

EE 491 Weekly Report 7

Start Date: March 20

End Date: March 26

Group number: 18

Project title: Utility Scale Lithium-Ion Energy Storage Project

Client &/Advisor: Burns and McDonnell, Zhaoyu Wang

Team Members/Role:

- ❖ Oksana: Leader; responsible for keeping the team on track; cable sizing.
- ❖ Sarah: Organizer; responsible for revising, editing, and helping keep track of all our reports.
- ❖ James: Document Report; responsible for the submission of our reports. Inverter quantity and cable sizing to batteries
- ❖ Cole: Point of Contact/Communicator; responsible for meeting and contacting the clients, faculty advisor, and the AutoCAD site layout design.

Weekly Summary:

This week, we continued to work on the one-line diagram, finalizing some key points that need to be added to the final diagram. We also researched various different manufacturers for numerous things such as the fuses, panel box, and transformer data. We used this data to make some assumptions for our project design. We also took time to research cable sizing notes and understand various tables in the NEC (National Electrical Code) 2020 version. We will continue to finalize the one-line diagram, as well as start on the calculations for the cable sizings.

Past Week Accomplishment:

As a group:

- Finalize one-line
- Technical documentation for the client

Individually

- James: Updated AutoCAD one-line drawing.
- Cole: Found Technical documentation for transformers, breakers, fuses, panel box, and switchboards.
- Oksana: I worked on cable sizing notes and helped with the weekly reports. I also set up meetings with the faculty advisor.
- Sarah: I worked on documentation for our one-line diagram and technical documentation for our client.

Pending Issues:

We need to do more research on the cable sizing references and try and finalize the cable sizing math for the project.

Individual Contributions:

Name	Individual Contribution	Hours this reporting period break down	Total hours for the week	Total Hours
Oksana Grudanov	<ul style="list-style-type: none"> - Worked on reviewing the NEC code for cable sizing - Worked on the weekly report 	4.0 (Cable sizing research) 4.0 (Weekly Meetings) 0.5 (Weekly Report)	8.5	36.5
Sarah Ebert	<ul style="list-style-type: none"> - Worked on technical documentation for one-line diagram - Worked on project planning documentation 	4.0 (Weekly Meetings) 2.0 (one-line documentation) 2.0 (Project planning docs)	8.0	36.0
Cole Dustin	<ul style="list-style-type: none"> - Found spec sheets for components 	4.0 (Weekly meetings) 3.0 (Spec Sheets)	7.0	35.5
James Mendenhall	<ul style="list-style-type: none"> - Updated one-line diagram 	4.0 (One-line Diagram) 4.0 (Weekly Meetings)	8.0	35.5

Plans for the upcoming week:

- Get familiar with the new spec sheets we found for various parts
- Edit the one-line diagram
 - Add a key
 - Move some breakers/fuses around
- Start on the cable sizing calculations
- Continue to work on the technical documentation for the client

Individual Assignments for the upcoming week:

Oksana: Work on the cable sizing calculations with the new specifications given by the client

Sarah: I will work more on the documentation and assist Oksana with her work on the cable sizing as needed.

Cole: Find spec sheets for the components(Transformers talked about in the meeting.

James: Make corrections to the one-line that was discussed in the meeting. Add key to the one-line diagram.

