

SWATeam Recommendation

Name of SWATeam: Energy

SWATeam chair(s): Bill Rose, Andy Stumpf,

Date submitted to iWG: 6/8/21

Recommendation title: Integrate iCAP Goals into Research/Learning Labs

For internal use only: Date reviewed by iCAP Working Group:

Specific actions/policy recommendation:

We recommend forming a committee to oversee integration of iCAP objectives into research/learning labs and to actively engage researchers to adopt sustainable lab policies. The committee should consist of a diverse range of stakeholders associated with sustainability and/or research on campus, such as F&S, iSEE, DRS, OVCR, OSHA, and Energy/Engagement iCAP Sustainability Working Team representatives. Outcomes from the committee should include, but is not limited to, a toolkit for sustainable and safe lab policies, training modules for those policies, a green purchasing guide, and inventory of equipment/spaces. The training modules should be part of onboarding and a required component of the lab safety training modules.

Suggested unit/department to address implementation: OVCR/F&S/iSEE

Rationale for recommendation:

In FY19, our university received the most funding from NSF and much of that research is related to the global challenge of climate change and long-term sustainability. We have a responsibility to “walk the talk” by personifying our espoused ideals. The University of Illinois prides itself on being one of the most innovative Universities in the world, yet we are far behind our colleagues in regard to sustainable practices in the lab. Therefore, we believe that researchers should be more than just aware of the iCAP goals and should be actively engaging them in their work. This will allow for more universal and impactful change.

Connection to iCAP goals:

- Reducing labs’ environmental impact would be integral to Objective [2.2] “Reduce Energy Use Intensity (EUI) of university facilities from the FY08 baseline by: 45% by FY30, 50% by FY40, and 60% by FY50.”
- Colleges with a large number of labs will be further assisted by this recommendation to accomplish Objective [2.2.2] “Reduce the total annual energy consumption of each college-level unit by at least 20% from an FY15 baseline by FY35.”
- Expansions of Objective [7.1] “Enhance the overall culture of sustainability on campus, and increase the number of certifications issued through the Certified Greener Campus Program by 20% each year from FY20 to FY24” would include supporting more sustainable practices in research.

Perceived challenges:

Some of the perceived challenges will be working with DRS and OSHA to make sure that lab practices are safe as well as sustainable. This includes enforcement, changing lab practices, monitoring researchers' actions on a scheduled basis, and gathering involvement. Another challenge that we perceive is the wide spread teaching and adoption of lab practices that are in line with the iCAP goals.

Anticipated timeline of implementation:

An anticipated timeline of implementation would be by FY23/24.

Anticipated budget (identify if cost is up-front or continuous):

No up-front costs to form a committee. Looking at the long term there will need to be a budget surrounding the purchasing of energy meters for lab equipment. Meters range from \$30 - \$3000 depending on the accuracy.

Individual comments are required from each SWATeam member (one or two sentences):

Team Member Name	Team Member's Comments
Bill Rose (co-chair)	This document has my high recommendation. The U of I has strong precedents in this field. As a research university, making research facilities greener is very noteworthy and will have strong repercussions.
Andy Stumpf (co-chair)	Part of any campus-wide effort to reduce energy usage we must look at the places we work and research to optimize all functions. This recommendation sets forth a pathway to integrate laboratories into the iCAP effort. This will require change to our daily routine (not easy to do!!) and likely require hiring additional staff to implement the program. Like the DRS laboratory oversight the proposed process should be standardized, but may offer value-added benefits to the researchers and students by suggesting/implementing the most important energy efficient strategies.
Paul Foote	Many of our peer institutions and the founding institutions started the sustainable lab initiative and programs over a decade ago (2008-2010), they range from small one person director led programs to programs that provide a sustainable lab coordinator in every college on campus. The basic sustainable lab practices such as shut the sash, inventory management, energy efficiency, plug load management, green chemistry, chemical & equipment sharing, space management, recycling programs etc... are old hat. They are now innovating new solutions and tasking researchers with creating breakthrough practices that put them at the forefront of sustainable leadership. It is past time for the University of Illinois to capitalize on the expertise available all over campus and bring our labs to the forefront of sustainable practices and environmental stewardship.
Tim Mies	I support this proposal as a beneficial route to assist research labs toward the iCAP goals. As departments and colleges can now have a direct impact on their budgets by enacting energy conservation, there should be increased effort to support them through education and financial support

	(instrumentation, staff support) to help understand meaningful ways changes in behavior / protocols can have positive impact.
Sushanth Girini	I have no additional comments. The recommendations look good.
Brad Frantz	I am in favor of this recommendation. It should provide a much-needed framework for energy and asset management going forward.
Yun Kyu Yi	I support this recommendation. It is important to monitor and reduce energy use in labs. Additionally, it would be great to consider regular monitoring of energy use and have a regular report on lab energy usage changes.
Tugce Baser	Unavailable for comment.
Brinn McDowell	I am highly in favor of the creation of a committee. Labs on average use 50% of university energy needs, so reducing energy in this area will be crucial in meeting iCAP goals for the University. Seeing as the University of Illinois takes pride in its innovation, continuing to be at the cutting edge of research and research methods should be a top priority. Lab sustainability is also an increasing topic asked about when applying to grant funding, so a committee would be very beneficial.
Peter Davis	This is a much needed initiative. Hopefully, we can stress the common-sense energy and financial savings. It should be seen as a benefit - not burden – to the labs. Additionally, since so many undergraduates are interested in research, they may be able to help promote this initiative.
Matthew Gold	I am in agreement for this recommendation because it not only will be a great way to save energy and money on campus, it will also provide great opportunity for research for the committee assembled. I believe that this recommendation will be a great way to reach the iCAP goals listed above in the document.

Further explanation and background (can be supplied in an attachment):

In the past, a similar recommendation for a committee to target research has already been submitted and gained support. There are also several initiatives on campus, such as the Freezer Challenge, that are already successful at engaging researchers to be eco-friendly. As those initiatives continue, we can start to learn and collaborate with them to promote the committee's efforts. A committee would just be an overarching body to bring together initiatives already in place, and creatively implement new ones. This will help to bring sustainability efforts for cleaner labs into one place.

This got started from a project over the summer where my lab group was looking to implement green lab practices into our own facilities. For my group I created a Power Point, and an energy finance sheet. These both help to gain awareness and show the monetary/energy difference these changes can make. I also became a My Green Lab ambassador to stay updated with newer practices being put in place. Currently, I am collecting empirical data from metering a chemistry lab on campus to demonstrate the exact effects energy usage from labs have on campus.

Comments from consultation group (if any; these can be anonymous):