

## EE 491 WEEKLY REPORT 2

September 12<sup>th</sup> – 19th

Power system reliability in MISO for high wind/solar levels

Group 23

Client: Midcontinent Independent System Operator

Team Members:

Zaran Claes

Shelby Pickering

Matt Huebsch

Shannon Foley

David Ticknor

Ian Rostkowski



## WEEKLY SUMMARY

This week of senior design involved several meetings. The most important meeting was with Armando from MISO and our faculty advisor Dr. McCalley. During this meeting, we went more in depth into design specifications. Before the meeting, we were told to study a set of documents provided to us by MISO, and write down definitions for key terms (such as: LOLE, ELCC, PASA, system adequacy, capacity value, FOR, resource adequacy, COPT, and net load) and also write any questions we had on the documents. At the meeting with Armando we were required to have a solid understanding of these vocabulary terms, as these are the terms we will be working with all semester. Additionally, we were able to discuss with Armando any questions we had after the reading about our project and we were able to further solidify the goals of the project. We left the meeting with a better understanding of what wind and solar footprints we would be using as well as a better understanding of what the requirements will be for siting the wind and solar once we get to that point of the project.

After the meeting, we received a document from Energy Exemplar that all members of the team needed to read and sign in order for us to receive the PLEXOS license(s). We are at the point of the project now that we are waiting for PLEXOS to move forward with our project, but in the mean time we will all continue solidifying our knowledge of the vocabulary and project goals, as well as start looking into PLEXOS to have a basic understanding for when we receive the software.

## ACCOMPLISHMENTS FOR THE WEEK

Name	Contributions	Hrs this week	Total
Zaran Claes	-Helped organize meeting -Wrote part of weekly report	2	7
David Ticknor	-Researched PLEXOS structure -Reviewed given documents	3	8
Shannon Foley	-Prepared questions to further the design specifications -Wrote weekly report -Collected and submitted the applications to Energy Exemplar to get the Plexos software we needed	4	8
Ian Rostkowski	-Read given documentation and took notes on key concepts -Attended meeting with Armando and discussed key concepts. Also discussed plans for moving further with project -Completed Energy Exemplar document	3	7
Shelby Pickering	- Studied the given documents thoroughly, taking notes and especially paying attention to the key vocabulary discussed in the documents -Prepared several questions for the meeting with Armando in order to solidify understanding of the goals for this project -Wrote notes during the meeting and shared with others in the group -Signed and turned in Energy Exemplar document in order to get the PLEXOS license	3	7
Matt Huebsch	-Read over some of the documents for background on the studies we are about to do for renewable penetration. -Filled out the license paperwork for PLEXOS -Met with Armando and took notes	2	6

## PENDING ISSUES

- The team is awaiting PLEXOS software, the main software needed to simulate power models for our project.

## PLANS FOR NEXT WEEK

Next week we are all planning on reading the documents provided to us to familiarize ourselves with all the concepts. We are also meeting face to face with our team again.

Zaran Claes- Will work on compiling notes of all the documents and plan out a meeting with MISO and our advisor.

David Ticknor - Will begin to research PLEXOS scripting / automation. Look over the given data from MISO coming this upcoming week.

Shannon Foley- Set up a long meeting to teach the team what I already know about Plexos now that we should get the software set up.

Ian Rostkowski - Will begin to research how to operate PLEXOS and finalize understanding of the project's mission statement and important topics by reading given materials.

Shelby Pickering – Will prepare for next MISO meeting, which is occurring Wednesday 9/26. Will begin looking more into PLEXOS so I have some idea of what is going on, this way when we get the software hopefully it won't take Shannon too long to teach us the ins and outs of the program and then we can get moving forward with our project, as we have really been playing the waiting game up until this point.

Matt Huebsch- write minutes Wednesday's meeting with Armando, start to learn PLEXOS from Shannon.