EE 491 WEEKLY REPORT 3

September 20th - 26th

Power system reliability in MISO for high wind/solar levels

Group 23

Client: Midcontinent Independent System Operator

Team Members:

Zaran Claes

Shannon Foley

Matt Huebsch

Shelby Pickering

Ian Rostkowski

David Ticknor

WEEKLY SUMMARY

This week, we worked with MISO to receive data so we can begin to analyze it. We are hoping to receive this early next week. Since we are still waiting to receive the PLEXOS software that we need to begin properly processing the data, we will use the data given to us by MISO to begin calculating capacity factors and capacity credit per site at peak. We will work in excel to achieve this goal. As a team, we need to be sure that everyone understands what this information is, and what it means. That means, while we analyze the data, we need to relate it back to the concepts that we have been researching such as: LOLE, ELCC, PASA, system adequacy, capacity value, FOR, resource adequacy, COPT, and net load.

ACCOMPLISHMENTS FOR THE WEEK

Name	Accomplishments	Hrs this week	Total
Zaran Claes	-Set up meetings with MISO for this week and the following weeks -Attended meeting with policy studies team, asked questions related to the project and project plans	2	9
David Ticknor	- Worked with team to organize and structure our cybox in a way that made sense to all -Created Meeting agenda template -Attended MISO meeting.	2	10
Shannon Foley	-Received and worked with the team to look at the data and analyze it -Met with MISO and the rest of the team	2	10
Ian Rostkowski	-Attended MISO meeting to confirm understanding of current and future plans for the project -Began working on a tentative schedule for completing the project (will finalize in week 4)	3	10
Shelby Pickering	-took and distributed notes from the MISO meeting	2	9

	-asked questions in the MISO meeting to get a better understanding of the project -began looking into PLEXOS to have a basic understanding for when we receive the software		
Matt Huebsch	-Wrote minutes for last week's meeting with Armando -Read through documents and messages and helped edit our reports. -Attended meeting number 4 in Dr. McCalley's office and took notes	5	11

PENDING ISSUES

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

PLANS FOR NEXT WEEK

This week, the V1 is due on 9/28. Due to this, the team needs to create a tentative schedule and establish technical tasks to achieve our overarching goals for this project.

We are hoping to receive and begin working with the PLEXOS software. Because we all need to get caught up to speed, Zar and Shannon will help teach everyone else what they know about the software. We will use the first week to look at the model that currently exists. It is important to look at generation, load, prices, and locations. We will work to scale the data from the 2024 load data to 2018 load data using a linear regression in excel. After we accomplish this, we need to check the data compared to the original to be sure that it all looks correct compared to the unedited version.

INDIVIDUAL CONTRIBUTIONS FOR NEXT WEEK

Zaran Claes- Once we get PLEXOS, I'd hope to re-familiarize myself with it so that I can assist Shannon in helping teach everyone in the group how to use it. We should also be receiving solar, wind, and load profiles from the MISO team. We hope to analyze this data by looking at peak load and generation times.

David Ticknor - Continue to read about wind capacity factor and credits. Dive into data that should be provided by MISO. If PLEXOS is received, understand how to use it efficiently.

Shannon Foley- Begin working with Plexos and processing the data. Planning on spending a significant amount of time teaching everyone else in the group to use the software. Planning on teaching the information to people all in one group, but if everyone cannot meet at the same time, I will host separate meetings.

Ian Rostkowski - Finalize scheduling for project and begin to analyze given data from MISO. Will also begin to work with PLEXOS if the program is made available.

Shelby Pickering – Will work to learn more about PLEXOS as we wait to receive the licence for it. Will hopefully begin analyzing the data once we receive it from MISO.

Matt Huebsch- Write the minutes for meeting four. Read and look over all the documents in CyBox.