

## EE 492 Weekly Report 9

10/23/16

**Group number:** DEC1614  
**Project Title:** Impact of High Photo-Voltaic Penetration on Distribution Systems  
**Client & Advisor:** Iowa State University & Alliant Energy & Venkataramana Ajarapu  
**Team Members/Role:**  
Logan Heinen /Team Leader  
Difeng Liu/Team Webmaster  
Zhengyu Wang /Team Communication Leader  
Redouane Zaou /Key Concept Holders

### Weekly Summary

The conference we had in this week help us a lot on understanding the Washington distribution system, because the system and OpenDSS file is more complete than the previous one. Besides looking at the difference of the system, we also looked at how our client generate all the data that they gave to us. And the main target for this week is researching the new system.

### Past week accomplishments

1. Conference call with client
2. Gain new OpenDSS distribution system of Washington area
3. Compare the new system to the old one
4. Locating all the selected nodes from client

### Pending issues

- ❖ Try to match up data
- ❖ Need more debugging
- ❖ Check reasons why system still not complete
- ❖ More research on new system about its implements

### Individual Contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Logan Heinen	Meeting with advisor, Group meeting, Conference call, New system analysis, Debugging new system, Concluding differences between two systems,;	5	33

Difeng Liu	Updating website, Meeting with advisor, Group meeting, Conference call, Database research;	4	28
Zhengyu Wang	Meeting with advisor, Group meeting, Conference call Database research, Concluding differences between two systems, Weekly report;	4	31
Redouane Zaou	Meeting with advisor, Conference call, Database research	3	27

### **Comments and Extended Discussion**

It has been a week since we had the new OpenDSS file of the Washington area distribution system, and our work are mainly focused on the new system. However, things did not go smoothly as we imagined. During the conference call, we found out that our client was using SynerGEE instead of OpenDSS, and the OpenDSS file was directly generated from Synergee. That might be the reason why we cannot have the same output as given. This is the main course for next week.

### **Plan for Coming Week**

The new system does not work well. The good thing is the system is now improved because of it covers more nodes in the middle area, which was not showing in the previous system. But the bad thing is we still found out the system is not complete. In the conference call, we had a look at the circuit map on the SynerGEE, and we found that they have some extra nodes and lines on their map but we never meet in OpenDSS map. That brings a lot of confusions, and these are what we are going to find out in the coming week.

### **Summary of Weekly Advisor Meeting**

There was no Advisor meeting besides the conference call since Prof. Ajjarapu was busy on conference. Prof. Ajjarapu left us a message of keeping doing data analysis and making progress on the new system. As well, he required us to record all the output so that we can update with client clearly.