

## Buildings & Land SWAT Minutes: Tuesday, June 13<sup>th</sup>, 2017

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*Faculty/Staff Attendees: Muthusamy Swami; David Norvell; Rob Vieira; Tran Huynh; Yara Watson*

*Student Liaison(s): None*

*Guest(s): None*

### Review of Minutes

Minutes were approved

### Updates:

UES Building Survey (Tran)

- There has been some progress with the end user survey; currently exploring using housekeeping staff to collect plug load data
- Suggestion to explore the Qualtrics survey tool that the university pays for

Discussion: OEIS

- There is a need to create awareness of the tool among faculty
- Continuously adding of data and functionality; suggestions from faculty would be helpful for OEIS' continued development
- Swami's course used it to compare two building's energy performances

Provost "billing initiative"

- Background: The Collective Impact includes a statement regarding moving away from the current system, which causes the "hotel effect," to allocating or "charging" departments for the utility use. It is an interest of the Provost, Dr. Dale Whittaker, as it was a tool used at Purdue, where he served before to coming to UCF.
- Discussion of what end users can truly control to reduce usage; much of the usage is due to building operations, therefore it may be beneficial to wait until equipment issues are addressed; noted that some departments are utilizing data/tech equipment that are both energy hogs and go against university server policy

Room reservation optimization

- Currently, scheduling software has no optimization; users must call someone to reserve space and someone to turn on AC
- Policy to use R25 could increase client satisfaction
- Investigate interface software R25 and BAS system



**Sustainability  
Initiatives**

## **New Business:**

### ASHRAE Building Energy Quotient (bEQ)

- Nate Boyd is on the ASHRAE bEQ committee and is coordinating with Swami and Curt Wade to pilot a course where students will benchmark UCF buildings using bEQ (see possible course format options below)
- There is the potential to use the ASHRAE student chapter, but being a small group they may not have the capacity to take on such a large project
- New advance building energy course
- There is still the need to investigate how bEQ works, what's required, and what data access is needed

**Next Meeting: Tuesday August 8<sup>th</sup> at 3:00 PM in the Global building**

Email excerpt regarding bEQ and Prof. Swami's course:

**Subject:** RE: ASHRAE Building EQ

**Date:** Fri, 02 Jun 2017 12:22:27 +0000

**From:** Nathaniel Boyd <[NBoyd@hanson-inc.com](mailto:NBoyd@hanson-inc.com)>

**To:** Curtis Wade <[Curtis.Wade@ucf.edu](mailto:Curtis.Wade@ucf.edu)>

**CC:** Muthusamy Swami <[swami@fsec.ucf.edu](mailto:swami@fsec.ucf.edu)>, Bill Bradford <[BBradford@hanson-inc.com](mailto:BBradford@hanson-inc.com)>, Wade Conlan <[WConlan@hanson-inc.com](mailto:WConlan@hanson-inc.com)>

With respect to Building EQ evaluations at UCF, particularly focused on those being conducted by students, we have three primary options to consider;

**Option 1**, which we attempted to do last year but admittedly were a bit too ambitious, was to use a class project in Dr. Swami's EML 4601 / 4602 HVAC classes. We wanted to do the library last year, per Tran's directions but the scale of that building and the # of students in Swami's class (over 40) would have made that a real challenge. The other aspect to this is that ASHRAE had not yet fully developed the course curriculum for Building EQ. ASHRAE has now finalized that curriculum, to my understanding.



**Sustainability  
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If we use Swami's class, I feel we should break up the students into groups of no more than 8-10 to conduct the analysis, under guidance by UCF Utilities and Energy Staff and ASHRAE focused consultants like myself and others who specialize in this field. Using this approach, we could probably assess 3-5 buildings per semester in Building EQ (class student size-dependent), and since they'll be graded on it the delivery of the reports should be timely. We will need to put together a small team of professionals to get this kicked off right, and I can help put together that group. They'll probably come from the firms that have your Cx and MEP design contracts.

**Option 2** is to use the ASHRAE student branch, operating outside the framework of any specific course curriculum. The pace of assessments would be slower, maybe only 1 or 2 assessments per semester initially, but otherwise the program would look similar. Assistance from Swami and consultants would still be used to QA the inputs before the reports are run, so you should still have quality reports generated. This avenue may be the quickest to get started while we formally work out the educational component that would need to be incorporated into Swami's syllabus.

**Option 3**, and this is the long range hopeful plan from ASHRAE's perspective, is to get authorization from the CECS MAE Chair Yoav Peles to initiate a new course, following the curriculum that ASHRAE has developed for building energy performance assessments in assistance with APPA. I believe that it is a good time to approach Dr. Peles on this subject, as the ASHRAE Building EQ program is in the process of migrating to an entirely web-based platform and that should be finished by the end of this summer. I'll have more to report when I return from the ASHRAE Annual Conference in Long Beach at the end of this month. UCF has been included in a small group of about 6 schools across the country identified as pilot candidates through the APPA / ASHRAE Building EQ rollout.

