



# MONTANA CLIMATE SOLUTIONS COUNCIL

TECHNOLOGY INNOVATION AND TRANSITIONS COMMITTEE

## MEETING INFORMATION

October 9, 2019

1:30 p.m.

Governor's Office, Helena, MT

## ATTENDEES

Committee members in attendance: Mark Haggarty (co-chair), Marty Tuttle (co-chair), Paul Tuss, Scott Bischke, Todd O'Hair, Steve Thompson, Patrick Holmes, Joe Theil, Jayne Morrow, Lee Spangler, Al Ekblad

Other Council members in attendance: Shaun McGrath, Tom Armstrong, Kathy Hadley

DEQ staff in attendance: Jen Lane, Rebecca Harbage

Others present: Tom Kaiserski, Cody Ferguson, Peggy Trenk, Tivan Bovington

## MEETING NOTES

Patrick Holmes kicked off the meeting with an overview of the basic charge of this committee. The way Montana responds to climate challenges will create economic opportunity. Industries and communities across the state will face unique challenges and this committee will work with them to understand their needs and seek to match needs with resources to support transitioning communities. This work will include a comprehensive look into how to leverage the university system. It will also involve strategizing around how to advance research and development of new technology, identifying gaps and key areas of need. The committee will seek broad support from many stakeholders with the goal of developing a plan that will carry Montana into the future.

### **Introductions**

Committee members introduced themselves and shared their areas of interest and expertise related to the work of the committee.

### **Agenda Part One: Technology Innovation**

Committee members discussed how technology innovation might be defined for the purpose of the work of the Climate Solutions Council. Many ideas were shared and discussed including:

- Tech innovation is solving old problems with new approaches
- Tech innovation may mean different applications of existing technology
- Tech innovation includes impact-reducing, cost-reducing technology and may include changes in design, communication, as well as policy

- Tech innovation for the purposes of this Council means anything that can be used to reduce carbon in the atmosphere. Existing tech may be innovative if it is used in a new way or in a new place
- Tech innovation may include cultural or behavioral changes that don't directly reduce carbon, such as mitigation or adaptation activities
- Tech innovation should not be defined too narrowly that it limits us to only the technology that we can imagine today
- The discussion of tech innovation should focus on how to foster an innovative landscape in which effective new ideas develop and flourish with appropriate support/incentives

## **Discussion**

After members talked about possible definitions, the discussion moved toward describing the support networks that exist in Montana already. This developed into a conversation about ways to nurture/support/expand these support networks in ways that allow innovation to happen. Several case studies were discussed as examples of innovation that either succeeded or did not succeed. What are the components of the landscape that are working? Where are we falling short? Why do innovations succeed or fail in Montana today?

Committee members discussed key characteristics of a “landscape” that supports effective, robust innovation across multiple sectors and technologies. Some of these suggested elements that may help define and characterize the landscape include: the research capacity within the Montana University system; partnerships among the University system, business community, state and local government; the policy environment that supports business and market formation (for example, energy balancing markets); and community and business institutions that support innovation, including labor unions and the chamber of commerce. Innovation also can be communications and policy that help communities become more resilient.

The committee also discussed how defining and assessing the innovation landscape benefits from exploring case studies of projects and/or commercialization efforts to understand why they succeeded or failed in practice. Case studies serve multiple purposes: concrete examples of actual projects will help communicate how the innovation landscape is described; case studies focus on what is actually happening in Montana and can help assess why some projects succeed or fail; and case studies can help identify opportunities to adapt the innovation landscape and explain how new opportunities can be leveraged.

Some examples may include the pump storage project in Meagher County, a small biofuels project, and/or REC Silicon in Butte.

## **Discussion on Committee Direction and Focus**

Patrick Holmes suggested several aspects of the committee work and direction to keep in mind as the discussion moves forward. An important task the Committee will be to conduct asset mapping that can identify real opportunities in Montana to leverage existing partnerships and opportunities into actual projects. One of the primary goals of the committee work is to build a strategy around technology research, development and commercialization.

The Committee also should keep in mind that technology innovation is required beyond the energy sector and across multiple geographies.

Further discussion: The urban rural divide is widening and solutions are required for all types of communities, particularly rural communities. Focusing on rural landscapes and communities may also provide unique opportunities to leverage resources, partnerships and innovation that may be overlooked as most efforts and attention is typically focused on cities where investments theoretically return a higher “bang for the buck.” Technology innovation in agriculture, timber, manufacturing, and other sectors are an important focus for the Committee.

Using an innovation landscape approach may help deal with uncertainty. What new technologies and innovations are on the horizon that remain unknown today? The committee also needs to be careful about putting one technology forward without being clear about unintended consequences (the committee should focus not only on innovative technology but effective technology). Accepting uncertainty shifts the focus on how to navigate and create the landscape to allow technologies to emerge rather than select favored existing technologies to promote.

### **Agenda Part Two: Transitions**

The committee ran out of time and will pick this topic up at a future meeting.

## **ACTION ITEMS**

The committee concluded its meeting with the following action items.

1. Continue the discussion to describe an effective, robust innovation landscape and begin to characterize it’s elements. Jayne Morrow, Todd O’Hair and Tom Kaiserski agreed to contribute to the continued discussion about the innovation landscape at the next meeting. Joe Thiel agreed to help define and characterize the research capacity, partnerships, investment and relationships within the Montana University System that supports and leverages innovation as a key element of the innovation landscape.
2. Use case studies to assess why attempts to commercialize innovation in Montana succeeded or failed. The case studies will be useful to further define and assess the elements of the innovation landscape, identify gaps, and new opportunities to build capacity and new partnerships. Lee Spangler, Al Ekblad and Steve Thompson agreed to contribute to this discussion at the next meeting.
3. Draft a glossary of terms (Scott Bischke)

### **Next Meeting**

The next meeting is tentatively scheduled for the afternoon of October 24<sup>th</sup> in Helena