

EE/CprE/SE 491 WEEKLY REPORT

01/30/2020 - 02/13/2020

Group number: 21

Project title: **New Simulation Methods to More Effectively Integrate High Levels of Renewable Energy Resources**

Client &/Advisor: **MISO and James McCalley**

Team Members: **Jared Rickard; Collins Ntwali; Nidhi Rawell; Jeremy Nash;**

o **Weekly Summary;**

Worked on developing code for calculating spatial attributes that can be used for clustering. Trained with our clients in using Plexos software and received the model files for all future simulations. Worked on implementing new clustering methods. Started generating and analyzing code output.

o **Past week accomplishments**

- **Jared Rickard:** Continued work on Plexos, created spatial data calculations.
- **Collins Ntwali:** Worked on Plexos assignment from Dr. McCalley's EE552 class.
- **Nidhi Rawell:** Worked on Plexos, and code implementing another clustering algorithm.
- **Jeremy Nash:** Continued work on Plexos, further simplified box and whisker plot code, started runtime code

o **Pending issues**

- **Jared Rickard:** Developing test cases.
- **Collins Ntwali:** Getting a successful Plexos simulation run.
- **Nidhi Rawell:** implement another clustering algorithm
- **Jeremy Nash:** graph out indices files in order to better illustrate what the code is outputting and if the attributes are working (or why they are not working)

o Individual contributions

Name	Individual Contributions	Hours This Week	Hours Cumulative
Jared Rickard	Spatial calculations, indices file format improvement	12	92
Collins Ntwali	Troubleshooting Plexos	10	84
Nidhi Rawell	Python coding, Plexos	8	80
Jeremy Nash	Python coding, Plexos	10	89

o Plans for the upcoming week

- **Jared Rickard:** Develop test cases. Work on visualization of the code, especially the spatial attributes, at the request of the client.
- **Collins:** Develop a Code Diagram to better visualization how the code functions.
- **Nidhi Rawell:** Continue work on Plexos and implementing another clustering algorithm in the code
- **Jeremy Nash:** Continue working on code which better illustrates the output of the main program, continue working with Plexos

o Summary of weekly advisor meeting –

Went over the code output, discussing what the clustering choices could mean. Trained in Plexos