

EE/CprE/SE 491 - sddec19-06

Design and Implementation of a Small Scale Stand Alone Hybrid Solar PV and Wind Energy Generation

WEEKLY REPORT - 4

3/2/19 – 3/8/19

Client and Faculty Advisor: Dr. Venkataramana Ajjarapu

Team Members:

Hussein Ghitan - Meeting Scribe

Blaise Ronspies - Test Engineer

Adam Schroeder - Chief Engineer

Anna Schulte - Meeting Facilitator

Weekly Summary:

This week our team met with a student, Taylor Mullen, who was apart of the previous senior design team working on this project. Through this meeting we gained a better idea of how to operate the existing setup. The previous team member also informed us that the breaker may be broken which lines up with the testing we did on the system. The team also met up with an engineer from the ETG, Matthew Post, to clear up questions about the PV arrays. The team requested to disconnect the PV arrays in order to remove the breaker safely. Our team met with the TA, Pranav Sharma to discuss next steps for our project.

Past Week Accomplishments: Set up crucial meetings necessary to continue the project. The website, which was previously giving us difficulties, has been fixed.

Pending Issues:

Our team has sent in an order request for a battery and a breaker within the past two weeks. We recently learned that the ETG has received our order but that it has not been placed. This may cause some difficulties in getting the DC output working.

Individual Contributions:

Team Member	Contribution	Weekly Hours	Total Hours
Hussein Ghitan	Fixed issues with team website and updated, I also figured out the control box components and connections.	5:30	14
Blaise Ronspies	Attended meetings and figured out how to safely disconnect the enclosure from	5	12.5

	power. Disconnected the faulty breaker, and noted the actual resistances of the box		
Adam Schroeder	Worked on the control box diagnosing what component is broken that is not allowing voltage to get to the DC output. Ensured all other connections are connected as per print in the diagram.	5.5	14
Anna Schulte	Sent order for breaker to the ETG, familiarize myself with the system components through meeting with previous member	4	12.5

Plans for Coming Week:

Our plans for the next is to have two of our group members working on the simulation part and have two members keep working on the hardware. The simulation will be using the simulink model in MATLAB. We will use the actual system specifications to compare those results with what the team is getting from the real life PV system. For the hardware part, the team still waiting for the ordered battery and breaker, once those parts arrived we will be able to do more system component testing and hopefully identify any major problems with the system. In the meantime we will test existing parts and try to improve safety.