EE 492: Weekly Report 7

March 11th – March 17th

<u>sdmay19-24:</u>

Power System Reliability in MISO for High Wind/Solar Levels

<u>Team:</u>

Zaran Claes, Shelby Pickering, Matt Huebsch, Shannon Foley,
David Ticknor, Ian Rostkowski

<u>Advisor:</u>

Dr. James McCalley

<u>Client:</u>

Midcontinent Independent System Operator (MISO)

Accomplishments this week

Task:	Group members who contributed:	How they contributed:
Put in 2006-2012 load profiles.	Shannon, Zar	MISO informed us at our last meeting that instead of running just the 2012 load profile scaled to 2017, we should use all years 2006-2012, each scaled to reflect 2017 levels.
Get comparison model LOLE with the 2006-2012 horizon.	Shelby, Shannon	Ran PASA simulation in PLEXOS until received LOLE value of 0.1.
Put 30% and 50% penetration level scenarios of the 50/50 model into PLEXOS.	Shelby	Compiled necessary data and formatted it into a version PLEXOS can understand via excel.
Get 10%, 30%, 50%, and 100% LOLE's and ELCC's for the 50/50 model	Ian, Shelby, Matt	Ran PASA simulations for each scenario and changed fixed load until an average LOLE of 0.1 was achieved. Once we get the LOLE for each penetration level, we can compare each fixed load to the fixed load of the comparison model and then from this we can calculate the ELCC.
Progress on automation	David	Combined three different query types in proper order to achieve the automation order needed for our script. Tested and wokring inside of PLEXOS

Pending Issues

No pending issues as of now.

Plans for next week

Next week is spring break, so the group will continue work the week after.