip was to become familiar with the Schatz Energy Research Center (SERT) and the Campus Center for Appropriate Technology (CCAT), their functions, and the staff and students that are involved with them. It also allowed for us to learn about the projects and plans that those facilities are pursuing and encouraging. The hydrogen fuel cell vehicle testing taking place at the Schatz Energy Research Center was one such project. At SERT, the potential of hydrogen fuels in vehicles is being researched using two such vehicles along with a hydrogen fueling station. This technology is a leading competitor in research and development in to alternative energies with the potential to have a far smaller environmental impact than other fuels with regards to emissions and resources extraction. However, the development and manufacture of any new technology along with the infrastructure to support it on large scale is likely to develop its own set of environmental concerns and costs. One such concern is where the energy for electrolysis to produce hydrogen fuel comes from. While the vehicles themselves produce virtually no emissions, if the energy used to produce hydrogen is generated using traditional fuels, emissions would still be released due to the operation of the vehicle.

CCAT allow for numerous volunteer opportunities. Having a presence at these functions along with attending courses at the center could allow for direct involvement in one or more of the various design projects taken on by CCAT.

Recommendations

I would recommend that the class attend more visit and tours such as these. I feel that the class (myself included) found the trip very interesting and informative and allowed for us to gain a better understanding of the function and operation of SERT and CCAT and possible future opportunities for us to participate in.