

2019 SUMMARY

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Campus Climate Conversation

UM's Carbon
Neutrality Goal,
Strategies, and
Next Steps



COMMITTEE'S THANKS

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A big THANK YOU to all those who attended this event as presenters, facilitators, note takers, and participants. To submit feedback on this summary or request additional information on the Conversation that took place in April 2019, please contact Eva Roche (eva.roche@umontana.edu)



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EXECUTIVE SUMMARY

Sustainability leaders at the University of Montana (UM) hosted the fifth Campus Climate Conversation on Thursday, April 4, 2019. The event drew students, faculty, staff, and administrators together to discuss UM's progress toward its greenhouse gas emissions reduction goals, provide an update on strategies we have pursued and progress we've made, and to discuss our climate action options moving forward.

The Campus Climate Conversation sought to accomplish three main goals:

- Inform and engage our campus partners on UM's work accomplished to date toward our emissions goals, how UM compares to peer institutions, and our options for moving forward;
- Generate recommendations for next steps and prioritize strategies for university leadership;
- Identify areas of interest for engagement among students, faculty, staff, and administrators.

Shortly after the April 4th Conversation, event organizers and student leaders met with President Bodnar to make several requests and recommendations based upon participant feedback. Requests include:

- Publicly recognize that UM will not be meeting our 2020 commitment at the State of the University address in the fall.
- Publicly express support for the city/county joint resolution for 100% clean electricity by 2035 and statement of his support of UM's hunt for clean electricity.
- Statement of commitment for KRELF and building our revolving fund's capacity.
- Convene a task force to seriously consider and explore what a Zero Net New Growth policy would look like for UM.

In order to follow up on these requests and hear President Bodnar's feedback, several student climate action leaders met with him in late August with the hope that fall 2019 provides an opportunity to speak to our climate action goals explicitly and re-affirm our commitment to this important work. It is clear from participant feedback that our campus partners are committed to carbon neutrality, seeking viable climate action strategies, and are willing to grapple with the complexities and nuances inherent these efforts.

INTRODUCTION

UM developed its first Climate Action Plan (CAP) in 2010 and established a carbon neutrality target date of 2020 (<http://www.umt.edu/sustainability/documents/CAPFinal.pdf>). Since 2010, UM has explored a number of large-scale renewable energy projects including large-scale solar, a biomass gasification facility, and off-campus wind energy projects. The CAP details a number of large-scale renewable energy projects and their estimated resulting emissions reductions. For a variety of reasons, each of these has failed to gain sufficient traction to move beyond the scoping phase, even with campus support for climate action and renewable energy.

Since 2010, UM has also invested heavily in energy efficiency, conservation, and campus-wide engagement. These investments have resulted in energy savings and avoided costs for the university but have been offset by additional new construction and the energy consumption of new built space. Overall, UM's greenhouse gas emissions footprint decreased from FY 2012 through FY 2016, but then increased in FY 2017. The 2019 Campus Climate Conversation Resource Guide details where UM is now in terms of GHG emissions and the various strategies being explored. The Resource Guide was provided to all participants prior to the Campus Climate Conversation to ensure educated discussion on all strategies.

This summary provides an overview of participant feedback on those strategies, including group discussion, participant pre- and post-questionnaires, as well as comments and preferences indicated on the large sheets of paper that were labeled with each strategy and provided as a tool to collect additional comments.

**"The time is right {for a space utilization assessment}.
We need to make decisions about design and
growth based on data-informed space needs."**

- Campus Climate Conversation Participant

EVENT BACKGROUND



PARTICIPANTS

Nearly 70 students, faculty, staff, and administrators from across the main campus and from Missoula College attended the spring 2019 Campus Conversation.

Representatives included:

- Administrators from the Offices of Facility Services, UM Dining, UM Housing, Student Success, Sustainability, Athletics, and Campus Recreation, among others.
- Deans and faculty members from Philosophy, Business, Environmental Studies, Geography, Public Administration, Sustainable Construction, College of Forestry and Conservation, and Communication Studies, among others.
- Student leaders from ASUM, the Global Leadership Initiative, Climate Response Club, Blackstone Launch Pad, MontPIRG, and more.

SPEAKERS



Participants were welcomed by **Nicky Phear**, outgoing director of the Climate Change Studies Program, and **Steve Schwarze**, Communications Studies Professor and incoming director for the Climate Change Studies Program.

Eva Rocke, UM's Sustainability Coordinator, provided a brief overview of UM's Climate Action Plan and carbon emission trends. She introduced participants to one strategy for discussion, the adoption of a Zero Net Growth policy.



Kat Olson, ASUM's Sustainability Coordinator, presented on the strategy for growing the capacity of the Kless Revolving Energy Loan Fund.

Brian Kerns, Facilities Engineer, explained Combined Heat and Power Generation, solar panel installation, and what a LEED-EBOM process might entail for UM.



Christopher Preston, Professor of Philosophy, discussed the opportunity and inevitability of purchasing carbon offsets.

Undergraduate students **Adison Thorp** and **Raina Woolworth** highlighted student efforts toward the climate crisis and called for campus leaders to take action.



STRATEGY DISCUSSION

Following the presentations, participants were asked to turn to their small tables and discuss the climate action strategies presented and included in the Resource Guide that was provided in advance. They were not asked any specific questions about each strategy, just to offer their general thoughts and reflections on which seem most and least appealing for campus implementation. Some tables moved methodically through each of the strategies that were presented, others chose to focus on two or three that stood out as being especially promising or, in some cases, strategies that were less appealing. Moderators then shifted the conversation to focus on what is needed to make some of the strategies happen. To guide the discussion, participants were asked what research, networking, support-building, or other “scaffolding” needs to be built in order for the priorities to be successful. These ideas were meant to inform the recommendations and plan for action to be shared with university leadership.

PRIORITIZATION AND RECOMMENDATIONS

Participants had a chance to place colored sticky dots (4 dots per person) on large pieces of paper that identified each strategy and included space for participants to make notes, additional ideas and suggestions, or ask questions. The dots were meant to indicate a participant’s support of each strategy, so the strategy sheet with the greatest number of dots is considered the “most popular” option. In addition to this exercise, participants completed pre- and post-event questionnaires to add further opportunity for feedback and input. Designated note-takers at each table recorded main points from the opening presentations and table discussion.

The remainder of this report is a summary and analysis of everything we heard during the Campus Conversation, ideas shared on the large white sheets with colored dots, and through the questionnaire.

CARBON EMISSION REDUCTION STRATEGIES

Participants were asked to indicate which carbon emissions reduction strategies they most supported. They were asked to identify the top two strategies they supported on both the pre- and post-event survey. Below are the results that indicate the percentage of participants favoring each strategy and the shift in preference after the three hour discussion.

Carbon Emissions Reduction Strategy Most Preferred	Pre-Event	Post-Event
KLESS Revolving Energy Loan Fund	11%	22%
Combined Heat and Power Plant	15%	20%
Zero Net Growth Policy	7%	19%
Onsite Solar Generation	24%	14%
Education and Behavior Change Programs	17%	12%
Carbon Offsets	10%	10%
Energy Conservation LEED	16%	3%

Table 1. Participant preference for reduction strategies

STRATEGY #1

KLESS REVOLVING ENERGY LOAN FUND (KRELF)

UM's KRELF was one of the nation's first university funds created to support student-driven sustainability initiatives. Since 2009, students have supported KRELF through the opt-out \$6/student Sustainability Fee they pay every semester and the fund continues to be UM's primary source of sustainability funding. Beginning fall 2014, \$3.68 of the \$6 sustainability fee has been allocated for KRELF's Large Project Reserve Fund. The fund is to remain untouched until reaching a \$500,000 threshold, at which point funding will be used for large-scale energy conservation and efficiency projects that meet KRELF's guiding principles. The fund currently sits at just over \$360,000.

Based on the post-event questionnaire, table discussion, and the dot voting exercise, increasing support for KRELf was the most supported strategy. The post-event questionnaire revealed a significant change in participants' attitudes toward KRELf, with the "revolving loan fund" strategy receiving only moderate support prior to the event and then becoming the most supported strategy after the presentations and table discussion. In addition, it received 71 dots indicating support. Many tables discussed new ways to generate additional revenue for the fund and it was at least one table's first choice of strategies to focus on over the next 2-3 years.

In order to build KRELf faster and truly harness its capacity to transform campus building performance through energy efficiency, participants agreed that we should be seeking new sources of revenue. Currently, KRELf is funded entirely by the student sustainability fee. Other institutions with revolving loan programs add state dollars and private charitable contributions to their revolving loan funds in order to increase fund capacity.

RECOMMENDATIONS

- Establish a faculty and staff payroll deduction wherein employees elect to contribute a set amount of money each pay period to the fund.
- Make KRELf a mandatory fee instead of an opt-out fee. Consider increasing the fee slightly in the next biennium.
- Partner with the UM Foundation to identify potential donors to KRELf who have already shown an interest in campus sustainability, both operationally and academically.
- Once the Large Project Reserve Fund has reached its target of \$500k, use the funds to strategically invest in an energy conservation project with high visibility and robust savings.
- Establish a carbon accounting system for departments related to travel, and offer a voluntary carbon offset program where funds go directly to KRELf.



STRATEGY #2

COMBINED HEAT AND POWER FACILITY

Using a natural gas combustion turbine to produce UM's power and steam would be economically and environmentally advantageous, given the historic price trends of electricity and natural gas. UM has conducted a feasibility study with CTA engineering and a design was selected that would provide about 85% of UM's annual electrical consumption while also reducing UM's electrical carbon footprint by a third. An investment of \$12M in essential CHP-related capital costs is estimated to payback in 10 years.

The combined heat and power (CHP) facility also saw a shift in participant interest between the pre-event questionnaire and the end-of-event questionnaire. Notes from the table discussions convey widespread interest in this strategy. Nearly all the tables expressed an interest in the CHP, though at least two recognized the challenge presented by continuing to tie ourselves to a fossil fuel energy source (natural gas) when the ultimate goal is to use 100% clean and renewable energy. Participants who expressed this concern but still support the strategy tended to agree that it would be important for UM to explore non-fossil fuel options simultaneously so that we have a multi-faceted, multi-strategy plan for generating more of our own energy on campus. The CHP was listed as the #1 priority by 4 separate tables, many of which paired this strategy with the "no net new" policy, additional support for KRELF, and small annual purchases of carbon offsets.

RECOMMENDATIONS

- Continue to seriously explore the viability of a combined heat and power facility and share the anticipated financial and emissions savings with campus.
- Couple the project, if possible, with a Zero Net Growth policy and some large-scale solar where feasible

"Go big. Be Bold. Get a development officer to target sustainability-minded alumni and run a small capital campaign for solar."

- Campus Climate Conversation Participant

STRATEGY #3

ONSITE SOLAR GENERATION

When it comes to large-scale renewable energy projects, UM's contractual relationship with our utility, NorthWestern Energy, limits our ability to pursue Power Purchase Agreements (PPAs), one of the primary tools other institutions have used to make significant progress greening their energy supplies. The installation of photovoltaic panels on suitable roofs and/or parking lots across campus would provide clean alternative sources of energy to campus. Panels provide a visible sign that UM is committed to sustainable energy production. Rooftops that are good candidates for PV arrays are the Mansfield Library, Liberal Arts, UC, PARTV, Payne Family Native American Center, Lommasson and Curry Health Center. An investment of \$2.5M for Library, \$1.3M for UC & \$1.0M for Liberal Arts roofs, \$20M for parking lots A, F, G, H, and P is estimated to pay back in 30 years.

Large-scale on-campus solar also garnered significant support at the conversation. Some participants expressed a preference for solar (or any large-scale renewable investment) only after significant investments have been made in energy conservation and building stewardship. Two tables noted that solar energy's inability to pay for itself in a reasonable amount of time makes it a less appealing option, though some participants felt it would be worthwhile to explore the potential for major donor cultivation for panels and similar projects (at least 2 tables discussed this idea specifically).

Some of the tables that spent more time discussing the pros and cons of solar noted the value of large-scale solar being highly visible to prospective and current students. This could provide a much-needed morale boost around campus climate action and convey to the public that UM is taking its climate commitment seriously. One participant commented that campus beautification and sustainability efforts can and should overlap in their goals and can be student-attracting (the implication being that solar panels would be considered a "beautifying" element). Table 9 expressed more support for large-scale on-site solar (rather than CHP) because it is a clean source of energy, has the potential to attract students and employees, and wanted to see UM consider waiting a few more years for the cost of solar technology to decrease. Large-scale solar was ranked the highest among the strategy options in the pre-event questionnaire, but dropped significantly in the post-event questionnaire in comparison to other strategies.

RECOMMENDATIONS

- Explore the feasibility of large-scale solar in visible locations to all campus stakeholders and visitors.
- Work with the UM Foundation to investigate donor interest in "Adopt a Solar Panel"-type programs to help fundraise for solar projects.
- Prioritize investments in building energy efficiency, perhaps coupling solar projects with building recommissioning and renovations.

STRATEGY #4

ZERO NET GROWTH POLICY

Sometimes referred to as a “zero net new” policy, the main idea behind this strategy is that no additional built space is constructed on campus without eliminating or decommissioning existing space. The 2017 Sightlines Sustainability Report cited earlier notes the trend in higher education, specifically across institutions that have committed to carbon neutrality, of large investments in energy efficiency and conservation while simultaneously adding new square footage to the campus footprint. Zero Net Growth policies encourage universities to explore and identify what their “right size,” both in terms of enrollment and total built space, really is and plan accordingly.

Several tables discussed the importance of knowing how our buildings are currently being used and managed and the value of conducting a space utilization assessment. This should include identifying ways our buildings can be managed more efficiently, like assigning space to the appropriate purpose and group size, as well as exploring our built space as it relates to how the structure of education is changing (online courses have different needs than in-person courses). This feedback indicates campus support for a space utilization study to inform a “No Net New” policy and a conversation about how to most creatively and efficiently use existing buildings and resources.

There was also interest in seeing major donor gifts for this sort of work, seeking donors specifically for building improvements and renovations rather than new construction. One participant who was very supportive of this strategy noted that LEED certification for new construction, and even existing facilities, was simply insufficient: “A zero net growth policy is essential for us to make progress on our sustainability goals.” We heard from several participants that even though this strategy is the least “glamorous,” it is possibly the most important. Table 6 spent a

fair amount of time discussing this strategy and agreed that it should be a top priority. One table discussed the importance of understanding the full cost of decommissioning buildings and the cost of implementing a full “no net new” policy for campus. Table 9 spent a fair amount of time discussing the value of this policy and felt that we should explore various metrics of growth, not just total square feet of built space, but perhaps the energy intensity of the built space. For instance, rather than being tied to just space, maybe the policy requires that for every new space that adds to our energy footprint, we must reduce our energy consumption to an equal extent elsewhere on campus.

Support for a “No Net New” policy shifted dramatically between the pre- and post-event questionnaire, with support for a policy of this nature doubling from before the event to after the event.

RECOMMENDATIONS

- Appoint a working group of campus stakeholders to explore what a Zero Net Growth policy might look like for UM and make recommendations.
- Conduct a campus space utilization study to determine real uses of built space and alignment of existing space with programs, institutional priorities, and student needs.
- Work with the UM Foundation to prioritize major donor cultivation aimed at improving existing space and resources over new construction and additional buildings.

STRATEGY #5

CARBON OFFSETS

A carbon offset is a reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for emissions made elsewhere. Offsets, whether generated from UM projects or purchased through an offset vendor, will be part of UM’s climate action toolkit if we remain committed to carbon neutrality. Carbon offsets are meant to address activities such as air travel and commuting that we cannot “efficiency” our way out of. There are several opportunities to connect specific carbon emitting behaviors directly to a cost, such as a voluntary departmental purchase of offsets, or a carbon neutral commuter program.

A common concern with carbon offsets that has been discussed in earlier Campus Conversations (and emerged again in our spring 2019 Conversation) is that offsets are an ongoing investment with no payback. Several tables discussed the importance of building the cost of carbon offsets into the cost of travel, perhaps on the Request Travel Authorization form. Table 5 indicated support for combining the CHP, carbon offsets, and a robust outreach program highlighting KRELF that would enhance energy conservation efforts across campus. Several tables specifically support the combination of purchasing carbon offsets and simultaneously investing in the CHP. Table 8 noted that linking offsets to faculty travel makes a lot of sense from an educational and operational perspective and would be a specific revenue source. Table 9 was very supportive of a carbon neutral commuter program because it is optional and is very clearly connected to a specific source of emissions and behavior.

In the pre- and post-event questionnaire, carbon offsets actually decreased slightly in popularity after the event, in comparison to other strategies discussed.

OTHER STRATEGIES

In addition to feedback on the climate action strategies presented to them, many participants offered ideas and comments related to this work but not specifically related to one of the strategies above.

- Multiple participants suggested UM more thoroughly investigate what it would take to work with a utility besides NWE and that we use our voice in the state to encourage the development of renewable projects. (Three separate tables talked about the importance of this.)
- Faculty and staff evaluations should include criteria that measure the employee's contribution to university sustainability goals. Another table offered a similar idea: that Deans, VPs, and other administrators should have climate- and sustainability-related metrics of success each year and that they are held accountable for those goals.
- In terms of UM meeting our carbon neutrality goals, one table discussed the value of having President Bodnar identify a commitment that works for him, whether it's specifically for emissions reduction efforts, waste, or another sustainability topic. They also discussed the value of those goals or targets being linked specifically to our existing priorities for action. Given all the discussion of the importance of the UM Foundation, several tables also noted the potential of truly getting the Foundation involved and identifying their role in these efforts.

- In order to continue engaging affiliates from across campus, one participant suggested exploring the feasibility of an incentive and awareness program for climate action and sustainability similar to that of the UM Wellness program.
- A larger, more prominent sustainability office would help draw attention to our efforts and accomplishments and allow even greater student engagement.
- One participant indicated that, rather than being driven solely by the cost/payback calculation, we should decide on a new target goal and what our ideal energy source would be and then fundraise to make it happen.
- One participant felt strongly that a behavior change campaign that provides UM affiliates with real-time feedback about energy or water use would be very impactful. Similarly, if we could find a way to incentivize departments for their sustainability and conservation efforts, that would go a long way as well.

CONCLUSIONS

The spring 2019 Campus Conversation generated an impressive array of ideas and input as UM seeks to re-assess its carbon neutrality targets and strategies. When asked in the questionnaire, “In your opinion, how important is it for the university to achieve carbon neutrality?” nearly all the participants felt it is either “very important” or “extremely important,” with those percentages increasing after participating in the event (from 46% to 55% seeing carbon neutrality as extremely important).

In your opinion, how important is it for the university to achieve carbon neutrality?	Pre-Event	Post-Event
Not at all important	2%	0%
Slightly important	3%	4%
Somewhat important	8%	6%
Very important	41%	36%
Extremely important	46%	55%

Table 2. Participant preference for carbon neutrality

In addition to supporting UM achieving carbon neutrality, the majority of event participants believe we should aim to achieve neutrality by or before 2035. Given that the city of Missoula has a carbon neutrality goal of 2025 and that the city and county have committed to 100% clean electricity by 2035, it makes sense that UM would have a goal that supports and is aligned with these community-driven targets.

In your opinion, by what year do you think the University should achieve carbon neutrality, if at all?	Pre-Event	Post-Event
2025	21%	21%
2030	44%	40%
2035	21%	21%
2040	8%	15%
2050	5%	2%
Not at all	2%	0%

Table 3. Participant preference for carbon neutrality date

Shortly after the April 4th Conversation, event organizers and student leaders met with President Bodnar to make several requests and recommendations based upon participant feedback. Requests included:

- Publicly recognize that UM will not be meeting our 2020 commitment at the State of the University address in the fall.
- Publicly express support for the city/county joint resolution for 100% clean electricity by 2035 and statement of his support of UM’s hunt for clean electricity.
- Statement of commitment for KRELF and building our revolving fund’s capacity.
- Convene a task force to seriously consider and explore what a Zero Net New Growth policy would look like for UM.

In order to follow up on these requests and hear President Bodnar’s feedback, several student climate action leaders met with him in late August with the hope that fall 2019 will provides an opportunity to speak to our climate action goals explicitly and re-affirm our commitment to this important work. It is clear from participant feedback that our campus partners are committed to carbon neutrality, seeking viable climate action strategies, and are willing to grapple with the complexities and nuances inherent these efforts.



“We should be including a line for carbon offsets on our travel authorization forms. If the budget can’t support them, faculty and staff should be allowed to pay for them personally.”

- Campus Climate Conversation Participant