**eGen SWATeam Meeting 08**

February 19th, 2019

3pm-4pm

NSRC 376

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

1. Approval of last meeting’s minutes
2. SSC Meeting Update (Gabriel Mishaan via email)
   1. Idea from last meeting: Is there a possibility of getting SWATeams more involved with SSC?
   2. SCC agreed to discuss this idea more at their next meeting (Monday, March 4th)
3. Geothermal Project Update (Yu-Feng Lin)
   1. Cost estimate of 2 vertical wells: $8 million (rough)
      1. Comparison to Pennsylvania costs to show us where we are
      2. LCOH estimate ($/MM Btu) - very low; from Cornell
   2. Overall there are competitive prices for geothermal
   3. Good momentum for the research part of project
4. Engineering Geothermal Project
   1. Moving forward
   2. Thermal response test baseline measurement done
   3. Study started in 2015:
      1. Vertical temperature profile
      2. 100 meters down
      3. Delay of temperature, textbook temperature reaction with depth; constant point after a certain point, BUT
         1. When the graph is blown up, the measurements are not constant… looking closer there are differences and fluctuations and it’s actually getting warmer with depth
   4. For study done south of Grainger Library, on Engineering Quad:
      1. Opposite is true - the temperature is decreasing with depth
      2. Shouldn’t be have any interference underground
      3. Still need to check the nearby utilities to see if there’s any interference from those
      4. 100 m is usually the stagnant point of temperature, at this point the temperature should start increasing again
      5. Not the natural temperature distribution
   5. Good to know for the geothermal system to help with efficiency during the year; Study will help with future construction of geothermal site
5. Open House for the Energy Farm (Tim Mies)
   1. Wants this to move forward
   2. April as the ideal month for event
      1. Saturday afternoon?
   3. Would be open to students and community
6. Discussion of Biomass: is there potential for biomass on campus? (Tim Mies/Mike Larson)
   1. Biomass efficiency is a little better, saves propane
   2. Anyway to fit this into the energy budget? Currently makes up a big portion in the iCAP
   3. Discuss with Iowa who uses biomass (Tim Mies)
      1. Financial side: cost of the fuel, harvesting, transportation, equipment?
   4. We would need new equipment to do anything with biomass on our campus; Would require a significant amount of capital (Mike Larson)
   5. Something to look at for the new 2020 iCAP
7. Action Items for next meeting:
   1. Taking a look at the different objectives and adding input to shared Google Doc:
      1. Mike Larson: 3.1-3.3
      2. Yu-Feng Lin: 3.4
      3. Tim Mies: Possibility of a new objective
      4. EVERYONE: consider 2020 iCAP and provide own comments to sheet as well
   2. Consider which objectives we want to get rid of
   3. Keep in mind that we want to create a realistic 5-year plan with goals that are based on what we know today and what we believe are achievable
8. Next meeting Announced:
   1. March 5th @ 3pm (NSRC 376)
9. Adjournment