

EE 491 WEEKLY REPORT #1

9/19/19 – 9/26/19

Group number: Sdmay20-14

Project title: 115kV /34.5kV Solar Power Plant & Substation Design Project

Client &/Advisor: Black and Veatch / Venkataramana Ajjarapu

Team Members/Role: (Roles are rotated on an as needed basis) Jake Ciccola (Scribe / Client communications), Ethan Curnutte (Chief engineer), Ada Lupa (Test engineer), Blake Danek (Meeting facilitator), Michael Lortz (Design engineer), Bashir Mohamed (Test engineer)

Weekly Summary: This week, after having our first meeting with our client and our advisor, we focused mainly on researching the hardware we will need for our project. Our client walked us through all the different types of hardware we will need for the project, such as the solar panels, inverter box, and combiner boxes, and we started to do research to understand what these devices do, as well as the pros and cons to different types of these devices. We found multiple datasheets that correspond to some of the devices we talked about in order to look at their specifications more in depth.

Past Week Accomplishments: As a group we mainly focused on preparing information and our presentation for our first official client meeting. More specifically, we looked at using Microsoft Project to create a Gantt chart for a timeline/ man hour budget chart for the team. We also (as mentioned above) looked into different hardware such as inverted boxes, and combiner boxes. For the inverter box we looked at one by ABB, but it seemed to handle less voltage as compared to the newer models. For the combiner box we looked at one by Solar Boss that is a disconnect combiner that would fit both 600V and 100V range.

Pending Issues: There were no issues this week.

Individual Contributions:

- **Member 1: Jake Ciccola:** Filling out the meeting minutes, helping create the meeting agenda, and reaching out to Black and Veatch. (6 hours)
- **Member 2: Ethan Curnutte:** Looking up information about solar panels and filling out the JA Solar array parameter. (6 hours)

- **Member 3: Blake Danek:** Looking up information about the Eagle 72 Solar Panel filling out the array parameter. (6 hours)
- **Member 4: Ada Lupa:** Looking up information about the Eagle 72 Solar Panel and filling out array parameter. (6 hours)
- **Member 5: Michael Lortz:** Looking up information about solar panels and filling out the JA Solar array parameter. (6 hours)
- **Member 6: Bashir Mohamed:** Looking up information about solar panels and filling out the JA Solar array parameter. (6 hours)

Plans For The Upcoming Week: (Please describe duties for the upcoming week for each member. What is(are) the task(s)?, Who will contribute to it? Be as concise as possible.)

Team Member 1: Jake Ciccola - Contact the company and make sure that we have our weekly meeting on schedule. Also ask any questions that the group has before the next meeting. Work on array parameter as well.

Team Member 2: Ethan Curnutte- Update the JA Solar 72 array parameter and get an understanding of how to model the system.

Team Member 3: Blake Danek - Update the JA Solar 72 array parameter and get an understanding of how to model the system.

Team Member 4: Ada Lupa- Update the Eagle 72 array parameter and get an understanding of how to model the system. Compare the two panels and choose which one would be better suited for the project.

Team Member 5: Michael Lortz: Update the Eagle 72 array parameter and get an understanding of how to model the system. Compared the two panels and choose which one would be better suited for the project.

Team Member 6: Bashir Mohamed: Look up information about the inverters and how to model the system in the future.