

From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb comment
Date: Sunday, March 22, 2020 10:34:04 PM

Permanent Storage

Scientists have shown that mineral carbonation can permanently capture and store carbon quickly enough and safely enough to rise to the challenge of climate change.



Iceland's Hellisheiði Geothermal Power Station, above, is the third largest geothermal power station in the world and the site of ongoing mineral carbonation experiments. Credit: Ámi Sæberg

By [Kimberly M. S. Cartier](#) [[eos.org](#)] 20 March 2020

“By mineralizing, we are permanently getting rid of the CO₂. We can walk away from it.” In carbon storage experiments tied to geothermal power plants in Iceland, 90% of injected carbon dioxide (CO₂) transformed into minerals in just 2 years. Standard carbon storage methods can take thousands of years to do the same.

“We are basing our methods on this natural process which is part of the big carbon cycle where all carbon on Earth derives from and ends up in rocks,” said lead researcher [Sandra Snæbjörnsdóttir](#) [[forcid.org](#)]. She is the head of CO₂ mineral storage at [CarbFix](#) [[carbfix.com](#)].

“By mineralizing, we are permanently getting rid of the CO₂. We can walk away from it. We don't have to monitor it for the next decades or so. The permanent storage is the key here,” she said.

Fast and Forever

The Intergovernmental Panel on Climate Change [reported](#) [[ipcc.ch](#)] that to keep climate change below 1.5°C, humanity must not only drastically cut CO₂ emissions [[eos.org](#)] but actively remove CO₂ from the atmosphere and keep it locked away. Most ongoing carbon capture and storage (CCS [[geo.arizona.edu](#)]) projects seal captured CO₂ deep underground in sedimentary rock reservoirs to keep it from escaping. That carbon eventually seeps into small rock pores, dissolves in groundwater, and reacts with the rock to become carbonate minerals, trapping the carbon for good.



Carbon dioxide dissolved in water reacted with the basalt (black) in this core to create carbonates (white), trapping the carbon in solid form deep beneath the ground. Credit: Sandra Ó. Snæbjörnsdóttir

However, this method alone can't store a large enough volume of carbon or [mineralize \[usgs.gov\]](https://www.usgs.gov) it fast enough to meet the carbon storage demand. It can take thousands of years from start to finish for all of the [carbon \[eos.org\]](https://www.eos.org) to mineralize, and at any point, a shift in the rocks can cause some carbon to escape.

Climate researchers have [long recognized \[smithsonianmag.com\]](https://www.smithsonianmag.com) that highly reactive basaltic rocks could be a solution to the carbon storage problem. In addition to being common around the world, basalts contain high concentrations of calcium and magnesium ions that chemically react with CO₂ to make calcite, dolomite, and magnesite. Moreover, dissolving the CO₂ in water aboveground and then injecting it into subsurface basalts bypasses the slower and less secure stages of conventional carbon storage.

Geothermal power stations, which sit atop basalt-rich volcano deposits, were a natural site for the new method's first field tests. Since 2012, the CarbFix project has partnered with Iceland's [Hellsheiði Geothermal Power Station \[extremeiceland.is\]](https://www.extremeiceland.is) to capture the CO₂ released when drawing up hot water from the ground. The team dissolves the CO₂ in wastewater and injects it hundreds of meters deep into the basaltic ground. The team reduced the risk of induced seismicity by carefully surveying injection sites and adjusting injection rates as needed.



Hellsheiði Geothermal Power Station sits atop basalt-rich formations. Credit: Kimberly M. S.

Cartier

Snæbjörnsdóttir and her team have been extracting rock cores from the injection sites to quantify how well the mineral carbonation process works. The team found that over 90% of the injected CO₂ had been converted into minerals within 2 years of injection.

"We have demonstrated a very rapid mineralization of the injected gases," she said. "But also the way that we inject is that we dissolve the CO₂ in water prior to or during injection. This means increased security as well, because by dissolving the CO₂ we're killing the buoyancy of the CO₂. The CO₂-charged fluid is heavier than the groundwater in the formation where we are injecting, so it has the tendency to sink rather than to rise up. This increased storage security."

The team [published \[doi.org\]](https://doi.org) these results in *Nature Reviews Earth and Environment* in January.

Expanding Around the Globe

Mineral carbonation has been [gaining interest \[bbc.com\]](https://www.bbc.com) in recent years, Snæbjörnsdóttir said. "People often believe that this can only be done if you have geothermal [heat], but that's not the case," she said. "The things that you need for this to work are just a source of CO₂, [water], and reactive rocks."

A team in the United States found a [similar mineralization rate \[sciencedirect.com\]](https://www.sciencedirect.com) on the flood basalts of the Columbia River. The European Union has sponsored [future versions \[carbfix.com\]](https://www.carbfix.com) of CarbFix, and an [international consortium \[geco-h2020.eu\]](https://www.geco-h2020.eu) has formed with the goal of using CCS to lower geothermal emissions.

Snæbjörnsdóttir's team is currently working to combine this process with [direct air capture \[eos.org\]](https://www.eos.org) of CO₂ and researching other pathways to mineral carbonation.

"We know that basalts like we have here in Iceland are perfect for this method," she said, "but there might be rock types that are less reactive but still reactive enough. If some of those rock types are feasible to use for this method, we could broaden the applicability even more."

"For example, there's been a lot of work done in Yemen where they have very reactive peridotites in connection with the ophiolites that are there," she said.

"Using this method you can store CO₂ in areas you had not considered doing it before." The team is also looking into how well offshore injections using seawater might work. Offshore injection would make this method an option in regions with limited freshwater resources or that might be prone to induced seismicity. If combined with direct air capture of CO₂, that could also bring this carbon storage method to areas that aren't strong CO₂ emitters.

"It expands the applicability of CCS in general because by using this method you can store CO₂ in areas you had not considered doing it before," Snæbjörnsdóttir said. "You're opening up new possibilities in addition to the conventional CCS that is already taking place."

[https://eos.org/articles/basalts-turn-carbon-into-stone-for-permanent-storage \[eos.org\]](https://www.eos.org/articles/basalts-turn-carbon-into-stone-for-permanent-storage)

the University System especially the Unit at Butte can look into this issue now and work with the entire University System and Economic Development programs in Montana to seek large grants at the national level to work on this issue. At the very least, the University System can put together a proposal to give to the next Legislature to work or even start to implement this proposal.

Sincerely; John Cobb, Augusta, Montana .



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] comment from john cobb
Date: Sunday, March 22, 2020 10:43:32 PM

Well if this following article is correct and we continue to reduce coal use in Montana with most of the units at Coal Strip shutting down and Montana takes credit for the reduction in pollution and not give Oregon and Washington the credit- how much more do we have to cut in CO2 pollution to meet the goal set by the Governor?

<https://www.goodnewsnetwork.org/emissions-from-power-sector-decline-by-2-percent-in-2019/>
[\[goodnewsnetwork.org\]](#)

Carbon emissions from the world's power sector reportedly fell by 2% in 2019—the single largest drop in electrical CO2 production since 1990.

According to a new [report \[ember-climate.org\]](#) from environmental think tank Ember, the historic decline in CO2 emissions was largely caused by Europe and the US shifting away from coal, resulting in a global 3% decline in coal-fired power generation, which is also the largest drop in 30 years.

Coal usage in Europe declined by 24% in favor of wind and solar power while coal declined in the US by 16% in favor of natural gas. Collectively, this means that Europe's coal usage has been almost halved by 43% since 2007.

"The global decline of coal and power sector emissions is good news for the climate but governments have to dramatically accelerate the electricity transition so that global coal generation collapses throughout the 2020s," [says \[ember-climate.org\]](#) Ember Electrical Analyst Dave Jones. "To switch from coal into gas is just swapping one fossil fuel for another. The cheapest and quickest way to end coal generation is through a rapid roll-out of wind and solar."

RELATED: [Whales Represent One of the Greatest Allies Against Climate Change—Perhaps Even More Than Trees \[goodnewsnetwork.org\]](#)

This year's edition of Ember's annual emissions report uses data representing electrical generation and demand across 217 countries, covering 85% of the world's electricity production. The [full report \[ember-climate.org\]](#) is free for

public access.

The report's key findings go on to say: "Wind and solar generation rose by 15% in 2019, generating 8% of the world's electricity. Compound growth rate of 15% of wind and solar generation is needed every year to meet the Paris climate agreement. This was achieved in 2019 and lower prices provide hope it can be sustained.

"However, maintaining this high growth rate as volumes scale up will require a concerted effort from all regions."

RELATED: [This Tasty Seaweed Reduces Cow Emissions by 99%—and It Could Soon Be a Climate Gamechanger \[goodnewsnetwork.org\]](#)

The report goes hand-in-hand with research [published by the International Energy Agency last month \[goodnewsnetwork.org\]](#) outlining how global CO2 emissions had actually defied expectations by plateauing in 2019 thanks to a rise in renewable power sources and declining coal usage.

The United States recorded the largest emissions decline on a country basis, with a fall of 140 million tons, or 2.9%. US emissions are now down by almost 1 gigaton from their peak in 2000.

LOOK: [Rather Than End Up in a Landfill, Non-Recyclable Glass May Soon Be a Cheaper New Ingredient in Concrete \[goodnewsnetwork.org\]](#)

Emissions in the European Union fell by 160 million tons, or 5%, in 2019 driven by reductions in the power sector. Natural gas produced more electricity than coal for the first time ever, meanwhile wind-powered electricity nearly caught up with coal-fired electricity.

Japan's emissions fell by 45 million tons, or around 4%—the fastest pace of decline since 2009, as output from recently restarted nuclear reactors increased

From John Cobb, Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb comment
Date: Sunday, March 22, 2020 10:48:28 PM

The Council should set some direction clearly dealing with the refineries in Montana and not leave broad recommendations that mean nothing. Is it the Council's position that it wants the refineries in Laurel and Great Falls to be shut down? Take a vote and lets see where the Council sits on this issue.

From John Cobb, Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Sunday, March 22, 2020 11:06:02 PM

The Council should recommend what the cost of energy will be to Montanans in complying with your goals and recommendations. One suggestion is It should be a goal to have cheaper energy costs than all the neighboring states in arriving at your overall goals.

From John Cobb, Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb comments
Date: Sunday, March 22, 2020 11:10:33 PM

In your guiding principals for effective climate adaption where is there any reference to the Montana Legislature being included? They are the elected representatives of this state and I did not see any where they are specifically included in the entire plan. Was that on purpose to not list the Legislature or is the Legislature is irrelevant to the process?

John Cobb Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Sunday, March 22, 2020 11:26:38 PM

The Council should be specific in its recommendations to work with the Rural electric Cooperatives. From a number of comments from some within the cooperatives, they do not seem to be happy with a number of Recommendations by the Council. You or future Councils or groups need to have a sit down with the Cooperatives on an ongoing basis. Do not get into this urban vs. rural split that happens so often not just in Montana but elsewhere. Most people want to help reduce climate warming but that does not mean eliminating rural Montana and most of its communities as a number of people may think to meet the Council's goals as your recommendations as broad as they may be mean. That also does not mean that the Urban areas should dictate to rural areas on how to reduce CO2. The simple fact that most carbon credits come from rural areas and not the cities show that rural areas are not the big CO2 polluters as some think.

From John Cobb, Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Sunday, March 22, 2020 11:44:03 PM

Will this Council explain in simple terms to me what the goal of net greenhouse gas neutrality for average annual electric loads in the state by no later than 2035 means? If the Council does not know then why make any recommendations? Can you tell us what it does to the average Montanan?

Someone, somewhere gave this number to the Council and the Governor and where is the data to back it up? What if the data was wrong in the first place? I do not know what it means to me or anyone in this state. Please give us examples. Based on the goal then you should know right now where we are and give us that information.

What are the greenhouse gas amounts now in average annual electric loads and what has been the trend over the last decade or more? Again if you take out the coal units in Montana that have been discontinued where are we now?

From John Cobb, Augusta, Montana



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From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Sunday, March 22, 2020 11:54:02 PM

On increasing the staffing at the Montana Climate Office: It is likely to be hard to add any new staff with the economy in the situation it is now and will be for a year or two. But it is important to either find the money for the staff or allocate staffing from elsewhere if possible. I would recommend you approach the legislature that having staff to get the data of what is happening in Montana as to greenhouses and where it is coming from and address a number of the opinions on the issue with more facts done within Montana would be worth the money. For example, I hear a number of opinions and studies as to the effect of cattle to greenhouse gases. I have my opinion and so do others. But it would be good to have Montanans that work for us try to give us better facts to base our opinions on. I would rather disagree with another Montanan on the issue on cattle effect on greenhouse gases than have to deal with international and national writings and reports. I would rather have the information from people we hire in Montana on where all the Co2 comes from in Montana whether from humans or nature.

From John Cobb, Augusta, Montana



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From: [Lawrence Drummond](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Counter thoughts to global warming
Date: Sunday, March 22, 2020 7:18:06 AM

Please read Robert Felix's "Not by Fire but by Ice;" it's an easy read and strongly objects to the interpretation that humans are causing this. Please take the time to read it. Thank you.

Lawrence J Drummond

[REDACTED]
Kansas City MO 64111-3370

[REDACTED]
(I am a dedicated environmentalist)

Sent from my iPhone

From: [REDACTED]
To: [Climate Council](#)
Cc: rural@mtco-ops.com
Subject: [EXTERNAL] draft report -greenhouse gas eruption
Date: Sunday, March 22, 2020 8:51:45 AM

Dear people,

The co-op paper asked me to email you with the message that they are clean energy users. With most of the energy generated from hydro-electric and forced purchase of so-called 'clean energy' (sun, wind, etc.) it is one of the cleanest operations in the world. I would even go so far as to say that the whole green house gas fear is actually a useless task. Government CANNOT control the weather.

When you consider that normal carbon dioxide (CO₂) is a very miniscule portion of the atmosphere and that it is a natural substance used by plants to grow all the good things on our planet, it is ridiculous to worry about an increase from 350 ppm to 400 ppm claimed by climate people. Also it is NOT CAUSING 'GLOBAL WARMING'!

Be aware that any claimed attempt to control it is actually to control people, not the problem. Most of those who claim dire consequences (12 years to destruction of the planet; we should put climate deniers in jail, and other nonsense), are doing it to control OTHERS, and at the same time not controlling themselves.

Further, the science is not settled. Please look at actual facts and doctored facts, i.e. lies. What can you actually claim based on the actual, admissible, proven science? One thing that is obvious is that government cannot change things like they claim to be able to do. In short, Climate Change is nothing but skewed data exacerbated by prejudiced politicians driven by uneducated (or mis-educated, i.e. biased) phd's who have a political agenda to control people.

STOP THE NONSENSE.

Sincerely, Richard O. Harkins, attorney at law, [REDACTED] Ekalaka, MT
59324

From: [Michael Hoyt](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comment Submission
Date: Sunday, March 22, 2020 4:37:54 PM

Climate Change Council Comments

March 22, 2020

The establishment of the Climate Change Council was a political move, something which gives citizens the “appearance of doing something” when in reality, the goal of the council is to give political cover for continuing “business as usual.”

The establishment of the council was based upon the false assumption that its members can and will “speak for and represent all of us.” Not only is that a deceitful portrayal of reality but it displays the cynical attitude held by our elected politicians, who regard the regular citizens of Montana as rubes who must be controlled and spoon fed carefully filtered information.

The following statements found on page 3 of the Montana Climate Solutions Plan (January 31, 2020, modified February 12, 2020) clearly reveal the intent of the council.

“A foundation of the best available science and locally relevant knowledge, experience, and information is critical to inform decision-making. However, sound science and information alone are insufficient to effectively manage climate-related risks—efforts to translate that science into accessible information and to build capacity, outreach, and delivery mechanisms in response to the needs of government agencies, tribal nations, land managers, business owners, non-profits, and individuals is often necessary.”

In other words, “science is important, BUT beliefs and opinions held by individuals, corporations, and other organizations are more important.”

Furthermore, under the heading “Guiding Principles for Effective Climate Adaption” the document states:

“Montana agencies, communities and stakeholders should approach climate change and its impacts with an understanding of the state’s geography, culture, history, economy, and resources.”

Those are code words for, go slow and don’t upset the apple cart. If there was previously any doubt about the purpose of the council, that statement solidifies its “status quo” intent.

The remainder of the document does little more than repeat the council’s goal of continuing “business as usual” while pretending to do something new and different. In fact, the document describes actions which will accomplish nothing of import and will certainly not have more than a negligible impact on either reducing climate change or mitigating its impact on Montana’s citizens.

The document reaches a new level of cynicism when, on page 4, it recommends the

“Establishment of a Climate Advisory Council...” with a key strategy to:

“Prioritize and conduct research with University Social Scientists to better understand the climate information needs of agricultural producers, forest land managers, tourism and recreation businesses, state, local and tribal governments and other stakeholders in Montana.”

Ignoring previous statements about “the best available science,” that strategy moves decision-making away from a reliance on research-based facts into the world of “feelings and beliefs,” the domain of religions.

With all that said, the world in which Montanans now exist includes the Coronavirus Covid-19. Although the full force of its impact on our societies and cultures is still to be experienced, it is already apparent that the world’s carbon footprint has already been drastically reduced. If we and our governments pay attention, a lot can be learned about how humanity (and Montana) can and should deal with the effects of climate change.

- For starters, everyone should slow down their pace of life—for example, governments could, as a start, impose an immediate 55 to 60 mph speed limit, even on Interstate highways.
- Governments at all levels should provide incentives and education to move the dominant culture away from consumption for the sake of consumption—we can learn to enjoy what we have and stop falling prey to corporate advertising which drives the current over-consumption.
- Mow lawns less often or maybe not at all—learn to live in the world provided by natural ecosystems—the enjoyment of life does not require the “domination” of everything around us.

Many other methods for mitigating climate change and its impact have already been proven (by research) to be effective. To name a few:

- Eat less meat or none at all.
- Stop the exploitation of public lands by discontinuing tax-subsidized mining, grazing, and logging.
- Grow food using less fertilizer and fossil fuels.
- Have fewer (or no) children.
- Work from home when possible.

Scientists have done the research needed to find ways to mitigate climate change and its effects. Climate Change Councils and Advisory Councils are not needed (other than to provide political cover for elected officials). It’s time for governments at all levels to “just get on with it,” unless of course, the hidden agenda is to allow climate change to eviscerate life as we know it and dramatically reduce world populations.

Elected officials have waited too long to eliminate the effects of climate change. Things have already changed and, now that feedback loops are beginning to operate, the rate of change will increase rather quickly. All anyone can do now is prepare to cope with a changing world and imagine that some humans will survive.

Michael Hoyt

Corvallis, MT

From: [Renal Lind](#)
To: [Climate Council](#)
Subject: [EXTERNAL]
Date: Sunday, March 22, 2020 9:31:32 AM

Montana's electric cooperatives are proven leaders in reducing greenhouse-gas emissions, and in using clean energy sources. Therefore, I do not believe additional government mandates are needed.

From: [Clint Nagel](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Gallatin Wildlife Association comments on the Montana Climate Solution Plan
Date: Sunday, March 22, 2020 3:11:01 PM
Attachments: [Climate change.doc.docx](#)
[climate change.ref.docx](#)

Dear Montana Climate Solution Council:

Please accept the comments and references below regarding the State's and Governor's attempt to address the issue of climate change. We understand that the issue of our changing climate is having an adverse affect on our wildlife. As a wildlife advocacy organization, we are very much concerned over how our society is going to mitigate or reverse the effects of global warming. We sincerely believe that changes in all aspects of our society need to be employed to combat this crisis. And we do see it as a crisis.

We hope to be a part of this effort and we want to be that voice for wildlife.

Thank you for opening this up for public comment.

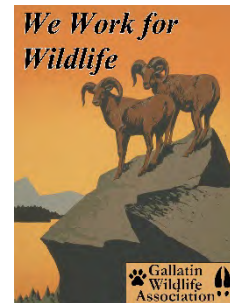
Sincerely,

Clint Nagel, President
Gallatin Wildlife Association

Gallatin Wildlife Association

Bozeman, MT 59717

gallatinwildlife.org



March 22, 2020

Montana's healthy and diverse natural environment, one which we know, love and unfortunately and occasionally some take for granted, has been predetermined by its climate. Due to the state's size, location, geographic features and elevation, Montana's climate is variable and, in some cases, extreme. Our indigenous flora and fauna can be sensitive to even the most subtle, not to mention the most dramatic climate changes, a climate by the way which is changing before our eyes. In the Introduction of the State of Montana's draft Montana Climate Solution Plan, on page 3, it states the following:

"Our temperatures are 3 degrees warmer on average than they were just a few decades ago..."

Some may refuse to recognize the science. Some may refuse to recognize the reality on the ground, but that doesn't alter what is true. Our climate is changing. It is getting warmer and drier. Further on in MCSP's Introduction, there is this proclamation.

"According to the Montana Climate Assessment (MCA), the State could experience an additional 3-7 degrees increase in average temperatures by mid-century, including an increase in incidences of extreme heat that could dramatically increase many of these impacts moving forward."

As a result, we can only imagine what kind of changes those will have on our wildlife. We can already see evidence of some of those changes today. We see it in their population numbers, in their behavior, and in the loss of their habitat. A variety of species such as pika, wolverines, grizzly bears, and moose, etc. are just some of the species whereby science has documented climate causal effects. The same could be said for the health of our forests and our biome. Again, as goes the health of our forests, so goes the health of our wildlife as our forests provide food, water, security and protection. It is truly a delicate and intricate balance of nature.

It is in this context that Gallatin Wildlife Association (GWA) would like to comment on Montana Climate Solutions Plan (MCSP), a document issued by the Montana Climate Solution Council (MCSC) a product of Governor Bullock's Executive Order 8-2019. GWA is a non-profit, all volunteer, wildlife conservation organization representing hunters, anglers and other wildlife advocates in Southwest Montana and elsewhere. Our mission

is to protect habitat and conserve fish and wildlife. GWA supports sustainable management of fish and wildlife populations through fair chase public hunting and fishing opportunities that will ensure these traditions are passed on for future generations to enjoy.

1. Preparing Montanans for Climate Impacts:

The MCSC has listed eight (8) preliminary recommendations in which it says “***will prepare our communities, infrastructure and economies for anticipated climate impacts.***” No matter what is recommended, we must realize that actions and decisions should be based upon science and common sense. We must open ourselves up to ideas and policies that may be contrary to traditional thought. In the 21st century, we must realize and acknowledge that perhaps this new century deserves a different perspective; that the old way of doing things aren’t applicable anymore.

Items F, G, and H are three of the eight recommendations which reference forest management, forest resiliency, wildlife and watershed quality. These three recommendations will be discussed below in considerable detail.

1F. BUILD THE RESILIENCE OF MONTANA’S PRIVATE WORKING LANDSCAPES (FARMS, RANGELANDS, AND FORESTS) AND SUPPORT VOLUNTARY AND INCENTIVE-DRIVEN EFFORTS FOR CLIMATE SMART MANAGEMENT THAT REDUCES RISKS, IMPROVES BOTTOM LINES, AND ENHANCES CARBON STORAGE IN SOILS, FORESTS AND WOOD PRODUCTS.

Agriculture:

There needs to be an honest look at how the role agriculture is accentuating climate change. The management of our private landscapes (whether they are farms, ranches or forests) have a significant role in our changing climate; just as much as the management of our tribal, state or federal lands. It is not just government’s role or responsibility to fight climate change; it is all of ours. We all must understand the consequences of our own actions and take responsibility for it.

In an article in [The Hill](#)¹, a website based in Washington D.C., dated August 3, 2019, Erik Molvar, a wildlife biologist and Executive Director for Western Watersheds Project states the facts as listed below. They are specific and are not covered in MCSC’s recommendations, but they should be acknowledged. Even though factoid #1 has and will receive ridicule, that doesn’t mean we shouldn’t address it. We are going to have to ask ourselves a question. Are we serious in addressing the issue of carbon in our atmosphere or not? Agriculture should not be immune from debate. Another question is: What do we do about it?

1. *“Livestock belching, farting and manure emissions of this and other gases has been estimated to account for 14 to 18 percent of the total human-induced greenhouse gases that are responsible for climate change. The remaining 82 to 86 percent of carbon emissions into the atmosphere comes from taking carbon out of the ground*

and pumping it into the atmosphere, whether through equally-potent methane leaks from natural gas wellfields and pipelines or through burning fuels to produce carbon dioxide.”

2. *“But the livestock also convert and degrade lands, radically reducing carbon sequestration – the natural ability of the biosphere to soak up atmospheric carbon – creating an even greater climate problem than methane emissions themselves.”*
3. *“Less visibly but perhaps more importantly, livestock grazing on the world’s grasslands, shrub steppes and deserts can cause even greater withdrawals from a carbon banking standpoint than cutting down the forests. Livestock grazing eliminates deep-rooted native grasses and wildflowers, replacing them with shallow-rooted annual weeds that thrive in disturbed environments and die every year, releasing their carbon back to the atmosphere. Annual weeds therefore have little ability to store carbon in the soil.”*
4. *“In addition, once rangelands become degraded through overgrazing, shrubs sometimes increase, but clearing these shrubs to stimulate forage production for livestock further cripples the land’s ability to store carbon.”*

To be fair, a few key strategy points addressing some of these issues are contained in the draft MCSP. They are listed here.

- *“Recognize Montana producers for their high adoption rates of soil health practices including no/conservation tillage and cover crops, improved grazing systems and efforts to maintain and restore native rangelands.”*
- *“Explore partnerships with producers and their associations to research conservation practice adoption factors, cost savings, and climate related co-benefits, such as carbon storage, increased water holding capacity in soils, and reductions in pest and disease risks.”*

The emphasis here is on increasing soil moisture and holding on to that capacity, restore native rangelands, and carbon storage. But the points made by Mr. Erick Molvar explain why this might be more difficult than it looks. If the agricultural industry doesn’t acknowledge or understand that some of the current practices are the problem, how will we see improvements? That is the enigma. In other words, how can we make improvements in our managing practices, if we refuse to acknowledge the fact that how we are managing our rangelands is the opposite of what is needed. Hopefully education will be part of this plan.

Farmers and ranchers cannot continue to overgraze or overuse pastures or rangelands and expect improvements in range conditions. As Mr. Molvar reported, livestock grazing uproots the native grasses and wild flowers, and allows exotic species of weeds to replace them. One of the most common of these invasive species is cheatgrass (*Bromus tectorum*). This has been devastating on public rangelands throughout the west, but the solution on public land should be the same as that on private lands. GWA would like to reference a summary from a scientific research article in the [Journal of Applied Ecology](#) written and published by Reisner, Michael D., et al,² entitled *Conditions favouring Bromus tectorum*

dominance of endangered sagebrush steppe ecosystems. Note the BSC cover that is mentioned in the first bullet point is referring to biological soil crusts.

- *“Model results imply that bunchgrass community structure, abundance and composition, along with BSC cover, play important roles in controlling *B. tectorum* dominance.”*
- *If the goal is to conserve and restore resistance of these systems, managers should consider maintaining or restoring: (i) high bunchgrass cover and structure characterized by spatially dispersed bunchgrasses and small gaps between them; (ii) a diverse assemblage of bunchgrass species to maximize competitive interactions with *B. tectorum* in time and space; and (iii) biological soil crusts to limit *B. tectorum* establishment. Passive restoration by reducing cumulative cattle grazing may be one of the most effective means of achieving these three goals.*

The science is out there and we can provide more upon request. The key point is there are ways and methods we can improve rangeland conditions, conditions which will achieve the desired results, but the question is do we have the will? Will the state inform and encourage private land holders to do what is required? Further, in the listing of key strategies, there is the suggestion of implementing financial rewards or incentives for those willing to make changes in management practices. We applaud the MCSC for this effort and commitment.

As for forests in private hands, the management of those forests should not be much different than those forests on state, tribal or federal lands. Private landowners must also be made aware of the additional science, the new science if you will. The understanding of private landowners that trees are a source of carbon sequestration. This is crucial to our implementation of a better land-use management policy. Much like those comments pertaining to agriculture, comments regarding the management of our Nations forests (whether it be private or public) should be applied to both.

Soils:

The importance of improving soil's ability to aid in the sequestration of carbon shouldn't be undervalued. In an article by Renee Cho³, dated February 21, 2018, on a blogsite called State of the Planet hosted by Earth Institute and Columbia University, Renee lays out several premises proving the soils ability to help in fighting climate change.

1. *“Sequestering carbon in soil, however, is a relatively natural way of removing carbon dioxide from the atmosphere with fewer impacts on land and water, less need for energy, and lower costs.”*
2. *“The Earth's soils contain about 2,500 gigatons of carbon—that's more than three times the amount of carbon in the atmosphere and four times the amount stored in all living plants and animals.”*
3. *“Currently, soils remove about 25 percent of the world's fossil fuel emissions each year.”*

4. *“How much carbon soils can absorb and how long they can store it varies by location and is effectively determined by how the land is managed. Because almost half the land that can support plant life on Earth has been converted to croplands, pastures and rangelands, soils have actually lost 50 to 70 percent of the carbon they once held. This has contributed about a quarter of all the manmade global greenhouse gas emissions that are warming the planet.”*
5. *“Agricultural practices that disturb the soil—such as tilling, planting mono-crops, removing crop residue, excessive use of fertilizers and pesticides and over-grazing—expose the carbon in the soil to oxygen, allowing it to burn off into the atmosphere. Deforestation, thawing permafrost, and the draining of peatlands also cause soils to release carbon.”*
6. *“A 2017 study estimated that with better management, global croplands have the potential to store an additional 1.85 gigatons carbon each year—as much as the global transportation sector emits annually. Moreover, some scientists believe soils could continue to sequester carbon for 20 to 40 years before they become saturated.”*

This impact of soil’s ability to sequester carbon cannot be understated, but this highlights the impact that man has had on our natural environment. If mankind would actually take the time and money to try restore the natural balance back to our soils, water, and forests; just imagine the impact we could have in fighting climate change. But it takes willingness, the commitment, and the dollars to do so. GWA hopes that these comments will provide the impetus and incentive to act upon what these recommendations. There is scientific proof these acts will help.

1G. SUPPORT CLIMATE RESILIENT FORESTS, RANGELANDS, AND WILDLIFE USING AN ALL-LANDS, ALL-HANDS APPROACH ACROSS OWNERSHIP BOUNDARIES.

The first two key strategies listed in the MCSP under 1G are listed here and they raise questions. First the text.

- *“Continue to address wildland fire risks through coordinating interagency planning and response, supporting wildfire-adapted communities, and building resilient landscapes through active forest-management to improve safety and protect communities across ownership boundaries.”*
- *“Use forest management to maintain structure and composition to increase resiliency to insects, disease and uncharacteristic stand-replacing wildfires; protect municipal watersheds; and maintain the long-term capacity of forests to continue to buffer emissions as natural carbon sinks.”*

Forests, Fires and Range:

What is the definition of “active forest-management” as referenced in the first key strategy? We don’t see definition of the term and traditionally speaking this has referred to active engagement by man to log, thin or selective cut forests. In some cases, reference has even been made to chemically treat areas to control vegetative growth. GWA feels

these manmade solutions are not applicable on public lands, solutions which we feel don't belong in a natural system.

In an article entitled "*Logging drives carbon emissions from U.S. forests, escalates climate crisis*" by Smith, Danna, et al⁴, dated Oct. 2, 2019 in the Missoula Current, there is this statement.

1. *"Many people are aware of the importance of protecting rainforests in Brazil to help mitigate climate change, but few realize that more logging occurs in the US, and more wood is consumed here, than in any other nation globally. The rate and scale of logging in the Southeastern US alone is four times that in South American rainforests."*
2. *"But the promotion of logging to supposedly curb carbon emissions is just part of the Administration's ongoing alignment with industry and troubling pattern of climate science denial. Carbon emissions from logging in the U.S. are 10 times higher than the combined emissions from wildland fire and tree mortality from native bark beetles."*
3. *"Fire only consumes a minor percentage of forest carbon, while improving availability of key nutrients and stimulating rapid forest regeneration. Within a decade after fire, more carbon has been pulled out of the atmosphere than was emitted."*
4. *"When trees die from drought and native bark beetles, no carbon is consumed or emitted initially, and carbon emissions from decay are extremely small, and slow, while decaying wood helps keeps soils productive, which enhances carbon sequestration capacity over time."*

This article highlights the science of carbon sequestration and the role that forests play in that effort. The practices supported by the science can be applied onto all private, tribal, state and federal lands. These thoughts should place a whole new insight in how we view the role of our forests and value of protecting them.

In another research paper published in Ecological Applications in 2018, Zald, Harold, Dunn, Christopher J.⁵, derived the following as reported in their paper "*Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape*". From the Abstract;

1. *"Using Random Forest ensemble machine learning, we found daily fire weather was the most important predictor of fire severity, followed by stand age and ownership, followed by topographic features. Estimates of pre-fire forest biomass were not an important predictor of fire severity."*
2. *"Our findings suggest intensive plantation forestry characterized by young forests and spatially homogenized fuels, rather than pre-fire biomass, were significant drivers of wildfire severity."*

In other words, day to day weather (such as hot, dry and those during periods of drought) and those highly-managed forests are more susceptible to severe fires than those that aren't managed to that degree. Forests with high biomass are not driving factors of wildfire severity. In summary of the article it states the following principals, principals

which proves the point that forest management may not be the solution we once thought it was.

3. *“First, it brings into question the conventional view that fire exclusion in older forests is the dominant driver of fire severity across landscapes.”*
4. *“There is strong scientific agreement that fire suppression has increased the probability of high severity fire in many fire-prone landscapes (Miller et al. 2009, Calkin et al. 2015, Reilly et al. 2017), and thinning as well as the reintroduction of fire as an ecosystem process are critical to reducing fire severity and promoting ecosystem resilience and adaptive capacity (Agee and Skinner 2005, Raymond and Peterson 2005, Earles et al. 2014, Krofcheck, et al. 2017).”*
5. *“However, in the landscape we studied, intensive plantation forestry appears to have a greater impact on fire severity than decades of fire exclusion.”*
6. *“Second, higher fire severity in plantations potentially flips the perceived risk and hazard in multi-owner landscapes, because higher severity fire on intensively managed private lands implies they are the greater source of risk than older forests on federal lands.”*
7. *“These older forests likely now experience higher fire severity than historically due to decades of fire exclusion, yet in comparison to intensively managed plantations, the effects of decades of fire exclusion in older forests appear to be less important than increased severity in young intensively managed plantations on private industrial lands.”*

Wildlife:

Of the key strategies mentioned, three of them recommend efforts to honestly assess wildlife and wildlife habitat, to assess climate adaption needs on a variety of species, and to communicate those assessments and needs to the public and users. The key here of course is the word “honestly”. For years, GWA has been trying to promote the dangers of climate change on a variety of species, some of those listed above in the introduction. As a result, we applaud MCSC for acknowledging and recommending these proposed actions. But we are skeptical, and the reason for that skepticism has been the actions of previous and recent state and federal land-use and wildlife management agencies. So many times, it seems as if state and federal agencies are at odds with each other or even at odds within their own government. How will this message be conveyed to all actors and what assurances are there that agencies would change direction as recommended?

A few key strategies mentioned within the context of wildlife is the idea of strengthening partnerships between private, local, state, tribal and federal entities. In addition to partnerships, the MCSC also recommends the building of new collaborations. GWA has also been somewhat skeptical of collaborations because based upon prior experience and beliefs, the use of collaborations has meant an excuse of likeminded user groups to form a coalition drowning out opposing views. There is also a belief that government agencies use collaboration as a mechanism for job avoidance, as a way for them to avoid making the hard decisions. GWA is not and would not be in favor of such participation if this were

to be the case. Any collaboration must include all voices who want to participate. Normally we would applaud the partnering of government agencies coming together to make positive changes on the behalf of wildlife. But again, the skepticism comes into play because we have seen massive political interference by ideological players manipulating the system to carry out policies undermining the goal. Besides, there are some principals that maybe, just maybe should not be compromised away.

One key strategy listed in the MCSP is:

- *“Protect, enhance, and restore rivers, streams, lakes, reservoirs, wetlands, and riparian areas that are critical to fish, wildlife, and plant populations. Provide for aquatic organism passage, where appropriate.”*

Again, we applaud such methods and actions. But we also recognize that several state and federal agencies seemed to have gone out of their way to weaken those protections, not strengthen them. Even the Department of Environmental Quality (DEQ) has made decisions that are counter to these goals. When we say an honest assessment, we mean a complete honest assessment and we suggest that the public and NGOs be allowed to have a voice in this effort.

An example of our concern highlighting the impacts of climate change on wildlife, GWA would like to refer MCSC to a piece of research entitled *“Climate change effects deer and moose in the Midwest.”* In the abstract written by Weiskopf, Sarah, R., et al⁶, there are these statements.

1. *“Warmer temperatures and decreasing snowpack in the region favor survival of white-tailed deer. In contrast, moose may become physiologically stressed in response to warming, and increasing deer populations spreading disease will exacerbate the problem.”*
2. *“Although there is some uncertainty about exactly how the climate will change, and to what degree, robust projections suggest that deer populations will increase in response to climate change and moose populations will decrease.”*

This is just an example of the science available and why reference should be made to it by state and local officials. The public must come to understand the replications of climate change. Right now, we believe they are not. This kind of data can be and has been replicated elsewhere and one that GWA has been trying to bring forth to the public through letters and comments specifically ie: the U.S. Forest Service. It is one that the state of Montana needs to be aware. Montana Fish, Wildlife and Parks cannot ignore the reality and we hope that the MCSP can be instilled into other state agencies.

1H: PROTECTING MONTANA’S WATER QUALITY AND QUANTITY FROM CLIMATE CHANGE.

There are only 4 key strategies listed under recommendation 1H and they are simple enough to be listed here.

- *“Promote wetland and stream function through restoring and protecting river corridors, floodplains and wetlands and supporting related education efforts.”*
- *“Integrate local drought and water quality planning into other climate and land use planning efforts.”*
- *“Invest in tools to improve statewide monitoring and assessment of water resources.”*
- *“Incorporate green infrastructure and adaptive water management that combine flooding mitigation, water storage, and water quality improvement into stormwater infrastructure and natural storage utilizing ditches, floodplains, and irrigated lands.”*

As GWA comments and reads these recommendations, it is not hard to understand where we as a people and a state have gone wrong when it comes to the protection of our water resources. This proves our point all along; we as a people know what to do, we just don't do it, or in some cases, we don't want to do it. The politics gets in the way. These 4 recommendations are actions that we as a Nation and a state should have been doing all along. If this document changes the existing paradigm, our existing attitude, then so much the better. But our fear is that this will become lip service. We urge DEQ and the state to prove us wrong.

Watersheds:

The first place when discussing best ways to protect Montana's water supply is to protect the state's watersheds. This would enhance both water quality and quantity. And in that regard, it should be stated that the majority of the state's headwaters lie on federal lands, either Bureau of Land Management, National Forests or National Parks. As a result, it is imperative there should be state input as well as public input with federal officials on the best methodology, on the need and the desire to make sure our watersheds are being properly protected from ongoing degradation. We should know, one of the primary functions of our National Forest Land was to protect the Nation's watersheds. It has been so since the establishment of the Forest Reserve Act of 1891. But slowly over time, through multiple use, and other legislation, our watersheds have almost come to be expendable. Our opinion.

To show how severe the problem of watershed degradation has become, GWA will reference a stat from The National Center for Ecological Analysis and Synthesis who released a report in July 2016 by McDonald, R.I., et al⁷ entitled *“Estimating watershed degradation over the last century and its impact on water-treatment costs for the world's large cities”*. One alarming statistic is this:

1. *The working group found that watershed degradation has impacted the cost of water treatment for about 1 in 3 large cities, increasing the costs by about half. Added up globally, the team calculated the cost to be a staggering \$5.4 billion per year.*

This is a remarkable and alarming statistic. Even though this is based upon global trends, it does represent the seriousness of how mankind has not done what is needed to protect our watersheds. If climate change were not an exacerbating factor in our watershed degradation, our watersheds would still need national attention. But it is, therefore making our degradation even more dire. To place this concern in more practical and realistic terms, we urge DEQ to acknowledge these summations from a journal article entitled “*Water quality degradation effects on freshwater availability: Impacts to human activities*” by Peters⁸, N.E., Meybeck, Michel. From their abstract, there are these points.

1. *“Human activities on all spatial scales affect both water quality and quantity. Alteration of the landscape and associated vegetation has not only changed the water balance, but typically has altered processes that control water quality. Effects of human activities on a small scale are relevant to an entire drainage basin. Furthermore, local, regional, and global differences in climate and water flow are considerable, causing varying effects of human activities on land and water quality and quantity, depending on location within a watershed, geology, biology, physiographic characteristics, and climate.”*
2. *“These natural characteristics also greatly control human activities, which will, in turn, modify (or affect) the natural composition of water. One of the most important issues for effective resource management is recognition of cyclical and cascading effects of human activities on the water quality and quantity along hydrologic pathways.”*
3. *“The degradation of water quality in one part of a watershed can have negative effects on users downstream. Everyone lives downstream of the effects of some human activity. An extremely important factor is that substances added to the atmosphere, land, and water generally have relatively long-time scales for removal or clean up.”*
4. *“Policy alone will not solve many of the degradation issues, but a combination of policy, education, scientific knowledge, planning, and enforcement of applicable laws can provide mechanisms for slowing the rate of degradation and provide human and environmental protection. Such an integrated approach is needed to effectively manage land and water resources.”*

In short, human activity affects water quality. The more disturbances occurring on private, local, state, tribal and federal natural lands, the more it will affect the quality and even the quantity of our Nation and state’s water. The types of disturbances are varied and multiple, all the way from agricultural impacts to recreation to soil productivity and fires.

We urge the MCSC to review and implement elements of the Forest Service paper FS-977 dated May 2011 entitled *Watershed Condition Framework: A Framework for Assessing and Tracking Changes to Watershed Condition*⁹. The purpose of this paper was to assess and monitor watersheds on Forest Service lands across the Nation and to adopt restoration for those watersheds that need improvement in the face of climate change.

Wilderness:

In actuality, GWA believes that one of the best protections of our watersheds is the application of wilderness, where and when appropriate. Wilderness areas eliminate the destructive effects of roadways, mechanized and motorized uses, protects water quality and quantity by preserving the integrity along riparian areas, plays and active role in carbon sequestration, protects the biological diversity of plants and animals, and to some degree may limit grazing. All of these positive aspects of wilderness also cut down on the likelihood of erosion, soil compaction and loss of soil integrity.

Agriculture:

On a side note, an issue that is exacerbated by climate change is the affect agriculture is having on our Nation's rivers. The following facts indicate that perhaps agriculture is having a larger impact on the quality and quantity of our Nation's water than politicians and the agriculture community realizes. GWA would like to refer DEQ to a National Geographic article by Alejandra Borunda¹⁰ dated March 2, 2020. She bases her article upon the research done by Brian Richter, the lead author of the study. In that article entitled "*How beef eaters in cities are draining rivers in the West*", there are these critical points.

1. *"The biggest user of river water by far, though, is agriculture and new research shows that across the western United States, a third of all consumed water goes to irrigate crops not for human consumption, but that are used to feed beef and dairy cattle. In the Colorado River basin, its over 50 percent."*
2. *"They tracked the water taken out of rivers and streams in each little fraction of a watershed to the places it was being used to irrigate crops, and in many cases could trace its journey to farms or counties that grew certain cattle feed crops.....They could also estimate how much the water withdrawals from individual watersheds would endanger fish populations living in those delicate waters. Low summer water flows in rivers across the region, particularly when caused by water extractions that end up irrigating cattle feed crops, have added to the local extinction risk faced by nearly 700 species of fish."*
3. *"Beef cattle and dairy industries expanded across the western U.S. over subsequent decades, but the animals needed more feed than they could forage from the dry landscapes—so feed crops like alfalfa became more and more critical to the burgeoning herds. As large-scale irrigation projects bloomed across the west, more and more cattle-feed crops could be grown, supporting ever-expanding herds. Some 23 million acres of alfalfa are grown across the U.S."*
4. *Just last week, a team published a paper in Science showing that the Colorado's flow is projected to diminish another 20 to 30 percent by the middle of the century.....Richter and his colleagues did the math and figured out that if 20 percent of the cropland currently used for cattle feed in the upper part of the Colorado River basin were to lie fallow, the states involved could meet their water use goals.*

We present these facts here to show that agriculture is a dominant user of water, in our Nation, in Montana and elsewhere. The water cycle, agriculture and climate change are all interrelated. One of the suggestions that the author above mentions (not highlighted here) is to pay farmers not to farm. That's the dire situation. The lack of mention and inclusion over the role that agriculture would play in trying to achieve the goal of protecting Montana's water quantity and quality is doomed for failure. This role must be addressed.

The Role of Beavers:

Would you believe that beavers actually have a direct role in climate change? But then again, we all do. But The Wildlife Society's website, dated October 26, 2018, Julia John¹¹ reported in her article, "*Could beavers help deal with climate change*", referred to a paper by Petri Nummi, lead author. In that paper Nummi states:

"his team found beavers release carbon into the atmosphere, adding to the contribution of greenhouse gases. But they also store carbon away in the soil. So which contribution is greater?"

The answer to that question is:

"Overall, beavers annually sequester an estimated 0.47 teragrams of carbon. But at the same time, they give off 0.82 teragrams of carbon dioxide and methane."

But that is not the real issue here, beavers also play a positive role in fighting the negative effects of climate change.

According to Suzanne Fouty¹², Ph.D, in a paper entitled "*Climate Change and Beaver Activity*", she makes a statement reported here.

"Beaver trapping was the first large-scale Euro-American alteration of watersheds."

But the issues we wanted to stress can best summed up by the article by Ben Goldfarb¹³ in Sierra Magazine dated July 3, 2018 entitled "*Beavers are the Ultimate Ecosystem Engineers*." According to Goldfarb, beavers can:

1. *Filtering pollution.* He states: "Every year, America's farmers use 20 million tons of synthetic fertilizers. When those chemicals reach the sea, they breed low-oxygen "dead Zones" devoid of marine life". In Rhode Island, researchers discovered that beavers could cut agricultural pollution by up to 45 percent, keeping estuaries healthy.
2. *Storing groundwater.* The weight of beaver ponds forces water into the ground, recharging the aquifers that we're depleting at a breakneck pace. Some researchers estimate that ponds up to 10 times as much water belowground as above it."
3. *"Wetlands are cradles of life: In some arid regions, they support 80 percent of the species despite covering just 2 percent of the landscape."*

4. *“Preventing Floods: Although most people associate beavers with flooding, their ponds can actually help prevent catastrophic deluges by slowing, spreading, and storing water.”*
5. *“Adapting to climate change: As the climate warms, more precipitation falls as rain instead of snow, running off directly to the ocean rather than gradually melting throughout the summer.....combine snow decline by relocating beavers to headwaters on public lands, where their ponds capture rainfall and keep streams full as the planet gets hotter.”*
6. *“Storing carbon: Just as forests suck carbon from the atmosphere and sequester it in wood, so beavers trap carbon in the form of organic sediment that settles to the bottom of their ponds.”*

These facets of beaver activity are a plus during hotter and drier summers. Beavers support groundwater percolation, prevents surface-water runoff, and maintains biodiversity and biological integrity. Once again man’s arrogance of not understanding the delicate balancing role of nature nearly wiped out this beneficial species. But beaver is making a comeback and as we are finding out, there is more of a need, more than ever to restore the balance and also aid in the help to fight climate change impacts.

In Conclusion:

GWA has tried to confine our comments to issues that either directly or indirectly relate to wildlife, wildlands, and watersheds, each of which are prescribed in the MCSP. We tried to make the point, all of these issues are concentric to each other, but ever more so as the health of each are dependent upon our changing climate. To deny climate change doesn’t exist or that specific individuals or groups have no role to play in combating it is selfish and shortsighted. As we said, just because some politicians, groups or organizations don’t believe in climate change doesn’t make it any less true. We all have a role to play. We feel GWA’s role is to be the voice for the voiceless, recognizing that wildlife are the ones most likely to pay the highest price for man’s actions, the price of extinction.

On May 29, 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services¹³ agency of the United Nations released a report to the world entitled *“Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.”* In paragraphs A5 and A6 respectively, there are these key messages.

“That human actions threaten more species with global extinction now than ever before. An average of around 25 percent of species in assessed animal and plant groups are threatened suggesting that around 1 million species already face extinction, many within decades, unless action is taken to reduce the intensity of drivers of biodiversity loss. Without such action, there will be a further acceleration in the global rate of species extinction, which is already at least tens to hundreds of times higher than it was averaged over the past 10 million years.”

Globally, local varieties and breeds of domesticated plants and animals are disappearing. This loss of diversity, including genetic diversity, poses a serious risk to global food security by undermining the resilience of many agricultural systems to threats such as pests, pathogens and climate change.”

This is why GWA felt the need to comment. Our changing climate is affecting our biodiversity, the world as we know it. The gift of inhabiting this world with the untold variety of species on this planet is what makes life worth living. Far too long, man has either ignored, or taken advantage of the life around us with an arrogance that is shameful. The same holds true for the variety of life here in Montana. We are blessed with so many wildlands which still holds potential for its wildlife, to squander that or let the world slowly change around us without trying to protect all living things is simply unthinkable.

So many of our species are very sensitive to these ongoing changes in our climate. As we said in our introduction, whether it be pika, wolverines, grizzly bears, or moose; large or small; or even the many species of fish in our waters, there needs to be a governing body that is trying to establish criteria and/or policy to minimize or at least mitigate the ongoing crisis that is here.

GWA applauds the intent behind this effort. We tried to comment in a constructive way in order to make this document even more effective. We could provide more research, more scientific papers and journals to prove our point, but we hope our leads will direct you to do the same, in the proper direction. Please accept our comments in the sincerity in which they were given.

Sincerely,

Clinton Nagel, President
Gallatin Wildlife Association

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From: [Katie Scherfig](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on draft Montana Climate Solutions Plan
Date: Sunday, March 22, 2020 8:10:16 PM

Council Members,

Thank you for your efforts in producing the draft Montana Climate Solutions plan. In addition to the specific comments below, please make it a priority that implementation begin immediately for those measures which can begin right away and that will help reduce greenhouse gas emissions.

-- Please support efforts to expand Montana's ability to understand climate risks and prepare for change. In particular, recommendations 1A through 1H should be funded and acted upon.

-- Montana needs more accessible climate science. Please support a larger Montana Climate Office with more staff, stronger Montana University System climate coordination, research and funding, and increased support from the state to communities so they can develop greenhouse gas reduction and climate adaptation strategies.

-- Recommendations 2A through 2E and 2G through 2K are essential for Montana to reduce greenhouse gas emissions and avoid locking into new fossil fuel infrastructure. Montana is deficient in programs and funding to support energy efficiency and conservation and the key strategies identified, if enacted swiftly and with financial support, are essential. They will save Montanans money while improving public health.

-- A statewide energy efficiency standard would save all Montanans money.

-- Raising the size cap on distributed generation solar systems (aka rooftop solar) would benefit schools, libraries, and other public buildings in their community - saving taxpayer dollars and creating educational opportunities for our youth.

-- Support adoption of low emission vehicle standards and actions that will incentivize/promote/enhance electric vehicles.

-- Please encourage and support community goal setting, energy data collection across sectors, and planning efforts to reduce emissions and save money in local communities.

-- Voluntary controls on oil and gas development are inappropriate. The industry has had decades to voluntarily curb greenhouse gas emissions and has failed to do so. Methane emissions from oil and gas development are easily controlled and should be required. The time has past for voluntary commitments from this greenhouse gas producing sector.

-- Carbon capture and sequestration is not an appropriate climate solution for coal-fired electricity. This unproven technology only makes dirty, expensive coal plants even more expensive and risky. The final recommendations should focus on reducing reliance on coal-fired electricity instead of relying on misguided, expensive, risky, and unproven technology.

Thank you,

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Katie Scherfig



BOZEMAN, MT

From: [Gwendolyn Struck](#)
To: [Climate Council](#)
Subject: [EXTERNAL] GOVERNMENT MANDATES
Date: Sunday, March 22, 2020 2:07:05 PM

MONTANA'S ELECTRIC COOPERATIVES ARE PROVEN LEADERS IN
REDUCING GREENHOUSE-GAS EMISSIONS,
AND IN USING CLEAN ENERGY SOURCES.
THEREFORE, I DO NOT BELIEVE ADDITIONAL GOVERNMENT MANDATES
ARE NEEDED.

From: [Angie Winter](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Draft Montana Climate Solutions Plan.
Date: Sunday, March 22, 2020 2:56:08 PM

Dear Council Members,

Thank you for the draft Montana Climate Solutions plan and for the opportunity to comment. While I have some specific suggestions for improvements below, I urge you to begin immediate implementation of measures to reduce carbon emissions.

Recommendations 1A through 1H should be funded and implemented. Adequate support for climate science is essential to our ability to understand risks and prepare for change. We need a better funded Montana Climate Office and increased state support to communities working to reduce carbon emissions and plan for climate adaptation.

Recommendations 2A through 2E and 2G through 2K are essential for Montana to reduce carbon emissions. Montana needs to support energy efficiency and conservation to save Montanans money, protect public health, and protect agriculture and recreation industry from the worst effects of climate change. Also critical are expanded shared solar, incentives to develop utility scale storage development, and incentives for solar ready & solar integrated design & building codes. A statewide energy efficiency standard is a key step in increasing energy efficiency.

Recommendation 2Q would increase allowable systems size for distributed generation systems – I suggest raising the cap up to 100 kW for residences and up to 250 kW for institutional installations. This would benefit schools, libraries, and other public buildings – saving taxpayer dollars and creating educational opportunities.

Voluntary controls on oil and gas development do not work. The industry has had decades to curb carbon emissions voluntarily and has failed to do so. Methane emissions from oil and gas development can be controlled and should be required.

Carbon capture and sequestration are unproven technologies and are not an appropriate way to address carbon emissions of coal-fired electricity. Instead, we should focus on reducing reliance on coal-fired electricity.

Please support adoption of low emission vehicle standards and actions to incentivize electric vehicles.

Please encourage and support local communities that choose to set strong carbon emission reduction goals.

In addition, Montana's renewable energy standard should be raised to 80% by 2035. This is achievable and will create jobs and save money.

7 16

There is a need to replace the coal severance tax as coal sales drop -- a tax on electricity could replace the coal severance tax, and also fund worker retraining programs and pension security for fossil fuel workers.

Please consider adding the above ideas to the Solutions plan.

Angie Winter
Kila, Montana

Sent from [Mail \[go.microsoft.com\]](mailto:go.microsoft.com) for Windows 10

From: [Daniel Eakin](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on draft Montana Climate Solutions Plan
Date: Monday, March 23, 2020 8:36:34 PM

Council Members,

Thank you for your efforts in producing the draft Montana Climate Solutions plan. In addition to the specific comments below, please make it a priority that implementation begin immediately for those measures which can begin right away and that will help reduce greenhouse gas emissions.

-- Please support efforts to expand Montana's ability to understand climate risks and prepare for change. In particular, recommendations 1A through 1H should be funded and acted upon.

-- Montana needs more accessible climate science. Please support a larger Montana Climate Office with more staff, stronger Montana University System climate coordination, research and funding, and increased support from the state to communities so they can develop greenhouse gas reduction and climate adaptation strategies.

-- Recommendations 2A through 2E and 2G through 2K are essential for Montana to reduce greenhouse gas emissions and avoid locking into new fossil fuel infrastructure. Montana is deficient in programs and funding to support energy efficiency and conservation and the key strategies identified, if enacted swiftly and with financial support, are essential. They will save Montanans money while improving public health.

-- A statewide energy efficiency standard would save all Montanans money.

-- Raising the size cap on distributed generation solar systems (aka rooftop solar) would benefit schools, libraries, and other public buildings in their community - saving taxpayer dollars and creating educational opportunities for our youth.

-- Support adoption of low emission vehicle standards and actions that will incentivize/promote/enhance electric vehicles.

-- Please encourage and support community goal setting, energy data collection across sectors, and planning efforts to reduce emissions and save money in local communities.


-- Voluntary controls on oil and gas development are inappropriate. The industry has had decades to voluntarily curb greenhouse gas emissions and has failed to do so. Methane emissions from oil and gas development are easily controlled and should be required. The time has past for voluntary commitments from this greenhouse gas producing sector.

-- Carbon capture and sequestration is not an appropriate climate solution for coal-fired electricity. This unproven technology only makes dirty, expensive coal plants even more expensive and risky. The final recommendations should focus on reducing reliance on coal-fired electricity instead of relying on misguided, expensive, risky, and unproven technology.

Thank you,

--

Daniel Eakin


Sidney, MT

From: [REDACTED]
To: [Climate Council](#); [REDACTED]
Subject: [EXTERNAL] Climate control
Date: Monday, March 23, 2020 10:55:07 AM

Montana's electric cooperatives are proven leaders in reducing greenhouse-gas emission, and in using clean energy sources. Therefore, I do not believe additional government mandates are needed.

Respectfully,

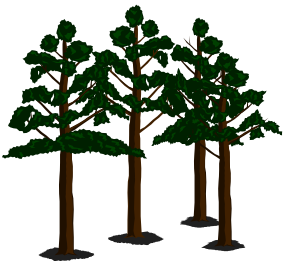
Randy Jones

Sidney Montana

From: [Scott Kuehn](#)
To: [Climate Council](#)
Cc: [scott kuehn](#)
Subject: [EXTERNAL] Comments on Montana Climate Solutions Plan
Date: Monday, March 23, 2020 9:19:59 AM
Attachments: [MT Climate Solution Plan Scotts comments March 23 2020.pdf](#)

Scott Kuehn
Certified Forester
Pyramid Mountain Lumber
[REDACTED]
Missoula, MT 59804
[REDACTED]

Forest Health is 2 rings/inch



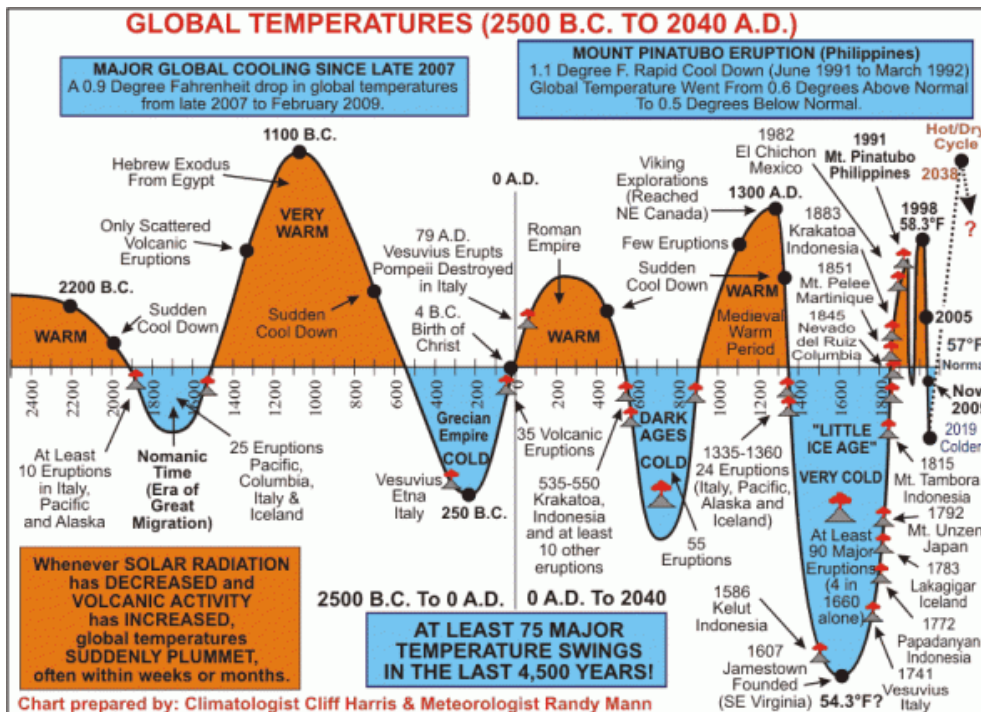
Scott Kuehn
Missoula, MT 59804

7 19

March 23, 2020

Comments of Montana Climate Solutions Plan

Attached are my comments after reading the Montana Climate Solutions Plan. I am no way a climate change denier, but have looked at both sides of the science. Our climate has been changing for millions of years, from the creation of the peaks in Glacier Park to the boiling mud pots in Yellowstone. 12,000 to 15,000 years ago, the continental ice shelf reached as far as Polson. Missoula was under 1000' of water dammed up by a glacier by Sandpoint. 12,000 years ago is a blink of an eye in geological time. Since then, all of the wildlife, forests, and ecosystems have come back to what we see today. Climates change and they always will.



I've tried to break up my comment on sections listed in the plan.

1D

I support active management on all ownerships of forested lands in Montana. Not just for reduction in wildfire risks, but to maintain healthy, productive forests that absorb millions of

tons of CO every year. Active management also includes harvesting trees to maintain forest health. These trees will be processed into wood products that will be used in homes and buildings sequestering carbon for years.

7 19

Every forest manager is aware of the Montana/Idaho Airshed program and many of us have been involved since its inception in 1978. Every forest manager is aware of the use of prescribed fire for forest management and fuels reduction. We've been using prescribed fire for the last 70 years. We have been working with the MT DEQ to allow more prescribed burning, especially during the winter months.

Urban forestry canopy is a small, but important part of the solution. But nowhere in this draft does it mention the millions of acres of timberland, Tree Farm, private industrial forest, State and National Forests that absorb CO every day. Montana forests play a huge role in reducing CO that this plan failed to address.

1F

Montana forest owners already diversify their income streams by utilizing proper forest management. Keeping their forest healthy, absorbing CO, providing for wildlife, water and reducing wildfire risks. Every tree harvested and turned into a 2x4 or a sheet of plywood is sequestering carbon for years to come.

What is your definition of "Long-lived wood products?" It's only mentioned here, but not defined. Are you thinking Mass Timber which is mentioned in 3D #4? Mass timber is a new innovative way of construction with wood and does sequester carbon, but so does a 2x6 in a single-family home, or apartment complex. This plan seldom mentions the sequestration of carbon by using wood products in building. It is mentioned several times in regard to ranching or underground carbon storage. Very little in this plan addresses using wood products for construction versus Cement, steel and other high fossil fuel consumptive building products.

1G

I strongly support active management on all forested lands. Forest management and fuels reduction projects rely on heavy equipment and hundreds of gallons of diesel (Fossil fuel) a day. Log trucks hauling the logs burn diesel. All of which goes against the policy of this plan to reduce the use of fossil fuels. We know of no plans to convert logging equipment or log trucks to electric motors. Adding recharging stations at rest areas as promoted in this plan, will not replace the need for diesel for trucking in the near future. Each new truck or piece of equipment has to conform to Tier 3 or 4 emission regulations. A tier 4 diesel engine in downtown Los Angeles is actually an air filter, that is, the exhaust is cleaner than the air it takes in. (See Caterpillar web site)



Tier 4 exhaust on a Log Loader. This is exhaust, but looks like a jet engine.

Biofuels are a good step towards decreasing diesel consumption in large trucks, but creating Biofuels is not carbon neutral either. Whether from cooking oil, wood waste or other sources, it takes energy to produce energy.

The plan mentions Electric Vehicles. I can see the use of electric vehicles (EV) in cities, but they are a long way off from taking the family on a cross country trip in the family truckster EV. Can you imagine the whole family pulling into a rest area, going to the bathroom, then sitting there waiting for the family truckster getting recharged? Can you imagine the kids saying, “Are we charged yet, are we charged yet?”





Craig Cross
To all the green people with green cars...
This is an electric charging station, powered by a diesel motor. 🤔🤔🤔🤔🤔🤔



IRONY
Irony is a Toyota Prius being recharged by a gas powered Honda portable generator.

I support the development of Biofuels from wood products, but must be cost effective. I also support the new mass timber building program, but I also support the use of wood products in the entire housing industry. It doesn't matter if it's a 2x8 used in the production of a mass timber wall, or a 2x8 used in a home, both sequester carbon for years.

3D

I absolutely disagree with this statement in 3D. Yes, the forest products industry has changed over the last 50 years, for the better. Local sawmills employ 100-150 people in the small "Rural" towns like Seeley Lake, Thompson Falls, Livingston, Deer Lodge, St. Regis. They rely on profession loggers and log haulers to cut, process and haul the logs to the mill. These mills are the life blood of these towns. Not just the mills, but the loggers, truckers and support businesses. No loggers, no logs, no mills, no mass timbers or 2x6's

Fifty years ago, a logger could by a D5 Caterpillar or skidder for under \$50,000. Today's loggers have millions tied up in just several pieces of equipment. These state-of-the-art machines are all computerized and require specialized mechanics to work on the computerized systems.

What do you mean when you say "Existing infrastructure and planning systems limit the capacity of the industry to treat forest at higher risks of wildfire due to climate change..." You're nuttier than a squirrel turd if you believe that. All of the mills in Montana are operating at 60-70% capacity. Lack of long term, reliable, and sustainable timber supply is the problem, not lack of infrastructure. Many loggers are hired by the wildland fire fighting organizations to help fight forest fires. Montana still has the infrastructure of sawmills, post and pole, specialty small sawmills that are able to use the products generated during fuel reduction products. Arizona and Colorado have lost their mills and have to pay exorbitant amount of taxpayer money to treat these fuels.

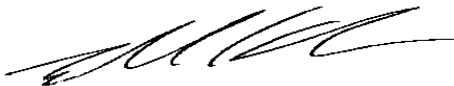
I disagree that Montana's economy or transitioning away from Natural Resources. Sawmills are spending million dollars' worth of upgrades, the USFS is increasing their annual cut in Region 1.

Conclusion:

We're not making any more dinosaurs and at some point, our oil supply will run out. We need to start looking into alternate forms of energy, not just wind and solar. We're a long way off from solar powered jet liners or locomotives.

As I read this plan, all I could think of is the government will want more tax money from industry and individuals to help fund more research. This plan mentions Funding: 22 times, Research: 36 times, Capacity: 31 times, Expand: 9 times and Universities: 30 times, all of which would have their hand out for more funding. This looks like those who are hooked on government funding/grants will continue to receive more funding. When one of the easiest ways to reduce CO and sequester carbon is through forestry and sustainable forest management and is barely mentioned in this plan.

Sincerely'



Scott Kuehn

From: [Kelsey K. Sather](#)
To: [Climate Council](#)
Subject: [EXTERNAL] I Support the MT Climate Solutions Plan
Date: Monday, March 23, 2020 3:10:09 PM


Dear Montana Climate Council,

I'm writing in support of the Montana Climate Solutions Plan. Both the proactive and reactive measures outlined in the draft are vital first steps towards mitigating greenhouse gases while preparing for the anticipated consequences of the changing climate. Thank you to the people who put the hard work and astute vision into the plan.

As a young adult who would like to have children with my husband, I've been deliberating on whether or not it's an ethical decision to bring a child into a world facing global warming. If Montana committed to an infrastructure that prioritized renewable energy, I would feel much more confident in creating a family.

I was born and raised in Montana. My Norwegian ancestors homesteaded in the state's north-central plains. I am proud to call myself a Montanan. Please continue our state's tradition of adaptability and common sense, and commit to the promising future outlined in the Montana Climate Solutions Plan.

Sincerely,
Kelsey Sather



From: [Scott, Lauren](#)
To: [Climate Council](#)
Cc: [Stovall, Lindsay](#)
Subject: [EXTERNAL] American Chemistry Council - Comments on the Montana Climate Solutions Draft Plan
Date: Monday, March 23, 2020 1:07:53 PM
Attachments: [ACC Letter on Montana Climate Solutions Council Report March 31 2020.pdf](#)

Hello Rebecca Harbage,

On behalf of the American Chemistry Council, I have attached comments on the Montana Climate Solutions Plan. Thank you in advance for considering our comments. Should you have any questions, please do not hesitate to contact myself or Lindsay Stovall.

Also, I hope this email finds you well as we navigate this difficult time as a country.

All the best, Lauren

Lauren Scott

American Chemistry Council
Manager, State Affairs

[REDACTED] | Sacramento, CA | 95814

C: [REDACTED]
www.americanchemistry.com [americanchemistry.com]

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March 31, 2020

Rebecca Harbage
Director's Office
Montana Climate Solutions Council
Montana Department of Environmental Quality
P.O. Box 200901, Helena, MT 59620-0901
Delivered Via Email to: ClimateCouncil@mt.gov

Dear Members of the Montana Climate Solutions Council:

Thank you for the opportunity to provide comments regarding the 'Montana Climate Solutions Plan: Preliminary Recommendations and Key Questions for Partner and Public Comment'. The American Chemistry Council (ACC) and its members support the adoption of the most recent building energy codes without weakening amendments. We are pleased to see recommendation 2A "Modernize Montana Building Energy Codes and Administrative Processes to Promote Energy Efficiency and Other Climate Benefits" included in the report.

Chemical Industry and Construction Value Chain are Important Stakeholders

The decisions of the Climate Solutions Council impact ACC's members and their employees. The chemical industry supplies many products and materials to the building and construction value chain, including those products that deliver energy efficiency throughout the entire building structure. ACC's members are also large users of energy so the responsible use of energy is important to the industry's economic health and competitiveness. In Montana, the chemical industry provides thousands of in-state jobs, generates over four million in state and local tax revenue, and ships \$224 million in products around the world each year.

ACC Supports recommendation 2A: Modernize Montana Building Energy Codes and Administrative Processes to Promote Energy Efficiency and Other Climate Benefits

Energy efficiency is the lowest cost option for meeting energy demand. Energy efficient buildings create economic opportunities for businesses and industry by promoting new energy efficient technologies and reducing energy waste.

Studies have shown that the adoption of the most recent energy codes will result in healthier, more comfortable, and more resilient homes. Improvements to the building envelope improve occupant comfort and maintain temperatures, especially during events with severe weather. A study conducted after Superstorm Sandy found that homes built to newer energy codes enabled residents to safely stay in their homes longer after a power outage compared to similar buildings constructed under an older code.¹ The ability to shelter in place longer saves lives and provides critical flexibility for deploying first responder resources.

¹ ACEEE. *Leaks and Lives: How Better Building Envelopes Make Blackouts Less Dangerous*
<http://aceee.org/files/proceedings/2014/data/papers/1-439.pdf>.

The impact of monthly energy bills on those with low or fixed income, particularly the elderly, can be significant.

- About one in five households reported reducing or forgoing basic necessities like food and medicine to pay an energy bill and 14% reported receiving a disconnection notice for energy service.
- Nearly one-third of U.S. households (31%) reported facing a challenge in paying energy bills or sustaining adequate heating and cooling in their home in 2015.
- 11% of households surveyed reported keeping their home at an unhealthy or unsafe temperature.

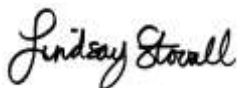
Considering that newly built homes will be around for 50 to 100 years, Recommendation 2A will help ensure that all new homes lock in efficiency and health improvements for years to come.

ACC also supports these specific strategies listed within Recommendation 2A:

- Provide for regular adoption of updated International Energy Conservation Code (IECC) codes every 3 years.
- Accelerating the code adoption process to occur within 12 months of a new code being issued by the International Code Council (ICC).
- Requiring and supporting training and enforcement of the code; training on code implementation and enforcement are important components of effective implementation.

Thank you in advance for considering our views. Should you have any questions or comments, please do not hesitate to contact me at [REDACTED] or via email at [REDACTED].

Sincerely,



Lindsay Stovall
Director, State and Regulatory Affairs

[REDACTED]
American Chemistry Council

From: [REDACTED]
To: [Climate Council](#)
Cc: [REDACTED]
Subject: [EXTERNAL] Public Comment Supporting Energy Initiative
Date: Monday, March 23, 2020 7:58:30 PM

To whom it may concern;

I have read the draft of the Montana Climate Solutions report.

I support this; it's certainly shows progress and our state government's opportunity to spend taxpayer money wisely. Every MT resident has to be informed of the climate science and help them understand it. We must adapt to climate change, even a low-populated state like MT – we still contribute greatly to greenhouse gas emissions. Clean renewable energy helps reduce this effect and needs to be expanded.

Every citizen can make an effort to change everyday habits and routines to lessen the impact of climate change to their families, surroundings, lands and livelihoods. Adaptation requires change, but change is good and can even be beneficial.

Funding should be made available to help Montanans adapt to and accept these changes to our earth and lessen it's impact on their lives.

I believe the study's three (3) main initiatives and the list of recommendations for each are well-written and thought out.

I support this and hope the state legislators adopt these resolutions and will fully fund this effort.

Thank you!

Respectfully,

Ken Ketchum
[REDACTED]
[REDACTED]

From: [Michael Wood](#)
To: [Climate Council](#)
Subject: [EXTERNAL] MT Climate Solutions Plan - comments
Date: Monday, March 23, 2020 1:35:06 PM

To whom it may concern,

First, I want to thank you for your efforts to craft the draft Montana Climate Solutions plan. Beyond my specific comments below, I am also writing to emphasize that the final plan *must ensure* Montana can (*at least*) meet the greenhouse gas (GHG) reductions goals established in the Executive Order. In particular, I'd like to briefly express my perspective concerning energy production in Montana, before delving into the specific strategies in the draft report.

Energy production is one of the single largest producers of GHGs worldwide. As is well known, a 2018 IPCC report concluded we have until the end of this decade to avoid the most extreme impacts from climate change. While Montana's contribution of GHGs are minuscule on a global scale, we have a moral and **ethical** responsibility to "do our part" in helping maintain a sustainable environment for current and future generations of Montanans.

Moreover, technological advancements in renewable energy productions have already fundamentally shifted the global energy production market, moving it increasingly away from traditional fossil fuel sourcing, and toward renewable energy sourcing. Indeed, large and small investors worldwide have recognized that technological advancements in renewable energy, coupled with the growing "PR problem" for the fossil fuel industry at a global scale, WILL result in "stranded assets" within the fossil fuel industry. Investment firms like Blackrock, Morgan Stanley, institutional endowment funds, and state pensions have already begun divesting from fossil fuel production across the board, and this trend is predicted to increase with each passing year in the coming decade.

Aggressively reducing Montana's reliance upon fossil fuels for energy production, and creating incentives for investment in renewable energy at a large scales within our state, is clearly good for our climate and the well-being of our communities. Moreover, if planned and executed well, it may also allow our energy production sector to remain "ahead of the curve", and avoid the "stranded asset" problem already hitting the sector at a global scale as Montana transitions to a 21st Century energy production and utilization reality. Please ensure that, wherever possible, GHG reduction strategies in the draft Plan are implemented *immediately*, as a means of incentivizing this transition.

With regard to the draft plan specifically:

Section 1: Adaptation.

Please support efforts to expand Montana's ability to understand climate risks and prepare for

change. Recommendations 1A - H should be funded and acted upon.

In particular, Montana needs more accessible, up-to-date climate science. Please support a larger Montana Climate Office with more staff and funding, stronger Montana University System climate coordination, research and funding, and increased support from the state to communities so they can develop climate adaptation and mitigation strategies and plans.

As an aside, I am also concerned with possible functional redundancies between the Montana Climate Office, the Climate Advisory Council, and the Climate Smart Montana Network. Would it be feasible to coordinate these three entities under one umbrella?

Section 2: Mitigation.

In conjunction with my opening paragraphs concerning the imperative reduce Montana's GHGs as rapidly as possible, I am strongly in favor of prioritizing an analysis of how Montana can achieve a net-zero condition economy wide, by 2030, 2035, 2040, etc. The draft plan currently states:

“Further discussion is warranted and the Council looks forward to continued dialogue to better understand these concerns to inform efforts at improving modeling to meet long term goals and evaluate tradeoffs, and better understand the limitations of current assessments.” (p.10)

This language should be changed to indicate an actual commitment and prioritization of an assessment that clarifies how Montana WILL meet its goals and by what date.

Having said this, I believe recommendations 2A -E and 2G-K are essential for Montana to reduce greenhouse gas emissions and avoid building new fossil fuel infrastructure. Our state is woefully deficient in programs and funding to support energy efficiency and conservation, and the key strategies identified should be enacted swiftly and funded, saving Montana residents and businesses money while improving public health.

A statewide energy efficiency standard is needed to meet the plan goals.

Raising the size cap on rooftop solar systems is very important. This would benefit schools, libraries, and other public buildings, save taxpayer dollars and create educational opportunities.

The adoption of low emission vehicle standards and actions that will incentivize, promote, or enhance electric vehicles is crucial to reducing transportation emissions.

Add key strategies that would strengthen transit systems throughout Montana, helping to

reduce emissions from transportation.

Support community climate action planning, including goal setting, energy data collection across sectors, and planning efforts to reduce emissions and save money in local communities.

Voluntary controls on oil and gas development are insufficient. The industry has had decades to voluntarily curb greenhouse gas emissions and has not. Methane emissions from oil and gas development should be required.

Lastly, while I believe carbon capture and sequestration is not an appropriate climate solution for coal-fired electricity, it *may eventually be* a source of economic opportunity, separate and apart from Montana meeting its GHG reduction goals. As such, CCS technology and development ought to be pursued as a larger economic development strategy within Montana. As for this draft Plan, the final recommendations should focus on reducing reliance on coal-fired electricity instead of relying on this, as-yet, unproven and experimental technology.

Thank you for the opportunity to comment on this draft Plan.

Very Sincerely,

Michael Wood



Missoula, MT 59806

From: [Youngs](#)
To: [Climate Council](#); [REDACTED]
Subject: [EXTERNAL] Comments on Montana Climate Solutions Plan
Date: Monday, March 23, 2020 2:57:35 PM
Attachments: [Climate Plan comments.doc](#)

To: Montana Climate Solutions Council

cc: Senator Susan Webber
Representative Marvin Weatherwax Jr.

Comments on:

MONTANA CLIMATE SOLUTIONS PLAN

OVERALL:

There is a serious problem in there not being a needs inventory. What greenhouse gases are we concerned with, in what volumes, from what sectors of the economy and what are their CO2 equivalents, Without these data it will be impossible to assess the completeness of the plan or measure progress.

Additionally, the plan should set out a path to accomplish “net greenhouse gas neutrality for average annual electric loads in the state by no later than 2035” and “net greenhouse gas neutrality economy wide at a date to be determined by the Council.” A deadline should also be set for all economic sectors including agriculture, forestry, surface transportation, airports and built environment (development codes and planning, construction materials and design).

Each of these sectors should be evaluated in terms of additional climate forcing (CO2, N2O, CH4, dust, etc.) to the projected achievement of neutrality.

AGRICULTURE:

The recent “doomsday” report from the IPCC states that it will be impossible to keep global temperatures at a safe level unless there is also a transformation of the way the world produces food and manages land.

Methane from livestock and other agriculture activities is mentioned in the plan as a seemingly minor aside. Methane is more than 80 times as powerful as carbon dioxide on a 20 year time frame and 30 times on a 100 year time frame. It can't be ignored.

Nitrogen fertilizer can account for more than 50% of total energy use in agriculture. There are ways to produce electricity without releasing large volumes of GHG, but there aren't ways to produce synthetic fertilizers without producing GHG. Additionally, their pollution problems for water bodies are well known. The only source for returning nutrients to the soil is by using traditional methods of composting, cover crops, no-till planting and related techniques.

The nutrients in the compost should be returned to the soil where the food is being raised, Which would involve substantial changes in raising, transporting and marketing food as well

as how it is raised. This should also facilitate improvement in the soil quality and carbon capture.

MACHINES:

The draft plan calls for “aggressive and timely adoption . . . of (electric) passenger vehicles. . . “ for helping to reduce GHG emissions. Additionally, this would have secondary desirable effects. Unlike the ottocycle engine, a properly built electric motor could last nearly forever. The only friction points are the bearings which can be refurbished periodically. The batteries are another issue, but with proper design that problem will also disappear. A huge energy cost of all cars is the original manufacture. Often it takes more energy to produce the car than it will ever use up in fuel.

In 1977 Percival Goodman stated in The Double E “. . . a long period of usefulness is wanted Parts wear out, so easy repair and replacement are essential, a requirement that calls for the designer to make clear the function as well as how it functions.” In the March, 2020 issue of National Geographic The End of Trash echos this sentiment with Recycle, Refurbish, Reuse or Repair. In 1971 Barry Commoner (The Closing Circle) explained how release of massive amounts of carbon dioxide leads to atmospheric warming. This also applies to all mass produced items. Montana will never manufacture cars, but refurbishing and repair could be a huge permanent industry.

TRANSPORTATION:

There needs to be a nationwide electric transportation system. We can have our preference as to what that system should be like and where it should intersect with Montana, but until the decision is made about design we'll have to wait. As for a local and rural system we could begin planning now. Electric buses would seem the most appropriate.

BUILT ENVIRONMENT:

Building codes should be modified to allow for pole and beam and mass timber construction. These would greatly reduce CO2 emissions in residential, commercial and office buildings by eliminating most concrete and steel. The school of architecture at Montana State University would likely be interested in helping.

OTHER SOURCES OF ELECTRICITY:

The Future of Montana Electricity includes two intriguing possibilities:geothermal and low-head hydroelectric.

Worldwide, geothermal is growing rapidly. Montana could be a part to this.

The geothermal section (of The Future of Montana Electricity) states that “The state does contain several high temperature sites that could provide clean renewable base-load power.” These sites need to be identified and evaluated.

The water resources section includes adding additional (or new) capacity to existing dams, and building new sources for small scale hydro. These projects would not create the environmental problems which large facilities typically involve.

Thank You for the opportunity to submit these comments. Please let me know if I can be of

further help.

Harold Young

St. Ignatius, MT 59865

To: Montana Climate Solutions Council

cc: Senator Susan Webber
Representative Marvin Weatherwax Jr.

Comments on:

MONTANA CLIMATE SOLUTIONS PLAN

OVERALL:

There is a serious problem in there not being a needs inventory. What greenhouse gases are we concerned with, in what volumes, from what sectors of the economy and what are their CO2 equivalents, Without these data it will be impossible to assess the completeness of the plan or measure progress.

Additionally, the plan should set out a path to accomplish “net greenhouse gas neutrality for average annual electric loads in the state by no later than 2035” and “net greenhouse gas neutrality economy wide at a date to be determined by the Council.” A deadline should also be set for all economic sectors including agriculture, forestry, surface transportation, airports and built environment (development codes and planning, construction materials and design).

Each of these sectors should be evaluated in terms of additional climate forcing (CO2, N2O, CH4, dust, etc.) to the projected achievement of neutrality.

AGRICULTURE:

The recent “doomsday” report from the IPCC states that it will be impossible to keep global temperatures at a safe level unless there is also a transformation of the way the world produces food and manages land.

Methane from livestock and other agriculture activities is mentioned in the plan as a seemingly minor aside. Methane is more than 80 times as powerful as carbon dioxide on a 20 year time frame and 30 times on a 100 year time frame. It can't be ignored.

Nitrogen fertilizer can account for more than 50% of total energy use in agriculture. There are ways to produce electricity without releasing large volumes of GHG, but there aren't ways to produce synthetic fertilizers without producing GHG. Additionally, their pollution problems for water bodies are well known. The only source for returning nutrients to the soil is by using traditional methods of composting, cover crops, no-till planting and related techniques.

The nutrients in the compost should be returned to the soil where the food is being raised, Which would involve substantial changes in raising, transporting and marketing food as well as how it is raised. This should also facilitate improvement in the soil quality and carbon capture.

MACHINES:

The draft plan calls for “aggressive and timely adoption . . . of (electric) passenger vehicles. . . “ for helping to reduce GHG emissions. Additionally, this would have secondary desirable effects. Unlike the otto cycle engine, a properly built electric motor could last nearly forever. The only friction points are the bearings which can be refurbished periodically. The batteries are another issue, but with proper design that problem will also disappear. A huge energy cost of all cars is the original manufacture. Often it takes more energy to produce the car than it will ever use up in fuel.

In 1977 Percival Goodman stated in The Double E “. . . a long period of usefulness is wanted. Parts wear out, so easy repair and replacement are essential, a requirement that calls for the designer to make clear the function as well as how it functions.” In the March, 2020 issue of National Geographic The End of Trash echoes this sentiment with Recycle, Refurbish, Reuse or Repair. In 1971 Barry Commoner (The Closing Circle) explained how release of massive amounts of carbon dioxide leads to atmospheric warming. This also applies to all mass produced items. Montana will never manufacture cars, but refurbishing and repair could be a huge permanent industry.

TRANSPORTATION:

There needs to be a nationwide electric transportation system. We can have our preference as to what that system should be like and where it should intersect with Montana, but until the decision is made about design we'll have to wait. As for a local and rural system we could begin planning now. Electric buses would seem the most appropriate.

BUILT ENVIRONMENT:

Building codes should be modified to allow for pole and beam and mass timber construction. These would greatly reduce CO2 emissions in residential, commercial and office buildings by eliminating most concrete and steel. The school of architecture at Montana State University would likely be interested in helping.

OTHER SOURCES OF ELECTRICITY:

The Future of Montana Electricity includes two intriguing possibilities: geothermal and low-head hydroelectric.

Worldwide, geothermal is growing rapidly. Montana could be a part to this.

The geothermal section (of The Future of Montana Electricity) states that “The state does contain several high temperature sites that could provide clean renewable base-load power.” These sites need to be identified and evaluated.

The water resources section includes adding additional (or new) capacity to existing dams, and building new sources for small scale hydro. These projects would not create the environmental problems which large facilities typically involve.

7 25

Thank You for the opportunity to submit these comments. Please let me know if I can be of further help.

Harold Young
St. Ignatius, MT 59865

From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb comment
Date: Tuesday, March 24, 2020 8:33:55 AM

Does the Councils recommend to shut down the natural gas use by many cities, and towns in Montana? What energy source do you wish to replace natural gas with if you recommend the end of natural gas to those communities? The Council should take a vote on this issue.

From John Cobb, Augusta, Montana



Virus-free. www.avg.com [[avg.com](#)]
[\[avg.com\]](#)

From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Tuesday, March 24, 2020 8:33:55 AM

Can the Council be more clear on what it wants to do with the propane tanks that dot Montana that are used by thousands of Montanans? Does the Council seek to eliminate those tanks?

From John Cobb, Augusta, Montana



Virus-free. www.avg.com [avg.com]
[avg.com]

From: [John Cobb & Cheryl Lux & Cobb Charolais](#)
To: [Climate Council](#)
Subject: [EXTERNAL] john cobb recommendation
Date: Tuesday, March 24, 2020 8:33:57 AM

In the executive order it says” Whereas, Montana’s CO2 emissions have dropped 20 percent from the historical high in 2007, while the state gross domestic product grew more than 25 percent over the same period, demonstrating the resiliency of our economy to grow as emissions decline.

Where did that information come from? You need to list where the reduction in CO2 came from. Was it simply reducing part of the Coal Strip units or other coal utilities? If the reduction is because of less coal use and more natural gas use- is that bad to keep using natural gas as an energy source?

Are you comparing the reduction on CO2 to the grown of the economy when they may not be related?

From John Cobb Augusta, Montana



Virus-free. www.avg.com [[avg.com](#)]
[\[avg.com\]](#)

From: [John Dunkum](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on draft Montana Climate Solutions Plan
Date: Tuesday, March 24, 2020 8:38:05 AM

Council Members,

Thank you for your efforts in producing the draft Montana Climate Solutions plan. In addition to the specific comments below, please make it a priority that implementation begin immediately for those measures which can begin right away and that will help reduce greenhouse gas emissions.

-- Please support efforts to expand Montana's ability to understand climate risks and prepare for change. In particular, recommendations 1A through 1H should be funded and acted upon.

-- Montana needs more accessible climate science. Please support a larger Montana Climate Office with more staff, stronger Montana University System climate coordination, research and funding, and increased support from the state to communities so they can develop greenhouse gas reduction and climate adaptation strategies.

-- Recommendations 2A through 2E and 2G through 2K are essential for Montana to reduce greenhouse gas emissions and avoid locking into new fossil fuel infrastructure. Montana is deficient in programs and funding to support energy efficiency and conservation and the key strategies identified, if enacted swiftly and with financial support, are essential. They will save Montanans money while improving public health.

-- A statewide energy efficiency standard would save all Montanans money.

-- Raising the size cap on distributed generation solar systems (aka rooftop solar) would benefit schools, libraries, and other public buildings in their community - saving taxpayer dollars and creating educational opportunities for our youth.

-- Support adoption of low emission vehicle standards and actions that will incentivize/promote/enhance electric vehicles.

-- Please encourage and support community goal setting, energy data collection across sectors, and planning efforts to reduce emissions and save money in local communities.


-- Voluntary controls on oil and gas development are inappropriate. The industry has had decades to voluntarily curb greenhouse gas emissions and has failed to do so. Methane emissions from oil and gas development are easily controlled and should be required. The time has past for voluntary commitments from this greenhouse gas producing sector.

-- Carbon capture and sequestration is not an appropriate climate solution for coal-fired electricity. This unproven technology only makes dirty, expensive coal plants even more expensive and risky. The final recommendations should focus on reducing reliance on coal-fired electricity instead of relying on misguided, expensive, risky, and unproven technology.

Thank you,

--

John Dunkum


Missoula, MT

7 30

From: [Mike Fledderman](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comment
Date: Tuesday, March 24, 2020 5:02:51 PM

The way I understand it my local co-op, Ravalli electric gets its power from hydroelectric, how better can it get ? PLEASE keep the government out of it, and please don't turn some misguided mandate into a mess like California is experiencing. Thanks

From: [Liz Gupton](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on draft Montana Climate Solutions Plan
Date: Tuesday, March 24, 2020 8:40:14 AM

Council Members,

Thank you for your efforts in producing the draft Montana Climate Solutions plan. In addition to the specific comments below, please make it a priority that implementation begin immediately for those measures which can begin right away and that will help reduce greenhouse gas emissions.

-- Please support efforts to expand Montana's ability to understand climate risks and prepare for change. In particular, recommendations 1A through 1H should be funded and acted upon.

-- Montana needs more accessible climate science. Please support a larger Montana Climate Office with more staff, stronger Montana University System climate coordination, research and funding, and increased support from the state to communities so they can develop greenhouse gas reduction and climate adaptation strategies.

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Thank you,

--

Liz Gupton



Alberton, MT

From: [Jeff Lonn](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments to Climate Council
Date: Tuesday, March 24, 2020 7:47:30 AM
Attachments: [Lonn comments to Climate Council.pdf](#)

Below and attached as a pdf are my comments to the Climate Council concerning recommendations:

Formation of the Climate Council appears to be an attempt to show Montana residents that the state government is concerned about climate change while at the same time assuring politicians' corporate lords that business can continue pretty much as usual. Council membership is heavily weighted towards economic concerns and is light on scientists, although it is not as bad as the governor's Grizzly Bear Council that does not include a single scientist member. Climate Council's recommendations appear to be focused on maintaining the present and past economy rather than taking significant measures to slow climate change. A statement on page 3 admits to this in a round-about way: "sound science and information alone are insufficient to address climate risks". Why would sound science be insufficient?

I am particularly concerned by the Council's emphasis on maintaining or increasing the Montana economy's dependence on natural resource extraction (agriculture, logging, and mining) rather than helping a new economy adapt to changing demands and to climate change. Below are climate change ideas and information that the council has covered poorly, or that are in opposition to Council's recommendations:

1. Logging/deforestation has been found by many studies to produce more atmospheric carbon than almost any other activity, including wildfire. And logging the wildlands has also been shown to be completely ineffective in stopping wildfires or slowing insect and disease outbreaks. These "problems" are a symptom of climate change, not causes. Logging also reduces most wildlife populations and spreads invasive weeds. The "active forest management" recommended by the Council should be restricted to the areas immediately surrounding homes, as recommended by scientists. The best way to promote carbon sequestration in the forest is to leave it alone and let it adapt. And, if you are really so concerned about the economy, public land timber sales always lose taxpayer money—\$2 billion a year, according to one study. Why not instead work towards promoting the new cleaner economies taking over in most of western Montana?
2. To grow hay, the livestock industry steals huge amounts of water from streams that are warming and drying up. Grazing degrades public lands, destroys riparian areas important for streamflow, and spreads cheatgrass, increasing wildfire risk. Why not promote measures that allow retirement of grazing allotments and buyouts of irrigation rights to boost streamflows? Which is now more important to Montana's economy—the fly fishing/float-boating recreation economy or the taxpayer subsidized agricultural economy?
3. You make no mention of eliminating coal-fired electricity generation, even though that's what the free market is trying to do. Using coal to generate electricity produces more

carbon dioxide than almost any other method, and it is quickly becoming one of the most expensive. Rather than propping up the coal industry, Council should recommend helping workers in this industry find new ways of making a living and adapting to the new economy.

4. Council mentions promoting biofuels several times. Studies show that biofuels, including ethanol and wood products, emit even more carbon dioxide than coal when production emissions are considered. Biofuels should not be considered as a solution to climate change.
5. While Council's goal of achieving net greenhouse gas neutrality is laudable, your related recommendations sound like they were written by Northwestern Energy. What about promoting rooftop solar by offering stronger tax incentives and at least retaining the current net metering program rather than punishing residential solar producers as Northwestern Energy continually proposes? Any changes in net metering should instead encourage more rooftop solar. Eliminate the practice of Northwestern Energy's taking back electric credits once per year, and allow credits to be carried over. If Northwestern feels that the basic service charge—for everybody—is inadequate to maintain the grid, then the PSC should allow an increase, **for all customers**, that will fairly cover that cost. Punishing residential solar producers is counter to solving climate change.
6. It is not enough to "ensure that local governments have access to updated information...on floodplains and wildfire-prone areas" (p. 4). Local politicians always resist zoning, and so zoning should be required statewide. Good zoning can prevent houses from burning or flooding.
7. On p. 6, Council recommends implementing "active management across ownership boundaries to reduce wildfire risks and sustain watershed functions as identified in Montana's updated Forest Action Plan". You need to back up this recommendation with recent science. As stated above, science has found that active forest management (logging) does not reduce wildfire risk or disease and insect outbreaks, and adds more carbon dioxide to the atmosphere than any wildfire. And you are blindly supporting Montana's Forest Action Plan, which I don't believe has even been released yet. What is it? Who wrote it? Give details.
8. On p. 7-8, you recommend building "resilience" of forests, rangelands, wildlife, and working landscapes. *Resilience* is a buzzword with little meaning other than trying to force forests, rangelands, economies, etc, back to the way they were, or the way we think they were. A better approach would be to promote adaptation to a new climate. And, while producing some wood products will always be a necessity, their production **does not** enhance carbon storage according to science—just the opposite.
9. Implementing statewide building codes that require energy efficiency as recommended on p. 9 is a great idea. Conservation will go farther in reducing climate change than any of your other proposals. And you can also encourage electricity conservation by implementing a structure that increases KWh rates with increasing use; in other words, the more you use, the more you pay.

10. While it is great to recommend low emission standards for vehicles, you should also implement more stringent mileage standards. Montanans drive an inordinate amount of gas guzzlers compared to the rest of the nation. One way to address this would be to raise the gasoline tax significantly. It would encourage less driving and more high mileage vehicles. I'm sure the added tax revenues could be used constructively to further address climate change.
11. Carbon capture is probably the most expensive way to reduce atmospheric carbon and, as one dissenter put it, will encourage the continued consumption of fossil fuels.
12. Increasing the allowable size for solar generating systems is a good idea. Dissenters repeated Northwestern Energy's arguments. However, solar electricity is good for everybody (except Northwestern Energy's stockholders and executives), and should be encouraged as much as possible.

Other ideas not considered by the Council:

1. Discourage large families, that is, encourage having less children. This could be accomplished by eliminating tax exemptions for children beyond two. Or even add a head tax for the 3rd child and beyond. Tax revenues would go up and could potentially improve the education system. Climate change cannot be averted without zero population growth.
2. Move away from a resource extraction economy and help the new cleaner economies that are developing.
3. Encourage remote work (telecommuting) where possible, reducing commutes and fossil fuel use. We seem to be accomplishing this right now for other reasons.
4. Promote real education on climate change for all residents, rather than the filtered propaganda that comes from politicians and industry.
5. Use best available science to inform decisions. This cannot be overemphasized, and your recommendations fall short here. For example, Council's recommendations to promote active forest management completely contradict recent science.
- 6.

To summarize, I am very disappointed by the Council's recommendations. But I am not surprised: after all, the Council *is* a political group.

Thanks for your consideration,

Jeff Lonn

Hamilton, Montana

Sent from [Outlook \[aka.ms\]](#)

COMMENTS ON CLIMATE COUNCIL RECOMMENDATIONS

Formation of the Climate Council appears to be an attempt to show Montana residents that the state government is concerned about climate change while at the same time assuring politicians' corporate lords that business can continue pretty much as usual. Council membership is heavily weighted towards economic concerns and is light on scientists, although it is not as bad as the governor's Grizzly Bear Council that does not include a single scientist member. Climate Council's recommendations appear to be focused on maintaining the present and past economy rather than taking significant measures to slow climate change. A statement on page 3 admits to this in a round-about way: "sound science and information alone are insufficient to address climate risks". Why would sound science be insufficient?

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- e. Use best available science to inform decisions. This cannot be overemphasized, and your recommendations fall short here. For example, Council's recommendations to promote active forest management completely contradict recent science.

To summarize, I am very disappointed by the Council's recommendations. But I am not surprised: after all, the Council *is* a political group.

Thanks for your consideration,

Jeff Lonn

Hamilton, Montana

From: [Larry Campbell](#)
To: [Climate Council](#)
Subject: [EXTERNAL] comments to the Climate Council
Date: Wednesday, March 25, 2020 11:46:56 AM

I'm afraid that the Climate Council is likely yet another attempt by bureaucrats to make the appearance of doing something while bolstering business as usual.

Our traditional resource extraction industries, including gas and oil, timber and mining have been socialized, except for the profits, for a very long time, both for the extraction and for the 'remediation'. It's high time for "leaders" to lead and taxpayers subsidize an alternative climate friendly approach. THE GORILLA in the climate chaos living room is consumer capitalism. The discussion of viable solutions for this existential crisis is derailed by our collective failure to honestly accept the magnitude of the crisis and the fundamental nature of necessary changes we need to make.

The Climate Council will just be shifting the deck chairs around so we don't see the iceberg looming unless it finds the courage to speak truth.

Sincerely,

Larry Campbell

Darby, MT

From: [Mike Carlson](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on Montana Climate Solutions Plan
Date: Wednesday, March 25, 2020 3:40:56 PM

Dear Council,

I have read this draft plan numerous times trying to decipher the many confusing topics which are duplicative. It needs to be re-written for clarity and brevity. I would recommend a re-write to include an executive summary. This is very difficult plan to read, follow and understand as written.

There seems at first to be an emphasis on outdoor recreation versus the rest of Montana and it's plains and prairie region and the land users there. Section 1-f I am more interested in. I have been involved in production agriculture since 1976 so my comments reflect that segment of our economy. Here in Eastern Montana we have not seen the effects of global warming with above normal rainfall and bountiful crops and pasture for many years. It has been years since we saw a 100 degree day and only a few 90's each summer. We can tell the climate is changing a little in the length of the growing season but every year is different in the great plains.

I am opposed to carbon markets. Farmers and ranchers have been doing their part to improve the land since the 1940's using conservation practices. Range lands naturally hold carbon. Cropland has been managed using no-till practices now since the 1980's. Farmers reasons for using no till and alternative crops, cover crops are for always the same reason - for their improved economic return. Any kind of a carbon tax to fund a carbon market is always passed on to the consumers. An example is higher utility bills. Our utility bills are high and going higher all the time and we are all alarmed by the loss of our most reliable energy - coal fired power plants. The forced transition away from coal will have a long lasting economic effect in Montana and will destroy the economy of some rural areas, counties and large towns to include Billings. Bio fuels are not cost effective or feasible. Also badly need better forest management practices for many reasons.

Section 2B -Energy storage strategies are confusing and need a lot of study to see if these are even feasible or cost effective

Solar is an idea that must be based on cost effectiveness and location in the state and not subsidized. DOE maps show only the SE part of Montana being a little feasible for large scale solar development. A good example of a poorly planned solar farm is near Reedpoint, Mt. On the north side of a mountain in a wooded area!. I would like to see the cost effectiveness and electrical production from it. Poorly planned projects like this give solar a black eye.

Wind energy development for energy production has potential in this region but the lack of power line infrastructure is a significant barrier. Many companies have looked at this region but after years of failing to find a way to move the electricity - they give up. Addressing and planning for future power transmission should be a significant part

of any state energy plan. There needs to be a state bureau who works extensively on this issue. Planning must be coordinated with other states as well. Ideas like a state and regional power planning authority must be staffed and fully funded and get to work! Studies of wind data sites in this region indicate many great potential areas. However the energy production capacity factor from wind is around 42-45%. This leaves a gap of over 55 % of the time that energy must come from coal or natural gas fired power plants to fill our daily needs. Wind energy development in Montana lags far behind our neighbor North Dakota. New power lines are being built all the time there along with many new wind farms. Wind farms are expensive and time consuming to plan, finance and develop. There are environmental issues with wind farms as well and no source comes without issues. However the economic costs of any type of alternative energy development must be studied and analyzed before endorsing it as the solution for future electrical needs and growth in this state. Rural users such as agriculture need low energy prices and reliability for their future.

Thanks

Mike Carlson, Glendive, MT

From: [DEQ Communications Team](#)
To: [Climate Council](#)
Subject: FW: Suggestions,
Date: Wednesday, March 25, 2020 5:31:37 PM

From: [REDACTED]
Sent: Saturday, March 21, 2020 4:59 PM
To: DEQ Communications Team <DEQCommunicationsTeam@mt.gov>
Subject: Suggestions,

I have always been impressed with our electric cooperative working for and with the people of Montana. It is in everyone's best interest to move toward cleaner energy sources and I feel our cooperatives are doing that. I am not in favor of additional government mandates.

Thank you for the opportunity to have input.

Naomi Claridge

- Naomi Claridge

From: [REDACTED]
To: [Climate Council](#)
Subject: [EXTERNAL] Greenhouse gas neutrality +
Date: Wednesday, March 25, 2020 11:19:38 AM

Hell folks:

I am writing in support of Montana's Climate Solution Council, to achieve a cleaner, reduced carbon environment to benefit our state's people, air and waters.

There must be proper building guidelines for energy efficiency and tax incentives for renewable energy technologies and energy efficiency. Please also make sure there is a chunk of change for investment in science education.

Efforts in these times can be made, not unlike our re-tooling after WWII, which would inspire good jobs and environmental benefits.

Support for I-187 needs to be broadcast! This would be an incredible step for a greener future for Montana.

And, there should be utility incentives to broaden the investment in PV and wind power. In summer, Montana gets more sun than Florida, and year round we have quite a wind resource in the eastern and SE parts of our state. That resource, combined with the winds of North & South Dakota, *could* supply most of the continental U.S.'s electrical needs.

I have been in the business of selling solar power and pumping systems for the past 21 years, and I note that Americans, in a non-partisan fashion, support renewable energy. Let's keep the ball rolling positively towards the future.

Sincerely,

Chris Daum
Oasis Montana Inc.

[REDACTED]
[REDACTED]
[REDACTED]

From: [Catherine Fahrenbruck](#)
To: [Climate Council](#)
Subject: [EXTERNAL] climate
Date: Wednesday, March 25, 2020 4:31:16 PM

Montana's electric cooperatives are proven leaders in reducing greenhouse-gas emissions, and in using clean energy sources. Therefore, I do not believe additional government mandates are needed.

Catherine Fahrenbruck

From: [David](#)
To: [Climate Council](#)
Subject: [EXTERNAL] mandates
Date: Wednesday, March 25, 2020 8:09:03 PM

Montana's electric cooperatives are proven leaders in reducing greenhouse-gas emissions, and in using clean energy sources.

Therefore, I do not believe additional government mandates are needed.

David K Fahrenbruck

From: [DEQ Communications Team](#)
To: [Climate Council](#)
Subject: FW: General Comment,
Date: Wednesday, March 25, 2020 5:31:53 PM

From: [REDACTED]
Sent: Tuesday, March 24, 2020 1:52 PM
To: DEQ Communications Team <DEQCommunicationsTeam@mt.gov>
Subject: General Comment,

I hear this new council is thinking of applying some issues that are in the New Green Deal. Hopefully not. If it affects our Co-ops in any way, I will be one upset Montanan. I have been a member of at least one, the 40 years I've lived in Montana. In my book they do an excellent job in every aspect. They are proven to reduce greenhouse gases, and do an excellent job at everything they do. Montana is losing too many companies and jobs to climate control mandates. We do not need anymore Rules. Some day people fighting for the change and rules, will realize, Mother Nature is in control of our climate. Always has been, always will.

- Donna Gamble

From: [Rick Knick](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on the Climate Solutions Council proposals
Date: Wednesday, March 25, 2020 11:21:06 AM

Dear Council,

Please consider the following comments in regards to Montana's efforts on climate solutions.

My name is Rick Knick and I am the general manager of Sheridan Electric Co-op. We serve electricity to 4,000 meters and 1,850 Members in NE Montana.

One of the proposals has to do with carbon capture and store. We promote and support the use of renewable electricity, but these types of electric generation are cyclic in nature. While battery storage is an option this method is not feasible for large 24 hour a day industrial electric loads. It is important that we keep fossil fuel generation for our base loads therefore supporting carbon capture will play an important role.

The development of renewable electricity is moving at a fast pace and has changed the industry already. But, renewables have not developed to a point that they can replace base load generation. We believe that supporting an all above approach will continue to help develop all types of electric generation. If we do not support an all of the above approach, we believe we could slow the development of important technologies including technologies that would make fossil fuels a clean viable source.

It is no secret that transforming the electric industry to a low carbon or carbon free state will take money. For this exact reason we must not risk the state's economy by moving too fast with regulation, mandates and stated goals.

In the rural cooperative world our Members push us to adopt and develop new and clean electric generating technologies. Electric cooperatives often lead the nation in developing these technologies and are at the forefront in including renewable energies in their power mixes. This same philosophy holds true for distributed generation or Member owned renewable sources. Cooperatives across the state have developed very effective net metering rates and policies allowing Members to develop their own renewable sources without forcing a financial burden on fellow Members that cannot afford the extra costs that come with stranded investments.

In closing I am confident that the Council will develop common sense proposals that take in mind a fragile economy.

Thank you for your hard work on this important issue.

Rick Knick

From: [Graham Marema](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Wednesday, March 25, 2020 3:34:21 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana

null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,

A black rectangular redaction box covering the signature of the sender.

Missoula, MT 59802

From: [Mike and Kris Mol](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Climate Solutions Plan comments
Date: Wednesday, March 25, 2020 3:00:05 PM

Dear Climate Solutions Council,

Thank you for the great work you have done in preparing a plan on how Montana can move forward to reduce our affect on the climate. Although I was unable to read through all the details of the draft, it is evident a great deal of thought and energy was utilized in preparing a very comprehensive plan. I believe we need to continue to work on scaling back greenhouse and carbon emissions as quickly as we can. Setting a deadline of 2035 should give us plenty of time to accomplish this goal. Government mandates will help to ensure we remain on target. If all the states and nations could implement such an all encompassing plan, I believe we can be very effective in reducing our affect on global warming. I hope and pray as much of the plan as possible can be implemented as soon as possible before it becomes too late.

Great job Climate Solutions Council!

Sincerely,
Kristine

From: [Eliot Thompson](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Draft Montana Climate Solutions Plan Public Comment
Date: Wednesday, March 25, 2020 11:44:26 AM

Below is my public comment for the draft climate solutions plan:

While there's definitely some good in the draft solutions plan, specifically related to adapting to climate change, the mitigation portion of the plan is severely lacking. Short of federal intervention, it is literally impossible for Montana to achieve economy-wide greenhouse gas neutrality by the end of the century, much less meet the too-little-too-late interim goal of net greenhouse gas neutrality for average annual electric loads in the state by 2035 based on the disappointingly insufficient and extraordinarily timid recommendations proposed in the draft solutions plan.

Any plan should be based entirely on what the science tells us we need to do, and the science tells us that our energy generation should be 100% renewable by 2030. Why was 2035 even settled on as an interim goal? The plan doesn't address why this specific date was chosen. Additionally, economy-wide we need to be carbon neutral no later than 2040 or 2050, but the council didn't even manage to set an arbitrary date, let alone a date based on science, for this critical portion of the plan.

I'm glad the climate council has included energy efficiency as one of its tools for solving the climate crisis; however, I am afraid we may be relying too heavily on energy efficiency. According to the Jevons paradox, increases in energy efficiency may result in increased consumption, and ultimately, more greenhouse gas emissions. Energy efficiency programs should be implemented, but any plan that relies on energy efficiency programs for reducing greenhouse gas emissions needs to address this problem. Given that nothing in this plan addresses that potential issue, we should focus more on switching our energy production toward 100% renewable energy sources.

Since many of the most energy inefficient and expensive homes belong to the least fortunate among us, energy efficiency measures allow us to address equity concerns while reducing our contribution to the climate crisis, and strategy 2C is an adequate first step toward that goal. However, the strategy needs far more than an evaluation of barriers to on-bill financing.

At a minimum, this plan should recommend a report or study on how to best accomplish a mandatory state-wide zero or near-zero interest tariffed on-bill financing program for energy efficiency projects that would be available to homeowners and renters. I know for a fact that many of Montana's electric cooperatives have not only been aware of the concept of interest-free on-bill financing options funded by the USDA's Energy Efficiency and Conservation Loan Program but have been interested in implementing such programs since at least the summer of 2017. Despite interest, not a single cooperative has been able to implement an on-bill financing program that can serve all of their members because they lack the capacity and willpower to create and administer such a program.

If we are going to extend actually affordable on-bill financing options for all Montanans, then we need statewide mandates, and we need to force NorthWestern Energy to participate. The glaring lack of any mandatory program indicates only lip-service to providing equitable on-bill financed energy efficiency solutions to Montanans.

Another missed energy efficiency opportunity is the bizarre lack of anything for transitioning away from fracked gas heating. We will never achieve a carbon neutral economy if we heat any of our buildings with fracked gas; that is not debatable. Why is this critical solution missing from this plan?

The portion of the plan dedicated to renewable energy is also severely lacking. We need to stop placing almost all the emphasis on finding solutions that only involve “incentives,” “encouraging,” and nudging industry to do what is necessary. Although not as visible as the current coronavirus pandemic, the climate crisis has killed and will continue to kill more people than any individual pandemic, but in response to the novel coronavirus, we are already discussing lockdowns, mandating the production of respirators, and making people do things they don’t necessarily want to do for the public good. We need to be responding to the climate crisis with the same level of urgency.

We don’t need to “advance legislation that clarifies investor-owned utilities’ ability to offer shared solar programs.” We need to mandate that all utilities have to provide low-barrier shared solar programs.

We don’t need to just “conduct independent research to compare taxation across states and renewable energy projects to determine if rates should be adjusted for new projects.” We need to mandate renewable energy projects no matter what, and the renewable energy portfolio needs to be 100% by 2030, in line with both the science and the Missoula and Helena 100% Clean Electricity commitments. We don’t need “any proposed adjustments [to] fully consider revenue impacts.” If the investor-owned utilities are unable to do what is necessary because they have to make a profit of our needs, then those investor-owned utilities should be taken over by the state. Nobody deserves to make a profit at the expense of someone else’s wellbeing.

The section on public transportation is a good first step, but we could do more. Ride-sharing and bike infrastructure are indeed critical, but we shouldn’t stop there. We should have free, robust electric bus services in Billings, Bozeman, Missoula, and Great Falls not only to reduce emissions from individual vehicles but to reduce emissions from routine maintenance on repairing roads. We need improved and expanded passenger rail and to explore the feasibility of trolleys in urban areas.

The portions of section 4 dedicated to industrial, oil, and fracked gas strategies is extremely disappointing. Carbon capture technologies should have a minor, if not negligible, role in any climate mitigation plan, but instead of common-sense solutions like updating our renewable energy portfolio to be more in line with what needs to happen, we’ve dedicated an entire page to carbon capture. Carbon capture cannot be used to allow us to continue polluting, and we cannot rely on not-yet created technology to solve the problems of today. The more we invest in carbon capture and in polluting fuel plants, the more difficult it becomes to close them down to transition to renewable energy.

The recommendation to increase the allowable systems size for distributed energy systems needs to happen, and I support its inclusion in this plan. The 50kW cap is arbitrary and hurts Montanans who take the initiative to switch to renewables. However, we need to make sure that utilities like NorthWestern Energy cannot make it too expensive to install solar by implementing egregious demand chargers or similar policies to punish Montanans and protect their profits. Again, if NorthWestern Energy is unable to provide the services we need to fight climate change at an equitable and fair cost, then they should not exist as an investor-owned utility.

I am concerned that this climate solutions council has been influenced by corporate interests, particularly by individuals who have been part of the problem. The fact that NorthWestern Energy and the Montana Petroleum Association were even invited to this council is downright disgusting and shameful. They have a vested interest in maintaining a status quo that allows them to profit off the pain and suffering of Montanans. They are bad-faith actors who do not deserve to be a part of this process. The fact that this plan will not allow us to achieve anywhere near carbon neutrality is evidence of the corruption endemic to and the lack of willpower within the governor’s office. Based

on the lackluster recommendations in this plan, the name “Climate Solutions Council” is a misnomer. What solutions exist in this plan are not enough. We can and must do better.

7 43

-Eliot

From: [Don Wilson](#)
To: [Climate Council](#)
Subject: [EXTERNAL] comment on new rules
Date: Wednesday, March 25, 2020 6:35:34 PM

The electric co-ops in Montana are already leaders in reducing greenhouse gas emissions, and are using clean energy sources. I do not believe that more government control is necessary. In fact, more rules may only make things worse by placing more burdens on the electric co. and on the people of MT. Thank you
God Bless You.

Don & Grace Wilson

From: [Debra Christian](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 4:17:03 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana


null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Debra Christian

Helena, MT 59601

From: [Constance Fiske](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 6:50:01 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana


null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Constance Fiske

Montana City, MT 59634

From: [Giannetti, Danae](#)
To: [Climate Council](#)
Cc: [Kack, David](#); [Gleason, Rebecca](#); [Madsen, Matthew](#); [Hamre, Andrea](#)
Subject: [EXTERNAL] Public Comment for the Draft Montana Climate Solutions Plan
Date: Thursday, March 26, 2020 5:02:34 PM
Attachments: [WTI MPT Draft Montana Climate Solutions Plan Public Comment.pdf](#)

Good afternoon,

Thank you for the opportunity to review and respond to the Council's Draft Montana Climate Solutions Plan. Please see the attached public comment from researchers in the Mobility and Public Transportation program of the Western Transportation Institute at Montana State University.

Sincerely,
Danae

Danae Giannetti, P.E.
Research Engineer I

Western Transportation Institute
Montana State University
[REDACTED]

Attn: Montana Climate Solutions Council
From: The Mobility & Public Transportation Program Team of WTI
Re: Draft Montana Climate Solutions Plan Public Comment
Date: March 26, 2020

The **Western Transportation Institute (WTI) at Montana State University (MSU)** is one of the nation’s oldest transportation institutes focusing on rural transportation issues. Among WTI’s suite of research programs, researchers within the Mobility and Public Transportation (M&PT) program use comprehensive approaches to investigate and address transportation challenges in small urban, rural, federal lands (national parks, forests, etc.), and tribal settings through research, outreach and education/training. The M&PT program focuses on the interactions among various transportation modes (transit, walking, biking, and driving), as well as the potential for multimodal connectivity to meet individual and community goals and needs.

The M&PT team has reviewed the “Montana Climate Solutions Plan Preliminary Recommendations and Key Questions” through the lens of our expertise in small urban and rural transportation and respectfully submits public comment specifically pertaining to the key strategies outlined under recommendation *2N: Improve statewide transportation management to foster alternatives and support the needs of communities* (Page 20). Furthermore, we offer our expertise to the Council for work “...with partners to refine these recommendations and to build the policies, programs and partnerships that will be required to ensure effective implementation” (Page 2). The following comments pertain to each key strategy under recommendation *2N*. Three recommended additional key strategies with relevant resources for the Council’s review are also included within this public comment.

Key Strategy: *Create the position of transportation system management coordinator within the Planning Department of MDT.*

The umbrella of “transportation system management” is broad and contains a wide range of programming such as arterial streets management (traffic signal timing), real-time traveler information, work zone management, as well as active transportation and demand management. Due to the broadness of the term, the eventual coordinator may be tasked with duties that perpetuate automobile-centric travel without addressing the intent of reducing transportation-related greenhouse gas (GHG) emissions.

Please consider explicitly focusing this new position on transportation demand management (TDM) in order to facilitate a shift from “automobile-centered” to “human-centered” programming. In 1994, the Federal Highway Administration

(FHWA) described TDM programs as ones that are “designed to maximize the people-moving capability of the transportation system by increasing the number of persons in a vehicle, or by influencing the time of, or need to, travel.” A 2004 FHWA report titled *Mitigating Traffic Congestion – The Role of Demand-Side Strategies* further explains:

“Managing demand is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route, time of travel and mode. In the broadest sense, demand management is defined as **providing travelers with effective choices** to improve travel reliability.”

The concept of providing travel choices is relevant in Montana. There is a common misconception that driving alone is the default preferred mode of transportation. However, without providing safe and convenient transportation options, driving alone or forgoing travel may be the only realistic options. Usage alone does not indicate preference; furthermore, preference cannot be deduced without providing options from which to choose. In *Demand Management as an Element of Transportation Policy: Using Carrots and Sticks to Influence Travel Behavior*, M.D. Meyer states, “the basic ingredient to successful adoption of area-wide TDM action is to link it to broader goals that the public can support.” Through strategies to reduce vehicle miles traveled (VMT), TDM both addresses congestion management and reduces transportation-related GHG emissions. Furthermore, it mitigates the need for expensive capacity-expanding roadway projects. In January 2020, the MDT Multimodal Bureau Chief reported to the Montana State Legislature’s Transportation Interim Committee that, “currently available highway money will cover one-third (1/3) of the projected \$14 billion in transportation needs over the next decade.”

We respectfully request that greater attention be given to demand-side strategies to reduce costs associated with building and maintaining Montana’s transportation network as well as to address environmental and social equity in transportation. Our team has provided TDM technical assistance to the City of Bozeman and Montana State University and is willing to offer similar expertise to other entities within the state of Montana.

Key Strategy: *Develop and host a ride sharing internet tool at MDT that will enable drivers and riders to connect with each other so as to reduce vehicle miles travelled and costs for Montanans while also lessening the burden on existing transportation infrastructure.*

Our team supports this strategy and has expertise managing the RideAmigos “internet tool” currently utilized in Bozeman which helps people reduce their transportation-related GHG emissions. The RideAmigos platform is also currently in use in Missoula.

[RideAmigos.com](https://rideamigos.com) – RideAmigos is an online platform with program tools for communities, businesses, and organizations to showcase and promote a variety of commuting options (including, but not limited to, ride sharing). RideAmigos programs may include:

- Employee commuter programs, employee carpool programs, employer transportation benefits, vanpool management, ride matching software, tracking options, incentive programs, and commuter challenges.

Bozemancommute.org – The Western Transportation Institute (WTI) currently manages bozemancommute.org which is built on the RideAmigos platform for showcasing travel options around Bozeman. WTI has worked with local businesses and organizations to develop both community-wide and business-specific networks on this platform. Interest in the RideAmigos platform is growing throughout Gallatin County and consideration is underway to expand beyond Bozeman. The site’s web address may be updated in 2020 to reflect this expansion.

Waytogo.missoulainmotion.com – Missoula in Motion (MIM) is a program of the Transportation Division of the City of Missoula’s Development Services. MIM manages Way to Go, which is also built on the RideAmigos platform.

Our team is willing to offer the Council more specific information on the logistics of managing this “internet tool” and provide relevant technical assistance upon request.

Key Strategy: *Develop planning for expanded bike infrastructure including protected bike lanes working with appropriate local jurisdictions.*

We urge three considerations in the implementation of this key strategy:

1. Define the target design user of any expanded bike infrastructure

The 2019 FHWA *Bikeway Selection Guide* states that the critical decisions of selecting the target design user and target comfort level are often overlooked. “In such cases, the network typically defaults to serving Highly Confident and Somewhat Confident users...” (Page 13). As communities across Montana expand bicycling infrastructure, we encourage consideration of a wider group of ages and abilities. This will support the establishment of a more equitable and lower-stress bicycle network, which should in turn facilitate an increase in the number of people riding bicycles.

2. Address Funding of Expanded Bicycle Infrastructure

With respect to the current financial status of funding available for transportation projects in Bozeman, the 2017 Bozeman Transportation Master Plan (TMP):

“is not fiscally constrained and will encounter significant financial shortfalls over the 24-year life of the Plan. The anticipated costs for the various improvements are more than the potential revenue available over the planning horizon” (TMP, Page 154).

As Bozeman continues to grow, difficult decisions around the future of our transportation network will need to be made. Communities all across Montana are faced with similar difficult decisions. A dedicated state funding source for designing, constructing, and maintaining an expanded bicycle network, including protected bike lanes, would empower local jurisdictions to plan and prioritize bicycle infrastructure projects. Without a dedicated funding source, local municipalities will not be able to make sufficient multimodal transportation investments.

3. Create an enforceable policy for protected bike lanes

On the state level, the 2016 MDT Road Design Manual (RDM) outlines bicycle design treatments in Chapter 7, Section 7.4.2 which includes design guidance on (unprotected) standard bicycle lanes, buffered bicycle lanes, and one-way/two-way separated bicycle lanes. The typical application of the standard bicycle lanes is on “streets without sufficient right-of-way or pavement for buffered bicycle lanes or separated bicycle lanes (SBLs).” The 2019 FHWA *Bikeway Selection Guide* indicates that “bike lanes (buffered preferred)” are appropriate on streets with operating speeds below 30 miles per hour and with traffic volumes less than around 6,500 vehicles per day (VPD). The RDM was published before this FHWA guidance and does not give design practitioners the latitude to do more than the minimum design treatment of standard bicycle lanes. In light of recent distracted driving trends, we urge the creation of an enforceable policy that would direct transportation design practitioners to prioritize the safety of vulnerable road users (people walking and biking) through the design and construction of facilities that are above and beyond the current minimum design guidance for unprotected facilities.

A Necessary Change in Thinking about Transportation Modes

We acknowledge that recommendations 2L and 2M also address reducing transportation related GHG emissions.

Reliance on automobile-centered GHG emission reduction strategies disproportionately favors people with access to a vehicle. We urge the Council to consider the portion of Montanans that may not be able to own a vehicle or drive due to age, abilities, and/or income. For example, according to the American Community Survey (ACS) 2013 – 2017 5-year estimate, 21,270 households (5.1%) as well as 10,032 workers over age 16 (2.1%) in Montana do not have access to a private vehicle. Furthermore, 14.4% of residents and 9.1% of families in Montana live in poverty. Meanwhile, 5.2% (age-adjusted prevalence) of Montanans have a vision disability (CDC’s Disability and Health Data System, 2017). We urge consideration of GHG emission reduction strategies that support equitable mobility and access for people unable to benefit from automobile-centered GHG emission reduction strategies.

The recommendations put forth can shift policy towards a more human-centered transportation system but only if equity is kept at the center of any change. This outcome requires a shift away

from thinking of the automobile as the default mode of transportation and the prioritization of vehicle speed and volume over all other performance metrics. Focusing on how our transportation system can prioritize the movement and access for people benefits our local and regional communities, as well as our state and national welfares.

Recommended Additional Key Strategies and Resources

Recommended Key Strategy A: Prioritize Highway and Street Maintenance over Expansion

Increases in GHG emissions attributable to expanding highways and streets are substantial. One study predicted that the growth in vehicle miles traveled (VMT) attributable to increased lane miles would produce an additional 43 million MTCO_{2e} (metric tons of CO₂ equivalent) emissions in 2012 nationwide (Handy, S. 2005). Numerous studies show that adding capacity to roadways fails to alleviate congestion for long because it actually increases vehicle miles traveled (VMT) (Handy, S. 2015).

From the NCHRP Research Report 916: *Sustainable Highway Construction Guidebook*, the annual national economic impact of highway and street construction put in place (as defined by the US Census Bureau) in 2017 was \$85 billion, which is about 0.3% of U.S. GDP. A rough estimate of 65,600 MTCO_{2e} for the construction of highways and streets constitutes about 0.001% of the total U.S. GHG emissions. The guidebook goes on to state, “Despite these small fractional contributions to the overall total, annual impacts of \$85 billion in construction put in place and 65,600 MTCO_{2e} are, by themselves, substantial and worthy of attention” (Page 10).

During MDT’s TranPlan Public Outreach, survey respondents ranked “preservation and maintenance” as the first priority area. Within the priority area strategy ranking, “pavement and bridge condition – preserve road pavement and bridge deck condition” was ranked the highest. However, of concern is the second ranked strategy of “aging roadway upgrades – improve roads not built to modern standards (such as **widening** and slope flattening).” Widening of roads is often thought of as a countermeasure to address congestion and delay. However, recent research by Transportation4America indicates widening of roads neither reduces congestion nor delay. Therefore, we encourage the Council to incorporate a key strategy that prioritizes maintenance over expansion to address sustainability through human, environmental, and economic dimensions. Communities across the United States are right-sizing their roadways (also known as road diets). There is great benefit, both environmentally and economically, in Montana taking note of this trend before prioritizing resources into widening roads.

Additional Resources

Congestion Con: How more lanes and more money equals more traffic

(Transportation4America, 2020): <http://t4america.org/wp-content/uploads/2020/03/Congestion-Report-2020-FINAL.pdf>

NCHRP Research Report 916: Sustainable Highway Construction Guidebook:

<https://www.nap.edu/catalog/25698/sustainable-highway-construction-guidebook>

FHWA Road Diet Guidance: https://safety.fhwa.dot.gov/road_diets/

Road Diet Myth Busters (FHWA):

https://safety.fhwa.dot.gov/road_diets/resources/pdf/roadDiet_MythBuster.pdf

Increasing Highway Capacity Unlikely to Relieve Traffic Congestion. (Handy, S. 2015). UC Davis: National Center for Sustainable Transportation. Retrieved from:

<https://escholarship.org/uc/item/58x8436d>

Smart Growth and the Transportation-Land Use Connection: What Does the Research Tell us? (Handy, S. 2005). *International Regional Science Review*, 28(2): 1-22. Retrieved from: <http://bit.ly/1NCeeSP>

Recommended Key Strategy B: Prioritize Public Transportation Funding, Planning, and Operations

According to MDT, there are 43 Montana public transit systems across the state and over 75 agencies throughout Montana that provide specialized services for the elderly and disabled. We encourage the council to include a key strategy that highlights the role that public transportation can have in reducing transportation related GHG emissions. According to the Federal Transit Administration (FTA), public transportation can reduce GHG emissions by:

- Providing a low emissions alternative to driving.
- Facilitating compact land use, reducing the need to travel long distances.
- Minimizing the carbon footprint of transit operations and construction.

Even in rural communities, expanding programs such as the Missoula Ravalli Transportation Management Association's iRide vanpool can offer greater accessibility to jobs and opportunities with a smaller carbon footprint than single occupancy vehicles.

Additional Resources

Public Transportation's Role in Responding to Climate Change (Federal Transit Administration, 2010):

<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/PublicTransportationsRoleInRespondingToClimateChange2010.pdf>

Recommended Key Strategy C: Complete Streets for Communities of All Sizes

We are concerned that walking as a mode of sustainable transportation was not mentioned in a key strategy of the Council's draft recommendations. According to the Pedestrian and Bicycle Information Center, "complete streets are designed to enable safe and convenient access for all road users and foster transportation equity, healthy lifestyles, and vibrant communities." Often thought of in terms of large urban areas, the Center goes on to explain, "complete streets in rural areas can look quite different from those in urban areas; however, both are designed to balance safety and convenience for everyone." Therefore, we encourage the council to include a key strategy of implementing a statewide Complete Streets policy to also encourage walking in communities of all sizes across Montana.

Additional Resources

Implementing Complete Streets in Small Towns and Rural Communities (Smart Growth America, 2017): <https://smartgrowthamerica.org/implementing-complete-streets-small-towns-rural-communities/>

Pedestrian and Bicycle Information Center Complete Streets Landing Page (including case studies): <http://pedbikeinfo.org/topics/completestreets.cfm>

FHWA Safe Transportation for Every Pedestrian (STEP) Resources landing page (Including case studies): https://safety.fhwa.dot.gov/ped_bike/step/resources/

From: [Rochelle Gravance](#) [REDACTED] [Sent You a Personal Message](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on the Draft Montana Climate Solutions Plan
Date: Thursday, March 26, 2020 2:53:18 PM

Dear Montana Climate Council,

Dear Members of the Governor's Climate Council,

We appreciate the indication that protecting Montana's water quality and quantity is key to adapting to climate impacts. Explicit protection for clean air and clean water is key for both climate mitigation and adaptation.

We strongly support an increase in the allowable systems size for distributed generation systems.

We strongly support an increase in the renewable energy portfolio standard. There are no specifics attached to that goal at the moment; we urge the council to set a goal backed by the projections of climate scientists, mirroring recent commitments by Helena and Missoula to 100% clean electricity by 2030, as well as an exclusion of large hydropower.

We strongly support the need to integrate traditional and indigenous knowledge into adaptation efforts.

There's a nod to "the needs of young, sick, aging, and other vulnerable populations" in managing local infrastructure. We urge the council to explicitly prioritize climate solutions that center the needs of impacted populations that are disadvantaged because of geography (i.e. tribal nations and rural communities), vulnerability to climate impacts (the elderly, young, people with disabilities), vulnerability to economic transition (i.e. fossil fuel workers), and identity groups with less access to power in our society (low-income groups, people of color, LGBTQ folks, women).

We strongly support a strong demand response standard and energy storage standard for the state's investor owned utilities.

We strongly support expanding funding and capacity for apprenticeship programs in green jobs.

We strongly support reforming Montana fiscal policy to addressing economic transitions with an emphasis on support for people, families, and communities most impacted by the climate crisis.

We support efforts to expand energy efficiency, efforts to replace water heaters with grid-integrated water heaters, and mobile home replacement programs.

We support expanded community solar development and enabling shared solar for IOUs.

We support incentives for solar-ready and solar-integrated design and building.

We support reducing property taxes on new renewable energy.

We strongly support low emission vehicle standards and expanded EV infrastructure and accessibility.

We are also deeply concerned about some major gaps in the draft plan. Here are a few:

First and foremost, the cost of not taking adequate measures to prevent and prepare for the worst outcomes of the climate crisis are immeasurably high. When assessing the cost of any potential solution, the council should take into account the cost of not addressing the climate crisis in the window we have left. All solutions should be prioritized based on their potential impact in helping avert the crisis and achieving maximum greenhouse gas emissions in the next 8-9 years, the window of time scientists have identified as critical, as well as their ability to promote community resiliency. We absolutely need regulation of greenhouse gas-emitting industries in our state, not just incentive-based solutions. The current plan omits any mandates to restrict the activity of greenhouse gas-emitting

industries in our state.

It's unclear that the sum total of the mitigation and adaptation goals would meet either the goals of the council or use all available state leverage to bend the global emissions curve as quickly as possible, mitigate the climate crisis, and meet the needs of Montana communities in adapting to current and future changes. The timeline of greenhouse gas neutrality in the electricity sector by 2035 is slower than current climate projections call for. We need to be adapting state goals in line with the current scientific understanding of what's necessary to avert global climate tipping points. There is an underlying implication in this plan that innovation, carbon sequestration, and incentive-based efforts to reduce emissions might be enough to avert a global climate crisis, without providing accompanying evidence that this is indeed the case. An understanding of what is necessary to meet the challenge of addressing the climate crisis, not what seems currently politically feasible, should guide the council's final recommendations.

We are deeply interconnected, and our communities suffer when we don't have sufficient support systems in place that protect the needs of the most vulnerable. Making sure all Montanans have access to healthcare, job security, and basic resources that prevent community breakdown in a crisis are key to substantive climate solutions that fully address the issue of community resiliency.

Land protection is key to both adaptation and mitigation and should be explicitly named as such. This can and should include meaningful consultation with Montana's Tribal Nations and a consideration for expanding the land under indigenous management.

The scope of the solutions should extend to include the scope of Montana's influence as a state. This can and should include restrictions on new fossil fuel infrastructure built within state borders and partnership with other states in advocating for solutions that address the scale, scope, and urgency of the climate crisis, i.e. retracting all existing federal subsidies for fossil fuels and a governing agenda like the proposed federal Green New Deal that addresses the climate crisis concurrently with systemic inequities and a plan to help people and communities weather the economic transition.

Finally, this plan needs to be based on an adequate assessment of the challenges we face in tackling this issue, including past obstacles to implementing climate solutions, and a substantial communication plan to promote public understanding of the climate crisis and the necessity of action. The plan should include an articulation and assessment of the risks of hitting global climate tipping points, a system for regularly updated information flows, and a prioritization of solutions that aim to avert them. What are the major obstacles (in Montana, nationally, or globally) to making adequate progress on this issue, and why has this crisis instead worsened over the many decades we've known about this problem? How will the climate solutions plan address the long history of misinformation and propaganda campaigns by special interest groups that have stymied action on this issue?

Your Information

?

Rochelle Gravance | email: [REDACTED] | zip: 59019

Not Rochelle Gravance? Reset form.

Title

Street Address

[REDACTED]

City

Columbus

[REDACTED]

Your Message

Subject

Comments on the Draft Montana Climate Solutions Plan
Message

Dear Members of the Governor's Climate Council,

7 48

Sincerely,

Rochelle Gravance

[REDACTED]

Columbus, MT 59019

[REDACTED]

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or [REDACTED]

[REDACTED]

From: [Cheryl Hart](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 3:34:15 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana

null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Cheryl Hart


Helena, MT 59601

From: [Cynthia Mathews](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 12:38:36 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana


null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Cynthia Mathews

Missoula, MT 59802

From: [Jennifer Nitz](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 11:55:13 AM

MT Climate Council


RE: Public comment: I support clean energy in Montana

null

Montanans care about the mountains and valleys of our state, and need a climate plan that protects these special places.

I support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. We need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard are important steps on the path to a cleaner, more sustainable society.

Montana is behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Sincerely,
Jennifer Nitz

Missoula, MT 59802

From: [Erin Nuzzo](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 2:05:58 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana

null


Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Erin Nuzzo


Missoula, MT 59808

From: [Carla Pyle](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Commenting on MT Climate Solutions Plan
Date: Thursday, March 26, 2020 11:20:13 AM

Greetings,

I am submitting this comment in response to Gary Wiens's "A Call to Member Action" in the March 2020 Rural Montana magazine.

I perceive Mr Wiens's viewpoint as basically analogous to the current federal government response to the COVID-19 pandemic, where officials are taking the short (and might I suggest selfish) view of the situation now facing our country and the world. Instead of providing a link to the document and inviting his readers to make their own self-informed decision, Mr Wiens calls on members to submit quoted message that seems to be drawn from his own questionable motives. Rural Electric Co-ops should be exploring new technologies to help their members navigate the imminent changes ahead.

Personally, I believe that government mandates have proven to be necessary to enforce the significant changes that are called for to slow the rate of detrimental effects of climate change - necessary because the corporate interests have demonstrated time and time again that their promises to 'self-regulate' are disingenuous. Don't get me wrong, I think the electric co-ops are likely more responsible than some others in the field. However, I believe now is a time for each of us to take a serious look at how we are moving forward in these uncertain times.

I agree with the dissenting view on 2P in the Draft document, and urge the committee to carefully question the strategy of 'seeking primacy for Class VI deep injection wells' for carbon sequestration. There are far better methods of carbon sequestration that promote soil health and have multiple benefits to ranchers, local communities and air quality. [See WSE's work with this initiative \[westernsustainabilityexchange.org\]](#).

I favor maximizing renewable energy deployment and increasing Montana's Renewable Portfolio Standard (2R), with rapid implementation of alternatives to entrenched systems that are no longer viable for the long term. I applaud the creative, holistic approach suggested by the Draft document as a whole - especially ***expansion of the use of nature-based solutions***. Geothermal heating & cooling comes first to my mind in this regard, ahead of solar. Promoting awareness through education initiatives is imperative to the success of this plan.

Montana communities need the tools and education to make informed, voluntary changes now, or else face forced changes later. Thank you for inviting the people of Montana to join the conversation - we are a big part of the solution, and many of us are ready to contribute on the local level.

Our small communities are resilient and resourceful. The most productive solutions will come out of a proactive and positive approach as we move through the challenges ahead - **together**. 753

Thank you.

Carla Pyle
Livingston, MT

From: [Walter Rowntree](#)
To: [Climate Council](#)
Subject: [EXTERNAL] public comment
Date: Thursday, March 26, 2020 9:07:46 PM

To MT Climate Solutions Council,

This is a comment on the MT Climate Solutions Plan.

I have reviewed the Plan and I strongly believe that the market based approach of a carbon fee and dividend (Similar to HR 763, a bill before Congress now) will directly support many of the goals of the Plan and will indirectly support most of the others. British Columbia instituted a similar carbon fee and dividend in 2008 and it continues to be effective and broadly supported by business and the public.

I would also like the Council to consider endorsing HR763. This endorsement could be within the plan or separate from it.

Thank you,
Walter Rowntree

From: [Walter Rowntree](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment
Date: Thursday, March 26, 2020 9:08:43 PM

To MT Climate Solutions Council,

This is a comment on the MT Climate Solutions Plan.

I would like to see direct incentives for GHG reduction such as:

- Monitoring of and consequences for methane leaks at the wellhead and throughout the distribution system.
- Time of Use electric billing
- Passing electricity market signals through to the consumer in a way that gives them real-time access to data that allows them to actively change their behavior to save money.
- incentivizing allowing utility end customers to access the market for grid stabilization services by promoting aggregation of home batteries.
- Market based promotion of electric vehicles, community DER (including battery storage and solar generation)
- Market based promotion of utility scale renewable installations, such as property tax relief for energy storage and generation. This relief should sunset when the market no longer requires them for widespread adoption.
- Low or no interest on-bill financing of residential and commercial solar and battery energy storage.
- Monetary incentives to promote purchase of pure Battery Electric Vehicles. This alone will drive the deployment of charging infrastructure.
- A market signal to dis-incentivize gas guzzlers and incentivize low carbon impact vehicles, such as an increase in the gas tax.

Many of the above would be broadly supported by a price on carbon. If revenues collected were returned to citizens as a dividend, there would be broad public support. A national plan of this type is HR 763, the Energy Innovation and Carbon Dividend Act. Please consider adding a market based solution like this to the Climate Solutions Plan.

Thank you,

Walter Rowntree

Kalispell, MT

From Walter Rowntree's [Outlook.com](#) account.

The information in this email is important and should not be ignored. As sometimes happens, this email may be lost in the cloud and never reach you, or be filtered as spam/junk/malware by software you don't understand. If this occurs, please notify me that the email never arrived so that I can re-send it. This is on you. I've done my job. Thank you and have a great day.

From: [Walter Rowntree](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment
Date: Thursday, March 26, 2020 9:10:22 PM

To MT Climate Solutions Council,

This is a comment on the MT Climate Solutions Plan.

At the end of part 3 of the Plan specific feedback is asked for concerning the role of tax policy in confronting climate change. I believe that policy which addresses the issue should be in the form of a carbon fee and dividend. This would create a market based signal which would drive both adoption and innovation. Adoption addresses many of the items in part 2, innovation addresses many of the items in part 3. British Columbia has a successful carbon fee and dividend policy and Congress is considering the Energy Innovation and Carbon Dividend act. I encourage you to incorporate a similar plan into Montana's future, and for the Council to actively endorse the Energy Innovation Act.

Thank you,
Walter Rowntree,
Kalispell

From Walter Rowntree's [Outlook.com](#) account.

The information in this email is important and should not be ignored. As sometimes happens, this email may be lost in the cloud and never reach you, or be filtered as spam/junk/malware by software you don't understand. If this occurs, please notify me that the email never arrived so that I can re-send it. This is on you. I've done my job. Thank you and have a great day.

From: [Walter Rowntree](#)
To: [Climate Council](#)
Subject: [EXTERNAL] public comment
Date: Thursday, March 26, 2020 9:12:16 PM

To MT Climate Solutions Council,

This is a comment on the MT Climate Solutions Plan.

The Plan specifically asks:

‘How should the state consider possible economy-wide emissions policy proposals such as a price on carbon or cap and trade proposals?’

I support a price on carbon in the form of a carbon fee and dividend. Such a plan has been carefully designed and its probable impact thoroughly analyzed.

This is the Energy Innovation and Carbon Dividend Act now before Congress.

Please incorporate a similar policy into Montana’s plan.

Thank you,

Walter Rowntree

7 58

From: [Heather Sheffield](#) [REDACTED] [Sent You a Personal Message](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on the Draft Montana Climate Solutions Plan
Date: Thursday, March 26, 2020 3:49:56 PM

Dear Montana Climate Council,

Dear Members of the Governor's Climate Council,

Sincerely,

Heather Sheffield

[REDACTED]
Livingston, MT 59047
[REDACTED]

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or [REDACTED]
[REDACTED]

From: [Robertus Wortelboer](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment: I support clean energy in Montana
Date: Thursday, March 26, 2020 9:17:41 PM

MT Climate Council

RE: Public comment: I support clean energy in Montana


null

Montanans care about the uniquely beautiful mountains and sweeping, lush valleys of our state -- and we want a climate plan that protects these special places for future generations.

I fully support the efforts laid out in the Montana Climate Solutions Plan to reduce emissions, promote energy efficiency and tackle transportation pollution. Furthermore, I believe we need a state-wide energy policy that ensures all Montanans benefit from emissions reduction. Expanding access to climate research, strengthening the Renewable Portfolio Standard and passing a statewide energy efficiency standard would be important steps on the path to a cleaner, more sustainable society.

Montana is already behind other states in their climate goals, and when it comes to protecting our state and world from the worst impacts of climate change, there's no time to waste.

Thank you for your consideration.

Sincerely,
Robertus Wortelboer

Emigrant, MT 59027

From: [Brad Bauman](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Input to the Solutions Council
Date: Friday, March 27, 2020 10:06:56 AM

Dear Council Members,

The idea that the Montana needs to create this big new movement related to our climate is an unnecessary movement. Montana already has a large amount of renewable resources being used for electric generation. Hydro generation is as renewable carbon free as it gets!

The market will take care of the higher priced generation options such as what is happening with coal and natural gas. The price of natural gas is expected to remain low for the next decade and that will influence the coal generation, not some big 'the sky is falling' movement by environmental groups.

Please, we have many other issues bigger than this one that can be considered. This committee should be disbanded and let common sense drive the discussion not government mandates.

Brad Bauman

From: [T or S Bengtson](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Public comment
Date: Friday, March 27, 2020 12:14:36 PM

Hi

Please consider my comment in that I believe Montana electric cooperatives are proven leaders in reducing greenhouse-gas emissions, and in using clear energy sources. Therefore I do not believe additional government mandates are needed.

Thank you

Sharon Bengtson



West Glacier MT 59936

From: [Noreen and Roger Breeding](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on Montana Climate Solutions Plan
Date: Friday, March 27, 2020 8:27:57 PM

A climate plan for the state of Montana such as this one is urgently needed and overdue.

I strongly support establishing an energy storage standard and advancing energy efficiency tools. Montana must invest in all cost-effective energy efficiency in order to meet carbon reduction goals at the lowest cost.

To make the plan stronger, please consider the following:

- Invest in local food systems through increased funding and support from the state to reduce food travel distance to improve emissions reductions.
- Recommend that Montana regulate and limit the flaring, venting, and leaking of methane and other greenhouse gases from the oil and gas industry.
- Remove Carbon Capture Sequestration suggestions because the technology is not viable and will not make coal economically competitive. Eliminate public funding of CCS facilities to spend funds on more promising climate solutions.

I commend this council for their dedication to confronting the need to address global warming directly and immediately.

Noreen Breeding

Bozeman

From: [Diana Maneta](#)
To: [Climate Council](#)
Cc: [Chase Jones](#)
Subject: [EXTERNAL] Comments from Missoula County and the City of Missoula
Date: Friday, March 27, 2020 10:46:07 AM
Attachments: [Missoula City-County Comments on Climate Solutions Plan \(signed\).pdf](#)

Hello,

Please find attached joint comments on the Draft Montana Climate Solutions Plan from Missoula County and the City of Missoula.

Best,

Diana

Diana Maneta
Energy Conservation and Sustainability Coordinator
Community and Planning Services
Missoula County

In response to the COVID-19 outbreak, the CAPS office is closed to the public until further notice. Please see our website (www.missoulacounty.us/caps [missoulacounty.us]) for information on how we can continue to assist you remotely.

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Letter 2020-050

March 26, 2020

Governor Bullock and members of the Montana Climate Solutions Council:

Thank you for the opportunity to comment on the draft Montana Climate Solutions Plan. The City of Missoula and Missoula County recognize the grave threat that climate change poses to Montana's public health, economy, and ecosystems, and have been working for a number of years on local climate change initiatives. These include goals of carbon neutrality in city and county operations, a joint goal of 100% clean electricity for the Missoula urban area by 2030, and a joint climate adaptation planning effort called Climate Ready Missoula.

While local governments like ours have an important role to play in addressing climate change, there's only so much we can do on our own. Action at the state level is essential. We strongly support the work of the Climate Solutions Council to develop a coordinated statewide effort to address climate change, both by reducing greenhouse gas emissions and by preparing for the impacts of climate change in Montana.

Our comments on the draft plan are presented by topic area below, including responses to some of the questions posed in the draft plan to guide partner and public feedback.

Section 1. Preparing Montanans for Climate Impacts

Since the summer of 2018, Missoula County, Climate Smart Missoula, and the City of Missoula have led a stakeholder-driven climate adaptation planning effort called Climate Ready Missoula (<https://www.climatereadymissoula.org/>). The Climate Ready Missoula Plan, which is on the brink of being adopted by the Missoula Board of County Commissioners and the Missoula City Council, includes 29 goals and 77 strategies to adapt to the impacts of climate change in Missoula County. Implementation of the plan will require collaboration at the state level; as the plan notes, "Many of the challenges we're facing are bigger than our county, and we can build resiliency most effectively by collaborating with other communities and with statewide and regional efforts."

In this context, we support recommendations 1A through 1H of the draft Montana Climate Solutions Plan on the topic of climate adaptation. Many of these strategies are similar or complementary to strategies identified in the Climate Ready Missoula Plan. In fact, some strategies in the Climate Ready Missoula Plan specifically identify the need for action at the state level, for example "Advocate for state water policies that provide innovation and flexibility in encouraging water conservation and resiliency" (Strategy 45). We look forward to collaborating in the implementation of these strategies.

Responses to Selected Section 1 Questions

How can the state best support the unique planning needs of local governments? We recommend that the state strengthen and expand the Montana Climate Office and fund regular updates to the Montana Climate Assessment. The Climate Ready Missoula process benefited enormously from access to a number of University of Montana scientists, who contributed to our process in several capacities: as technical consultants, steering committee members, workshop participants, and reviewers of the mid-century

climate scenarios that were developed for the plan. We benefited from the presence of the University of Montana in our community, and we recognize that other cities and counties may not have access to similar resources without an expanded Climate Office and coordinated efforts across the Montana University System with the capacity to bring actionable climate information to local governments. In addition, we relied heavily on the Montana Climate Assessment to develop the locally-specific climate projections that were the foundation of our planning process, and we urge the state to update the Assessment regularly so that it will continue to serve as a useful resource to local governments.

Section 2. Strategies to Reduce Greenhouse Gas Emissions

We strongly support the Council's goal of net greenhouse gas neutrality in the electricity sector by 2035. Achieving this goal will not be easy, but it is essential to avoid the worst impacts of climate change.

In April 2019, Missoula City and County established a goal of 100% clean electricity for the Missoula urban area by 2030. Since then, Bozeman and Helena have established similar goals of their own. We have been in discussion with NorthWestern Energy for several months about opportunities to partner with the utility and these other communities to achieve our goals. We welcome the opportunity to collaborate with the state, as the more broadly our actions are coordinated, the more impactful, efficient, and cost-effective they will be.

Energy Efficiency

We strongly support recommendations 2A through 2F related to energy efficiency. There is tremendous potential to use energy more efficiently in Montana, and we encourage the state to implement these recommendations as quickly as possible, particularly rate structures that facilitate energy efficiency (2D), modernized building codes (2A), and a statewide energy efficiency standard (2B). These measures will save Montana residents and businesses money, while helping utilities avoid the need to invest in new generation capacity.

Renewable Energy

We likewise support recommendations 2F through 2K on the topic of renewable energy. However, while this is a good starting point, we believe that more will be needed in the realm of renewable energy to achieve the 2035 carbon neutrality goal. We urge the Council to include recommendation 2Q (distributed generation) in its final plan. Our city and county governments have a number of facilities that would be candidates for larger distributed generation systems but are currently limited by the 50 kilowatt size cap. Increasing the cap will allow us to save taxpayer dollars by increasing our investment in on-site renewable energy systems. We also urge the Council to include recommendation 2R (renewable portfolio standard) in the final plan.

In addition, we suggest the inclusion of a new recommendation on the topic of utility resource planning and procurement. Statute requires that public utilities "provide adequate and reliable electricity supply service at the lowest long-term total cost" (MCA 69-8-419). It does not specify the factors that should be included in the "total cost" calculation. The Public Service Commission and/or legislature should clarify that a carbon price must be included in this cost calculation. This will allow utilities to take climate impacts into account in resource planning and procurement and eliminate a major obstacle to achievement of the 2035 carbon neutrality goal.

Finally, we urge the Council to consider the excessive energy consumption and climate impacts of cryptocurrency mining, a new industry that has moved into Montana in recent years to take advantage of

our low electricity rates and cool climate. In 2019, Missoula County adopted interim zoning regulations to address the local impacts of cryptocurrency mining, including a requirement that new or expanded cryptocurrency mines power their operations with new renewable energy sources. The excessive energy consumption of this new industry has the potential to derail our collective efforts to address climate change, and we encourage the Council to address this topic at the state level.

Transportation

We support recommendations 2L through 2N on the topic of transportation. We suggest that recommendation 2N be broadened to include public transit and pedestrian infrastructure, in addition to ridesharing and bike infrastructure.

Transportation accounts for a large percentage of greenhouse gas emissions in urban areas like Missoula, and there is tremendous opportunity to reduce those emissions by reducing single-occupant vehicle trips. Missoula's Long-Range Transportation Plan, *Activate Missoula 2045*, includes a goal of tripling the proportion of commute trips taken by bicycle, transit, and on foot by 2045. The Montana Department of Transportation (MDT) has a major role to play in facilitating this shift. To accomplish this, we encourage MDT to shift away from vehicular level of service and toward a measure of moving people efficiently. Specific recommendations for MDT:

- The HSRRA policy considers all improvements outside of a vehicular travel lane as "amenities" requiring special approval. Modification of this policy would make it easier to design streets that will move more people via bike, walking and transit.
- MDT should allow more permissive designs for transit, such as in-lane stops, appropriate stop infrastructure and signage, and innovative signal technology that prioritizes movement of buses.
- Adopt urban standards that fully support and integrate multi-modal best practices.
- Ensure that adequate funding in urban areas goes to supporting local transportation plans and goals, such as the *Activate Missoula 2045* goals.
- Prioritize safety over operational efficiency, with extra emphasis on the safety of non-motorized users who don't benefit from vehicular safety technology.

Furthermore, we urge the Council to add a recommendation to the transportation section: "Develop comprehensive strategies to maintain and expand passenger rail service." Passenger rail must be a consideration for public transportation in the 21st century in Montana, particularly from a carbon-reduction and sustainability standpoint. To that end, it is imperative to retain the Empire Builder along the Hi-Line and also to take steps to restore inter-city, long-distance passenger rail service through the more populous southern region of the state. Billings, Livingston, Bozeman, Butte, Helena, and Missoula (and many smaller communities east and west) last saw regular passenger rail service in 1979, and we believe that the time has come to take concrete steps to position ourselves to restore service to these communities. Missoula County has spearheaded an effort to establish a passenger rail authority for southern Montana, and we welcome the Council and the state of Montana to partner with us and other counties in this undertaking. Key strategies for this new recommendation might include:

- The state of Montana should develop a passenger rail authority modeled after passenger rail authorities in other states.
- Work with Montana's congressional delegation to explore creation of a regional, multi-state passenger rail council.

- Direct the Montana Department of Transportation to prioritize passenger as a part of the state's multi-modal approach to mitigating climate change.

Waste Reduction – Zero Waste

Forty-two percent of all U.S. greenhouse gas emissions are generated in resource extraction, manufacturing, and distribution of goods and food. Additionally, our Community Greenhouse Gas Inventory reports that nine percent of Missoula's community greenhouse gas emissions are generated through the landfill disposal of solid waste. Waste reduction is therefore critical to greenhouse gas emission reduction efforts, and we strongly recommend the inclusion of waste reduction strategies in the Montana Climate Solutions Plan so that our state has a robust set of tools to achieve the Governor's goal of net greenhouse gas neutrality economy-wide at a date to be determined by the Council.

The City of Missoula established zero waste as a community priority in 2016 by setting a goal to reduce what the community sends to the landfill by 90 percent by 2050. The plan to move Missoula toward that goal, **ZERO by FIFTY: Missoula's Pathway to Zero Waste** was adopted in August 2018. The ZERO by FIFTY framework includes Access, Infrastructure, Policy, and Education; details can be found at <https://www.zerobyfiftymissoula.com/>. We encourage the Council to incorporate the framework of ZERO by FIFTY, adapted to the statewide context, with a focus on upstream and midstream solutions. Missoula is particularly excited about the potential to reduce wasted food and to reduce waste in the building and development sector. We believe that this focus applies broadly in Montana and creates even greater impact when incorporated statewide.

Responses to Selected Section 2 Questions

How can the state, cities and counties work more collaboratively to enforce the energy code and advance energy efficiency objectives? We strongly support recommendation 2A, in particular the recommendation to allow local jurisdictions to require compliance with stretch energy codes, as well as accelerating state adoption of the International Energy Conservation Code.

How should the Public Service Commission evaluate greenhouse gas impacts of decisions and rate-payer risks? Please see our recommendation above on the topic of utility resource planning and procurement. The Public Service Commission should require utilities to include a carbon price when evaluating the cost of resources to meet the "lowest long-term total cost" requirement.

Are there improvements that could be made to the way the state engages with local governments, counties and tribal nations regarding transportation projects and planning? Please see our recommendations for MDT in the Transportation section above.

How can the state assist and learn from local government and tribal nation greenhouse gas reduction efforts? There could be great value in a state government program (perhaps located in the DEQ Energy Office) to provide resources and assistance to local governments on the topic of climate action planning to reduce greenhouse gas emissions. Missoula City and County are among a small number of local governments in the state who have undertaken climate action planning efforts, and we often share information informally with other local governments that are interested in embarking on such efforts. A state government program with staff capacity and a web-based portal to facilitate the sharing of information, data, and best practices would make climate action planning more accessible to local governments and tribal nations throughout the state.

As discussed above, we also recommend that the state consider following the example of Missoula County in addressing the excessive energy consumption of cryptocurrency mining operations and the example of the City of Missoula in addressing waste reduction.

How should the state consider possible economy-wide emissions policy proposals such as a price on carbon or cap and trade proposals? The state should support federal carbon pricing legislation. A federal price on carbon (whether achieved through a carbon tax, cap and trade, fee and dividend, or other policy) is essential to reduce greenhouse gas emissions nationwide and will make it much easier for Montana to achieve its own climate goals. Montana should also consider working with other states in the region to develop a regional carbon pricing initiative. But the state should not wait on federal or regional action, and in fact the more quickly we reduce in-state greenhouse gas emissions, the better positioned we will be when a carbon price is enacted. Montana should move forward with urgency to complete and implement the Climate Solutions Plan. There is no time to lose.

Sincerely,

**BOARD OF COUNTY COMMISSIONERS
MISSOULA COUNTY, MONTANA**



Josh Slotnick, Chair



Dave Strohmaier, Commissioner




Juanita Vero, Commissioner

CITY OF MISSOULA, MONTANA



John Engen, Mayor



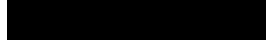
Bryan von Lossberg, Council President

From: [Laura Reynolds](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments
Date: Friday, March 27, 2020 8:35:46 AM

As a member of Citizens Climate Lobby I encourage you to use a carbon fee and dividend program to create a market signal to make carbon emitting industry less competitive. But I concede that approach is not entirely practical at the state level. It should be national. So I ask that you endorse HR 763, the Energy Innovation and Carbon Dividend Act.

Regarding things to do at the state level I suggest you streamline any non carbon emitting energy proposals . And make a nice safety net for displaced workers in the fossil fuel economy.

Laura Reynolds



Kalispell, MT 59901

Get [Outlook for Android \[aka.ms\]](#)

From: [O'Connor Roy](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Climate Plan
Date: Friday, March 27, 2020 3:34:49 PM

Dear Council Members, first let me thank you for all the work you put in to draft this excellent plan for Gov. Bullock. I am hoping the time and effort put into developing this plan will lead to actual implementation of the majority of the recommendations. This, in my opinion, will be the most difficult part of your work!


We have to do all we can as individuals, communities, and the State, to cut our fossil fuel emissions, to facilitate immediate conservation measures, and promote the growth of renewable energy resources. The plan outlines various ways we can do this, all of which I support.

The real concern to me is how to get these changes made. The Governor has very limited capabilities to initiate change, other than contract clarity to promote conservation and renewables within state buildings and lands. He can also instruct the DEQ and the DNRC to follow the recommended guidelines per the draft plan. These will help, and should be addressed as soon as possible.

The main changes that can be made are under the control of the Legislature, who historically does not support conservation. The committee should publish, and make available to all residents and voters, a very short summary of these recommendations, and how important they are to addressing Climate Change. At this stage we must hope the public will contact their legislators to pressure them to pass measures that are outlined in the Plan. Giving tax incentives to promote both energy savings and clean energy production will make a huge difference, but will be fought by corporations and lobbyists who represent them. Education and voter involvement are the only way to offset this.

Being a producer of crops and livestock, I am aware of the changes that are happening to our climate, and can only hope this plan will be a success, and move us in a more sustainable direction.

Sincerely,
Roy O'Connor


Missoula, Mt 59802

From: [Chris Scranton](#) [REDACTED] [Sent You a Personal Message](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on the Draft Montana Climate Solutions Plan
Date: Friday, March 27, 2020 6:55:48 AM

Dear Montana Climate Council,

Dear Members of the Governor's Climate Council,

Montana should emphasize transitions to fossil fuel free energy sources especially solar and wind. Because of the environmental damage caused to fish and other wildlife large hydro projects should not be emphasized.

There should be increased tax incentives for people and industries that install solar ready systems. As a further incentive to install solar or wind power there should be property tax reductions for properties that instal these renewable energy systems.

Montana should be developing programs to train workers in the installation and maintenance of solar and wind projects.

There should be incentives for solar to be incorporated into new building designs.

Since hot water heaters use more energy than any other appliance in most homes there should be incentives for people and businesses to instal more efficient water heaters.

Efficiency standards should be set for vehicles and electric car technologies should be supported with more recharge stations available for a transition to electric transportation.

No new fossil fuel electric generation plants should be built and as more renewable energy comes on line existing fossil fuel plants should be phased out.

As battery technology continues to improve, Montana should invest in energy storage systems.

The cost of not doing enough to mitigate climate change should be incorporated into the plan. In other words the costs associated with climate change should be considered such as lost crops, increased fires, reduced water availability, effects on wildlife, air pollution and other effects on human health.

Climate change is a growing threat to life as we know it. Doing nothing is unacceptable and not doing enough is also unacceptable. Montana needs to develop a climate solution plan that formats uses the best scientific knowledge to reach our goals of becoming carbon neutral. This will not be easy but is doable if Montana makes it a priority.

Sincerely,

Chris Scranton

[REDACTED]
Stevensville, MT 59870
[REDACTED]

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or [REDACTED]
[REDACTED]

From: [Jeannie Siegler](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on Draft Climate Solutions Plan
Date: Friday, March 27, 2020 10:46:31 AM

I congratulate the Council for a very thorough compilation of climate change adaptation strategies. Please include me on an email list which provides updates of Council activities.

My only suggestion relates to energy conservation in existing structures. In my opinion, the Coal Trust Fund (in addition to the existing USB charge structure) would be a source of funding through which the legislature could assist homeowners and businesses with best practice building strategies for new structures, and for retrofitting older structures. The savings “dividend” from retrofits or mores stringent building codes could be used by structure owners to repay low or no interest loans from the Trust Fund.

Thanks you for your consideration.

Chris Siegler

[REDACTED]

Huson, MT 59846

[REDACTED]

From: [jean zankner](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Climate Solutions
Date: Friday, March 27, 2020 10:29:07 AM

I'm writing in support of the draft of Climate Solutions for our state. I'd especially like to support and see put in place 2C which would encourage the purchase of energy efficient appliances. Saving energy is one of the best ways to slow down air pollution. Thank you,
Jean Zankner

From: [Will Boland](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Climate
Date: Saturday, March 28, 2020 8:22:34 PM

Can you imagine the tremendous boost to our economy if energy costs were cut by half and all that cash was available to circulate in society? Plus, we could impede the viral growth of carbon in the atmosphere which will soon not do anybody any good. Subsidize solar and lead us into a better future! Will Boland

From: [Greg and Jo Ann Dramer](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Climate change solution proposal
Date: Saturday, March 28, 2020 11:05:22 AM

There is no doubt the climate is changing. And we all need to do our part

But solutions need to be reasonable and practical and realistic... NOT simply reactive.

The laws and regulations NOW in place are helping us reach the goals and are realistic. We DO NOT need more and more government regulation....instead we need level headedness, as our emotion and passion have gotten us into action, to solve these necessary and real concerns.

Now let us all help the businesses, leaders and others to reach the goals...without unrealistically hog-tying them with more and more restrictions.

Jo Ann Dramer

Sent from my Verizon, Samsung Galaxy smartphone

From: [Dunwell Mary](#)
To: [Climate Council](#)
Cc: [Dunwell Mary](#)
Subject: [EXTERNAL] Climate Plan Comment - Rep. Mary Ann Dunwell
Date: Saturday, March 28, 2020 4:11:25 PM

3-28-20

To: Montana Climate Solutions Councilmembers
From: State Rep. Mary Ann Dunwell, HD 84 Helena/East Helena
RE: Public Comment about Draft Climate Solutions Plan

Hello Climate Solutions Council,

Thank you for considering my input regarding your draft climate solutions plan and preliminary recommendations. The draft document reflects some good, collaborative, multi-disciplinary work. Yet, I see glaring gaps in the plan, and I encourage you to take the opportunity to fill those gaps to produce a more complete, effective plan and reach bold climate solutions.

The plan needs to include pricing on carbon. It needs a more robust investment in renewable energy production and storage capacity. And it needs strategic thinking about stopping coal in the not-too-distant future and an immediate, short term cap and invest policy. I suggest looking at other states' actions in this direction, as well as market forces, to inform Montana's policy.

The first goal of the climate solutions plan to reduce climate impacts needs to consider public health implications and the probable connection between global warming and climate change with the world's emerging infectious diseases, such as the current COVID-19 pandemic. Part of the revenue from a carbon tax could fund public health research and preparedness measures for such pandemics. A 100% renewable energy portfolio—or phased in to 100% renewable energy standard and a phase out of coal and other fossil fuel reliance—would protect the public health.

The second goal for strategies to reduce greenhouse gases, as well as the third goal to address the needs of workers and communities in transition must include a price on carbon for the large industrial emitters—coal fired power plants, natural gas power plants, oil refineries and extraction operations. I suggest a carbon fee/community dividend model to price carbon and return the revenue to energy communities in transition, workforce development for renewable technology jobs, and jobs in environmental remediation of polluted sites resulting from extraction industries.

A mere \$10 per metric ton carbon fee could yield tens of millions of dollars to invest in

communities. [HB 193, the Montana Climate Action Act from the 2019 Legislative Session](#) could inform this carbon fee policy.

I hope you give serious consideration to my suggestions. Thank you.

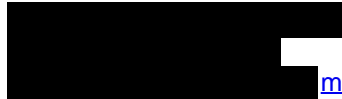
Regards,

Rep. Mary Ann Dunwell

Mary Ann Dunwell

House District 84, Helena/East Helena

State of Montana



[maryannunwellforhd84 \[facebook.com\]](#)

@MTMaryAnn



Helena, MT 59604

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From: [Dylan Flather](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comments on Climate Council's plan
Date: Saturday, March 28, 2020 7:20:45 PM

Please consider the following points:

- The Council's goal to achieve net greenhouse gas neutrality is essential, but your recommendations do not reflect this goal. What about promoting rooftop solar by offering stronger tax incentives and retain the current net metering program? If the basic service charge is inadequate, an increase for all customers to cover that cost is in order.
- Implementing statewide building codes that require energy efficiency as recommended on p. 9 is a great idea. Please also encourage electricity conservation by implementing a structure that increases rates with increasing use.
- Thanks for recommending low emission standards for vehicles, you should also implement more stringent mileage standards and reduce speed limits.
- The current economy must change in reaction to climate change. Council membership is heavily weighted towards status quo economic concerns and very light on scientists and economists. The result is the council emphasizes maintaining and increasing natural resource extraction (agriculture, logging, and mining) rather than helping the economy adapt to changing demands and climate change.
- Climate Council recommendations should not supersede the best available science. The Montana Climate Solutions Plan alarmingly states that "sound science and information alone are insufficient to effectively manage climate-related risks" instead it seeks to respond "to the needs of government agencies, tribal nations, land managers, business owners, non-profits, and individuals" (page 3 Montana Climate Solutions Plan MCSP). The economic needs of industry should not take precedence over sound science and economic predictions.

Thanks very much for your consideration,

Dylan

From: [Shirley Sager](#)
To: [Climate Council](#)
Subject: [EXTERNAL]
Date: Saturday, March 28, 2020 11:10:39 AM

This big push to drastically scale back greenhouse gas emissions by the radical left is ridiculous and would destroy the US economy and way of life. Montana's electric cooperatives are proven leaders in reducing greenhouse-gas emissions, and in using clean energy sources. Therefore, we do not believe additional government mandates are needed.

From: [Katie Smith](#)
To: [Climate Council](#)
Subject: [EXTERNAL] Comment
Date: Saturday, March 28, 2020 1:36:51 PM

Dear Council Members,

I'm a member of Vigilante Electric Co-op for over 40years. Our electricity has working on carbon free for some time. Our power supply comes from Bonneville Power Administration (BPA). The BPA provides us with low-cost carbon free power. Several co-ops in the state are using solar power. Ravalli County is one I read about in the Rural Montana magazine,has installed solar for their co-op members. Montana's electric co-ops are already moving to reduce greenhouse gasses. We ask you not to add more government mandates on electric co-ops.

Sincerely,

Kathryn Smith