

Due date FRIDAY 4/2 4pm

THEME: Measuring Success

Subthemes:

STARS/AASHE, Second Nature Reports

Energy/Emissions Monitoring (and Nitrogen)

Plan Updates

Interim and Overarching Goals

Surveys

Other (monetary savings, students, documentation, etc)

Evidence from interviews:

- So, we've also now are on track to get the gold designation. (Steve Nabor, Senior Associate Vice President for Financial Services & CFO Weber State)
- Every year. (Steve Nabor, Senior Associate Vice President for Financial Services & CFO Weber State)
- We, we review it with the budget director, the vice president myself and the facility people. Okay here we make a determination how much money is moved from the, from the utility account to savings in utilities. That's a key decision. But I would say that the facilities department is managing that every freaking hour. So when I show up in my office in the middle of winter, they can control my temperature to keep it cold in here. (Steve Nabor, Senior Associate Vice President for Financial Services & CFO Weber State)
- Managing that every minute of the day, we don't review it once a year. Right, but they're on the hook to display those energy savings so, you know what, you manage what is measured, and they're managing it. (Steve Nabor, Senior Associate Vice President for Financial Services & CFO, Weber State)
- So we go pretty in depth on it. I primarily was over reporting on kind of student, like the sustainability designated courses and faculty that were involved in sustainable courses. But that was such a small part compared to like what the other intern and my boss were doing. I just got off on it kind of easy because I had monthly newsletters to make so I got kind of lucky. But STARS is really important for keeping track of where we started and where we're going in making our goals. We want to be realistic with our goals. Right now I think we're STARS silver, yeah I think we're STARS silver. So the big debate this year was are we going for I think the next one is gold and then there's green I think is how it works, or platinum. One of those. (Katherine Meyr, Student Sustainability Communications Coordinator, Weber State University)

- You can also see the major areas that you're lacking. Like we were doing really well in facilities. But we weren't doing well in like we don't have enough sustainability courses. And we don't have enough... we didn't have enough individual departments or offices doing tiny trashes. Or recycling their ink cartridges and things like that. So that's where the green department program came in, was like to help us get to the next certification of STARS. (Katherine Meyr, Student Sustainability Communications Coordinator, Weber State University)
- But STARS as I understand it can be... even if you don't think that you can reach the next certification the next year that doesn't mean that you can't still improve of course because gold is arbitrary. It's about the progress and the efforts that you're making. But it really does help you see where you need to improve on points if you wanted to continue through the certification process. So I think it'd be really great for us, even if it is really stressful. And I think more universities should and are going to utilize as making sustainability plans is going to become more popular. I think this is a really good one to go off of. (Katherine Meyr, Student Sustainability Communications Coordinator, Weber State University)
- So our very first climate action plan was adopted in 2009. We signed on to the American College and University Presidents Climate Commitment in 2007. And then over this past fiscal year 2020 is when we engaged in the update process. And just finished up our last round of subcommittee meetings in January of this year. And so now I'm in the process of actually writing up all of the results from all of those different subcommittee meetings over the course of the year to create our new updated climate action plan. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)
- Yeah it was first developed in 2009. And then so 2020 is the first time that we updated that climate action plan. But within the 2009 climate action plan yes we had a goal to be carbon neutral by 2050 and then we had interim goals and targets for carbon emission reduction within that plan. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)
- Yes absolutely. We, so that's one of the other things I do is report annually on how close we are to meeting those benchmarks that we set out in that climate action plan. Every year thus far we have... you know met or exceeded our scope one and scope emissions benchmarks. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)
- So in terms of the tool that we've always used, we have always used carbon calculator and now it has developed into SIMAP that's run out of University of New Hampshire. It's a tool we utilize to enter all of our data. That data that goes into that tool for calculating the greenhouse gas emissions comes from a million different sources right? Like it's a substantial effort every year to gather all the data, whether it be from utility bills or from the state of Utah. For example when it comes to our fleet vehicles we have to figure out how many gallons of diesel or gas or CNG we purchased over the year. And we have to get those records from the State of Utah and their fleet management system. So I have... a...

nice long list of people and departments that I have to contact on an annual basis and reports that they have to run for me that get collected this data every single year to get entered into SIMAP. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)

- Now that's the other key thing, right, is we sat down with our financial department and our accountants and we had to all agree on the way we were going to document those savings and how that was going to be acceptable to everybody. A lot of times in energy management you do what's called weather normalization, right, to kind of account for the changes in weather. We don't weather normalize our data, because for our accountants they wanted to know at the end of the fiscal year, they don't understand what a normalization. So when you tell you saved \$1M this year in avoided utility costs. And you weather normalize that data, they're going to sit there and look at their account. And they're going to say but there's not \$1M sitting in my bank account. You're like but I did save that money. It was a really cold year this year, we had to use more natural gas. They don't understand that, right. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)
- Yeah we've been engaged with STARS since 2010 and submitted our first report in 2011. Our most recent report was 2019 so we're due to produce another one here in 2022. Right now we're STARS silver. And our next report we're hoping to shoot for STARS gold. I think that it does line up pretty darn well, especially in terms of you know looking not just at operations but it's helped us really improve our academics as well and our curriculum and really pushing for that change across campus. (Jennifer Bodine, Energy and Sustainability Office (ESO), Weber State University)
- So I'd say we look to that tool to help us make sure we're hitting all the things, right. That we're not just talking about environmental sustainability any more but we're also talking about social justice and environmental justice and culture and employee engagement and the connection between sustainability and our educational mission. (Eva Rocke, Sustainability Coordinator, University of Montana)
- No they're progress reports, climate action progress reports. Because Second Nature doesn't really care about your STARS report. It's a totally separate organization. So we haven't done one in a few years but we did just complete our most recent, we are almost done with our most recent greenhouse gas emissions inventory. So I am not going to publish a progress report that specifically speaks to the climate action plan probably because that feels irrelevant at this point, a little outdated. But I will update the campus on where we are in terms of our total emissions footprint and how we... the reasons we are where we are. (Eva Rocke, Sustainability Coordinator, University of Montana)
- So we committed to doing a climate action plan and updating it every two years. I will be quite honest we haven't quite made every 2 years. It's 2 or 3 years, like we were supposed to update last

year and frankly we got Covid, and we're hoping to get our climate action plan, we were supposed to do a 2020 10 year anniversary update of our climate action plan and frankly Covid just took us out at the knees. So we're hoping to get that out in '21, but we really want to do some campus engagement and frankly that's really hard to do right now. (Carrol, Sustainability Coordinator, CSU)

- So yes, we developed the original one. We've updated it 4 times (per success of other plans)(Carrol, Sustainability Coordinator, CSU)
- Well we have met our goals in some areas and not in others. That's the simplest way to say it. We have 16 strategies to get to climate neutrality by, our goal we posed in 2010 was 2050.(Carrol, Sustainability Coordinator, CSU)
- There's some of them like okay let's just pick one that hasn't been more successful and we'll back up. Airline travel is one that comes to mind and it's a struggle for a big research university because people fly at a big research university.(Carrol, Sustainability Coordinator, CSU)
- Some of the ones we have done are despite, well we've grown from 9.5 million square feet to 12.5 million square feet in the last 10 years. And over the same time we actually reduced our energy use, our carbon footprint related to energy over that same period. Not by as much as we wanted to. We were hoping with the 2050 goal that you set in 2010 you got 40 years to do it. So theoretically you have to reduce your carbon footprint by 2.5% a year. Well after 10 years we're not 25% down. We're down about 15% but if you look at it per student or per square foot, we're down about 35%.(Carrol, Sustainability Coordinator, CSU)
- We do our greenhouse gas footprint every single year. It's an important metric for your university and I would work very hard at convincing somebody at your university. It's a pain, okay I am going to say a bad word and you have to bleep it out, a pain in the ASS to do greenhouse gas footprints. I run that team every year.(Carrol, Sustainability Coordinator, CSU)
- And without that we have no idea what our progress is right? I mean that's your scorecard on your climate action plan. If you're not watching your greenhouse gas footprint regularly, then your climate action plan has nothing, you have nothing to measure whether you are being successful.(Carrol, Sustainability Coordinator, CSU)
- And there have been some things like the story I told you about the airline offsets. We have not been successful in that(Carrol, Sustainability Coordinator, CSU)
- And yes we've worked our tail off at it and we're really proud of it. But we also recognize we have taken a few laps and we have a marathon to run. We got a lot of work left to do. As does everybody. And we all just need to say out loud that this is what the world in 10 or 15 or 20 years needs to look like and this is our path to get there. And what your climate action plan looks like can help you lay out that path. (Carrol, Sustainability Coordinator, CSU)
- But one more caution about your climate action plan, is that when you write it, write it with the intent to update it at least every 2 or 3 years. I was a little cocky about how we're supposed to update it every 2 years and sometimes it's 3.(Carrol, Sustainability Coordinator, CSU)
- And that started a second planning process that was much more specific. And it came up with a list of things that we could do and about how much it would cost per ton of carbon to do it (Alexi, Sustainability Coordinator, USU)
- Yeah we do report to Second Nature and we do a STARS report every 3 years. (Alexi, Sustainability Coordinator, USU)
- And we do keep track of commuting and air travel (Alexi, Sustainability Coordinator, USU)
- So every 3 years we started looking at our STARS report and then trying to make goals. What is it we think we can do and value enough to put resources towards (Alexi, Sustainability Coordinator, USU)

- And they have a goal of 10% reductions every year leading up to 2040 I think is where they want to be carbon neutral. And we've got a long ways to go.(Zac Cook, Utilities Senior Energy Manager, USU)
- All of our subcommittees developed lists of efforts and measures that could be taken. And we tried to come up with associated costs impacts. And we developed a standardized cost(Zac Cook, Utilities Senior Energy Manager, USU)
- And we've also made a big change in how we track our carbon emissions. (Zac Cook, Utilities Senior Energy Manager, USU)
- We didn't hit our target of 10%. We were only, I shouldn't say only I think this is a huge accomplishment, we were at a 7% reduction roughly. We are trying to just formalize that process(Zac Cook, Utilities Senior Energy Manager, USU)
- So we're really trying to do some checks and balances to make sure that we're getting the data. That the data is consistent and legitimate. So in doing so, we've moved that over to the sustainability and energy department.(Zac Cook, Utilities Senior Energy Manager, USU)
- Definitely STARS has focused a lot of the goals and objectives that are part of STARS and that's kind of been a big kind of guiding factor that helped us put our CAP together. (Zac Cook, Utilities Senior Energy Manager, USU)

Evidence from plans:

- "Interim goals are as important, if not more so, than a carbon neutrality target date. Interim goals are short term, provide the opportunity to measure progress, and encourage starting the downward trend toward carbon neutrality sooner." (UM, 4, 63)
- "The Sustainable Campus Committee, with the support of the Office of Sustainability, will monitor and report on progress as well as recommend future updates and revisions to the Climate Action Plan" (UM, 8).
- "For the purpose of planning, it is assumed that energy audits will continue every three years until all buildings are completed and resulting identified projects will be funded and implemented" (UM, 21).
- "Students of the University of Montana are typically very active and involved in solving a variety of environmental issues. They, along with faculty and staff, would most likely embrace the opportunity to work on behavior changing campaigns and initiatives along with monitoring success rates." (UM, 22)
- "In order to assess the updated commuting habits of students, faculty and staff, further surveys should be completed on a bi-yearly basis" (UM, 35)
- (UM Measuring Success Summary from Worksheet) The CAP's success will be tracked and reported by the Sustainable Campus Committee along with the Office of Sustainability, with students potentially helping to monitor "success rates." Energy audits will be conducted every three years to monitor progress. As an interim goal, surveys will be conducted every other year, along with others intended to keep UM on track for the 2020 carbon neutrality target.

- “This climate action plan, emissions inventory, and progress reports will be made available publicly through the WSU Library, will be posted on the WSU web site, and will be provided to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination” (WSU, 6).
 - “An annual update report that includes action items completed, updated emissions inventory data, and a progress report narrative will be generated and posted for each subsequent year within nine months of the calendar year end” (WSU, 6).
 - “An annual report will be provided to the President’s Council, Student Senate and to the Faculty Senate at WSU. This report will identify energy consumption data, energy use trends, and other initiatives or actions taken in the preceding year to reduce carbon emissions.” (WSU, 34).
 - “This plan and all associated plans will be reviewed and updated on an annual basis” (WSU, 34).
 - “This demographic survey will need to be maintained and updated on a regular basis by surveys or other analysis to assess and compute the vehicle miles driven in future years” (WSU, 17).
 - “Besides the annual report to the President’s Council and the Student and Faculty Senate, an annual report will be provided to AASHE in their prescribed format” (WSU, 34).
 - “This report contains updated emissions numbers using the latest version (v 9.0) of the Clean Air-Cool Planet Campus Carbon Calculator. With each version, Clean Air-Cool Planet updates emissions factors used to calculate carbon emissions. Therefore, there will be some discrepancies when comparing the numbers in this report to the reports of previous fiscal years.” (WSU, 4).
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- (WSU Measuring Success Summary from worksheet) In order to keep track of the CAP’s success, the university plans to write an annual update report detailing energy consumption, energy use, and progress toward mitigation initiatives. The report will be given to the President’s Council, Student and Faculty Senate, and AASHE, as well as to the public through the university website and library.
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- (CSU) “This 2018 update provides an opportunity to demonstrate progress made toward the original goals and explain updates to the original plan.” (3)
 - (CSU) “Association for the Advancement of Sustainability in Higher Education (AASHE) awarded Colorado State University the first ever Platinum rating in the Sustainability Tracking, Assessment and Rating System (STARS) in March 2015. In March 2017, CSU repeated this accomplishment by receiving a Platinum rating under STARS version 2.1. To date, only three institutions have earned this rating – Colorado State University, Stanford University, and the University of New Hampshire.” (3)
 - (CSU) “Utilize STARS* as a framework to help set goals and assess progress” (6)
 - (CSU) “This 2018 Climate Action Plan update considers CSU’s projected emissions and identifies potential reduction and mitigation strategies between fiscal years FY10 and FY50. The business-as-usual forecast of emissions is primarily driven by increases in the intensity of electricity consumption in existing buildings (about 1 percent annually based on historical trends), and the construction of new buildings (growth averaged of 250,000 GSF/year through FY17, but a more conservative 150,000 new GSF is used for the model).” (9)

- (CSU)“Using the N-Print calculator, CSU now has more accurate accounting of how CSU imports or produces nitrogen, how it is used, and how much nitrogen is lost to the environment.” (11)
- (CSU)“Finally, implementation of strategies should be documented for future reference and reporting to the community and to decision makers. For instance, what was the actual cost of the strategy and when was it implemented? Who was involved and what were their tangible indications of success, such as number of participants, number of buildings retrofitted or kilowatt hours (kWh) of electricity reduced? This type of information can be used to celebrate success, adjust strategies, or develop new strategies.” (36).
- (CSU)“Certain strategies contained in the plan can be implemented in a fairly short period of time while others will need to be phased over time. Establishing specific timelines for implementing various strategies will ensure that there is enough time to complete them before the target goal year is reached.” (36).
- (CSU)“While this plan sets a long-term goal of climate neutrality, achieving interim milestones will help demonstrate tangible progress toward this goal over time. As discussed earlier in this plan, an interim goal has already been established to track progress.” (36).
- (USU) USU is committed to producing annual GHG emissions inventories. This enables the university to track its progress and continue to evaluate its goals, targets, and implementation process.
- (USU)“USU has recorded a 20% increase in student populations since 1990, but only a 1% increase in our corresponding energy growth. This is a strong indicator of the energy conservation and energy efficiency projects and policies that have been implemented during this time, both from the state level and on our campus have been effective” (8)
- (USU)“By determining how many unique individuals we have reached in SOAR, Connections, LEAP and other courses by the time they graduate, we will be able to monitor our success at reaching ‘all students’ as required by the ACUPCC” (16)
- (USU)“Plans also have been made to include specific questions on sustainability in the annual freshman/sophomore survey and the survey of recent USU graduates” (16)
- (USU)The Utah State Sustainability Council will continue to produce annual GHG emissions inventories. These are and will continue to be critical in determining how the University is doing overall on emissions goals. In addition, they will produce a brief document updating progress toward carbon neutrality every other year [Including ...]” (30)
- (USU)Sustainability Plan 2020 update, compares STARS rating of USU to other regional schools (including CSU, MSU, and Weber State)
 - Academic & Engagement; Community, Culture, & Communication; Operations; Energy & Built Environment; USU Greenhouse Gas Inventory; Air Quality & Transportation; Sustainability Council Collaborations; Food; Inclusion; Planning, Administration, & Human Resources; Purchasing; Waste & Recycling; Big To-Do List all included.

Measuring Success

Summary of clear subthemes:

In measuring success for different institutions' Climate Action Plans, a number of subthemes arose.

All four schools examined in detail relied on AASHE's STARS reporting platform to measure the university's success as they progress to more sustainable habits. This particular reporting platform, focusses on sustainability more broadly, sometimes distracting attention from greenhouse gas emissions and their effects on climate specifically (I.e. compost and recycling waste reduction programs). However, the STARS platform helps institutions create tangible goals for sustainability progress as universities progress from bronze all the way through platinum ratings, with minute interim progress monitored as well. The STARS report also highlight where certain institutions are lacking to help direct future focus and resources. In addition to STARS reporting, some institutions also produce intermittent reports for Second Nature reporting platform.

All universities examined also emphasized the importance of frequently and sufficiently tracking energy consumption and associated greenhouse gas emissions. CSU, in particular, discussed a specific tracking method for Nitrogen emissions. Having developed an emissions inventory with the original inception most CAPs, monitoring those emissions from year to year is how universities can keep score for their plan's successes and failures. It was noted that it is necessary to conduct an emissions inventory on a annual basis, but also that this is a substantial undertaking. Universities should plan, staff, and fund accordingly to ensure that these inventories can be made successfully.

Another subtheme we identified in measuring CAP's success is the creation of updated plans or updates on plan progress. Most CAPs include a commitment to producing these updates every several years, however, it seems that more often than not, universities have been unable to follow through with these commitments. Several universities that committed to producing updates every 2 to 3 years haven't done so in the past decade. Our focus institutions indicated that updating their plans is important to share progress that has been made, update goals and plans for reaching them, and to incorporate new knowledge, technology, and data. In producing and implementing a CAP, it therefor may be helpful to outline a plan for how and when those updates will be produced. It should be noted who will produce that plan, when they will produce it, what funding and other resources they will need (granting access to them), what the update may contain, and a step-by-step outline for producing the update (whether it is a full plan or a progress report). Updating CAPs is a large undertaking, and that should be noted in the CAP process.

To identify success, institutions also rely heavily on striving for overarching goals such as carbon neutrality deadlines, following interim goals to get there. These goals are important for both ensuring that the final goal is met, but to also provide uplifting benchmarks to those involved and the university as a whole. When interim goals are met, universities can take a moment to celebrate their accomplishments thus far, reinvigorating their determination for the future. These interim milestones can also be beneficial in helping to secure funding for future CAP projects.

Institutions also touched on other metrics for measuring success, from student and faculty surveys to tracking monetary savings, to having students track CAP progress, to heavily documenting all CAP progress for sharing with stakeholders. Student and faculty surveys along with extensive documentation are themes that arose in several institutions climate action planning process and can be used to help supplement other measurement practices. Tracking monetary savings is also important, however, not all

CAP projects will save money, and this may distract from the overarching goal of plans. Additionally, students are a vital resource to help track CAP progress, however, they should not be relied on as the sole means for tracking progress as they are often very busy and have a fast turnover rate within universities.

Overall researcher observations & key takeaways:

Questions from worksheet: By what measure is success tracked and reported? Does this plan discuss how progress is tracked and reported? Does the plan reference a system that assesses its sustainability performance? Many different approaches can be used, but make sure to take note of STARS and AASHE. Institutions track and report their CAPs' successes through reporting platforms such as STARS, AASHE, and Second Nature. In producing these reports, schools rely on countless metrics, but the most common and generally most important metric used are institutions GHG inventories. These inventories, taken originally as a baseline, then subsequently to track emissions reduction progress, are most effective when institutions make them annually. In addition to outside reporting platforms, institutions will publish updated CAP's or CAP progress reports internally to help inform relevant stakeholders on progress being made and future direction. For all these reporting platforms, it is important that institutions set interim and overarching goals to measure their success against. Several other success metrics and recording methods can be used to supplement those discussed above.