

May1727

**Project Title: Stand-alone Hybrid Solar/Wind
Power Plant**

**Advisors: Dr. Venkataramana Ajarapu & Ankit
Singhal**

Team Member – Roles

Nathaniel Byrne - Group Leader

Brian Gronseth - Solar Tech. lead

Jeffrey Szostak - Wind Tech. Lead

Matthew Lee - Communications Lead

Mike Trischan - Key Concept Holder

Eric Cole - WebMaster

Executive Summary:

In order to verify the hardware's accuracy and limitations we repeated the experiments performed last week but with bigger loads. We found out that our system can supply 300 W for only a few minutes maximum but 400 W still remains an illusive target.

Past Week Accomplishments:

Updated website, continued work on the combined system, started work on the final presentation and final poster.
We did more testing and cross verification. Some preliminary items regarding the finished product of our work.
Solar team took hardware measurements under heavier loads to verify whether or not the losses that were seen with one light bulb were constant. Solar team also met to finalize the simulation and verify measurements taken from hardware.
This week, the group tested our hardware experiments, finalized our simulations, wrote additional lab experiments, and improved our random wind/solar inputs.
Tested lab experiments, finalized lab experiments, worked on poster, finalized combined simulation scenarios
We repeated the solar hardware measurements for bigger load cases. This was to verify that the losses increased with larger amounts of power or if there were other losses.

Individual Contributions:

Name	Hours this week	Cumulative	Contribution
Nathaniel Byrne	3	69.5	I performed testing with the hardware readings.
Brian Gronseth	4	80	Helped take hardware measurements and track irradiance measurements.
Jeffrey Szostak	5	101.4	I assisted with improving our simulink models. I also improved our random wind/solar inputs for the simulink models.
Matthew Lee	4	108.8	I took more hardware measurements and helped with the calculations
Mike Trischan	5	98	Worked on poster, lab docs, combined lab simulation, and testing of lab experiments
Eric Cole	6	92	Updated website, continued work on the combined system and output.

Summary of Weekly Advisor Meeting:

Fine
Short, Ajarapu only slightly upset.
Met with advisor to discuss the final presentations and our demonstration strategy
We met with Dr. Ajarapu and Pranav Sharma Friday at 1pm. We discussed what we've improved since we last met up and how to go about the end of the year presentation.
Discussed previous accomplishments, future tasks
Dr. Ajarapu had to leave early but he was pleased with our accomplishments for the week

Plan for Next Week:

Work on finishing labs, final presentation, poster, and fix any last minute issues with simulations.
We must now make strides to finishing the project. Lab reports for the Power Systems class. Presentation items.
Whole team will meet to finalize our deliverables for presentation on friday. We will also put together an outline of what we will be presenting on.
We will finalize our lab experiments and finish the project in its entirety by Friday (our next Advisor meeting).
Work on finishing labs, final presentation, and poster
Put the finishing touches on the lab, and outline the poster, presentation and final report.

Pending Issues:

Na
NA
Na
None
Na
NA

Comments/Extended Discussion:

none
It is time to finish the project.
Na
None
NA
None