**eGen SWATeam Meeting 04**

November 15th, 2018

8am-9am

NSRC 358

**Attendees:** Mike Larson, Tim Mies, Andrew Stumpf, Yu-Feng Lin, Taylor Holin (clerk)

1. Approval of last meeting’s minutes
2. Discussion of Groundwater and Geothermal Resources Summit (Yu-Feng Lin)
   1. Successful event
   2. Allowed for good collaboration with other experts and ideas for research
3. Discussion of the joint eGen and ECBS meeting (after break)
   1. Poll sent out to schedule, will be within the first two weeks back from break ([ttps://www.when2meet.com/?7301507-134iW](https://www.when2meet.com/?7301507-134iW))
   2. Discussed possibility of inviting outside guests to discuss geothermal ideas -- approved
4. Discussed upcoming and potential projects
   1. Geothermal for the new Engineering building
   2. Geothermal under the Engineering Quad for surrounding buildings
   3. Geothermal in greenhouses
5. Discussed DOE team and their upcoming trip to Cornell University
   1. Will be a huge benefit for UIUC
   2. They’re the leaders of the east coast for geothermal energy
   3. Team will see what they’ve been doing and hopefully adopt those practices to use with our systems
   4. They may visit UIUC in the future for further assistance/collaboration
   5. Currently, there is no leader in geothermal in the midwest. This may help us take an important step towards becoming one
6. Discussion on understanding geology of areas before geothermal systems can be put into place
   1. Taking core samples - creating bore holes and studying the properties within them, putting fiber optics in the bore hole to get and start marking temperatures (Andrew Stumpf)
      1. Used as the foundation for the system, built off information that is gathered
      2. Provides a better starting point for system
      3. This allows us to anticipate problems before they would come up
   2. Core analysis needed by December for the Engineering building
      1. Will be completed by then
   3. Looking at other systems that have worked and haven’t worked and applying information to ours to make it the best it can be
7. Discussion of creating a campus-wide Geothermal Master Plan
   1. Currently there is no Geothermal Master Plan for the campus
   2. If we want more geothermal, there should be a plan like this put into place
   3. Would need help and input from other SWATeams if this were to be created
   4. There is a geothermal subcategory within the Campus Utility Master Plan, but is this enough? Should it be separated?
   5. Issues to discuss within and for the plan (Mike Larson)
      1. New buildings
         1. Justifying that they make sense, are worth it
         2. Figuring out the worth of hot water systems (vs. steam)
      2. Retrofitting old buildings to fit them for centralized geothermal systems
         1. Cost and worth
      3. Old buildings that are steam need to be completely redone
         1. Cost and worth
         2. Changing from steam to hot water is incredibly expensive (millions and millions of dollars), and would require the entire building to be redone
      4. Marking which buildings are hot water and which ones are steam
      5. Core drilling and creating permanent data stations for constant data to survey which areas are the best and not the best for geothermal systems
         1. Currently there are two locations, we may need more
         2. Cost and worth
         3. Make a proposal to SSC to drill more sites?
      6. Identifying where the money for these projects would come from
      7. Guidelines
8. Next meeting
   1. Second week back from break
9. Adjournment - Have a good break!