EE 492 Bi-Weekly Report
March 16 - March 29

SDMAY21-46

Microgrids to Support Communication Infrastructure

Client/Advisor: Dr. Anne Kimber

Team Members: Dylan Miley, Liam McAlister, Ryley Radack, Abdelrahman Mannan, Hoang Dang

Weekly Summary

The team created a rough draft of a report detailing the Matlab microgrid simulation and simulation results. The team ordered connectors to be used while testing the nanogrid. The team ran some preliminary tests of the nanogrid, including the battery and solar panels.

Past Week Accomplishments

- Created a rough draft report of the simulation.
- Ran tests on solar panels and the battery, measuring the watts generated by the solar panels.
- Ordered barrel connectors that will be used to connect the hydrogen fuel cell to the battery. They will also be used to measure voltage and current.

Pending Issues

- Need to finish the final draft of the report detailing the simulation components, sequence, and variables.
- Need to continue testing the prototype nanogrid.
- Hydrogen fuel cell has not arrived yet (expected to arrive this week)

Individual Contributions

Team Member	Individual Contributions	Hours This Time Period	Cumulative Hours
Liam McAlister	- Troubleshot grid-following inverter model	~12	~76
Dylan Miley	- PV + Battery -testing plans -final report	~12	~70
Hoang Dang	- troubleshooting integrated model	~10	~74
Abdelrahman Mannan	-Worked on integrating PV system with Battery and inverter	~12	~66
Ryley Radack	- Initial investigation	~10	~70

	into Battery and Solar system for nanogrid - Refined Inverter and wind model in simulation		

Plans for the Upcoming Week

Liam   - Added rough draft of grid-following inverter summary to the simulation report.
         - Assisted in testing battery and solar components of the nanogrid.

Dylan - Work on final report
         - Work on test plans + solar data collection vs expected performance due to irradiance and efficiency

Hoang - work on testing of solar panel+battery
         - writing reports of different iterations of battery model

Ryley - Add detail to Wind Subsystem in simulation report
         - Begin testing physical components of nanogrid against modeled behaviour

Abdel - Integrate PV array with system
         - Set up data logging for nano grid solar and battery system
         - Complete writing pv array portion of the document

Entire team   - Write up report
         - Test PV array, battery, and hydrogen fuel cell for nanogrid

Summary of Weekly Advisor Meeting
- Delivered rough draft of simulation report
- Delivered plan detailing how nanogrid components will be tested