
EE/CprE/SE 491 REPORT 16

11/11/23 - 11/25/23

Group number: 16

Project title: Photovoltaic Feasibility in Puerto Rico

Client &/Advisor: Prof. Vikram Dalal

Team Members/Role: Isaac Buettner, Adam Curtis, Hannah Nelson, Manuel Perez-Colon, Larry Trinh

o Weekly Summary

Main focus points this week were finalizing our simulations and models in XENDEE and making significant progress on our design document, industry panel presentation, and creating the poster for the table presentations in Coover. Some group members were able to meet in person with our advisor to present a more in depth look at how our models in XENDEE are being calculated and received feedback from the advisor on where to improve.

o Past week accomplishments

- **Isaac:** Met up with Dalal to discuss progress and double-check work, was able to create a feasible solution through the XENDEE software after solving a problem that had been persisting for the whole semester. Changed simulations so they produced net-zero solutions, meaning more energy would be exported from our site than imported, creating a path to the self-reliant and sustainable approach we'd been aiming for. Most notably we were able to get the LCOE for customers down from the reference of \$0.22/kWh to around \$0.13/kWh.
- **Adam:** Main focus was on completing outstanding tasks related to our final report paper, completed a few sections there and revised some sections from the previous semester. I also provided input to other team members on their tasks as needed.
- **Hannah:** Was finally able to get in contact with a representative from Eaton and got a quote for the transformer, so that is finalized. Mainly have focused on creating the poster for the presentation in Coover, working on the final presentation, and completing tasks for the design document.
- **Manuel:** Assisted other team members by providing input on their questions, finalized list of potential locations for our installations, and worked on revising sections of our design document and final presentation to clearly explain our project.
- **Larry:** I contacted some of the companies for their battery prices but I have not received any answers from them due to the holiday vacation. My partner and I scheduled a meeting with our advisor for XENDEE simulation software discussion, however my advisor was not able to join the meeting at the last minute. At the same time, I was also double checking the design document and final presentation.

o **Individual contributions**

<u>Name</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours for (2) weeks</u>	<u>Hours cumulative</u>
Adam Curtis	Work on design document, provide input to other team members.	10	118
Hannah Nelson	Poster, presentation, design document	10	120
Isaac Buettner	In-person meetings, XENDEE finalizations, checking work, updating website.	11	98
Larry Trinh	Checking design document and final presentation, contact with battery company, schedule a meeting with advisor	10	96
Manuel Perez	Design document, presentation, locations research completion	10	88

o **Plans for the upcoming week**

- **Isaac:** Finalize a sensitivity report, complete design document, finalize XENDEE battery module choice, help where I am needed after all this (getting ready for presentations week.)
- **Adam:** Continue to read through the design document and ensure all sections are up to date and complete. Create new slides for our presentation that will show what our final proposal is. Collaborate with the rest of the team to make a final design for our battery storage method and provide input to others as necessary.
- **Hannah:** Continue work on the poster, presentation, and design document to make sure those are finalized by the end of the week. Also will help team to come up with plan for storing the battery units, as that was a last minute change.
- **Manuel:** Continue work on design document and final presentation to ensure they are ready for the industry panel presentation.
- **Larry:** I will be working on the design documents with my team members and prepare for the final presentation, finish up the to do list before the end of the semester.