# EGen SWATeam

# Meeting Minutes

## September 21, 2017

## 4:00-5:00 pm Location NSRL 358

**Type of Meeting:** Bi-Weekly Meeting

**Meeting Facilitator:** Xinlei Wang

**Invitees:** Mike Larson, Tim Mies, Xinlei Wang, Yu-Feng Forrest Lin, Christopher Hillebrand, Yogesh Bhandari, Carol Lin (clerk), Morgan White

1. **Call to order**
2. **Introductions**
3. **Minutes from last meeting**
4. Minutes from the last meeting of last year are not on the iCap portal. Carol also contacted last year’s clerk but he couldn’t find them.
5. **Goals/focus for the year**
6. Review \*revised\* focus topics EGEN SWATeam that Morgan provided
   1. Rooftop solar on ECEB should be installed by April 2018
      1. It has already been funded and is in the process of being constructed. However, progress is slowing down. A check-in is needed.
   2. Wind power purchasing agreement
      1. This project was started in November 2016 and the campus will receive a portion of the wind-generated electricity.
   3. Solar farm tours
      1. There are currently about three being conducted each month. How can we further advertise the solar farm to the public?
      2. There may (hopefully) be an expansion to the solar farm or a second solar farm built. This will lead to even more solar farm tours. (See Open Issues below)
   4. Rooftop solar on Speech and Hearing building
      1. $40,000 has been allocated to this project, and it doesn’t need a formal structural analysis. It will be carried out shortly.
   5. Business and Instructional Facility’s 4th floor
      1. Another row of offices will be added, as well as a solar roof.
      2. The faculty is working to get a new energy dashboard this year that shows electrical use and solar production in real-time and display it at BIF.
   6. North campus parking deck rooftop solar
      1. Joyce is looking for sources of funding for this project. She needs ~$10 million.
   7. Civil engineering project based learning class
      1. There is a group of students that want to conduct a project on green roofs vs. solar panels for their class.
   8. Biomass boiler expansion
      1. Considering combining geothermal and biomass methods
   9. Fruit farm administration building
      1. Need to contact for details about their geothermal system
   10. Yu-Feng’s heat exchange study
       1. Can we utilize it on campus? Yu-Feng is concerned about finding a suitable location without damaging current infrastructure. He says that the best option will most likely be to use newly built buildings.
       2. There’s a new project that is testing through feasibility (no drilling/digging). They are seeing if it’s physically possible and economically feasible. Budget was cut by 20% though, so an energy farm seems the most feasible. Many technical simulations need to be completed, and the dean also needs to be contacted for her opinion.
       3. Solar on the Idea Garden’s garden shed
          1. They are submitting a funding request to the Student Sustainability Committee. Only one panel is needed. It’s wanted more for educational purposes
7. **Open issues**
8. Campus solar expansion

* Review recommendation for solar farm expansion (submitted on 4/28/2017)
  + Instead of an expansion, could a second solar farm be built in order to bring us closer to the iCap goals?
    - Mike says that Scott said he’d run with the idea. Now, the chancellor needs to be contacted to gauge her willingness to participate.
    - Kent (head of utilities services) and Scott talked to the master plan committee and the dean of ACES about the farm. The dean was resistant at first because they prefer the land be used for agricultural purposes, but they agreed to consider an expansion of the first solar farm. Scott also talked about potential areas with them.
    - Master committee did an example layout with the 2025 solar goals in mind. Provost office continued discussion with ACES about the land. Provost wants to meet with chancellor about solar farm and see if there is an F&S and get an official cost benefit analysis. Kent started financial analysis, and Mike was looking at EIA to estimate market prices.
    - What rate should the power purchase agreement use? Morgan will look at the numbers Mike M. has now and send it to provost and master committee afterwards. Scott’s and Mike M.’s information need to be taken down and the recommendation needs to be updated.

1. **New business**
2. Next Meeting
3. October 12?
4. Group presentation progress report/update on powerpoints
5. Needs to be done by September 30
6. **Adjournment at 5:00 pm**

Focus topics for this years SWATeam - Clean Energy Ideas

* Expansion of on campus solar.  
  Green/brown space vs rooftop vs parking  
  What is the most cost effective way to increase solar on campus?
* Clean energy PPA.   
  Develop a recommendation to explore pricing for another clean energy PPA.  
  This should be a long term PPA. Anything less than 10 years does not provide a predictable cash flow that stimulates investment in future renewable energy development and therefore should not be considered.
* Carbon capture  
  Setup meeting with Kevin O’Brien to hear about the ISTC projects.  
  Setup meeting with Sally Greenburg to hear about sequestration at ADM.
* Air Permit - Could we pursue a more flexible air permit that would allow the campus to test burn various biomass options at Abbott?  
  Setup meeting with F&S Environmental compliance to provide an overview of the campus Title V air permit, and review the options for burning biomass on campus.
* Geothermal: Xinlei and Forrest both have expertise in ground source heat pump systems. What opportunities can we pursue on campus to implement GSHP technology? New construction seems preferable because old buildings are integrated into steam system on-campus.