**eGen SWATeam Meeting 06**

January 22nd, 2019

3pm-4pm

NSRC 358

**Attendees:** Yu-Feng Lin (chair), Andrew Stumpf, Tim Mies, Gabriel Mishann, Jonah Messinger, Taylor Holin (clerk), Micah Kenfield (guest), Scott Willenbrock (guest), Ximing Cai

1. Approval of last meeting’s minutes
2. Discussion of drafting and timeline for the 2020 iCAP (Micah Kenfield)
   1. 2015 iCAP Goals and Objectives Review: <https://docs.google.com/document/d/1s9ame7fIUFO0asgRl0x8jMijoV-flYBzpGiEq0hkd4k/edit?usp=sharing>
      1. Have feedback by mid-April
      2. Complete throughout the semester to get feedback and progress of SWATeam
      3. Morgan has shared objectives and their progress, some are in progress, some not started, some completed (Ximing), could act as a baseline
   2. iCAP Drafting Process: <https://docs.google.com/document/d/134M90hTleJFdwi26wFBeoPxq0ahajYUN4cetGPvTO8o/edit?usp=sharing>
      1. Currently on Stage 1 - evaluating 2015 iCAP to see where we are at the start
   3. Looking at current SWATeam structure
      1. Is the current structure working?
      2. Possible shuffling
         1. eGen -- geothermal expansion possibility
      3. Goal: to make teams work better, more efficiently if possible
3. Discussion on the purchasing of off-campus solar power (Scott Willenbrock)
   1. In a waiting period - F&S directed to idea of purchasing solar from off-campus sites
      1. Update needed from F&S
   2. Taking a look at what other universities have done
      1. A lot of examples
      2. Stanford - having a Power Purchase Agreement with another off-campus site
         1. Powered by 100% renewable solar energy in a couple years time
         2. Annual basis
         3. They also use geothermal, leader on the west coast; helped them reduce their gross rate of consumption
         4. Good model for both
      3. MIT - at 40% renewable solar energy
      4. Georgetown - at 50% renewable solar energy
      5. University of California System (several campuses) - at 19% renewable solar energy
   3. We currently purchase ~40% and produce ~60%
   4. Should be a priority
   5. This project needs to be completed now, need recommendation by April
      1. Time constraint
   6. Goal to get proposal out by May 2019
   7. Our purchase agreement would be with the biggest facility in the state (150 megawatts)
   8. Price would be close to the grid
   9. UIC also wants to be involved in this project
      1. Needs further discussion
4. Discussion of green infrastructure finance firm - interest in talking to someone from UIUC about what Ohio State did to help out (Jonah Messinger)
   1. Ohio State Purchase
   2. ENGIE, Axium - public private partnership with Ohio State, 50 year lease
   3. This lease enabled more funds to be deployed
   4. Worth exploring, possible iWG recommendation
   5. Could be problematic, needs to be discussed
      1. Idea is that it would free up a lot of potential capital
5. Discussion of what major recommendations is the team working on for iWG? (Ximing Cai)
   1. Solar and geothermal
   2. Many in the works
6. Update on Geothermal Project (Andrew Stumpf)
   1. Finished drawing for the Engineering Instructional Facility (corner of Springfield and Wright)
      1. Four stories, instructional center
      2. Geothermal field going in south of the G. Library under the Bardeen Quad
      3. Geothermal project received ⅔ of total funding needed, applying for the rest this semester
   2. Finished bore hole and installed cable and geothermal loop
   3. Working in a lab to run analysis on core samples
   4. Next step is to give analysis results to the designers so they can adjust the design to create the most optimal system
   5. Space is a factor for further distribution of bore fields for remaining buildings around campus
   6. Depends on application as well - if cooling, warming, etc is required
7. Brief discussion of Geothermal (Yu-Feng Lin/Andrew Stumpf)
   1. Space issues
   2. Various application - cooling, heating
   3. Different methods - DDU, looped system, energy piles, bore fields
8. Greenhouse Project Update
   1. Looking for another design, asking another consultant for a third opinion
   2. Project delayed, system being put in around the spring/fall
   3. Energy pile system
9. DOE Project Update (Yu-Feng Lin)
   1. For ACES corridor
   2. In the modeling step, getting a permit and cost estimate
   3. $9 million is the rough estimated price for construction, is still being evaluated
   4. Non-electricity for heating, cooling and water heating
   5. Reuse method for geothermal; deep direct use
   6. Looking for cost-effectiveness use of geothermal
   7. Currently for research, next step is demonstration
   8. In general, campus is a good site for geothermal exchange, deep direct use
   9. Estimate for project by the end of the year
   10. More discussion with Dean to come regarding project
10. Next meeting: February 5th
11. Action Items
    1. Talk to Morgan White and Mike Larson about item #4
       1. Get their input and thoughts on something like this
    2. Start thinking about iCAP drafting process, review 2015 iCAP objectives and evaluation of team
12. Adjournment