

EE 492 Weekly Report **MAY15-21** **Week 21 (03/31/15-04/06/15)**

Advisors: Venkataramana Ajarapu

Client: Venkataramana Ajarapu

Members (roles):

- Daoxi Sun- *web master*
- Riley O'Connor- *team leader*
- Trevor Webb-*communication leader 1*
- Shihao Ni – *web master*
- Xiaokai Sun- *communication leader 2*
- Ben Ryan- *concept holder*

Project Title: Hybrid Solar Wind Generation System

Weekly Summary

At the end of fall semester our team had successfully simulated both the solar and wind generation systems in Matlab Simulink. The challenge for this semester is now to implement our designs with equipment, and produce the desired results.

Put wind team stuff here

This week was spent primarily preparing and presenting our progress on the project to the senior design 2 instructor.

Meeting notes:

General Notes

- I. Present solar material and wind material to our advisor
- II. The solar team will use the battery moving forward to perform some power flow calculations under various conditions. A test load will also need to be made.
- III. The wind team will solve the jam of the motor and try to connect the anemometer to the system to make the whole system work as one.

10/2 Group Meeting with Advisors

Duration: 60 min

Members Present: 6

Purpose and Goals:

Present relevant background information over our project to both our advisor and our fellow group members. Both the solar and wind teams now have made some progress with hardware, and will present that progress while getting useful advice on how to proceed from our advisor.

Achievements:

Both groups obtained advice for moving into the final weeks of this project.

The solar team has begun work on tracking power flow throughout the solar system. They also have begun designing a variable load with which to test the system. Preparations for combining the solar and wind systems has begun.

The wind team was able to drive the motor with the controller. The boost converter has been shipped. It will replace the previous designed boost converter.

Pending issues

1. Successfully creating solar and wind generation individually
2. Combining both forms of generation to supply one load

Plans for next week

1. Wind team: (Ben, Xiaokai, Shihao) will meet to design and implement their wind generation system
2. Solar team: (Riley, Daoxi, Trevor) will meet to further test the system now that the battery has arrived, begin documenting power flow and preparing for the final poster
3. Each team will also develop results that can be presented at our next meeting with our advisor and his grad student.

Individual Contributions (this week)

Daoxi Sun: 5

- Started building variable load
- Attended weekly advisor meeting
- Designed and practiced project presentation for senior design instructor
- Ordered additional parts

Riley O'Connor: 5

- Designed and practiced project presentation for senior design instructor
- Attended weekly advisor meeting
- Presented the project to the instructor
- Created a short demonstration video of the solar system

Trevor Webb: 5

- Designed and practiced project presentation for senior design instructor
- Attended weekly advisor meeting
- Updated information in the weekly report
- Presented the project to the instructor
- Created a short demonstration video of the solar system

Shihao Ni: 4

- Attended weekly advisor meeting
- Presented the project to the instructor
- Make the PowerPoint for presentation

Xiaokai Sun: 8

- Attended weekly advisor meeting
- Presented the project to the instructor
- Make the PowerPoint for presentation
- Updated information in the weekly report

Ben Ryan: 8

- Attended weekly advisor meeting
- Presented the project to the instructor
- Make the PowerPoint for presentation
- Created a short demonstration video of the wind system

Total contributions for the project

Daoxi Sun (105 hr)

Riley O'Connor (123.5 hr)

Trevor Webb (121.5 hr)

Shihao Ni (105 hr)

Xiaokai Sun (107 hr)

Ben Ryan (124 hr)