

Clean Cities Workforce Development Program

Spring 2020 Geography 595 Internship with the South Carolina Energy Office, Eva James

INTERNSHIP OVERVIEW

Last fall, I began a Department of Energy funded internship with the South Carolina Energy Office (Energy Office). The internship was through, Clean Cities University Workforce Development Program through Argonne National Lab. The Energy Office is a federally funded office that is housed within the SC Office of Regulatory Staff, a relatively new state agency founded in 2003. ORS works closely with the Public Service Commission to act as an artificial competition to the SC utility monopolies (eg. Dominion, SC Water, etc). Within the Energy Office, I work for the Palmetto Clean Fuels Coalition (PCF). PCF works to increase the use of alternative fuels and advanced vehicle technologies in South Carolina.

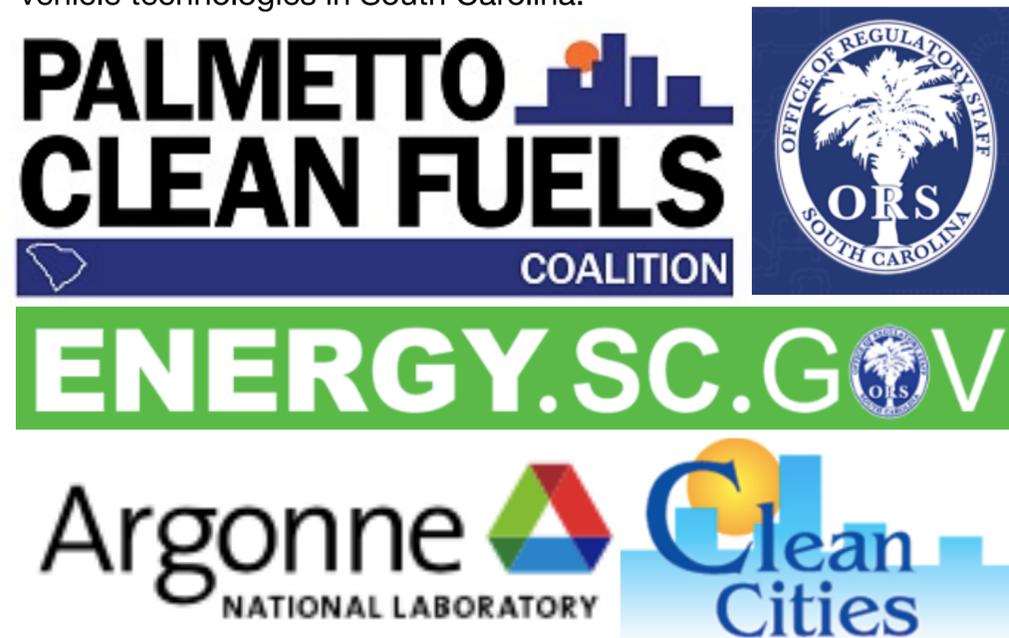


Figure 1: The various agencies and organizations that I have been working for this past semester

PCF is part of the Clean Cities program, one of nearly 100 designated coalitions in the United States, but PCF is the only one in South Carolina. The DOE approved the application for PCF's designation in 2003, recognizing the commitment of our stakeholders to building an alternative fuels market in South Carolina as a statewide coalition in 2004. PCF strives to help public and private entities, as well as individuals, lower fuel costs, improve air quality, and reduce petroleum consumption. PCF also promotes idle reduction, fuel economy measures, vehicle miles traveled reductions, and bicycle and pedestrian efforts.

MAIN RESPONSIBILITIES & PROGRAMS

My internship responsibilities with PCF cover a bevy of topics, from data analysis, business plans, event planning, website content, public relations and marketing plans, interfacing with stakeholders, idle reduction campaigns, research, and more. Some of my most time intensive tasks I cover completing deliverables for DOE subtasks and quarterly/annual reporting. This requires a lot of data manipulation and gathering on my end. This has helped improve my Excel and AFLEET skills, but some of the work is relatively mundane—aka typical intern work like sorting files, inputting data, reading reports, responding to emails, and getting the mail.



Figure 2: The Plug In SC Initiative logo, signage, and pavement markings from a PCF stakeholder I coordinated with in Hilton Head, SC

My three large projects I have been an integral part of since last September when I joined the Energy Office team are for the Plug In SC Initiative, the EV Exit Sign Pilot Project, and AFLEET Analysis Report for the City of Columbia. Plug In SC is intended to ensure that all electric vehicle infrastructure is visible and recognizable by adopting the federal guidelines specified in the Manual on Uniform Traffic Control Devices. It is based off of the South Carolina Electric Vehicle Market Study that aimed to recognize the importance of preparing South Carolina for increased EV sales and interests. PCF conducted this study to address the following issues: an assessment of the current EV infrastructure and policy framework in South Carolina, an analysis of trends and the outlook for the future, actions to prepare South Carolina for future EV development. I work on the Plug In SC Initiative with the intent to contact all EV charging station owners in the state and get them to outfit their chargers with uniform signage. This is important to overcome the barrier of consumers thinking there are “not enough chargers” available.

PROGRAMS (continued)

The EV Exit Signage Pilot Project looks at putting EV signage on exit ramps and off exits to direct highway drivers to available EV chargers along the designated corridors. This has required a lot of coordination with the South Carolina Department of Transportation on my end, and we have several edits going back and forth with them right now. I am in charge of mapping the proposed stations and signage locations, but all of these actions require SCDOT approval. Lastly, I was tasked to assist in a large fleet analysis for the City of Columbia that looks at how they can make their fleet more sustainable. This involved using Argonne National Laboratory's AFLEET software and inputting the vehicle information for the thousands of City of Columbia fleet vehicles. I then analyzed the outputs of the AFLEET results, charting and documenting changes and problematic vehicles the City of Columbia could drop or convert to cleaner fuels. It should be noted that not all of the work I did focused on electric vehicles; a good portion of my work circulates around propane, compressed natural gas, biodiesel, and all other alternative fuel sources.

WHAT I HAVE LEARNED

My favorite part of the job is getting to work for the government, as my previous internships were each with the private sector. Sitting in the ORS and Energy Offices have given me insight into the hurdles, benefits, and confusion surrounding state government work in South Carolina. For example, being an all red state, we are not allowed to talk about climate change or global warming, which is rather tricky when you are promoting clean, sustainable, energy efficient switches in homes, businesses and vehicles across the state. I have also learned there are many areas in which I want to grow within the Energy Office, in learning new skills and tackling different types of projects. For example, this summer I asked to be placed on a GIS team that tracks solar panel use across the state so that I could improve my GIS skillset.



Figure 3: The EV Signage Pilot Project report I have been compiling

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