

SWATeam Recommendation

Name of SWATeam: SWAT Transportation Team

SWATeam Chair: Yanfeng Ouyang

Date Submitted to iSEE: February 1, 2016

Specific Actions/Policy Recommended (a few sentences):

Campus fleet analysis and planning. The campus fleet includes department-owned vehicles, the car and truck pool vehicles, and the heavy equipment pool (mainly diesel-fueled large construction equipment). It is proposed that a feasibility study be performed on campus that:

1. Reviews the campus sustainability goals in the context of the University fleet;
2. Analyzes existing fleet data (i.e., fleet composition, ownership, usage/mileage profile) and future demand;
3. Evaluates current vehicle technology, fleet size, fuel types and availability;
4. Proposes collection of additional data (if needed);
5. Identifies various plans and anticipated cost/benefit results. Some of the options include: converting regular fuels to compressed natural gas, electricity, or biodiesel, increasing the portion of low-emission hybrid vehicles.

Rationale for Recommendation (a few sentences):

The campus fleet consistently accounts for about 10% of the total campus transportation eCO₂ emissions. Data from FY08-14 have revealed disappointing numbers on our campus' fleet emissions in recent years. The 2015 iCAP report has correctly identified this problem and recommended studying the feasibility for the campus to use (i) low-emission vehicles, and (ii) renewable fuels such as "sustainably-produced biodiesel, compressed natural gas from anaerobic digestion of organic wastes, and electricity from zero-carbon sources such as solar and wind."

Connection to iCAP Goals (a few sentences):

The fleet contributes to about 10% of campus emissions in the transportation sector, and it also has a range of other implications on campus sustainability objectives (e.g., financial cost reduction, promotional factor, political factor, resource conservation). The proposed work directly addresses two objectives listed in the 2015 iCAP report; i.e., "reduce fleet emissions" and "develop scenarios for conversion to alternative fuels."

Perceived Challenges (a few sentences):

The proposed work requires detailed data collection and "accounting" work. There may be administrative and political issues associated with the ownership of the various types of fleet vehicles.

Suggested unit/department to address implementation:

Outside consultant (or any campus department), Facilities and Services (F&S).

Anticipated level of budget and/or policy impact (low, medium, high):

This study may take a faculty member and a graduate student, or an outside consultant, 1-2 years to complete.

Individual comments are required from each SWATeam member (can be brief, if member fully agrees):

Team Member Name	Team Member's Comments
Yanfeng Ouyang	I believe the proposed study will help significantly reduce campus transportation emissions.
Pete Varney	I strongly support this study to address two iCAP objectives, however I also support someone with significant industry knowledge to lead this study.
Bumsoo Lee	Promoting the sustainability of campus fleet will have some symbolic value and gain the attention from the campus community. I agree that hiring a consultant with industry knowledge is the way to proceed.
Claire Dodinval	I think there are many directions this could be taken that could reduce emissions and be an observable shift towards sustainability (on campus and beyond).
Zhaodong Wang	I think this project is promising to reduce campus transportation emissions.

Comments from Consultation Group (if any; these can be anonymous):

Explanation and Background (can be supplied in an attachment):