



MONTANA CLIMATE SOLUTIONS COUNCIL

MEETING INFORMATION

Monday, January 27, 2020 – Tuesday, January 28, 2020
University of Montana, Missoula

ATTENDEES

- Council Members:

Amy Barnes	Patrick Holmes	Tracy Stone-Manning
Scott Bischke	Chuck Magraw	Joe Thiel
Amy Cilimburg	Bruce Maxwell	Ben Thomas
Al Ekblad	Shaun McGrath	Steve Thompson
Sally Ericsson	Todd O'Hair	Andrew Valanais
Mark Haggerty	Alan Olson	Gerald Wagner
David Hoffman	Caitlin Piserchia	Kathy Whitlock
Tom Lopach	Diego Rivas	Gary Wiens
Kelsey Jencso	Lee Spangler	Laurie Young

NOTES

January 27, 2020

- **Welcome & Opening Remarks**

Dean Tom DeLuca – Excited Climate Council is here and University stands by ready to help in any way they can. Steve Runnings began many of the early research studies. Important to try and adapt as best we can. Lots of executive order type functions ongoing, we need to make sure we don't miss an opportunity to leverage each of these efforts.

- **Meeting Objectives**

Continue an Environment of Learning. Goal today is to advance early recommendations and frame key questions that we have moving forward together. Take advantage of location and engage faculty and students.

- **Panel: Montana Forests and their Role in Climate Solutions**

- ***Tom DeLuca, Dean of the UM W.A. Franke College of Forestry and Conservation***

Q: Can we simultaneously improve habitat, generate wood products, conduct smart planning and improve green building?

A: We think YES. Steel & Concrete Construction accounts for 8% of global carbon emissions and it's non-renewable. The US has gone from nearly 50% renewable building materials in year 1900 to less than 5% today.

There are many benefits of mass timber construction: Uses small diameter timber. It's a Montana natural renewable resources, innovative cross laminated timber, it's carbon neutral, it creates jobs in rural communities, it has a short construction time. Univ. of Montana is in the process of designing a new building for the WA Franke College of Forestry and Conservation, highlighting a circular economy of the future.

- ***Carl Seielstad, Wildfire Mitigation***

Wildfires are emerging as a problem and MT will most certainly see more in the future: Fire is a growth industry, as there will be opportunities to affect change. It is an exciting time to be studying fire. MT has a legacy of innovation in fire science and we have an opportunity to lead. We need to... change the composition, structure of our forests and reduce fuels, adapt to forests with innovative building materials, etc.

Rapid assessment of fuel conditions – Use LIDAR data to fuse with less expensive satellite remote sensing data to predict fuels attributes for the western US. Fire behavior can be modified relatively simply. Models predicts this, now need to validate these models.

Fuel treatment design and effectiveness. Changes to the forest have a large impact on wildfires.

Montana is applying fire to our own lands in the Blackfoot Valley to reduce fuels.

There is a desire by many parties to treat lands across boundaries. May need legislative support and changes in liability laws.

- ***Solomon Dobowsky, Carbon Markets for Forest Management***

This is a growth area for Montana. There is growing interest in cap and trade programs. Several Western states have developed executive orders to this end.

24 million acres forest land in Montana; 24% private, 5% state, 4% tribal, 77% federal. Landowners are constantly looking to diversify revenue streams. Carbon offset programs add value diversifying income streams.

Example: Lubrecht Experimental Forest Carbon Offset Project. Demonstrating the value of forest lands and forest products to offset carbon emissions. How it works: California Air Resources Board's (CARB) cap and trade program. Carbon credits issued for annual growth and for standing stocks. Multiyear process that requires quantification, verification and 3rd party certification. CARB projects carry a 100-year lifespan.

- ***Beth Dodson, Realizing the Potential of Wood-Based Biomass Energy***

We know how to process woody biomass in MT. Looking at the slash, tops, that can't make a solid wood product. What we don't know how to do well is how to pay for it. Transportation is a big problem – a lack of clearance is an issue. Our trucks aren't very usable in forest conditions. The exciting thing is that the technology is coming along, such as Logset Corp.'s (a company out of Finland) hybrid technology. John Deere and Tesla are also getting into the market. Seeing emissions reductions and lower cost to operate.

- ***Questions & Discussion from the Council.***

This was a good example of boots on the ground applied practice.

Concerns about cost of laminated wood compared to steel and concrete. Have to consider full life-cycle. Laminated timber may be overkill because it is often too strong for a residential house. The sweet spot is between 6 and 15 houses.

How do you balance forest going out again vs. harvesting biomass on the forest. Forests were over-cut. Growth estimates were too high. Not all the pieces are in place yet, but it is possible.

How fast could we institute a cap and trade program? Could we join California? May need to develop our own carbon markets as CA considers eliminating projects from outside its borders. Some other states are also trying to implement cap and trade.

Concerns about actual use of CLT in practice. Building codes may not allow for it in Montana.
Foundation drying.

Lots of different forest structures. What type of forest are we talking about for cap and trade?
Majority of overstocked forests are the lower elevations with higher fire suppression and these are close to populated areas.

Unsure about size of CLT being produced at mills and the size/capacity of the mills in-state and out of state.

- **Climate Adaptation, Information, and Decision Support Committee**

Patrick Holmes reiterated that we need to identify the low-hanging fruit and move forward recommendations in those areas, rather than the ideas that need more information. We're aiming to produce a digestible invitation for partners and members of the public to provide feedback on our work.

- **Preliminary Recommendations / Questions and Next Steps**

Questions related to Healthcare, including medical and information resources. Suggestion to get Climate Smart Missoula involved in understanding the information that exists for human health, including rural & tele medicine. Physical & mental health are concerns in community resiliency.

Discussion of recommendations on forest health, wildfires, and air quality. A recommendation is to allow for more prescribed burning and additional funding to make it happen. Shaun McGrath asked what is the status of Climate Services proposal? John Tubbs responded there is a barrier between state agencies and the Montana University System.

For agricultural recommendations, we have thumbs up consensus. The committee decided to park ecosystems recommendation deliberation.

On forest recommendations, the committee consensus is a broad thumb's up, except segregate #3(part 3) from this recommendation.

Rangelands recommendations: Council gave a thumb's up to forward to the Governor.

- **Public Comment**

Dave Atkins, Retired US Forest Service employee and forest landowner. He's been at this a long time and is happy that we're focusing on "solutions". Q1: What policy proposal can the council put forward that will address all three committees? A: Carbon fee and dividend, which is different that cap and trade. Made reference to federal bill; HR 763. Q2: How do we create socio-political will? A: It will start with this room coming out with a strong support for actions & unity in that. This includes all of us in the audience. Done right, slash piles won't get burned – will be product feed stock.

Daniel Carlino, Recent graduate and candidate for PSC. NW Energy has no plans to lower greenhouse gas emissions in the next 20 years. PSC is not going to deny their request for fracking 800MW. Supposedly the Governor is taking fossil fuel \$. Challenged Governor on supporting both the Climate Council and Keystone.

Elliot Thompson, former Energy Corps AmeriCorps Member and Missoula resident. Concerned about water security and safeguarding that resource. Water is life. He is concerned about snowpack, water supply later in the year, more intense droughts in the future. There is a concern that pipelines will leak and hopes the council will recommend a plan to halt Keystone XL and reduce oil and gas infrastructure.

Leticia Romero. There is a planet emergency. We are living in the 6th mass extinction. We need to start acting like climate change is real. She's a US Army veteran and when we're under attack we immediately do something about it. We should use the terms Climate Crisis and Climate Emergency.

Erin Miller, Missoula Forward Foundation. The foundation conducted a survey, gathering stories from young people across Montana. She gave a few comments about nature and related ecosystems.

Christine Walter. To reduce carbon, we need to quantify success and establish timelines – how can it be done quickly, quantify fairness of recommendations. Put cost on the carbon content of fuel to make a real difference.

- **Lightning Round – University of Montana Faculty Research**

Moderator: Laurie Yung, Society and Conservation

- Commercializing Breakthrough Innovations, Jakki Mohr, Management and Marketing
- Beaver Dam Analogs to Mitigate Drought, Ben Colman, Ecosystem Science and Restoration
- Climate-Smart State Water Policy, Michelle Bryan, Alexander Blewett III School of Law
- Tribal Approaches to Water, Casey Ryan, Confederated Salish and Kootenai Tribes
- Designing for Embodied Carbon, Sarah Ayres, Loci Architecture+Design
- Early Warning Systems for Drought and Flooding, Kelsey Jencso, Montana Climate Office
- Effects of Fire on Elk Habitat and Populations, Mark Hebblewhite, Wildlife Biology
- Projections for Recreation & Tourism, Kyle Bocinsky, Montana Climate Office
- Addressing Health Impacts for Community Resilience, Jen Robohm, Family Medicine Residency
- Conservation Marketing, Justin Angle, Management and Marketing
- How Farmers and Ranchers Use Climate Information, Laurie Yung, Society and Conservation
- Utilizing Groundwater for Climate Resilience, Payton Gardner, Geosciences

January 28, 2020

- **Welcome and Overview of the Day**

- **Greenhouse Gas Mitigation Strategies Committee Recommendations / Questions and Next Steps**

Shaun McGrath kicked off the discussion of the committee's work. It's an enormous task to get to carbon neutral by 2035, or even by 2050. Working on modeling and inventory efforts, but need to put more time into understanding the underlying math. This will take more time.

- ***Section 1 – Inventory & Modeling***

Not discussed during this meeting

- ***Section 2 – Energy Efficiency***

- Revise the Montana Building Energy code building administrative process
- Look at codes every 3 years
- Reinstate city's jurisdiction to enforce energy code up to three miles beyond boundary
 - Include detailed verification
- Recommendation 1: Establish energy efficiency resource standard beginning at 1% annually
- Recommendation 2: Establish demand response standard
- Recommendation 3: energy storage standard
- On bill financing
- Pay for performance
- Regulatory approaches
 - 1. Decoupling – utilities encourage energy efficiency
 - 2. Time of use rates – allow utilities to charge time of use rates to encourages consumers to use during non-peak hours
 - 3. Inclining block rates
 - 4. Performance based regulations for investor owned utilities – performance based on predefined measures

- Mobile Home Replacement Program
 - 1. Develop replacement program
- Commercial Audits
 - 2. Renew efficiency program
- Water Heaters – create incentives to tie water heaters to the electric grid to create a new source of energy storage
 - Council members would like to see this measure expanded beyond water heaters
- Motion to approve: approved unanimously
- General concerns: jurisdictions, local government vs. outside jurisdiction enforcement, rural communities
- **Section 4 – Renewable Energy**
 - Legislative study on USB program
 - Encourage expanded community solar development
 - Enact policy to enable shared solar for inventory owned utilities
 - Encourage greater utility scale renewable developments, reduced property taxes
 - Establish state incentives for utility scale storage development
 - Provide incentives for solar ready and solar integrated design and building
 - Increase the allowable systems size for distributed generation systems
 - Increase and updated the state renewable energy portfolio standard
 - Energy Storage
 - MT PSC to open storage docket
 - Concerns: leaving out undeveloped technologies, ie modular nuclear, carbon capture and storage. Regulations vs. incentives/recommendations. Tax revenue
 - Motion to approve recommendations 1-6: approved
 - Recommendation A: approved with 3 no votes
 - Recommendation B: approved with 4 no votes
 - Recommendation C: approved
- **Farm, Ranch Land, Forest, and Wood Products**
 - Pathways for producers to participate in carbon markets
 - Establish MT carbon committee
 - Increase research on how much carbon is stored on agriculture lands
 - Concerns: does not include forestry
 - Motion to approve recommendations: approved
- **Transportation**
 - Concerns: How to replace revenue for MDT without electric vehicle tax (clear up verbiage in title), bike infrastructure including protected bike lanes
 - Motion to approve recommendations: approved
- **Industrial Oil and Gas & Carbon Capture and Storage**
 - Concerns: Using carbon capture and storage to continue the use of fossil fuels, how to position Montana to the changing national and global landscape, consider recommendation around cement production (high emitter),
 - Motion to approve recommendations: approved
- **Parking Lot Issues**

These are not going out to public for the January 31 deadline

 - Support the development and use of microgrids
 - Net zero energy buildings

- Carbon fee and dividend legislation
- Western electricity market
 - Chuck propose to move this forward for public recommendations
 - Motion to approve: approved
- Propose changes to MEPA
- Prepaid metering
- Mitigation planning for local and tribal governments
- **Presentation: Understanding Economic Transitions in Energy-Focused Communities**
Ben Alexander with Resources Legacy Fund spoke to the group. He presented on ethical concerns and issues related to climate change and reconfiguring our economies, finding new jobs and bases for income.

He undertook some research last year to see if “energy-focused” communities (e.g. Colstrip) are making gains and doing well. Three universities supported his research. The research was primarily focused on rural communities, to strip out the outliers like Denver and SLC. The research ended up focusing on three communities (in NM, WY, CO) that were tied to coal and/or oil and gas historically. Those communities were doing well at making efforts to diversify their economies and the question was WHY and HOW?

Building resilience was the key. There is a paradox between why places with overly abundant natural resources have a narrow economic base. He came up with a framework for change that includes: Rupture – There’s no going back. It reduces your time to react and focuses your goal-making; Slow-burning decline – You barely even see it as it happens slowly; Something in between that a community can wiggle out of. The type of rupture critically defines the type of response you will see in a community.

The 2nd piece of this is leadership. The character of the leadership and if they are trusted and good communicators. Does leadership have the ability to defend change? Establishing a vision is critical and must be communicated with the leadership in a community to create consensus.

Some examples: In CO, there was an explosion in a mine and another mine closed, the community wasn’t willing to reinvest. The community pulled together and with the local electric co-op, working with the State and US Dept. of Commerce to get a planning grant and created a bold plan to “elevate” and bring 5G broadband to every household and business in the area. They found the financing and connecting businesses to it. They employed laid-off coal miners to build out the network.

- **Technology Innovation for Climate Solutions and Community Transitions Committee**
 - ***Innovation Action Items***
 Mark Haggerty led the discussion of action items related to technology innovation.
 - Identify and invest in technology driven economic development opportunities
 - Invest in initiatives that build university-industry-society innovation linkages
 - Invest in the expansion and recruitment of new business/industry in state that reduces emissions
 - Advanced Energy Storage
 - REC Silicon
 - Gordon Butte
 - Mitubishi-Hitachi
 - Agriculture
 - Value-added processing for pulse crops
 - Soil carbon storage
 - Precision agriculture
 - Biofuels

- Velocys
 - NARA
 - Mass timber
 - SmartLam
- **Innovation Parking Lot Issues**
 MT Jobs Project 2017 recommendations needs to be explored for possible opportunities
 Regulatory/Permitting Reform Recommendation needs work
 - Need to focus regulatory/permitting reform recommendations, public comment could help target
 - Role of litigation?
 VW Trust/EV money needs to be coordinated with ongoing work in DEQ
- **Innovation Coordination Needs**
 Innovation in forecasting technology/research coordinates with adaptation work for ag producers
 Need to coordinate mass timber and biofuels with work in other committees
- **Innovation Discussion**
 Identify and invest in key technology-driven economic development opportunities and research, invest in connecting initiatives
 - Whitlock: seems like climate change is being tacked onto general innovation recommendations
 - Response: We're examining how innovation has worked in other areas to guide how it might work here
 - Holmes: How did you explore building these relationships absent legislative action?
 - Response: Absent appropriations, we recommend identify and invest in networking groups that can c
 - As much as possible, we should work in existing institutions
 Streamlining regulations/permitting
 - Holmes: is it possible to do this for techs we are unsure about the potential for yet? A universal review is a pretty massive undertaking that could have mixed results
 - Stone-Manning: Streamlining is one way to move permitting faster, other is to invest in more staff
 - Since building accounts for such a large source of emissions, could we take a look at building code specifically, even if we put other regulations on backburner
 - Ekblad: We weren't just looking at carbon in this recommendation, but a broader scale of projects
 - Thiel: Is more targeting of regulatory reform a good point for public comment? Response: part of this work is to ID what codes, regulatory regimes might need closer reform
 - McGrath: If streamlining permitting is the big issue, more bodies is probably best way forward. But do we accept the premise that "fast is good?" It's DEQ's job to make sure projects are safe and we do our due diligence.
 - These are not just questions for state agencies, we are obligated to follow the legislature's direction and so some of these things may involve changes in law and working with stakeholders

- I don't think class VI wells is the best example here. That would be a new authority, not a review of existing program
- O'Hair: Real hold-up is in the litigation and appeal, not the agency permitting and we need to examine how to reform that
 - We've seen wind projects brought down by people who supported them until they are in their backyards
- Tubbs: rephrase around "opportunities" not "barriers"
- Piserchia: How are regulations encouraging emissions?
 - Response: we did not examine what was propping up given industries, so much as what barriers were

Specific techs opportunities to focus on

- Holmes: How do we crowdsource more opportunities from the public?
 - Good work on evaluating state tools for ecodevo, need to examine better university and private sector tools/resources
- Valanis: need to examine rooftop solar too
- Maxwell: Accounting of climate value in existing research is important
- McGrath: Please work with our team from Energy office at DEQ re: EV and VW settlement. Numbers here make it sound like there is more money than is there, doesn't account for discussions that have occurred in the agency
- **Transitions Action Items**
 - MT Ready Communities Initiative
 - Should Council address fiscal work being done in legislature?
- **Transitions Parking Lot**
 - Fiscal policy work in legislature
- **Transitions Coordination**
 - Adaptation and resiliency planning coordination
 - Carbon pricing section needs to be coordinated with others
 - Coordinate efficient housing with other construction recommendations
- **Transitions Discussion**

MT Ready Communities Initiative

 - Tubbs: Often our discussions focus on specific communities, there is value in linking at-risk communities together to help them support one another, identify synergies, etc.
 - Commerce might be a good facilitator for this process.
 - McGrath: Not just about attracting industry, also about attracting new generations of professionals, especially in tech space. Outdoor recreation, bike infrastructure, even climate policy itself is part of this
 - Easy for a Boulder, CO, or Missoula to think that way. How do you have that conversation with a Colstrip?

Workforce

- Old industries have paid lower-education workers good wages and provided good benefits-- this is far less true of newer industry
- Many workforce retraining programs have failed
- Also a need to evaluate our workforce training needs for next generation (K-12, higher ed, vocational ed)
- Some best practices:

- We think of sending people to an institution for 2-4 years as out training, but much training can and does occur in the workplace
 - Apprenticeships (e.g. Missoula incentivization program)
 - Need to find pathways for new and transitioning workers to learn while remaining living wage-earners
 - Credit reciprocity
 - Wages in new industry need to be comparable to those in old. Prevailing wage laws?
 - Collective Bargaining
 - Questions/Discussion
 - Piserchia: We need to keep a broad definition of “green job” - not just in the energy sector
 - This is about climate, transition must be high on our priority list
 - Ekblad: Good wages drive investment, not the opposite. In CA, where these laws were put in place, you saw a lot of investment from unions in the green energy sector.
- **Next Steps, Engaging the Public and Key Partners**

Patrick Holmes said the immediate need is for a draft report by the Executive Order deadline of Jan. 31. After it is delivered to the Governor, it will be delivered to the Council for preparation to go to public comment. He requested that the Council give the state some latitude to determine the best timeline and parameters for the public comment period.

Question: How do we want to engage partners in the public around our work?

 - Invitations to specific partners to provide comment
 - Convening a summit to get a cross-section of partners together
 - Convene stakeholders on resiliency specifically?
 - MT Climate Assessment already has large stakeholder list, good spot to start outreach
 - Want to hear from Montanans who are actually doing this work. What’s working? What’s not?
 - Is there an opportunity to bring in folks from sectors identified in innovation work?
 - Need to make sure we are specifically bringing in groups most impacted by climate change and transition
 - Give space for new ideas that might not be as refined as what we’re doing here at the council
 - Allow for some focus on values
- **Public Comment**

Eliot Thompson. Need more transparency. Meeting notes need to be better. Upset about corporate groups on the Council. Wants independent study of investor-owned model of climate change.

[Name?]. Look at innovative ways to help farmers participate in sustainable farming. Irrigation techniques.

Selene Matt-Gross, Extinction of Ravalli and Missoula. We need to treat this crisis with the urgency we can. Need to totally divest fossil fuels. Need to totally oppose Keystone XL.

Daniel Carlino. Commented on the NorthWestern Energy procurement plan. Need to match regulation to science.

Dave Atkins. Thank you to the Council for the hard work. It is important that we engage civilly. Workers in Colstrip are not our enemies.

Valan Anthos. There will be a transition in the Governor’s Office soon. The most important issue is Keystone XL. Need to listen to indigenous communities and their concerns about water and land.