EE/ CprE 491 – ssddec18-19 Weekly Report
10/22/18 – 11/5/18
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 extra fans, clips for resistors, resistor enclosure, and enclosure for circuitry.**
- **Created, redesigned, and updated lab manuals. Continuation of updated lab manuals will be a weekly occurrence.**
- **Held a mock simulation of the lab and had feedback on overall time and effort to simulate the lab.**
- **ETG came in and added a bench that replaced the current set up. The bench added more space and made everything look more clean and nicer.**
- **Labeled all wires and components in the circuitry.**
- **Divided work that needs to be done before the end of the semester.**

Pending Issues:

- **Enclosure for circuitry needs to be made or a pre-built box needs to be purchase because current does not look very professional or clean.**
    - **There was miscommunication between ETG and our group. Previously thought the bench would be order and come in sooner, but it was delayed and currently takes 8 weeks to get here.**
    - **Our group thought there ETG would build an enclosure or fabricate a bench with an enclosure to place our circuit components.**

- **This led us to wait for a bench to come so that we can move our parts onto and not have to worry about building an enclosure. This stalled our progression for about a month.**
- **Now have to figure out what enclosure needs to be made in order to fulfill the needs of the lab.**

Individual Contributions:

Name	Individual Contribution	Hours this Bi-Week	Cumulative Hours
Christopher Goodrich	I developed an AutoCAD drawing of our circuit enclosure. It is showing the placement of every element of our circuit and was to verify everything will fit into our enclosure. I also help to set up a schedule for our team to follow for the remainder of the semester to make sure everything finishes well. I also finished labeling our circuit in preparation for rewiring. The next two weeks I will be rewiring the circuit, fitting it into our new enclosure, and helping develop a schematic using AutoCAD.	13	90
Taylor Mullen	I've helped work on labeling the circuit with Chris as well as making some diagrams for all the connections within the circuit to be able to design the schematic in AutoCAD which I have made some progress into and will finish the schematic within the week. Will also look into seeing what is needed in our poster.	6	60
Kenny Nguyen	Talked to Lee, from ETG, about enclosures with Drew. Had a workshop safety course lecture to ensure that we can use the workshop can be used for designing the resistor bank and enclosure. Made sure we had clips for each	7	74

	resistor so they can be mounted to the enclosure. Next week, create and finish resistor box and ensure website is completed.		
Damon Stubbs	Reviewed circuit components, particularly those related to the Arduino as the new one is ready to be installed. Looked at the Arduino's datasheet to see any possible complications and incompatibles. In the coming week I will be drafting a document with all the components connected to the Arduino and how they are used within the code, as well as outlining poster presentation needs and helping rewiring the system.	5	75.5
Andrew Wassenaar	Coordinated with ETG about possible enclosures to make for the resistance bank, and the main circuit itself. Went to the safety training provided by Lee Harker to be able to access the senior design shop in Coover 1316. Wrote detailed rough draft of entire Lab Document deliverable for client. Tested the first half of the experiment with a grad student and finalized those sections. The second half will be finalized once all our hardware has been completed and pictures can be added to the lab document.	12	86

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.**
- **Create an enclosure for Circuitry.**
- **Recode Arduinos to a Multimeter screen to display DC voltage and current.**
- **Continue rewiring and fixing up wiring in the circuitry and making sure the system is safe for use.**
- **Create poster for Senior design presentation.**
- **Start on Senior Design final document.**
- **Develop a wiring schematic for the circuit.**
- **Fit the circuit into the new enclosure.**
- **Testing on all circuit components.**