

Zac Cook Interview (Utah State)

Interviewer: I guess we'll dive right in. I guess first and foremost I would love to hear about your role at USU. If you could just tell me a little bit about maybe what you day to day is like and your responsibilities there?

ZC: So my title is Energy Manager and I am in our utilities and energy management department. I manage our heating and air conditioning show, which is a little unusual for this role but it makes a lot of sense because heating and air condition is a substantial portion of what the energy that's consumed on campus is. So we have 17 technicians and then there's a foreman over those 17 technicians.

And then I manage, in our department we manage lighting controls and the metering of all the utilities. And then we also have a group within our department, within energy management that does what's called retro commissioning. I don't know if that's a term you've heard of before, probably not. It's basically like you know with your car you try to tune it up every year or two or whatever. Buildings are the same way, as time goes on their performance drifts and they become less efficient. So we have a group that goes through and tries to optimize the performance of the buildings every 5 or 6 years.

So that's kind of an overview of what in general I do. We've got some renewable energy projects we're trying to do and looking at overall efficiency and energy usage on campus.

I: Cool, right on. This next question is very much related to that. Can you talk about your role with your campus's climate action plan? And what your role and responsibilities are as far as that goes?

ZC: So this was driven actually by our faculty senate is who really pushed this initiative. We've been trying to be energy efficient as long as I've been at the university. I was in a

different role prior to the role I am currently in. I feel like Utah State has always been a leader in efficiency and trying to improve campus. And we've always done that from a perspective of dollars and cents for energy and for maintenance costs. But we've never had an initiative to look at carbon directly. So when the president of our faculty senate, Patrick Belmont who I really recommend that you visit with him as well, if he's not on your list?

I: We have that down.

ZC: Perfect. He passed a resolution through the faculty senate which has been just a great thing for the university. It kind of coalesced all the efforts that were going on campus into one focus because prior to that I think a lot of people and organizations were kind of doing their own things and it wasn't this centralized effort. And what the outcome of this resolution was the president of the University kind of formed an executive committee to look at the University's climate action plan. And it broke up from there into different subcommittees that had different people from across campus that have expertise relating to different aspects of our carbon emissions.

So I am obviously on the energy committee. And we basically the different subcommittees went through and analyzed each of the areas that they could impact as far as carbon emissions and kind of developed a list of potential measures that could be taken. The goal from the outset was laid out from the faculty senate resolution. 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. I don't know, we're going to do everything we can to meet that. We've got some real hurdles on our campus. Each campus is different but we've got some real challenges with dependencies on natural gas that's going to make it an obstacle. 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 of carbon so we could put the value of the reduced carbon into the decision making process on campus.

Sorry I hope I wasn't rambling there.

5:50

I: No, any information is good information as far as we're concerned. I'd be curious to know, it sounds like natural gas is problematic but what other barriers do you feel stand between you guys and the success of your climate action plan?

ZC: So natural gas is probably the biggest hurdle. I would say the next hurdle, and I am not sure, so you're with MSU, is that right?

I: Yeah.

ZC: I am not sure, you have combined heat and power at your university do you know?

I: You know I don't know.

ZC: We do what's called combined heat and power so we produce a substantial portion of our power on campus using a gas turbine. We use the waste exhaust for heat. So it's really an efficient process but it's natural gas. But then the next hurdle that we have which has really been a challenge, we purchase power from a local municipal utility provider. So we are struggling with procuring renewable power, because it's not as easy if you're dealing with an open utility market where you can go buy power from wherever you want.

So we're looking at partnering with the utility and kind of pushing them, and encouraging them is probably a better term. And helping them understand our goals long term so we can become partners in providing not only the University but also the city renewable power. So those are the two biggest hurdles I see for our University to become carbon neutral.

I: Gotcha. Have you guys run into any financial barriers? I know what a lot of colleges and universities struggle with everywhere is actually finding capital to get these kind of initiatives off the ground and moving in the right direction?

ZC: We have. I think what we probably had the hardest time, I would say... the minds... the shift in the mindset of looking at carbon having a cost has been the biggest issue. If we have a large capital project that economically is on the cost side of things, makes sense, I feel like we've been very successful at getting capital for those types of projects. Where we still are in this shift of mindset of looking at the actual costs of carbon and factoring that into our economic equation.

So that is a challenge, especially... in our past projects. But going forward I see more and more support and more and more understanding of the long term costs of carbon and factoring that into the economics of a project. But we were, actually it was really rewarding to see this because one of our efforts to meet our goals was to increase the rate at which we improve the efficiency of the LED lighting on campus. So we were able to get a substantial amount of money to go ahead and retrofit the entire campus, and we're about 3/4s of the way done and we just had a lot of support.

I mean that one was easy because the economics without the CO2 costs just really make a lot of sense and we hit things at the right time. We received the funding right before Covid and I think it might have been a little bit of a different story if this had come after that because there's been a lot of financial concern about how that's going to impact budgets and what not.

10:18

I: That makes sense. Taking a step back I am wondering if you know much about when the

current climate action plan as it stands was developed and implemented and what it's status now. I know Montana State for example, our last one was developed in 2011, benchmarks were set but by year 2 and 3 we were not only failing to hit those benchmarks but pretty much failing to acknowledge that we had this climate action plan that we committed to. So I am just curious if you could maybe talk a little bit about that?

ZC: Yeah so we finished our most recent copy of our climate action plan I think it was 2019.

And we've also made a big change in how we track our carbon emissions. Our environmental health and safety office was doing that. It was a real challenge because there wasn't as much ownership in the process. And so the results and the data was really erratic, so we really couldn't gauge are we improving? Are we getting worse, because the data was just very inconsistent. So we've been developing a process to make that more meaningful data. And we can actually track our performance and if we're meeting our goals and objectives. So this last year we were really successful. 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 7% reduction roughly. We are trying to just formalize that process of referring back back to the carbon action plan.

And I think that's why our environmental health and safety office didn't put a lot of effort into the carbon data because people didn't seem interested in it in the past. And it seems like there's been a microscope put on it and it's been more of interest across campus. I think people are becoming aware of our carbon action plan on campus. And we are trying to pay more attention to it. And it's kind of our guiding document for our greenhouse gas emissions plan.

I: How are you guys trying to track carbon output now? What kind of changes did you make?

ZC: Really what we've done is we brought the responsibility of that under our sustainability organization. Since there's more focus and interest in, environmental health and safety it was kind of a thing they check off their list. They wouldn't go back and review the data that they were putting in and check the validity of it. They were just dump it in, spit it out and provide a report. 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.

I: Gotcha, so I guess... big picture once again, would you say between now present moment and 2019 when your climate action plan was launched if you will, it's been so far successful? I mean it sounds like 7 of 10, maybe not 100% but like you said that sounds like a pretty significant reduction over the first year?

ZC: Yeah I really feel like it has. And I strongly feel like the support and involvement from our faculty senate really kind of pushed us over the hump so to speak. Because prior to that we had a carbon action plan. And it didn't feel like it had a lot of teeth and it didn't feel like it necessarily had support from the administration. But the process we recently went through in the last year and half or two years has shined a light on this issue and it's made it very clear to the administration that this is something that needs to be on the forefront of their decision making. Whereas before that just wasn't there. In the past we had projects that we're going to have a really substantial impact on carbon emissions. But those type of discussions weren't happening at a high level. So we had some projects that unfortunately didn't happen because administration, it wasn't on the forefront of their minds. And they weren't as focused or concerned about it. I feel like now that we've gone through this and we've had the support of the faculty senate and the support of the University's President we're getting attention to the

projects that are going to be really impactful and we're getting support for those.

I: We did a literature review recently just to see what kind of research had been done, if any. We actually found out that not a whole lot has been done about what makes these plans successful and one of the things we did find, kind of like what you're alluding to here is involving stakeholders at every level, whether it's the faculty senate, the students, the guy who lives across the street from campus. It all matters. And the more stakeholder engagement there is the more successful these plans tend to be. And it sounds like there is a big transition to having the support of your president and the faculty senate. But I am wondering if you could point to any other stakeholder involvement that may have been involved in the more recent success of this plan?

ZC: The other stakeholder from my perception that had a big key was in the facilities leadership. I feel like in the past, and to be honest I think because our leadership, our VP, Associate VP of Utilities just retired this last December. But he'd been at the University 10 years and the first 8 years he I think felt like carbon reduction, wasn't worried about it, wasn't a big deal. And wasn't a big proponent of pushing that agenda, I guess if you want to call it that. I hate to use that phrase. But something changed and I think it was... having the right people reach out and... work with our AVP of facilities and be partners, rather than making facilities the bad guy so to speak. I really put my hats off to Patrick who I think will have some really good feedback. I apologies I keep saying that. And how he handled and worked with the leadership and facilities made a big impact in how... we've worked together.

Because I see that situation could've gone two different ways. If the faculty and other university administration came to facilities and was like hey you guys are doing an awful job. You've got to do something different because we've got all these issues. And they gave us these

unrealistic expectations and tried to tell us how to do our jobs, I think that we would've maybe facilities couldn't not been as strong of a partner in that process. But the way they came and they asked questions and they wanted to know what the obstacles that we saw in the process were and they tried to understand the problems rather than just telling us what needed to be done, what do they wanted to be partners in understanding and coming up with different ideas. And I think that made the carbon action plan come together and have some more traction because people were all on the same page and same team.

I: That's great to hear. Sort of along that vein I am curious to know since 2019 how has this climate action plan affected what you are doing on a day to day basis? If it has at all?

ZC: You know I think it has given us more legitimacy and more support to do our job. People are more conscientious and more supportive of what our efforts are. You know we've been able to change... different energy efficiency standards on campus which in the past would've been a real challenge and people would've pushed back harder. But it seems like when we explained what the end goal of some of the projects and things that we're trying to do people just seemed a lot more supportive and understanding and willing to work with us. I feel like it's made my job easier, just to be honest.

20:57

I: That's good to hear. I am sort of thinking about our... climate action plan at MSU and I am realizing I probably don't know, I am not sure I could answer that question if someone asked me how the lives of our facilities, utilities have changed. And that's probably not a good thing. So this I think is most of what I was hoping to ask you about today. Actually the last thing I wanted to touch based with you on is STARS. I am sure you're familiar, if that system has a major influence on how your plan was written and designed in terms of what

activities or initiatives have been prioritized and if you would say those have been generally in line with what you at Utah State University needs? If that makes sense?

ZC: Definitely STARS we have focused a lot of the goals around 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. So I am trying to think of examples. I know in our energy and built environment group, every time when we complete the STARS report we set up new goals around how to improve based on the different criteria associated with STARS. Yeah I would say we've tried to focus around the objects that are associated with it. Sorry that was a long answer to a short question! Sorry!

I: No problem. That's great. I do think that is all I have. If you have any questions for me, if I don't know the answer I can go find it.

ZC: Maybe just real quick, help me understand. So are you... is this something that a group of students with some faculty are working on at MSU? Or maybe help me understand where you guys are at and what your objectives are? Maybe I should've asked that early on, I apologize!

I: Let's see, 2021 was initially earmarked as the year to put together a new CAP. Covid effectively blew that plan up because you know we're suddenly trying to make sure that everybody can hold onto their jobs. The institution has the funding it needs, the bill gets approved the by state legislature. Basically we went from having a decent amount of interest in this to effectively no interest. But Dr. Haggerty and Rod Chapel who are the two involved in coordinating this at MSU took the opportunity to get... I mean they literally reached out to, I actually heard about this from my adviser. So they reached out to different departments and they forwarded us emails and said hey we're looking to put a group together to do some

research on how best to put together a CAP basically.

And the idea is that, like I said earlier we did a literature review. We decided to focus on 4 or 5 institutions that have similar indicators as MSU. So endowment, student body, latitude, same weather, that kind of thing. And so we landed on four institutions, five maybe, which includes, UM, Weber, University of Vermont and CSU Ft Collins. And we're basically reviewing the climate action plans of these places and reaching out to folks with the hope that we can gain a little bit of insight into what has maybe seemed successful for you guys. It's been amazing what we learned. For example we talked to Jennifer Bodine at Weber last week, the Sustainability Coordinator there. And she told us about the revolving fund...

ZC: For energy fund...

I: Yeah that was totally new to us but it's not something we're seriously looking into. Because part of what we really struggled with is actually raising money to implement these things successfully. Because yeah we have... struggled with garnering the interest of community stakeholders very much including administration and faculty. So sorry for the long winded answer, but we're effectively looking for what could help us out next year, which I think I failed to mention, which is when this has been put off to being. So theoretically there will be another group of students next year, probably beginning in the fall that are focused on actually putting the plan together.

ZC: I'll just put a plug in for... I think energy efficiency, I know I am biased because that's my job. I just think it's such a huge part of these, because it's the most economic way to meet the objectives. Often it just makes financial sense in the first place to do these. It's cool I am glad you talked to Weber State. They're doing some really great things down there. They've got a solid plan for carbon neutrality just to be honest. I mean their mechanical systems are

conducive of being all electric. So that's a good contact, I am glad to hear that you reached out to them as well.

I: Thank you so much for your time, this was really helpful.

ZC: Good if you have any other questions that come up don't hesitate to give me a holler, or we can set up another time to discuss anything or send emails back and forth, whatever works best.

I: Right on, will do!

ZC: Okay. Have a good one!

I: You too, take care!

28:40