

Group number: May1728

Project title: Impact of High Photo-Voltaic Penetration on Distribution Systems

Client &/Advisor: Alliant Energy/ Dr. Ajarapu

Team Members/Role: Nat Summitt/Team Leader, Sam Searls/Team Webmaster, Wyatt Lauer/Communications, Mark Szkodyn and Abdul Waasay Mirza/New Developments

- **Weekly Summary (Short summary about what you did this week)**
- Due to another meeting, our meeting for this week with Dr. Ajarapu was cancelled. We were able to complete our goals from last week, and we emailed our progress to Dr. Ajarapu and Ankit, the graduate TA that has been helping us. Our goals for next week are below:
 - ❖ Apply smart inverter findings to our code
 - ❖ Use our cloud intermittency data to start running simulations with smart inverter included in the system
 - ❖ Explore case of solar generation dropping to zero at peak load on system
- **Past week accomplishments (please describe as what was done, by whom, when)**
 - Nat Summitt: Continued to work on running simulations involving cloud intermittency, smart inverters on the solar objects, and looked into the case of solar generation dropping to zero during the peak load time on the system. Met with group for discussion of results.
 - Wyatt Lauer: Continued to work on running simulations involving cloud intermittency, smart inverters on the solar objects, and looked into the case of solar generation dropping to zero during the peak load time on the system. Met with group for discussion of results.
 - Sam Searls: Updated the website, continued to work on running simulations involving cloud intermittency, smart inverters on the solar objects, and looked into the case of solar generation dropping to zero during the peak load time on the system. Met with group for discussion of results.

- Mark Szkodyn: Continued to work on running simulations involving cloud intermittency, smart inverters on the solar objects, and looked into the case of solar generation dropping to zero during the peak load time on the system. Met with group for discussion of results.
- Abdul Wassay Mirza: Continued to work on running simulations involving cloud intermittency, smart inverters on the solar objects, and looked into the case of solar generation dropping to zero during the peak load time on the system. Met with group for discussion of results.
- **Pending issues (if applicable)**
 - None
- **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Nat Summitt	Worked on the code by adding in smart inverters and cloud intermittency, started to look into zero gen/peak load case	4	38
Wyatt Lauer	Worked on the code by adding in smart inverters and cloud intermittency, started to look into zero gen/peak load case	4	38
Sam Searls	Updated website, worked on the code by adding in smart inverters and cloud intermittency, started to look into zero gen/peak load case	4	38
Mark Szkodyn	Worked on the code by adding in smart inverters and cloud intermittency, started to look into zero gen/peak load case	4	38
Abdul Waasay Mirza	Worked on the code by adding in smart inverters and cloud intermittency, started to look into zero gen/peak load case	4	38

- **Plan for coming week (please describe as what, who, when)**
 - Nat Summitt: Prior to meeting with Dr. Ajjarapu on Thursday at 11:50 A.M., continue analyzing the Alliant files with our new findings for smart inverters, cloud intermittency data, and the possible case for peak load and solar generation dropping to zero. Also, the group will meet to start work on the final poster and the final document.
 - Wyatt Lauer: Prior to meeting with Dr. Ajjarapu on Thursday at 11:50 A.M., continue analyzing the Alliant files with our new findings for smart inverters, cloud intermittency data, and the possible case for peak load and solar generation dropping to zero. Also, the group will meet to start work on the final poster and the final document.
 - Sam Searls: Prior to meeting with Dr. Ajjarapu on Thursday at 11:50 A.M., continue analyzing the Alliant files with our new findings for smart inverters, cloud intermittency data, and the possible case for peak load and solar generation dropping to zero. Also, the group will meet to start work on the final poster and the final document. Continue updating the website.
 - Mark Szkodyn Prior to meeting with Dr. Ajjarapu on Thursday at 11:50 A.M., continue analyzing the Alliant files with our new findings for smart inverters, cloud intermittency data, and the possible case for peak load and solar generation dropping to zero. Also, the group will meet to start work on the final poster and the final document.
 - Abdul Wassay Mirza: Prior to meeting with Dr. Ajjarapu on Thursday at 11:50 A.M., continue analyzing the Alliant files with our new findings for smart inverters, cloud intermittency data, and the possible case for peak load and solar generation dropping to zero. Also, the group will meet to start work on the final poster and the final document.

- **Summary of weekly advisor meeting (if applicable/optional)**
 - Did not meet this week.