EE 491 Weekly Report MAY15-21   Week 12 (11/19/14-11/25/14)

Advisors: Venkataramana Ajjarapu   **Client:** Venkataramana Ajjarapu
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

The main goal this week was to advance the model of our design in Simulink. The solar team and wind team each began separate models, and once each model simulates the way we want it to the two will be put together for one comprehensive model.

Each group made progress with the simulations from last week to this week, but neither model is complete yet.

The whole group was able to meet with our advisor. They looked over what we had done so far and gave us some helpful advice for moving forward with our simulation models. Both groups are at a similar point in their simulations where both teams are trying to test their designs with a battery attached in parallel with the load.

Meeting notes:
General Notes

I. Present solar material and wind material to our advisor

II. Focus on trouble shooting our simulations

III. The Solar team must document the battery to show that the load is receiving roughly 400W

IV. The Wind team must think about how to simulate the wind turbine by hardware.

10/2   Group Meeting with Advisors
Duration: *60 min*   **Members Present:** *All*

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 Simulink models, but were not complete models.

Achievements:
Both groups largely benefited from the meeting with the advisor, who helped areas of each simulation that was not simulating as expected.

The solar team was incorporated the battery, but there are some issues where the power is not always at a steady 400W. This issue will be resolved moving forward.

The wind team was able to put the battery in parallel with the load and get a stable power from both the input side and the output side.

Pending issues

1. Simulating the solar generation and wind generation aspects in Simulink.
2. Modeling based on different conditions.
3. Combining the two models into one comprehensive model

Plans for next week

1. Wind team: (Ben, Xiaokai, Shihao) will meet to continue work on wind simulations
2. Solar team: (Riley, Daoxi, Trevor) will meet to obtain data on how much power is being diverted to/from the battery under several different loading situations. Power to the load should be about 400 W.
3. Each team will also develop results that can be presented at our next meeting with our advisor and his grad student. The individual solar and wind simulations should be largely completed by our next meeting with our advisor.

Individual Contributions (this week)

Daoxi Sun: 5
- Worked on Solar Simulink model
- Attended weekly advisor meeting

Riley O'Connor: 5
- Worked on Solar Simulink model
- Attended weekly advisor meeting

Trevor Webb: 6
- Worked on Solar Simulink model
- Attended weekly advisor meeting
- Updated information in the weekly report

Shihao Ni: 7
- Worked on Solar Simulink model
- Attended weekly advisor meeting

Xiaokai Sun: 7
- Worked on Solar Simulink model
- Attended weekly advisor meeting
- Edit the weekly report

Ben Ryan: 7
- Worked on Solar Simulink model
- Attended weekly advisor meeting

Total contributions for the project

Daoxi Sun (64 hr)
Riley O'Connor (65.5 hr)
Trevor Webb (65 hr)
Shihao Ni (72 hr)
Xiaokai Sun (70.5 hr)
Ben Ryan (74 hr)