

## sdmay23-27: 115kV/34.5kV Solar Power Plant & Substation Design Project

Week 2 Report

September 28 - October 5

### Team Members

Madison Lakomek — *Researcher*

Brooke Nelson — *Researcher*

Ashton Randolph — *Researcher*

Jacob Miller — *Leader*

Jenna Runge — *Researcher*

Omer Karar — *Researcher*

Madissen Lawrence — *Researcher*

Zach Zimmerman — *Meeting Minutes Recorder*

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### Summary of Progress this Report

During this week we met with Black & Veatch and showed them our finalized gantt chart along with the five array parameter tool sheets we compared. We completed the presentation for Ajarapu that went over photovoltaic characteristics. We met as a group on Tuesday and Thursday.

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### Pending Issues

We still need to present our presentation to Ajarapu because he was unable to meet this week. We also must all work on transferring our design from the array parameter sheet into CAD to make technical drawings of the solar field. We also must start looking into voltage drop and expense calculations given the calculation sheets from Black & Veatch.

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### Plans for Upcoming Reporting Period

We plan to have a rough CAD drawing of our solar field. We also will start on the calculations and alter the current figuration of our solar field based on the voltage drop calculation to ensure that we are in the 3% drop range given to us by Black & Veatch.

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### Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Madison Lakomek	I worked to edit the gantt chart based on the feedback we were given from Black& Veatch. I attended all meetings and assisted with finalizing one of the array parameter tool sheets.	4	0
Brooke Nelson	Attended all meetings, collaborated on all group activities such as the documentation, Gantt chart, and array parameter tool.	4	0

Ashton Randolph	I worked with the team to complete additional array parameter designs and complete the gantt chart. Attended meetings on Monday, Wednesday, and Thursday.	4	0
Jacob Miller	Lead B&V meeting 10/5/22, updated array parameter tool with new inverter.	4	0
Jenna Runge	Edited Gantt chart and added info to a presentation for Ajarapu about PV, worked on team activities / assignments, and attended all meetings.	4	0
Omer Karar	Attended all meetings, collaborated on all group activities such as the documentation, Gantt chart, and array parameter tool.	4	0
Madissen Lawrence	Edited Gantt chart, added information to the presentation for Ajarapu about PVs. Attended all meetings, and worked on team activities (reports and design documentation). Populated the ETG site for our project.	4	0
Zach Zimmerman	Worked on and completed array parameter designs. I added row spacing calculations, determined the tilt of the modules, and number of components. I created two designs of the solar farm using spreadsheets. I also began work on the AutoCAD designs creating a rough draft of the title block and cover page. Worked alongside the team to complete the Gantt chart. I attended all meetings	4	0

### Gitlab Activity Summary

Nothing to report.

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