Attendees…

**Xinlei Wang (Team Chair)**, Professor of Agricultural and Biological Engineering

**Mike Larson**, Director of Utility Production, Facilities & Services

**Tim Mies**, Deputy Director of Operations, Energy Farm, Energy Biosciences Institute

**Yu-Feng Forrest Lin**,Hydrogeologist, Illinois State Geological Survey - Prairie Research Institute; Clinical Professor, Department of Civil and Environmental Engineering; Research Professor, Department of Natural Resources and Environmental Sciences

**Catherine Yee**, Student Member

**Jack Morrissey**, Student Member

**John Flanagan (Team Intern)**, iSEE Campus Sustainability Intern

**~~Morgan Johnston~~**, Associate Director of Facilities & Services

1. **Call to order**
2. **Approval of minutes from last meeting**

Approved!

1. **Open issues**
2. **Review \*revised\* focus topics EGEN SWATeam (see attached document)**

See notes from the meeting on the following page…

1. **New business**
2. **New team ideas for this semester**
3. Preliminary assessment for clean energy PPA (see notes on the following page)
4. Fact sheet using solar farm as basis to estimate land needs and costs of additional solar farm (see notes on the following page)
5. **Other**
6. **Adjournment**

Next Meeting: April 13, Time 4-5pm, NSRL 250

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?

**Notes from 3/30 Meeting**:

* + There doesn’t seem to be much support for rooftop solar
  + Common issue is how land competes with real estate
  + Back of the envelope calculation is that, using UIUC solar farm as an example, 12.2 acres of solar farm are needed to meet 2020 goal, and 66 acres are needed to meet 2025 goal.
  + One option is to draft a recommendation to Sustainability Council and draft a fact sheet as a proposal using solar farm as a basis to estimate land needs and costs of additional solar farm.
* 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.

**Notes from 3/30 Meeting:**

* + Can a solar PPA achieve EGEN objective 3.3 (Expand purchase of clean energy)?
    - Solar is a good match for demand profile
  + Can we do a preliminary assessment, looking into options, and presenting a summary?
    - Better land
    - Investigate PPA
    - Campus has thousands of acres
    - Willard airport
    - Consider donated land to University near Chicago
    - Pros and cons of each location
* 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.

**Notes from 3/30 Meeting:**

* + What are markets for carbon
  + Kevin awarded, work was delayed in November and then again until April. Let’s learn more.
* 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.

**Notes from 3/30 Meeting:**

* + **Tim:** Biomass boiler is “sort of” running. There are some ash and optimization issues ongoing. Someone from German team is coming to campus. June 21st is tentative date for an opening. The biomass used is chopped miscanthus. Iowa is interested in coming to explain their project.
* 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.

**Notes from 3/30 Meeting:**

* + In the past, there was one stand-alone geothermal test performed by ISTC. **Mike** believes it was a closed loop geothermal assessment, and that the economics didn’t pan out for the analysis. **Mike** will try to dig up the report for **Forrest**.