

*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*

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- **Weekly Summary (Short summary about what you did this week)**
- We had our midterm presentation on Monday, March 6, with Dr. Amariuca. We had another meeting with Dr. Ajarapu on Thursday at 11:50 A.M two weeks ago (since last week was spring break) to discuss our idea for where we wanted to go with our project. During the meeting, we talked about how to approach our goals for analyzing the Alliant system. Ankit, the graduate TA helping us, was able to attend the meeting. Our goals for our next meeting are listed below:
  - ❖ Confirm one region of the last groups work for maximum possible penetration
  - ❖ Obtain cloud intermittency data
  - ❖ Look into using smart inverters within OpenDSS
  - ❖ Brainstorm worst case scenarios that we would like to simulate
- **Past week accomplishments (please describe as what was done, by whom, when)**
  - Nat Summitt: Met with group several times, researched smart inverters using OpenDSS, looked for cloud intermittency data, discussed possible worst case scenarios with the group, confirmed south region of last group's work.
  - Wyatt Lauer: Met with group several times, researched smart inverters using OpenDSS, looked for cloud intermittency data, discussed possible worst case scenarios with the group, confirmed south region of last group's work.
  - Sam Searls: Updated the website, met with group several times, researched smart inverters using OpenDSS, looked for cloud intermittency data, discussed possible worst case scenarios with the group, confirmed south region of last group's work.

- Mark Szkodyn: Met with group several times, researched smart inverters using OpenDSS, looked for cloud intermittency data, discussed possible worst case scenarios with the group, confirmed south region of last group's work.
  - Abdul Wassay Mirza: Met with group several times, researched smart inverters using OpenDSS, looked for cloud intermittency data, discussed possible worst case scenarios with the group, confirmed south region of last group's work.
- **Pending issues (if applicable)**
- None

○ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Nat Summitt	Continued with simulations and understanding old group's work, worked on presentation	5	34
Wyatt Lauer	Continued with simulations and understanding old group's work, worked on presentation	5	34
Sam Searls	Updated website, continued with simulations and understanding old group's work, worked on presentation	5	34
Mark Szkodyn	Continued with simulations and understanding old group's work, worked on presentation	5	34
Abdul Waasay Mirza	Continued with simulations and understanding old group's work, worked on presentation	5	34

○ **Plan for coming week (please describe as what, who, when)**

- Nat Summitt: Prior to meeting with Dr. Ajarapu on Thursday at 11:50 A.M., finish our analysis of the south region, finish research of smart inverters in OpenDSS and cloud intermittency data and finish brainstorming worst case scenarios.

- Wyatt Lauer: Prior to meeting with Dr. Ajarapu on Thursday at 11:50 A.M., finish our analysis of the south region, finish research of smart inverters in OpenDSS and cloud intermittency data and finish brainstorming worst case scenarios.
  - Sam Searls: Prior to meeting with Dr. Ajarapu on Thursday at 11:50 A.M., finish our analysis of the south region, finish research of smart inverters in OpenDSS and cloud intermittency data and finish brainstorming worst case scenarios. Continue updating the website.
  - Mark Szkodyn: Prior to meeting with Dr. Ajarapu on Thursday at 11:50 A.M., finish our analysis of the south region, finish research of smart inverters in OpenDSS and cloud intermittency data and finish brainstorming worst case scenarios.
  - Abdul Wassay Mirza: Prior to meeting with Dr. Ajarapu on Thursday at 11:50 A.M., finish our analysis of the south region, finish research of smart inverters in OpenDSS and cloud intermittency data and finish brainstorming worst case scenarios.
- **Summary of weekly advisor meeting (if applicable/optional)**
- We discussed our understanding of the Alliant system, and we discussed possible ideas of where we want to proceed with our project. Dr. Ajarapu concluded that our idea of wanting to research effects of weather conditions on solar generation in distribution systems was a good route to go for continuing the project. We then discussed what we needed to do to continue with our research plan. The goals, shown in the first section of the weekly report, are what we decided as a group that need to be accomplished for our next meeting.