Weekly Summary

In this session, we have made progress on the following tasks: Working with Dr. Ajjarapu for Alliant Energy signature on NDA, contacted Dr. Wang regarding OpenDSS lectures for the week of October 21, and continued learning about the software OpenDSS in preparation for inputting the 4-node example.

Past week accomplishments

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- o Nondisclosure Agreement – Daniel
    - o Progress is on the last step of obtaining Alliant Energy signature on NDA.
- o Contacted Dr. Wang regarding OpenDSS lectures - Thomas
    - o We will be attending the two lectures given in the next week regarding information about OpenDSS.
- o OpenDSS Familiarization – All Team Members
    - o We learned how to input data into OpenDSS for various components in the textbook example.

Pending issues

- o NDA Submission – All Team Members
    - o Contact with Alliant Energy has not happened as of this week.

Individual contributions

Name	Individual Contributions	Hours this Session	Hours cumulative
Daniel	NDA Progress, OpenDSS, Weekly Report	10	26.5
Andrew	OpenDSS	9.5	30.5
Kenneth	OpenDSS	9.5	27.5
Thomas	OpenDSS, Weekly Report, Contact Dr. Wang	10.5	27

Plans for the upcoming week

- OpenDSS Familiarization – All Team Members
    - Continue to learn how to input data into OpenDSS.
- NDA Progression – Daniel
    - Obtain Alliant Energy contact from Dr. Ajjarapu.
- Attend OpenDSS lectures – All Team Members
    - Attend EE 653 lectures pertaining to OpenDSS on Tuesday and Thursday of next week.

Summary of weekly advisor meeting

- Need Alliant Energy information for NDA
    - Send scanned cersion to Dr. Ajjarapu and Alok
- 4-node example
    - Finished with regulator example
    - Figure out OpenDSS and start 34-node as soon as possible
- Input code for lines/generators
    - Use MATLAB to generate OpenDSS code from excel files
- Need to get 34-node system
    - Check forums for examples of pervious implementation
- Steps for 34-node:
    - 34-node without regulator and 4-node with regulator
    - Add PV to 34-node system
    - 24 hour load modeling
        - Random load profile
        - With and without regulators
    - PV in distribution versus transmission
    - How voltage varies for different loading conditions
    - Alliant used radial distribution feeder
    - Can control reactive power of PV
        - Even at night/independent of real power
        - 4 control modes
    - PV minimizes switching of regulators and capacitor switching