Executive Committee Task Force Meeting
11/5/2015

Present:
Cameron Wake, Matt O'Keefe, Adam Kohler, Clay Mitchell, Bill Janelle, Jenn Andrews

Renewables Update (Adam):
- Consensus was that we should go ahead and pursue additional opportunities to use local hydropower for our purchased electricity. Seems that we could do this without precluding our ability to do solar (100kW to take advantage of tax credits/rebates/ etc) in addition to this, or at a later date.
- Ran the numbers and it looks like we could look for an additional 6MWh. This would give us a cushion. Net metering rules mean that we could get this 6 MWh from multiple sources if need be, but we need to use ALL of the power produced by the supplier/s in question.
- Matt: We should still use an RFP process, though, to get the best deal.
- Current hydropower is coming from Antrim (CT River watershed).
- Cameron: Couldn't we be doing more to integrate these questions into our curriculum and research? What about the new Policy school/program?
- Clay is currently teaching a course on siting large renewable projects, which he will teach again (fall after next?); it could be part of that.
- EPSCoR is doing a project on dams in New England. Would be great to train our students to be experts in water resources/energy/energy storage/climate impacts/policy.
- Dual major as a vehicle?
- Matt: UNH just submitted a grant application to the PUC to fund a back-pressure turbine in Rudman. Will be hiring a contractor to do a feasibility study, specs.
- Jenn: Is this still something we want to find some student or faculty expertise for? (Answer - sure that would be good.)
- Clay: At VT Renewable Energy Conference there was a very cool presentation on work Green Mountain is doing (potential CSNE case study??) Microgrid, high school, solar. Also, a presentation on Organic Rankine Engines, which use waste heat to produce power. Could we use this in co-gen plant for our smaller turbine?
- Matt: We looked at something similar for Siemens turbine several years ago but it didn't make sense because we already utilize most of the heat. Might make sense on the smaller turbine, or might be worth revisiting on the big one.
- Clay: That's a great project for my advanced students.

<u>Next steps:</u>

<u>1) Adam will reach out to Granite State Hydropower to see if they can help "match-make."</u>

2) <u>Adam and Matt will provide Clay and students the data they need to study the feasibility of using an ORE at the co-gen plant.</u>

3) Cameron and Clay will work together to come up with ideas for institutionalizing these questions (energy/hydro) into research and curriculum.

Waste minimization and diversion (Jenn):
- Researching how other schools are doing this (coordinating waste management, paying for it); can present this at next TF meeting
- Steve Pesci's planning intern/s are now labeling all outdoor waste receptacles (phase 3); SI interns are mapping all of the waste receptacles, their placement and signage, on campus. This info can be used by Faciltiies, campus planning, SI to make improvements.
- Composting: Student group focused on getting expanded composting as part of a broader effort to achieve a "zero-waste" campus; started a couple of years ago talking to the committee working on the new stadium; then spent last year lobbying to get NH law changed to allow permitting of composting facilities that do food waste; now the law is changed so UNH could apply for such a permit and do composting at Kingman. These students came to SI for guidance; we're encouraging them to put together a cost-benefit analysis of different scenarios ranging from doing no composting, to doing what we do now (more efficiently), to expanding composting to every place on campus
- Now an issue with complaints about birds flocking near the Kingman compost piles and endangering flights from Pease; meeting later this month to determine what's to be done about that.
- Cameron: Have we thought about outsourcing to an outfit that has already figured this stuff out (i.e. Mr. Fox)?
- Matt: Birds are definitely an issue at the landfill, too…

Next step/s: SI to monitor situation, bring update and results of research to the full Task Force, with recommendations that have been vetted by Steve Pesci and Sue Bennett, to next meeting.

Campus Climate Adaptation (Cameron, Jenn)
- President Huddleston signed on to a campus climate adaptation commitment last year.
- We have a section in WildCAP that acknowledges adaptation as a necessary priority and says we will put together a working group
- Looking at what other campuses have done and are doing, there is not yet one established framework for campus vulnerability or resilience plans
- That said, our Second Nature adaptation commitment means that by Jan of 2018 we need to articulate our plan to work with the "community" (however we define it) to meet goals for resilience across five systems: social, human, financial, natural, and physical.
- Cameron and Jenn looked at what other schools have done, and adapted their frameworks to create one that we thought would be practical and useful here: It's at https://docs.google.com/spreadsheets/d/1bTf3tfLnpoYyJ-0-fttiCDQB7qziegdac7sMmBTyGqw/edit#gid=0

- Matt: Is the idea that this would be a tool for other schools as well?
- Cameron: Mostly it was designed for relevance and ease-of-use to UNH, to get us started, but if others find it useful…
- Jenn: Everyone is kind of at the same place with this, just trying to wrap their heads around it. There is a working group of signatories that is comparing notes, so if this ends up working well for us we could definitely share it.
- Matt: The key is to have something for which the data is not too difficult to collect and can be easily updated.

Next step: ExCom members please send comments. Cameron and Jenn will present this to the full committee in December and ask for comments from them. In January we can then all work together to gather the data.

"State of Campus Sustainability – Energy and Climate" report w/ Sightlines

- UNHSI and Sightlines have been working together to assemble and analyze campus energy and emissions data for past 6 months.
- Presented a preview last week at AASHE conference (slides attached)
- Upshot is that higher ed is not doing any better as a sector than the US is generally
- 5% reduction in average "raw" campus emissions since 2010
- 13% reduction in average emissions PER gross square feet since 2007
- 2% increase in energy consumption PER gross square foot since 2007
- Reductions coming from fuel switching (mainly to natural gas), not reduced consumption. Continued growth in built space negates efficiency gains.
- After internal review this will go to external reviewers at AASHE, Second Nature, USGBC, Altenex. To be published in December, presented on again in April at Smart and Sustainable Campuses. Expect this will get national attention (based on Sightlines' past experience publishing similar reports, and the interest at the AASHE conference. This could be a real opportunity for UNH to tout its leadership, both in providing the tools and analysis for the higher ed sector and in reducing its own GHG footprint.
- UNH is doing much better than the average on the emissions front

- Jenn: Not sure how UNH compares on energy consumption; haven't run those numbers yet.
- Matt: We're probably similar to the national trend.
- Cameron: Have you considered publishing in peer-reviewed journal? (Answer – no, but let's!)
- Also, it would be good to present not only the means, but the best-in-class (and worst, perhaps; show the range) with case studies of what they're doing differently.

Next steps: Jenn will send the draft of the white paper to the committee members; please provide any comments or feedback that you can by 11/13 (or, worse case scenario, 11/20).