

Agenda Item 3a: Conservation, Efficiency, Transportation Work Group Meeting (and Information Session) Dec 17, 2020

Start Time: 10 AM

C3 members: Shelly Signs, Brandon Trelstad, Keith Jayawickrama, Jacob Putney, Lety Cavazos, Marlys Amundson, Kimberly Hannigan-Downs, Jillian Gregg, Cinamon Moffett, Beth Filar Williams, Leela Magdaleno,

Non-members: Emily Hayden, Rachel Burgess, Maddie Moyano

Different approval and funding pathways for different types of projects
<https://ufio.oregonstate.edu/project-management-manual/10-capital-planning-and-programming/103-identify-course-action>

- OSU's Requirements for Sustainable Development
<https://fa.oregonstate.edu/sustainability/requirements-sustainable-development>
- Energy Trust of Oregon's (small) role in helping finance some of our projects
<https://www.energytrust.org/commercial/>
- OSU Energy Rule (aka energy policy)
<https://fa.oregonstate.edu/fac-manual/007-campus-facilities-and-grounds-policies-and-procedures/energy-consumption-rule>
- How we are working with Facilities Services on retrocommissioning and to help them run existing buildings as efficiently as possible, such as our work with them on pandemic energy savings
<https://www.youtube.com/watch?v=MLQrv5UREpk>

OSU's draft Sustainable Transportation Strategy:

<https://transportation.oregonstate.edu/sustainable>

It is not critical to review it prior to the meeting, but will help show where we are headed in the transportation world. Also, the format of the draft Strategy (actions section, specifically) is something my team may emulate in assembling a concise carbon implementation plan.

Rethink

X <https://static1.squarespace.com/static/585c3439be65942f022bbf9b/t/5f96dc32289db279491b5687/1603722339961/Rethinking+Energy+2020-2030.pdf>

What Pacific Power is doing:

<https://www.pacificorp.com/energy/integrated-resource-plan.html>

TOPIC: How construction projects come to fruition at OSU and how they are funded

Polls:

- When did the OSU energy rule go into effect - just went into effect - 2019.
- Threshold dollar to include projects in 10-year capital forecast - \$5 million (below that doesn't have to go to board of trustees)
- Which video was featured in the pandemic energy saving video? Alumni center!

Construction Standards: Doesn't deal so much with energy.

OSU has a few LEED-certified buildings, others meet the standards LEED but did not spend the money to get the third-party certifications. OSU buildings needed to be LEED-silver.

After deregulation of higher education in Oregon, now they use an internal standard fairly close to LEED-Silver. OSU standards could be higher in terms of energy - **is there an**

opportunity to push this standard higher? A net-zero building would far exceed the OSU standards.

<https://fa.oregonstate.edu/sustainability/requirements-sustainable-development>

See the excel sheet at the end of the page. These are point based framework.

Arts Center is very efficient. It could be net zero with some solar.

Energy rule sets the standard for heating and cooling.

Biggest opportunity is for the buildings we currently have. A lot cheaper and easier to save energy in an existing building. The current stock of buildings far exceeds the 10-year capital projects plan.

Energy Trust of Oregon's (small) role in helping finance some of our projects - **Path to Net Zero** - buildings can assess how much energy efficiently they need to maintain. How much power can you produce from the area from the roof--and that does exceed the standards already. This provide flexibly in time b/c it is not cost-effective to retrofit later (like wall isolations or window redo - these would only have 30-40 year back periods) so buildings are ready one day to be ready for solar!

OSU Energy Rule (aka energy policy) outlines temp threshold for occupied and unoccupied places (not totally empty like for the library 10 people will be no occupancy) this also requires expectation managements - its might be really cold or hot to the few users there (set point would be 55F in winter and 85F in the summer) something we need to explain/promote more so people know!

Comments from members: In practice, despite the set points above, we have rarely seen buildings get to these temperatures, even on weekends or holidays. In fact, buildings are often colder in summer and hotter in winter, quite the reverse of what should be the case.

Building controls technicians - heating and cooling is usually remotely controlled, but not always. About 13 or 14 buildings on old time clocks where the technician has to physically go and adjust (more labor intensive). The rest are on remote controls. Buildings less than 15 years old have occupancy sensors; they tend to "wake-up" and start heating and cooling as soon as they sense people. Technicians could over-ride the sensor.

We only have 4 people in all of OSU who run these controls! And one programmer! About 1/3 of the staff they need.

- just verbally the campus agreed to hire another technician programmer!! This is going to be super important, as our existing buildings are critical to the efficiency.

Unless we get a staff of 10 or more in this shop we will have the issues people experience in building that are too cold or too hot.

Major capital projects are critical to make them efficient.

There is an advisory team from various high-level admin called the Infrastructure Working Group for Capital projects

Interested in a project, talk to capital planning, talk to donors, then is goes to Infrastructure Working group to see how it fits in with the campus overall plan. Then to the high-level admins then the board.

<https://ufio.oregonstate.edu/project-management-manual/20-ten-year-capital-forecast-and-capital-project-initiation/201>

https://leadership.oregonstate.edu/sites/leadership.oregonstate.edu/files/infrastructure_working_group_charge_jan_2020.pdf

Can C3 get a presence on the Infrastructure Workgroup? What about having input on Capital Planning? OSU does not seem to publicize the process, has not come up in the forums on Budget Conversations. FS president may be one person with access. Brandon thinks they don't see sustainability issues on a regular basis.

Most buildings on Corvallis campus do not pay the energy use. Housing and Dining may be an exception. Benchmarking: only 3 schools in the country charge energy costs to units (Colleges and Departments) - lots of data management and politics!

Pros of charging energy costs directly to units

- Rewards responsible units for energy conservation.

Cons

- Unit leaders need to track energy use and costs in addition to their existing responsibilities.
- To implement energy savings and carbon reduction, we would have to convince a whole lot of Deans and Department heads rather than a small number of people in central administration.

If central admin pays for most of the energy, they have the biggest stake in energy conservation (and get the benefit of energy saving) rather than the units. **What if central admin picked up the tab for getting the building from the moderate energy saving standard we have now, to net zero, at time of building?** Currently the extra cost falls on the project\unit (but they have no stake in energy saving since they don't pay for the energy). Yes eventually central admin would save money, but the payback for the extra cost may be 15-20 years.

Are there consequences from Governor Kate Brown's executive order 20-04 on carbon reduction from March 2020? Nothing right now, since that dealt with state agencies, and OSU is no longer a state agency. However, if Oregon tightens building codes to reduce carbon emissions, OSU would feel the effect.

Is it possible to quantify the cost savings and carbon reductions if the biggest energy wasting buildings on campus were brought into compliance (optimal scheduling, replace broken parts, add some infrastructure)? This would be a compelling argument to take to the decisions makers to invest more in energy savings. We can guess that 80% of the potential savings could be reaped from 20% of the buildings (80:20 rule).

OSU is encouraging limited operations from Dec 28-31. Adding 3 holidays and 4 weekend days, that is 11 days with likely very limited occupancy (3% of the year). **Is there an opportunity to save some additional heat and electricity by appropriate scheduling over that 11 day period?**

Can we have another session on installing solar power on OSU campus? Costs, logistics etc. In a couple of months.

What else can C3 do to push conservation and efficiency? That might be a topic for the January meeting.

Adjourned: 11:10 AM
