EE/ CprE 491 – ssddec18-19 Weekly Report
10/8/18 – 10/22/18
Group number: 19
Project Title: Design and Implementation of a small scale standalone Hybrid Solar PV and Wind Energy Generation System
Client & Advisor:
Venkataramana Ajjarapu
Team Members/Role:
Christopher Goodrich: Circuit Design Lead
Taylor Mullen: Testing Engineer
Kenny Nguyen: Webmaster/Circuit Design Engineer
Damon Stubbs: Software Lead
Andrew Wassenaar: Team Leader

Past Week Accomplishments:

- **Order resistors needed for resistor bank and other components that were viewed as in usable. These includes relays, and added breakers to list of components needed to be ordered.**
- **Created, redesigned, and updated lab manuals. Continuation of updated lab manuals will be a weekly occurrence.**
- **ETG came in and added a grounding rail to the lab that allows us to ground components now.**

Pending Issues:

- **Material for resistor bank needs to be defined and order.**
    - **Idea is to use either aluminum, tampered glass, or ceramic.**
    - **We can also use a combination of all the materials.**
    - **Length and width of the resistor bank needs to be feasible and also have enough space so that there's no interference between parts.**
    - **Current situation is pending on creating/buying an enclosure for resistor bank due to Matt, member of ETG, has been sick the past week and is fabricated a bench for our circuitry to sit on. Once the bench is completed and place in the lab room, the enclosure can be measured and bought and modified to fit all resistors.**
- **ETG is going to help add another conduit in the lab room, also will remodel the lab room by adding tables, a cabinet, for our current setup.**

Individual Contributions:

Name	Individual Contribution	Hours this Bi-Week	Cumulative Hours
Christopher Goodrich	The last couple weeks I have been sick and also have had a lot of work things come up. For our project I have done research on our pcb design for a buck/boost converter. I am also looking into what is on the market for buck/boost converters that would be sufficient substitutes for our project. By the end of this week I hope to be able to buy a buck/boost converter to have ready to test with our circuit.	3	77
Taylor Mullen	I have been working towards finishing labeling for the wires and identifying some components to put into the schematic that I've started within EAGLE. I'm going to continue to get a lot of work done on the schematic within the next couple weeks and to generate a box symbol to represent components that don't have a symbol in EAGLE.	4	54
Kenny Nguyen	This week, I've been sick and continued to talk to ETG about enclosure to only find out that we would have to wait until Matt is back to fully understand what the bench looks like and where we can play our resistor bank. Because the resistor bank is fairly large, a large amount of room is needed for it, approximately2ft by 2ft. The coming weeks, will order rest of parts, help Chris with rewiring the circuitry and constantly update website in order for it to be presentable at the end of the semester.	5.5	67

Damon Stubbs	I have been researching LabView and any possible implementations of it using Arduino. I have found a few libraries that support the Arduino and would make it possible to display various features of our system live to all students. However, some limitations exist on the Arduino that must be researched. In the future, I l look to test out LabView with the Arduinos and to work on the code for the new Arduinos to make sure they are compatible.	4	70.5
Andrew Wassenaar	I have been working on updating and revising the lab document. One of the final deliverables for our project is a detailed lab document so that students can walk through the experiment step by step and finish in the 3-hour allotted time. So far, I have completely redone the first 2 parts of the lab (of which there will be 5 total). These are the simulation experiments. In the coming weeks I will update the hardware experiments and include pictures as we complete our project.	8	74

Plans for coming 2 Weeks:

- **Create schematic for overall project, with components and how they function with one another.**
- **Start revising lab documents and doing parts of the labs that can be done with the current set up.**
- **After figuring out material used to create resistor bank, create resistor bank.**
- **Find out situation of fabrication of bench for lab from Matt, and order remaining parts to create resistor bank.**

- **Need to order clips and a rack that can fit each resistor in so that we can easily place them in our enclosure.**
- **Continue rewiring and fixing up wiring in the circuitry and making sure the system is safe for use.**