**Energy Conservation and Building Standards – 3rd Meeting Minutes**

*In attendance: Marian Huhman (through conference call), Dave Boehm, Karl Helmink, Andrea Martinez Gonzalez, Paul Foote, Carol Lin (clerk), Gopal Pareek (intern/community representative), Mike Marquissee (director of Budget, Research and Planning for energy services). Absent: Ashwini Shetty, Yun Kyi Ki*

1. Introductions were conducted for everyone to become acquainted with Gopal.
2. Gopal Pareek, Morgan White’s intern, is interacting with the SWATeams in order to obtain suggestions on how the Division of Intercollegiate Athletics (DIA) can become more sustainable and support the SWATeams’ efforts. He then takes those suggestions to Morgan. He hopes to attend the next few meetings and continue to act as mediator.
   1. Gopal says that, so far, he started a chapter of an organization called Green Sports Alliance that work to make sports more environmentally-friendly and socially responsible. He received a proposal for UIUC to join the organization along with other Big 10 schools, as well as to recruit more members. This was about a month ago. For the past two weeks, he’s been learning about the respective goals of each SWATeam. Today, he would like to hear ideas from the ECBS team, and then he’ll meet with Brett and Morgan.
      1. Karl says they’ve been working with Brett on Memorial Stadium. The team looked at Memorial Stadium’s energy usage in February 2017 and compared it to 2016. They commented how it dropped by $20-30 thousand per month, avoiding over $300,000 in utilities. This is the first athletics building they’ve gone through in terms of retro-commissioning, and the payback is good. They were also successful in obtaining DCEO grant money.
      2. Paul and Karl say there are also lighting opportunities at Irwin Practice Facility and at the Atkins tennis center. Would need assessment to approximate upgrade costs.
      3. Paul will write up a half-sheet summary for Gopal to take with him. Emailed.

Update: Athletics is starting to indicate that they have interest in RCx work in Irwin Academic Center and Bielfeldt Admin buildings.

1. Mike Marquissee, Director of Budget, Research and Planning for energy services presented a mini-lecture on priorities for SWATeam and funding options.
   1. Mike notes the takeaway is to develop understanding of how utilities’ energy and conservation is funded, as well as how that funding works. The budget is about $100 million, and there are many sources that depend on it. Comparing the last FY to this FY, the funding has definitely been reduced. What impact will that have on things we do and want to do? Mike says that, as a committee, the team should make recommendations as to how the rest of the funding can be used. Some of the topics Mike discusses in his mini-lecture are:
      1. Breakdown of funding from 2017
         1. Amount received from state budget to support state facilities, such as research buildings, classroom buildings, KPCA, libraries, etc.
         2. $18 million is billed to auxiliaries. They are the paying customers.
         3. If costs can be avoided, less of the $64,000 budget for state facilities would be used and can be redeployed to conservation projects.
         4. During 2017, we received a little over $5 million in grants. Campus picks up subsidy.
      2. Conservation breakdown
         1. If we increase ESCO projects, money will have to be taken away from other areas in conservation or other funding sources need to be found. Retro commissioning funding gets a permanent allocation of over half a million dollars. Spending rate is about $1.2 million though. The money that makes up that difference comes from AMFMA funds or rapid payback projects.
      3. Uses and funds
         1. Fuels make up the biggest part of expenditures. Operations and maintenance was the next biggest.
         2. Debt service goes to projects like upgrading electrical distribution systems.
         3. Because of higher gas prices, university admin group overspent budget and created a $100 million deficit. This required a 15 year plan, where $7-8 million had to be allocated per year to pay off the debt. Auxiliary helps pay $1 million per year to help take care of that.
         4. Overall, $95 million is spent and around $96 million is received in funding. Thus, there is a surplus of a little under $1 million.
      4. Predicted funding comparison
         1. A funding comparison of total funding in 2017 to projected funding needs in 2018 was done.
         2. Biggest difference will be the loss of the DCEO grant. Other budget cuts, like for campus utilities, will be about $225,000. Every year, state allocation gets taxed for things like redistribution of other types of expenses, such as tech services.
         3. This creates a $1 million difference for conservation funds overall, which will have to be made up some other way.
      5. 2018 budget model
         1. We receive a fixed amount from provost office to pay for utilities. If we save energy and spend less than $64 million, then there’s a surplus we can use to apply to other things.
         2. Last year, the surplus of $8 million went into boiler projects at Abbott, retro commissioning, systems and controls, etc. The idea is surpluses come from state and utilities and it goes back into energy reduction projects.
      6. Budget and funding cuts
         1. Surpluses are reducing. There was a $3 million cut in 2016 from provost office, which came off the utilities budget.
         2. In 2015, treasurer’s office did some refinancing of cops/bonds. This saved around $30 million but cost $16 million upfront.
         3. In the state utilities budget, the cost to provide utilities to campus is $63 million, but the budget set aside $64 million. If buildings consume less energy, less fuel is required, and less electricity is needed to be purchased. This is how surpluses for conservation are created.
   2. The team’s plan’s with the surpluses
      1. The list of items the SWATeam has asked the provost to redeploy that $1 million to is:
         * 1. $245,000 to a fifth recommissioning team. The overall plan is to have six teams, but there is not enough funding for fifth and sixth team though. The $245,000 would only be enough funding for a fifth team for one year.
           2. Two projects: $250,000 for the National Soybean Lab and $330,000 for Temple Buell Hall
   3. Other thoughts from the team:
      1. If we incur more debt in ESCO, this will reduce energy consumption and those savings will have to go and pay back the loans we got for the piece of energy performance project. Most cuts come out of energy function. Most cuts will come out of any efforts to continue energy conservation.
      2. Marian asks if efficient lighting is installed, does this lead to a bigger surplus for conservation? The answer is if it’s on state-supported facilities.
      3. Prime target should come from a reduction in consumption. This will lead to less money spent from the state budget. While we manage that money, provost office says what happens and has the power to adjust the budget.
      4. What kind of universal deficit are we carrying at this point? The aforementioned $100 million deficit is less than $30 million now. There are 5 more years left to pay it off. Once it is paid off, that frees up another $7 million because that’s how much we set aside for it every year.
      5. If we do get funding for the fifth recommissioning team, there will be significant savings in the long-term from that. If we assume a 3 year payback, we should see an additional $300,000 in our bottom line next year.
      6. There have been fees tacked onto electrical bill to support nuclear bills, in addition to grant loss.
      7. Mike suggests priorities should be to fund the 5th and 6th recommissioning teams. We also need to restore whatever funding has been lost through DCEO. Ability to retro-commission buildings was supported but not anymore.
      8. If we used a revolving loan fund to pay for a project, repayment has to come out of surplus. The concerns with the revolving loan fund are nobody is taking initiative to fund projects. The $1 million is not deployed because there not enough projects going around.
      9. $300,000 was given to Enterprise Works to come up with a project but it was dropped and sent back into the fund.
      10. Scale of ESCO projects being considered is being reduced because they can’t make the payback and funding is not available.
2. Green Labs Coordinator position update
   1. Paul’s update:
      1. Paul reached out to other universities on their plan, and the combined results actually parallel well with a potential plan as Paul imagines would be created here at UIUC. He is considering the initiatives of the other programs.
      2. Morgan suggested Paul should meet with Ximing to discuss the draft. Paul will do that when Ximing comes back from his trip. UIUC is a world-class university and Paul would like to make sure the Green labs Program is presented as such.
      3. The I2SL University Alliance Working Group (UAG) is promoting Bringing Efficiency to Research “BETR” grant initiative, Paul highlighted energy and water conservation links to their website in the document he sent out. He says this is to improve and promote efficient lab equipment processing and support from a national level. The focus is to increase the amount of moneys available for researchers from the grant pool, and reduce the indirect costs that are awarded to each university when grants are given out. Each university has a set percentage of indirect costs. For example, $1,000,000 researcher’s award and a 50% indirect university cost would result in an additional $500,000 of the granting agencies available funds going to the university to cover costs, reducing funds available for research. When labs become more efficient, they reduce the indirect costs thereby increasing the amount of funds available to be awarded to researchers.
      4. Paul believes this could be in place as early as 2020.
      5. In addition, a national green lab certification program is in development. The same person that conducted the freezer challenge is leading the program initiative. They are asking researchers applying for grants to implement voluntarily the “BETR grant” reporting approach to gain an advantage over other perspective researchers. There are currently federal regulations about equipment and such that can be reasoned for implementing these practices now.
   2. Marian says wireless sub-meters are one of the most effective tools for getting labs to compete with each other and reduce costs between labs. Paul says MIT put out a good presentation on that. They had a system with a meter, plug outlet, motion detectors, and cameras to actually monitor usage. By the time we get budget in place, we’ll have many options. Robby in the metering department was contacted, and Robby said it’ll be challenging. Each room doesn’t have its own circuit, so 1-on-1 will be hard, but there is technology available to do that. How will it be implemented provides another challenge though.
   3. ECE building is starting to ask some questions about meters. The college of engineering is taking care of that and pay the utility bills. It remains to be seen if users will be engaged. Someone needs to look into things over there. There is a good environment, but somebody is needed to support that effort. If the college of engineering won’t take care of it, employing a student may be the better option. On that note, Mike says check with Professor Phil Krein. He’s doing something related to the project and might be able to help. Karl has volunteered Paul to contact Phil.
   4. Michigan State is doing a safety guy+facility guy pairing, which has proven effective, and they’re looking at around 1400 fumes on campus.
3. Thinking ahead: Discussion of AFMFA funds at November 1st meeting (Dave)
   1. Doris needs to be contacted for her perspective. How are AFMFA funds being used? What is the student usage? Which projects are important to get done? What is it that the students want? What is possible in that area?
   2. Is there any wiggle room in the AFMFA funds that could be put towards other deferred maintenance? Priority should be placed on energy conservation projects.
4. Thinking ahead: Design competition for energy conservation imagery
   1. Marian will contact Michelle and see if they’re doing any sustainability competitions. There is potential for architecture or graphic design, located at the art and design building.
   2. Andrea has volunteered to help lead this project. It is also suggested that Olivia Harris be contacted. In general, a meeting between Marian, Andrea, Morgan, and Olivia should be arranged.
5. Illini Lights Out update
   1. The next one is coming up soon (October 20).
   2. The promotion for the upcoming ILO was done well. It was featured on the sustainability newsletter as one of the kickoff events for sustainability week.
   3. Marian has also contacted them and they’re aware they to count light bulbs/fixtures and not just switches.
   4. Karl and Andrea will be attending this ILO.
6. Sustainability Week is from October 23–27. There is also a celebration from 4-6 pm on Wednesday, October 25 at the Alice Campbell Alumni Center to discuss sustainability progress on campus.
7. Planning for recommendations. Do we need a subcommittee to help us prioritize?
   1. Loss of DCEO grants
      1. Retro-commissioning and starting up the fifth and sixth team (hopefully funded from provost office)
   2. Enterprise Works
   3. AFMFA funds
   4. Streamlining ESCO award process
   5. What is the best way to go forward with recommendations?
   6. Marian wants team to be thinking about talking to Kent about seeing what provost is going to do. Six weeks – 8 months is about the time needed to write a recommendation. The team says they would like to have one or two started by the end of the semester. Karl suggests: Let’s put this off till January/February next year. Start a draft.
   7. Karl will set up a meeting with Kent.
8. Next meeting is scheduled for November 1, 2017.