

Group number: May1727-28

**Project title: Design and Implementation of a small scale standalone Hybrid
Solar PV and Wind Energy Generation**

Client &/Advisor: Dr. Ajarapu

Team Members/Role: Roles TBD

Matthew Lee / Team Communication Lead

Nathaniel Byrne,

Eric Cole

Brian Gronseth

Mike Trischan

Jeffrey Szostak

○ **Weekly Summary (Short summary about what you did this week)**

The team met for the first time this week and discussed some of the project details with Dr. Ajarapu. Dr. Ajarapu gave us some background on what some of the previous senior design groups have worked on and showed us the physical equipment that they have left behind. We have begun to familiarize ourselves with the equipment and need to obtain the supporting documents that go along with the equipment.

○ **Past week accomplishments (please describe as what was done, by whom, when)**

Laid out a basic design plan and brainstormed ideas with the group. Began analyzing previous groups' equipment and leftover bits. Eric, Jeff, Brian began researching vertical wind turbines.

We had our adviser meeting, and went over a few things in the Senior Design Lab.
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Formed Team and divided into wind and solar group.

We were given our projects and formed our teams/sub teams.

Met with advisor, introduced to work done by previous senior design team, brainstormed how we will handle project in the following months (meeting times and project specs)

The group met up and discussed who would work on the Wind Turbine aspect of the project and would work on the Solar Panel aspect of the project. We then determined when would be the best time for us all to meet up to work on the project. Finally, we determined what work we want to do before our next meeting time.

○ **Pending issues (if applicable)**

Missing previous groups' documentation but have their equipment.

We need to define the remaining team member's roles, and potential additional meeting times(?).

Need the old reports/more information about the project.

Lack of team leader and lack of documentation promised by instructor

No issues

We're currently waiting for the paperwork/manuals from last year's group so we can more properly begin our project correctly without repeating work that was already done.

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Matthew Lee / Team Communication Lead 1	Created supporting documents such as surveys, Google Drive and preliminary file templates for team; 3 hours	3	3
Nathaniel Byrne 2	Matthew Lee sent out surveys and things, including this document. I think it would be suitable to allow him to select himself for Team Comms.	1	1
Eric Cole 3	Researched vertical wind turbines that can be used for our project. 3hrs.	3	3
Brian Gronseth 4	Looked up solar panel costs that would fit general needs of our project (between \$100 and \$200). The goal of this is to start a general budget and to specify the parameters we are looking to hit. 1Hr	1	1

Mike Trischan 5	Set up email list, organized everyone's available times, researched previous work done on project from years past. 3 hours	3	3
Jeffrey Szostak 6	I did research pertaining to Vertical Wind Turbines and which type the group would want to purchase for the project. I believe the Darrieus model is the ideal type. I spent about two hours researching.	2	2

○ **Comments and extended discussion**

Need to assign roles and set requirements ASAP.
I might keep a print out to ensure I can have viable answers/information for this report.
Thanks for filling in for now!
As a group we laid out the general block diagram of our project. Solar seems to be at a standstill because the solar system was dismantled. Wind started looking into the current setup that previous design team had put together, as well as researching possible vertical wind turbines.
Looking forward to working on this project!
None. Everything is coming along smoothly.

○ **Plan for coming week (please describe as what, who, when)**

Assign positions/role, review previous groups reports, inventory equipment, set design requirements, formulate strategic plan of action.
The group will probably finalize the remaining administration and organization issues regarding individual roles, rehearsing the problem statement, understanding when we will have work periods on this project.
Decide if we want to buy a wind turbine. Then more forward with purchase or secondary plan.
Pending promised documentation, I would like to read through that and start looking at the current solar panel setup to get a better idea of how it works. Officially give someone the position of team leader.
Research documents from advisor, meet up again, come up with a more focused plan
The group plans to decide which wind turbine we wish to purchase, and hopefully, make the purchase as well.

○ **Summary of weekly advisor meeting (if applicable/optional)**

Met with Ajarapu and Ankit (grad student) to discuss project ideals/goals. He did not give us any requirements so we will need to set them ourselves and present them to him for approval.

Met with Prof. Venkataramana Ajarapu on Thursday, regarding the problem statement, available equipment and tools, objectives, etc.

Project Beginnings

Dr. Ajarapu gave us general guidelines to look at in the beginning stages of this project. Wind team needs to research possible solutions to providing wind power generation with vertical wind turbines, and solar panel team needs to look into the current system and documentation of said system to get a better idea of how we can possibly incorporate adding a couple solar panels to increase our output capability from 200 watts to 400 watts. From there we need to come together as a team and decide the parameters we want to set and the goals we want to reach.

Learned about previous work done on project and advisor's expectations

Our meeting with Ajarapu went quite well. He gave us more information about the project as well as showed us the work done in previous years.