
EE 492 Bi-Weekly Report

March 30 - April 12

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 made revisions to the microgrid simulation report. The team also performed tests on the solar panel and battery. Lastly, the team contacted Dr. Whenzhen Li to prepare and schedule tests on the hydrogen fuel cell.

Past Week Accomplishments

- Made revisions to the simulation report
- Tested the DC voltage and current output of the solar array, varying the number of solar cells receiving sunlight
- Verified the DC power output of the solar array matched the power shown on the battery display
- Met with Dr. Li to begin testing the hydrogen fuel cell

Pending Issues

- Need to finish the final draft of the report detailing the simulation components, sequence, and variables.
- Need begin writing the nanogrid component testing report
- Need to test the hydrogen fuel cell

Individual Contributions

Team Member	Individual Contributions	Hours This Time Period	Cumulative Hours
Liam McAlister	- Tested solar array - Made revisions to the simulation report	~10	~86
Dylan Miley	- PV + Battery -testing plans -final report	~6	~76
Hoang Dang	- troubleshooting integrated model	~8	~82
Abdelrahman Mannan	-Worked on integrating PV system with Battery and inverter	~12	~80

Ryley Radack	- Simulation report writing - PV + Battery testing	~7	~77
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Plans for the Upcoming Week

- Liam - Continue revising simulation report
 - Create new diagrams to be used in the simulation report
- Dylan - testing the fuel cell with Dr. Li's lab
 - Work on final report
 - Work on test plans + solar data collection vs expected performance due to irradiance and efficiency
- Hoang - testing the fuel cell with Dr. Li's lab.
 - work on the final report.
 - writing reports of different iterations of battery model
- Ryley - Wrap up simulation report and make formatting formal
 - Begin poster and final presentation
- Abdel - Finalize report with diagram, figures and equation edits
 - Work on testing hydrogen fuel cell in Dr Li's lab.
- Entire team - Write up report
 - Test PV array, battery, and hydrogen fuel cell for nanogrid

Summary of Weekly Advisor Meeting

- Reviewed simulation report
- Discussed hydrogen fuel cell testing
- Discussed upcoming senior design poster and presentation