

GHG Committee

Recommendations Still under Consideration but Needing Further Discussion and Revision

AA. SUPPORT THE DEVELOPMENT AND USE OF MICROGRIDS

Per the Department of Energy, “microgrids are localized grids that can disconnect from the traditional grid to operate autonomously. Because they are able to operate while the main grid is down, microgrids can strengthen grid resilience and help mitigate grid disturbances as well as function as a grid resource for faster system response and recovery.” Further, microgrids can provide an opportunity to deploy more distributed generation, especially with storage technology, and can more efficiently use those technologies.

FLAG: This recommendation is still under development

As Appropriate, consider the following relevant to the recommendation:

- **Who could implement the recommendation (legislature, Governor, local government, utility/co-ops, homeowners, businesses, agriculture, landowners, industry etc.)?**
 - Legislature could pass a resolution supporting the development, and/or legislation requiring or incentivizing development.
 - Could be implemented directly by utilities
 - In some instances, could be implemented by private entities (e.g. universities, hospitals)
- **Describe the pros and cons of the recommendation, including any co-benefits for mitigation and adaptation to climate change.**
 - Per the Department of Energy: “Microgrids support a flexible and efficient electric grid by enabling the integration of growing deployments of distributed energy resources such as renewables like solar. In addition, the use of local sources of energy to serve local loads helps reduce energy losses in transmission and distribution, further increasing efficiency of the electric delivery system.”
- **Identify whether this recommendation would likely have a high, medium or low effectiveness or impact in addressing the issue and why. How does the recommendation advance the guiding principles or theory of change identified by the committee?**
 - Unknown (could use additional research on this). However, microgrids can increase the efficiency of distributed generation, especially when paired with storage. Microgrids could be especially impact for emergency and critical services, such as hospitals, fire and police stations, and more.
- **Identify whether this recommendation would have any significant adverse impacts on specific groups of people, industries, businesses or others. If there are significant adverse impacts, what mitigation strategies could be used to reduce those impacts? Similarly, are there adverse impacts to the environment to consider?**
 - None identified

- **What are the estimated costs or resources (both public and private) needed to implement this recommendation (if possible)?**
 - Unknown at this time. However, NorthWestern Energy has implemented a small micro-grid pilot project which could be used to inform further development.

- **Provide an estimate of a reasonable timeframe to implement this recommendation.**
 - Unknown. Need more research on this, or input from energy providers and developers.

- **What needs to happen to determine whether this recommendation, if implemented, is successful in achieving its goals? Does this recommendation address short, medium, or long term goals?**
 - Monitor use of the distributed and generation systems, especially in times of outages and/or extreme weather.

BB. NET ZERO ENERGY BUILDINGS: TACKLING CLIMATE CHANGE MITIGATION & ADAPTATION

PRIMARY AUTHOR: SUSAN BILO

DOES THE WHITE PAPER NEED TO BE COORDINATED WITH OTHER COMMITTEES?

Net Zero Energy (NZE) buildings tackle climate change mitigation and adaptation simultaneously. NZE strategies and goals overlap with the Climate Change Adaptation and Innovation/Transitions Committees.

Adaptation because NZE buildings can “float” power outages by A.) staying warmer in winter and cooler in summer due to superior building envelopes, and B.) when their solar electric, wind, or other electrical-generating renewable energy systems include battery storage, either on-site or as part of a micro-grid, they can be wired to have electricity when the grid goes down.

Innovation/Transitions because NZE buildings require an integrated, whole systems approach that is not widely practiced and they use proven, off-the-shelf technologies that are deemed innovative. Achieving a NZE building requires a transition away from business-as-usual thinking, building codes, policies, and processes.

KEY ISSUE

1. The Building Sector emits the most greenhouse gases (31%)

- and even more so when considering the embodied energy of construction materials and interior design.

* Viewing the chart title: “...with Electricity Distributed” means the electricity used in the listed sectors is included/accounted for in the %’s. Some charts separate electricity generation as a separate sector.

2. Heating and cooling account for most of the energy used in most buildings in the U.S. and in Montana.

<https://www.eia.gov/energyexplained/use-of-energy/homes.php>

<https://www.eia.gov/consumption/commercial/reports/2012/energyusage/index.php>

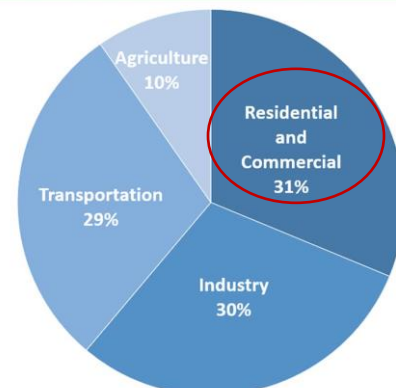
3. NZE buildings are designed to significantly reduce ALL of a building’s energy use and thus their greenhouse gas emissions.

Refer to Marc Rosenbaum’s 13 Best Practices link:

<http://nesea.org/conversation/masters-blog/marc-rosenbaum-13-best-practices-for-net-zero-energy-buildings>

The State of Montana can adopt one of the existing programs for all state-owned new construction or existing building retrofits. The State of Montana should adopt the International Living Future Institute’s (ILFI) Living Building Challenge Program and use its Net Zero Energy guidelines: <https://living-future.org/>

Total U.S. Greenhouse Gas Emissions by Sector with Electricity Distributed*



U.S. Environmental Protection Agency (2019). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017

a NZE or NZE-ready goal. Many and require third-party certification.

There are two non-profits that keep track of NZE certification numbers and trends. Montana should seek a partnership with these groups for program recommendations and trainings.

For the **Commercial Building Sector**, the New Buildings Institute (NBI) tracks NZE building progress.

<https://newbuildings.org/>

Most of the 482 commercial buildings listed in NBI’s report have achieved or have been designed to achieve a NZE Energy Use Intensity (EUI) goal between 18 and 24 kBtu/sf/year. Architects use energy modeling programs and have flexibility in how they achieve an EUI goal. “The ZE Verified projects on NBI’s NZE building list on average use 60% less energy than comparable existing U.S. commercial buildings and 46% less energy than new buildings under one of the most stringent U.S. base codes.”

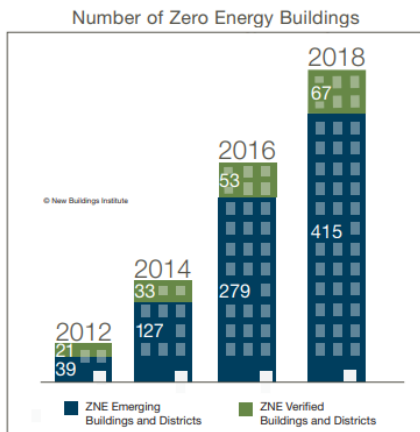
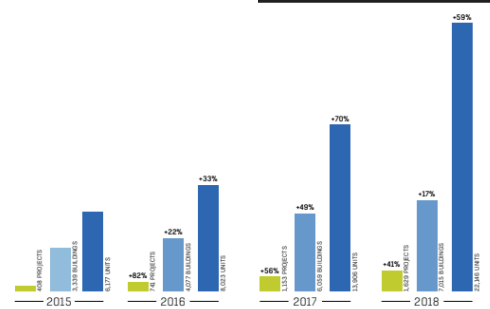


Fig 2. There are now 67 ZE Verified and 415 ZE Emerging projects documented
<https://newbuildings.org/resource/2018-getting-zero-status-update/>

FINDINGS

The growth our contributors reported in 2018 was once again very robust – the number of ZE housing units increased by 59% over the prior year’s inventory, 22,146 total units in design, in construction, and completed, as compared with 13,960 units in those combined categories in 2017.¹



<https://teamzero.org/resources/zero-energy->

NBI has developed a *Zero Net Energy Project Guide for the Residential Building Sector*, TEAM ZERO (formerly the Net Zero Energy Coalition) tracks NZE and NZE-ready projects:

<https://teamzero.org/>

The U.S. Department of Energy has a well-established Zero Energy Ready Home program:

<https://www.energy.gov/eere/buil>

GAPS

NZE adoption barriers include:

1. Lack of awareness of the concept and multiple benefits.
2. Lack of educated customers and trained professionals. Chicken and egg issue: customers building new buildings need to know that NZE and NZE-ready is an option and ask for it. And, Montana’s architects and builders need to know how to design and build NZE so they can be hired. Luckily, there are numerous architects and builders across the U.S. with the knowledge, expertise, and experience required, but Montana will need to assess knowledge gaps and educate and train most of its building-related professionals.
3. The emphasis on capital/first costs versus equal consideration of the “2nd price tag” of continuous operation and maintenance costs paid over a building’s lifetime.
4. Persistent, outdated myths about off-the-shelf and proven technologies used in NZE buildings. For example, companies that install traditional HVAC systems may say that air source heat pumps do not work well in cold climates like Montana’s.

STAKEHOLDERS

A more detailed list of Montana-based stakeholders should be developed. Stakeholders already identified include: architects, builders, developers, community development professionals, code officials, sustainability office staff, renewable energy professionals, real estate agents, and commercial and residential building owners.

RECOMMENDATIONS

RECOMMENDATION 1: THE STATE OF MONTANA ADOPT A NZE GOAL

- The State of Montana will lead by example and make sure all new construction has a NZE or NZE-ready goal. New construction provides the most efficient and cost-effective path for achieving NZE.
- Rank existing state-owned and -leased buildings by which are most energy- and water-efficient and retrofit to achieve NZE. Oregon retrofitted a 1950s-era Department of Transportation building to a (Site) EUI of 36: https://newbuildings.org/wp-content/uploads/2017/09/Radiant_ODOT_FINAL.pdf
- Then, lead tours and develop case studies to share the information and inspire others.

As Appropriate, consider the following relevant to the recommendation:

- State of Montana building officials will implement.
- As described under Committee Coordination, NZE buildings proactively tackle climate change mitigation and adaptation simultaneously.
- This recommendation will be highly effective in addressing greenhouse gas reduction.
- The recommendation will require the training of professionals who will design, construct, and operate NZE buildings.
- NZE design and construction cost more per square foot to build, but operation and maintenance costs are significantly reduced and these savings pay for the initial higher costs. Actual costs vary by building type and climate.
- Implementation could be immediate.
- The State of Montana will establish a NZE and Energy Use Intensity (EUI) goal for all new construction and existing retrofits and hire knowledgeable and experienced folks to get it done resulting in lower utility bills, and, more comfortable and durable state buildings that do not contribute to the increase in greenhouse gases.
- The State of Montana can include electric vehicle charging equipment on or near NZE buildings as a component of its NZE goal to tackle the Transportation Sector's greenhouse gas emissions.

RECOMMENDATION 2: PROVIDE INCENTIVES AND ADOPT POLICIES THAT ENCOURAGE NZE DEVELOPMENT

- Provide tax incentives (for a set number of years) for those taking the lead and building successful NZE projects.
- Encourage and assist in development of a NZE step/stretch code to be voluntarily adopted by local code officials.
- To accelerate the design and construction of NZE buildings, consider policy requiring a NZE-ready goal for all new construction.

As Appropriate, consider the following relevant to the recommendation:

- Montana DEQ and its Energy Office can oversee and implement.
- Con: The State on Montana will likely need to hire more staff at least for a set period of time. Pro: As described under Committee Coordination, NZE buildings proactively tackle climate change mitigation and adaptation simultaneously.
- This recommendation will be highly effective in addressing the reduction of greenhouse gases if step codes are adopted and architects and builders believe the tax incentives are financially worthy.
- Will have to research estimated costs and resources needed to implement this recommendation.
- Implementation can be quick: Step codes have already been developed by others and could serve as a template. Tax incentives might need to be approved by the legislature.
- DEQ and/or the Energy Office can easily track step code adoption and who applies for the tax incentives.
- Examples: According to a May 2018 American Council for an Energy Efficient Economy website article, “British Columbia [unveiled its voluntary zero energy “step code,”](#) which its local governments could choose to adopt, in April 2017. A few months later in November, [Oregon announced](#) it would begin incorporating zero energy strategies into its building codes beginning in 2019. This year in May, California adopted a new building code that requires all new homes be zero electricity by 2020 and new commercial buildings by 2030. Other active zero energy plans are underway in Vermont, Rhode Island, and Massachusetts.” <https://aceee.org/blog/2018/10/zero-energy-buildings-rise-barriers>

RECOMMENDATION 3: SUPPORT STATE-WIDE NZE EDUCATION AND TRAINING EVENTS

One barrier to NZE adoption is the lack of awareness of the building option and its multiple benefits. Coordinate and/or contract out state-wide educational events targeting aforementioned stakeholders. And, support seminars and trainings at existing events already coordinated by stakeholder groups.

For example, DEQ can support and coordinate with Montana’s American Institute of Architects (AIA) Chapter to bring ILFI’s Living Building Challenge and DOE’s Zero Energy Ready Homes program training to AIA’s annual conference. The training will have the added value of providing AIA continuing education credits.

Consider holding seminars, workshops, and trainings in Whitefish’s Center for Sustainability and Entrepreneurship:

<https://greenschoolsnationalnetwork.org/whitefish-school-district-strives-for-net-zero-through-center-for-sustainability-and-entrepreneurship/>

As Appropriate, consider the following relevant to the recommendation:

- Montana DEQ and or the State Energy Office can coordinate and/or contract out state-wide educational events.
- Cons: None. Pros: The educational events will be led by professionals who are already achieving NZE goals whether related to design, construction, research, financing, policies, etc.
- This recommendation will be very effective and have a high impact in addressing one of NZE's key barriers.
- This recommendation will ultimately have an adverse impact on building-related professionals who want to maintain business-as-usual and resist change.
- Costs will depend on multiple factors: number of events, presenter stipends, support materials provided, etc.
- There can be a quick turnaround time.
- Success can be measured by number of attendees and follow-up regarding implementation of NZE projects.
- Residential case study: NZE and other high-performance building programs have traditionally been a goal of folks with abundant financial resources and those that develop subsidized housing. Habitat for Humanity became interested in these programs after many families had to move out of their homes because they could not afford the utility bills and maintenance costs of code-built homes.
- A shining example of what has already been achieved can be found in Whitehall, Montana. The National Affordable Housing Network has developed a NZE-ready community called the Mountain Horizon's Solar Subdivision: <http://www.nahn.com/mountain-horizon/>

The NZE strategies used for both high-end and subsidized homes as well as commercial buildings are the same! Because of this and with NZE being adopted by customers in the middle of the financial spectrum, NZE can be realized today.

CC. ROBUST AND FAIR FEDERAL CARBON FEE AND DIVIDEND LEGISLATION

12/4/2019

PRIMARY AUTHORS:

- Kristen Walser, State Co-Coordinator for Montana, Citizens' Climate Lobby

DOES THE WHITE PAPER NEED TO BE COORDINATED WITH OTHER COMMITTEES?

Yes, Adaptation/Decision Support and Innovation/Transitions Committees

KEY ISSUE

Reducing net greenhouse gasses is a primary goal of the CSC, 100% by 2035 in the electricity sector, and later in transportation, building, industry, and all other sectors. A robust and fair federal Carbon Fee and Dividend (CFD) policy is seen by economists, scientists, and policy makers to be the most efficient and effective way to reduce emissions economy-wide, by incentivizing private and public innovation and efficiency on the consumer, industry, and investment levels. In short, CFD motivates people, at home and at work, to make decisions that lower emissions.

Council and the Governor's endorsement would serve as a clear message to our Congressional delegation and the public and is in line with Gov. Bullock's commitment to the U.S. Climate Alliance to: "Accelerate new and existing policies to reduce carbon pollution and promote clean energy deployment at the state and federal level."

PROGRESS TO DATE

Carbon Pricing differs greatly by type (Carbon tax or fee versus Cap and Trade) and by design: What is taxed, where, how much and what rate of increase, and most controversially, where does the revenue go. By discussing one specific bill in Congress which has support and has been studied by experts, the Council will be able to examine likely effectiveness and impacts realistically, as well as have a ready vehicle for endorsement.

The Energy Innovation and Carbon Dividend Act (EICDA) [H.R. 763](#) is a carbon fee and dividend policy, which places a fee starting at \$15/ton on the carbon content of fossil fuels, and rises by \$10-15/ton annually at the point of production or first sale, and returns the revenues in equal monthly shares called 'Dividends' to every adult with a social security number or TIN. Children 18 and under would be allotted ½ share.

The EICDA has 73 Co-sponsors with one Republican co-sponsor, and has been referred to 3 U.S. House committees: Ways and Means, Energy and Commerce, and Foreign Affairs.

The emissions reductions, economic and social impacts, and dividend administration of the EICDA and its policy predecessor (CFD at the same rate) have been studied by the Center for Global Energy Policy ([CGEP](#), Columbia University), and by experts commissioned by Citizens' Climate Education/Lobby by Regional Economic Models, Inc. ([REMI](#)), Kevin [Ummel](#) (International Institute for Applied Systems Analysis), and Allen [Lerman](#) (US Treasury). Additional carbon tax studies abound, including the comprehensive [Overview](#) of the Energy Modeling Forum (EMF) 32 Study on U.S. Carbon Tax Scenarios in 2018, and reviews of countries and provinces that have already implemented carbon taxes.

GAPS

- Carbon Pricing with a Dividend is a new concept for most Americans. Aspects of the bill are hard to explain to longtime supporters of other proposals. Council support could include public education.
- H.R. 763 needs broad support from the public, business, and thought leaders.
- H.R. 763 needs additional Republican support and a Senate companion bill. Sen. Coons and Sen. Flake introduced one in the last session, and Coons is working to reintroduce it with Republican support. This fall, Sen. Coons (D DE) created the bipartisan Senate Climate Solutions Caucus for this purpose, with Republican Mike Braun (IN), Lindsey Graham, Mitt Romney, and Lisa Murkowski, and Democrats Jeanne Shaheen and Mike Bennett, and Independent Angus King. The Partisan divide needs to be approached through respectful dialogue.
- H.R. 763 does not provide specific relief for the one industry most affected by the bill, coal. The Council could advocate for our Congressional delegation to submit an amendment to include a less than 1% carve out of revenue to provide \$25 billion in consistent and substantial funding for Coal miners and unrestricted local, county, and state coal tax replacement, which could be allocated for transition activities. See a proposal [here](#).

STAKEHOLDERS

IDENTIFY STAKEHOLDERS WHO NEED TO BE ENGAGED IN EITHER DEVELOPMENT OF RECOMMENDATIONS OR THEIR IMPLEMENTATION.

- Steve Bullock, Governor
- Steve Daines, Senator
- Jon Tester, Senator
- Greg Gianforte, Representative

RECOMMENDATIONS

RECOMMENDATION 1: PUBLICLY ENDORSE FEDERAL CARBON FEE AND DIVIDEND LEGISLATION

Publicly endorse and work for passage of federal Carbon Fee and Dividend legislation and/or the Energy Innovation and Carbon Dividend Act H.R. 763.

As Appropriate, consider the following relevant to the recommendation:

- **Who could implement the recommendation:**
 - Governor Bullock (as well as local government, utility/co-ops, homeowners, businesses, agriculture, landowners, industry, legislature)
- **Describe the pros and cons of the recommendation, including any co-benefits for mitigation and adaptation to climate change.**

Pros:

1. Carbon Pricing integrates well with other state, national, and international goals and policies.
2. This Carbon Fee is highly effective and fast:
 - a. U.S. economy-wide net GHG emissions fall by 32–33 percent by 2025 and 36–38 percent by 2030, with the power sector leading with 82–84 percent reductions by 2030. (CGEP)

- b. Covers majority of GHG, including Fluorinated gasses
 - c. Easy to implement quickly, using administrative structures already in place for collections and distributions (Lerner)
- 3. The Dividend protects vulnerable communities:
 - a. Average low- and middle-income households receive more in dividends than they pay in increased economy-wide prices for goods and services resulting from the carbon fee. The annual dividend for eligible adults is \$250-\$260 in 2020 and \$1,410-\$1,470 in 2030.
 - b. The dividend is not dependent on income, the dividend is taxed, but not used for means testing for social programs. 85% of lowest income Montanans receive more than they spend in added costs (Ummel)
- 4. It's good for health: EICDA reduces local air pollution from power plants, resulting in 295,000 lives saved over 10 years. ([Nature](#))
- 5. "Energy prices rise but do not skyrocket. Gasoline prices to increase by about 12 cents per gallon in 2020". (CGEP)
- 6. EICDA is good for the economy
 - a. 2.1 million jobs are created in 10 years, 220,000 jobs in the Mountain West Region (REMI)
 - b. The dividend stimulates the local economy
 - c. Mountain West GRP increases by \$10 B in 10 years
 - d. Carbon fee is predictable for government and business
 - e. Employment-heavy Renewable energy increases by 44% nationally by 2030. (CGEP)
- 7. Border Carbon Adjustment protects American manufacturing
 - a. Placed on carbon intensive goods imported from nations without comparable carbon pricing
 - b. Protects American jobs from getting off-shored to countries without carbon pricing
 - c. Creates economic incentive for all nations to price carbon
- 8. Bipartisan Appeal:
 - a. Market-based, and incentive-based, not regulatory, or government choosing winners and losers with subsidies
 - b. Encourages individual accountability
 - c. Low federal administrative costs (limited to 2% after year 4), no state administration costs
 - d. Dividend phases in, rises slowly, and phases out
 - e. Dividend is 'visible' to the voter- arrives monthly by direct deposit, ensures longevity of the policy
 - f. Regulatory Adjustment – prevents additional GHG regulations on taxed fossil fuels at stationary sources. (Does not affect regulations based on other pollutants in fossil fuel emissions, or non-stationary sources, e.g., CAFÉ standards.) If emissions targets aren't met in 10 years, EPA regulatory authority on GHGs from stationary sources is restored.
 - g. Rebate for Carbon Capture and Sequestration; no fee on fossil fuel exports
 - h. Exemptions for Military and agricultural fuels
 - i. Revenue neutral. Revenue does not go to government to spend
- 9. EICDA support
 - a. 73 co-sponsors in the U.S. House as of 12/5/2019
 - b. 13 Montana [endorsers](#): Montana Ski Area Association, Northern Plains Resource Council
 - c. 1000+ national endorsers: EnergyInnovationAct.org/[statements](#) and /[supporters](#))
- 10. Carbon Fee and Dividend and Carbon Pricing Support
 - a. The [Luntz Poll](#) found that 75% of Republicans under 40 support a carbon dividend policy.
 - b. 3500 U.S. [economists](#), 11,000 [scientists](#), National Religious [Partnership](#) for the Environment

Cons:

- 1. The public is slowly becoming aware of the benefits of carbon fee and dividend; often unaware of the Dividend

2. Does not use revenue for government sponsored research or development, deficit reductions, corporate or income tax reductions, or transition services
3. Does not cover upstream methane leaks
4. Impacts coal workers and lowers tax revenue from coal
5. 13% of the lowest income quintile households in Montana will spend more than 2/10ths of a percent more of their income on added costs. (Ummel)
6. "EICDA would be expected to cause a small decrease in federal government revenue in the early years of the policy. However, the effects we have not quantified could be large, particularly in the long run, making the net effects on federal government revenue unknown." (p. 24, CGEP)

Co-Benefits

1. One cost benefit analysis of this policy estimates \$8.4 Trillion for Health co-benefits and \$5.7 Trillion for Climate damages avoided and social costs of carbon over decades. ([Hinkle](#))
- **Identify whether this recommendation would likely have a high, medium or low effectiveness or impact in addressing the issue and why. How does the recommendation advance the guiding principles or theory of change identified by the committee?**
 - Endorsing the EICDA would greatly enhance the chances of gaining support of Montana's Congressional delegation, other influencers, and would educate the public regarding this policy approach. If implemented, the EICDA would have high effectiveness and would facilitate all other technical solutions.
 - **Identify whether this recommendation would have any significant adverse impacts on specific groups of people, industries, businesses or others. If there are significant adverse impacts, what mitigation strategies could be used to reduce those impacts? Similarly, are there adverse impacts to the environment to consider?**
 - Low income Montanans and Native Americans—13% of the lowest income Montanans would spend more than they receive in dividend, with a median monthly loss of about \$8. 25% of tribal members would spend more than they receive in dividends, with a median monthly loss of \$11.42. (MT Household Impact study [HERE](#)). Programs to enhance home efficiency, help with home heating bills, and provide transportation could be implemented or expanded.
 - Agriculture—Fossil fuel-based fertilizers, electricity, and fossil fuels used in off-farm transport would be subject to the slowly rising carbon fee. Impacts depend on inputs, e.g., producers who do not use fossil fuel based fertilizers would not be affected by carbon fees on fertilizer. Fuels used on the farm (like red diesel) are exempt from the fee, as are non-fossil emissions (e.g., manure and enteric fermentation). Producers are taking advantage of leases for wind and solar projects. Soil carbon sequestration may get a boost from a value placed on carbon. Biofuels like camelina oil may become economically viable. Environmental impacts from biofuel production will be studied, with a report and recommendations due in 18 mos.
 - Coal power generation would decline to 1% by 2030 (CGEP, p. 17)—Coal exports are not subject to the carbon fee. Carbon fees on safe and permanent CCS are refunded. A carve out of less than 1% of the EICDA revenue for 10 years could provide miners with direct monetary benefits to cover health, pension, relocation, retraining and other transition needs, and provide local, county, tribes, and states with funds for tax replacement to be used as needed. See a proposal [here](#).
 - Oil/Gas production (CGEP, p. 16-17)—16% of natural gas production will be replaced by fossil gas with Carbon Capture and Sequestration and possibly 'Renewable natural gas'. Demand for oil will decrease, resulting in less imported oil.

- Outdoor Industries/Tourism—Air travel prices would increase by about 1.7% with a \$15 carbon price. (Ummel) Operations dependent on fossil fuels would see costs slowly rise, and efficient operations will see costs decrease. Tourists’ dividends may offset their added costs.
 - State Government/Indian Nations/local and county governments—Lower tax revenue from coal might be offset by increased taxes from renewable energy production, new workers and expanded business from dividend spending and innovation. Avoided infrastructure replacement, lower insurance costs and operational costs with increased efficiency could also help.
 - Forestry—Logging and trucking rely on diesel fuel. Those costs will increase for all operations in the sector. 86% of MT sawmills already run on renewable energy, so will not be affected. Demand for new wood products may increase as cement and steel costs rise. Proforestation management for carbon sequestration may get a boost from a value placed on carbon.
 - Carbon Intensive industries—Energy intensive industries reliant on fossil fuels, such as cement and steel production, will face higher costs. This will provide an incentive for the use of low-carbon products where feasible, and encourage innovation.
- **What are the estimated costs or resources (both public and private) needed to implement this recommendation (if possible)?**
 - There are no costs or resources from Montana needed to implement this recommendation. National administration costs are covered by the carbon fee and are limited to 8% of revenues in the first 4 years and 2% a year thereafter.
 - **Provide an estimate of a reasonable timeframe to implement this recommendation. Does this recommendation address short, medium, or long term goals?**

This recommendation could be implemented with the stroke of a pen. If enacted, the Energy Innovation and Carbon Dividend Act would immediately begin to affect decision-making on all levels and in all sectors. Actual implementation of the fee and dividend would be subject to rulemaking and administration setup. It would attain the medium U.S. emissions reduction goals of the Paris Accord in 4 years, and the IPCC long-term goals for 90% reduction of emissions by 2050. Provision is made to increase the carbon price by an additional \$5 the year following a missed emissions target, as determined by the National Academy of Sciences. If not on target in 10 years, additional regulation of stationary sources would be implemented.
 - **What needs to happen to determine whether this recommendation, if implemented, is successful in achieving its goals?**

The continued monitoring of state emissions, as currently required by state and federal agencies, will indicate whether emissions reduction goals are being achieved.

ALTERNATIVE APPROACH ON CARBON PRICING FROM “THE UTAH ROADMAP”:

“Participate in the national dialogue about market-based approaches to reduce carbon emissions. We recommend the state actively participate in national discussions about how to harness the power of market forces and new technologies to reduce carbon emissions in a way that does not negatively impact Utahns. Market-based incentives for renewable energy, energy storage, enhanced energy efficiency, carbon capture utilization and storage, carbon pricing that is revenue-neutral and border-adjusted, cap-and-trade approaches, and other options may offer positive solutions for reducing emissions.

We encourage proposals that are simple and provide certainty. We also recognize the power of research, development, and innovation to make the distribution and transmission grid more efficient, enhance storage options, and bring down the cost of carbon-free generation sources. We acknowledge the value of organized markets that take advantage of the geographic and fuel diversity of carbon-free generation. We also acknowledge the value of maintaining affordable customer costs while decreasing carbon emissions.”

“Priority actions for consideration by policymakers:

- **Create a carbon policy committee** – The governor and Legislature may want to create a state-level policy committee to explore national approaches/local solutions for a market-based approach to reduce carbon emissions.
- **Engage with the Utah Congressional Delegation** – The governor and Legislature may want to engage with the Utah Congressional Delegation to explore how Utah could exert national leadership on this issue.
- **Incorporate into a Utah-style changing climate action plan** – Market-based approaches to reduce carbon emissions could be a major component of a Utah-style changing climate action plan.”

<https://gardner.utah.edu/wp-content/uploads/Utah-Roadmap-Public-Draft.pdf> [gardner.utah.edu]

DD. WESTERN ELECTRICITY MARKET

01/20/20

PRIMARY AUTHOR:

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DOES THE WHITE PAPER NEED TO BE COORDINATED WITH OTHER COMMITTEES?

No.

KEY ISSUE

THE WESTERN UNITED STATES ELECTRIC GRID IS COMPRISED OF 38 BALANCING AREAS. THIS MULTITUDE OF BALANCING AREAS CREATES ECONOMIC, CONTRACTUAL, AND PRACTICAL OBSTACLES TO BUYING AND SELLING ELECTRICITY ACROSS THIS FOOTPRINT. PUT ANOTHER WAY, THE MARKET FOR ELECTRICITY IN THE WEST IS FRAGMENTED, UNABLE TO TAKE ADVANTAGE OF THE ECONOMIC EFFICIENCIES THAT MARKETS PROVIDE.

ACROSS THE WEST – AND INDEED THE NATION – A GREAT CHANGE IS UNDERWAY. RENEWABLE ENERGY PRICES CONTINUE TO FALL, COAL PLANTS CONTINUE TO RETIRE, THE CLIMATE CRISIS IS DRIVING STATES, CITIES, BUSINESSES AND CITIZENS TO PROCURE CLEAN ENERGY. IN THIS CONTEXT IT IS ESSENTIAL TO DEVISE A GRID THAT IS ABLE TO COORDINATE ITS OPERATIONS AND TAKE ADVANTAGE OF THE WEALTH OF LOW-COST RENEWABLE RESOURCES IN THE WEST, AT THE LOWEST POSSIBLE COST. IN OTHER WORDS, POLICY MAKERS, UTILITIES, AND TRANSMISSION OPERATORS MUST ENABLE A FULLY INTEGRATED REGIONAL MARKET FOR ELECTRICITY. INDEED, THIS HAS SPECIAL SALIENCE FOR MONTANA, WHICH HAS AN ABUNDANCE OF RENEWABLE RESOURCES, THE DEVELOPMENT OF WHICH IS PRESENTLY HAMPERED AS A RESULT OF THE PRESENT BALKANIZED SYSTEM

PROGRESS TO DATE

TRADITIONAL WHOLESALE POWER MARKETS EXIST IN THE SOUTHEAST, SOUTHWEST AND NORTHWEST; THE REST OF THE COUNTRY, TWO-THIRDS OF THE LOAD, OPERATES UNDER MORE INTEGRATED MARKET STRUCTURES. THERE HAVE BEEN EFFORTS OVER THE YEARS TO DEVELOP WESTERN ELECTRICITY MARKET BUT THESE EFFORTS, DUE TO THE CONDITIONS DESCRIBED ABOVE HAVE INTENSIFIED IN THE LAST DECADE AND ESPECIALLY IN THE LAST FEW YEARS. RECENTLY, THE MOST NOTEWORTHY EVENT HAS BEEN THE DEVELOPMENT OF THE CAISO (CALIFORNIA INDEPENDANT SYSTEM OPERATOR) EIM (ENERGY IMBALANCE MARKET). (FOR MORE INFORMATION, SEE <http://www.caiso.com/Documents/EnergyImbalanceMarketFAQs.pdf>) THIS MARKET, WHICH PRESENTLY INCLUDES MANY UTILITIES, WITH MORE CONTINUING TO JOIN (NORTHWESTERN ENERGY WILL BEGIN TO PARTICIPATE IN THE MARKET IN 2021) HAS RESULTED IN COST SAVINGS OF OVER \$650 MILLION. DUE TO THE SUCCESS OF THE EIM AND IN RECOGNITION OF THE NEED TO CONTINUE TO TAKE ADVANTAGE OF THE COST SAVINGS MADE POSSIBLE BY MARKET OPERATIONS AND TO BETTER OPTIMIZE THE OPERATION OF THE GRID FOR CLEAN ENERGY, CAISO IS IN THE PROCESS OF DEVELOPING A DAY AHEAD MARKET. AS NOTABLE AS THESE EFFORTS ARE THEY ARE STILL INSUFFICIENT. WHAT IS NEEDED IS A FULLY INTEGRATED MARKET SO THAT TRANSMISSION AND GRID OPERATIONS CAN BE COORDINATED AS POWER MOVES ACROSS THE GRID.

GAPS

IT WOULD BE HELPFUL TO BETTER UNDERSTAND THE BENEFITS TO MONTANA FROM A REGIONAL MARKET. THE STATE OF UTAH IS CURRENTLY CONDUCTING SUCH A STUDY.

STAKEHOLDERS

UTILITIES

RENEWABLE ENERGY DEVELOPERS

RECOMMENDATIONS

RECOMMENDATION: SUPPORT FOR THE DEVELOPMENT OF A WESTERN ELECTRICITY MARKET

The recommendation is for a statement from the Governor and the legislature supporting the development of a western electricity market. The development of a western market will require states and utilities to recognize that such a market would produce advantages for all participants and work cooperatively to establish such a market. Accordingly, support from Montana for an integrated regional electricity market would help to build momentum toward achieving that objective.

As Appropriate, consider the following relevant to the recommendation:

- **Who could implement the recommendation (legislature, Governor, local government, utility/co-ops, homeowners, businesses, agriculture, landowners, industry etc.)?**

The Governor and legislature.

- **Describe the pros and cons of the recommendation, including any co-benefits for mitigation and adaptation to climate change.**
- A western electricity market would be economically efficient, reducing costs for customers and would enable additional Montana renewable energy development.
- **Identify whether this recommendation would likely have a high, medium or low effectiveness or impact in addressing the issue and why. How does the recommendation advance the guiding principles or theory of change identified by the committee?**

Creating of a regional market would significantly advance climate objectives.

- **Identify whether this recommendation would have any significant adverse impacts on specific groups of people, industries, businesses or others. If there are significant adverse impacts, what mitigation strategies could be used to reduce those impacts? Similarly, are there adverse impacts to the environment to consider?**

No

- **What are the estimated costs or resources (both public and private) needed to implement this recommendation (if possible)?**

Negligible. Unless Montana was to conduct a study to more precisely quantify the economic benefits from a market.

- **Provide an estimate of a reasonable timeframe to implement this recommendation. Does this recommendation address short, medium, or long term goals?**

Since the recommendation calls for action by the legislature, it could not happen until 2021.

- **What needs to happen to determine whether this recommendation, if implemented, is successful in achieving its goals?**

The ultimate objective is the creation of an integrated western electricity market.

EE. PROPOSED CHANGES TO NATIONAL ENVIRONMENTAL POLICY ACT PROCESSES

01/21/2020

PRIMARY AUTHORS:

Chuck Magraw

DOES THE WHITE PAPER NEED TO BE COORDINATED WITH OTHER COMMITTEES?

YES

KEY ISSUE

On January 9, 2020 the Council on Environmental Quality published proposed regulations that would have the effect, if adopted, of radically altering the way the National Environmental Policy Act has been implemented for over 4 decades, across both Democratic and Republican administrations. The proposed regulations are not only at odds with the prior CEQ interpretation but would also conflict with case law and agency practice. There are many aspects of CEQ's proposal; most importantly is that the proposal seeks to limit or eliminate analysis of climate change effects when agencies make decisions on major federal actions.

Among other things, the proposed rule would severely constrain the scope of NEPA review and consideration. Under existing authorities, agencies must examine direct, indirect, and cumulative effects of proposed actions. (Cumulative effects are simply the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.) CEQ's proposal would eliminate in its entirety the requirement to examine cumulative impacts and CEQ raises the possibility that it will eliminate the requirement to evaluate indirect effects by asking for comments on whether it should be retained. Of course, the climate impacts from a given project are by definition not direct, namely those effects arise from project induced emissions of GHG into the atmosphere which then, along with other GHG emissions, raise global temperature levels and cause ocean acidification, which then produce another set of cascading effects. Similarly, the proposed rule would limit consideration of only those effects that have a "reasonably close causal relationship" to the proposed action. This likely means, for example, that the actual, real-world effects of climate change could not be evaluated under NEPA. Finally, CEQ proposes to change the definition of the word "significant." NEPA requires the preparation of a "detailed statement" (EIS) on proposals for "major federal actions significantly affecting the quality of the human environment." Under the existing regulatory scheme determining significance requires consideration of both "context" and "intensity" and various criteria are set forth that can be used in making this determination. The proposal would do away with the existing regulatory guidance, replacing it with this provision: "In considering whether the effects of the proposed action are significant, agencies shall analyze the potentially affected environment and degree of the effects of the action." The vagueness of this language is problematic in general but especially so in terms of assessing the significance of climate change effects. Applying this definition would give agencies very wide latitude and would enable agencies to side-step NEPA review for federal actions with associated climate effects.

See:

<https://www.whitehouse.gov/ceq/nepa-modernization/>

https://www.washingtonpost.com/climate-environment/white-house-update-of-key-environmental-law-would-exclude-climate-change/2020/01/03/35491e10-2e89-11ea-9b60-817cc18cf173_story.html

<https://www.nytimes.com/reuters/2020/01/09/us/09reuters-usa-climate-nepa.html?searchResultPosition=1>

PROGRESS TO DATE

N.A.

GAPS

N.A.

STAKEHOLDERS

N.A.

RECOMMENDATIONS

RECOMMENDATION 1: FOR THE GOVERNOR OF THE STATE OF MONTANA TO FILE COMMENTS OPPOSING THE PROPOSED RULE (DUE ON OR BEFORE MARCH 10, 2020)

As Appropriate, consider the following relevant to the recommendation:

- **Who could implement the recommendation (legislature, Governor, local government, utility/co-ops, homeowners, businesses, agriculture, landowners, industry etc.)?**

The Governor.

- **Describe the pros and cons of the recommendation, including any co-benefits for mitigation and adaptation to climate change.**
- The pros are that the State of Montana would go on record as opposing a rule that is designed to constrain the federal government's consideration of climate change when it evaluates major federal actions under the National Environmental Policy Act.
- **Identify whether this recommendation would likely have a high, medium or low effectiveness or impact in addressing the issue and why. How does the recommendation advance the guiding principles or theory of change identified by the committee?**

Unclear.

- **Identify whether this recommendation would have any significant adverse impacts on specific groups of people, industries, businesses or others. If there are significant adverse impacts, what mitigation strategies could be used to reduce those impacts? Similarly, are there adverse impacts to the environment to consider?**

No

- **What are the estimated costs or resources (both public and private) needed to implement this recommendation (if possible)?**

Not substantial

- **Provide an estimate of a reasonable timeframe to implement this recommendation. Does this recommendation address short, medium, or long term goals?**

For the recommendation to mean anything it must be acted upon soon so that comments can be filed by March 10, 2020.

- **What needs to happen to determine whether this recommendation, if implemented, is successful in achieving its goals?**

N.A.

FF. PRE-PAID METERING

RECOMMENDATIONS

RECOMMENDATION: CONSIDER THE BENEFITS OF PRE-PAID METERING FOR REDUCTIONS OF ENERGY USE AND CO2 EMISSIONS

Brian Dekiep: Northwest Power and Conservation Council

Gary Weins: Montana Electric Cooperatives' Association

Date: 1.21.2020

Topic: GHG Mitigation Strategies Committee Consideration of Electric Power Pre-Paid Metering

Members of the GHG Mitigation Strategies Committee would like the Governor's Climate Solutions Council to consider the benefits of pre-paid metering of electric power to better understand the relationship between pre-pay and energy reduction for potential inclusion in the Climate Solution Council's final recommendations. It is not the expectation of members of the GHG Committee that prepaid meters would be a mandatory service but that utilities are encouraged to provide these services to their members on a voluntary basis.

Prepaid service in the U.S. has been around for well over two decades and has advanced from a program requiring special hardware to advanced metering infrastructure (AMI), a modern software-based electronic platform. Until recently, the service had mostly been offered by member-owned cooperative utilities and citizen-owned municipal utilities with little or no jurisdiction from public utility commissions.

In most cases, data has shown a connection between prepayment of energy bills and reduced consumption, with usage reductions of five to fifteen percent when customers switched from post-payment to prepayment. The Salt River Project (SRP), a public utility in Arizona believes the prepay model is an effective way to promote energy conservation and reports an average energy use reduction of 12% when using the prepay model. Glacier Electric Cooperative (GEC) in Cut Bank Montana, has also seen positive results with their pre-paid metering program. Results have shown significant savings and positive reviews by members using the service. Other Montana electric cooperatives also report similarly positive results using prepay.

According to the Distributed Energy Financial Group (DEFG) pre-pay Energy Working Group study (2016) pre-pay reduces potentially unmanageable bills and allows consumers to actively manage their consumption and expense. Pre-pay service represents a voluntary option that many lower income consumers appreciate. They avoid a security deposit and many cases reconnection fees and have greater control over their electric usage and bills. Some consumers and industry stakeholders also find the prepaid service provides predictability, flexibility and a better understanding of electricity usage and dollars in real-time. This choice of service allows individuals who know their household's value and need, to act on their energy information accordingly.

Pre-pay energy has been characterized by some consumer advocates as a second class service option aimed at low-income Americans. The DEFG's previously mentioned study on pre-pay also states that consumer advocates are concerned with remote service disconnection, and contend that pre-paid service is a predatory or even discriminatory service targeting lower income consumers. Consumer advocates believe these consumers are more likely to struggle when paying their monthly post-pay bill, and pre-paid service will permit energy providers to remotely shut-off service thus forcing these households to remain current on their pre-pay accounts.

To secure service to pre-paid customer from unexpected shut offs, Glacier Electric Cooperative can shut off power if the balance is negative at 11AM Monday-Thursday. However, they will not shut off on weekends, holidays, when offices are closed or during extreme weather events.

Restoring power is simple. Members would make a payment and within a few seconds can press the connect button on their meter to restore power. Members can make payments online, on the SmartHub app, pay-by-phone number, 24/7 kiosks, or by coming into the utility offices.

Individual utilities can set the parameters for their system. At GEC pre-paid is for residential only. Commercial, seasonal, and irrigation loads are not eligible for prepay services. If a member starts out as prepaid, they have twelve months of non-disconnect payment history to switch to monthly billing with no deposit. This means if their prepaid system does not go off for non-payment within 12 months they can opt to switch. In majority of GEC's experience members choose to remain on prepay.

Flathead Electric Cooperative (FEC) In Kalispell, Montana will not shut off power if funding assistance is pending, if the overnight temperature is forecast to be 15 degrees or lower, on weekends and holidays (this is exactly the same as their policy for non pre-pay accounts), or if FEC is having any problems with any payment programs. Prepay accounts are eligible for any and all funding assistance programs, which can be loaded as a credit on their account.

Payments of any amount can be made 24/7 via the online account, the mobile app, pay-by-phone, or at kiosks at both of their offices and in person during business hours. Members can customize notifications so they can be texted or emailed a notice when their balance is getting low. Power is restored immediately with a payment after a shut off.

NOTE: Chuck Magraw opposes the recommendation in its current form:

This is a good starting point for a discussion of the matter but there are too many issues and I have too many concerns about such a program that I can't agree that this should go forward to the full Council at this point in time. One piece of information that I would absolutely like to have is the shut-off rate before and after program implementation."

GG. LOCAL AND TRIBAL PLANS & STRATEGIES

1/15/20

PRIMARY AUTHORS:

Caitlin Piserchia, Montana Chapter of the Sierra Club

DOES THE WHITE PAPER NEED TO BE COORDINATED WITH OTHER COMMITTEES?

These recommendations need to be coordinated with adaptation/ decision support & innovation/ transitions committees, as well as stakeholders outside the committee. Steve Thompson from the innovation/ transitions committee, Sally Ericsson from the adaptation/ decision support committee, Michael Durglo, Jr. (CSKT Historic Preservation Department Head and Chair of the CSKT Climate Change Advisory Committee), Angeline Cheek & Sharon Kickingwoman (ACLU) have contributed to this paper.

KEY ISSUE

As the state of Montana aims to mitigate contributions to global greenhouse gas emissions and avoid the worst-case scenarios of climate change, local communities and tribal nations within the state are independently grappling with challenges related to mitigating and adapting to both current and impending climate impacts. The challenges and opportunities for both mitigating and adapting to climate change vary by location and community. Each community can help inform state policy by bringing concerns, challenges, and opportunities to the table. Different communities have assessed the urgency of addressing climate change differently, and some communities have been able to leverage local resources for a complete analysis of local emissions, threats, and drivers of climate change. Efforts aimed at mitigation and adaptation must coincide and need to move forward on multiple levels and scales simultaneously.

How can the state of Montana best support existing local and tribal strategies within Montana aimed at mitigating and adapting to climate change? What kinds of solutions could align with and strengthen existing local strategies, as well as local needs and concerns in the face of climate change? What kinds of solutions could align with and strengthen existing tribal strategies, as well as help meet climate-related needs and concerns of tribes that overlap with concerns about climate change? How can we evaluate environmental and social concerns in local communities in relation to current and future climate risks and in relation to potential solutions?

This ongoing work can be broken down into three primary categories:

- 1) Recommendations for coordination and communication among local, tribal, and state entities in mitigating and adapting to climate change and associated impacts.
- 2) Specific recommendations identified as beneficial to some existing local and tribal efforts to mitigate and adapt to climate change.
- 3) Recommendations for ongoing evaluation of climate solution policies and efforts.

PROGRESS TO DATE

- Two UM students, Christian Fauser and Jaret Kadlec, have worked to identify and summarize highlights from various local climate plans and tribal climate plans within Montana, as well as a list of potential stakeholders who should be consulted as part of the council process and evaluation of recommendations that relate to mitigation and/or adaptation.
- A helpful example: In respect to designing processes that involve communication and collaboration between local and tribal stakeholders, the 2006 [Alaska Climate Change Action Plan](#) includes several

relevant recommendations, including: 1) “develop community and regional risk and resilience plans in partnership with local and regional leaders”, 2) “develop agreements recognizing local and indigenous rights to self-determination as part of risk and resilience planning and adaptation,” and 3) “encourage and facilitate a strong network of municipal governments, Alaska Native Tribes, tribal consortia, and Alaska Native Regional and Village Corporations to leverage resources, share knowledge, and maximize efficiencies and purchasing power.”

- There are a number of known climate resilience plans and climate action plans in Montana, with implications for planning out state climate solutions:
 - Blackfoot Adaptation Plan, Billings Energy Conservation Commission, Bozeman Climate Action Plan, CSKT Climate Plan, Chippewa Cree and Fort Belknap (in progress), Helena Climate Change Task Force, Missoula Conservation Climate Action Plan, Missoula County Resiliency Plan, MSU Sustainability Plan, Red Lodge Energy Conservation Plan, UM Climate Action Plan, Whitefish Climate Action Plan, Whitefish School District Plan. There is a map listing known climate action and tribal plans here: <http://www.msucommunitydevelopment.org/plans.html>
 - Within and outside of these plans, various communities have set out goals for themselves, i.e. Missoula’s commitment to transition to 100% clean electricity by 2030, and Bozeman’s revised climate plan with the goal of 100% net clean electricity by 2030.
 - Several areas of overlap identified in the CSKT and Blackfoot adaptation plans include high levels of concern over preserving cultural resources and traditions (partially due to changing ranges of wildlife and plant species), preserving water quality (high) and water quantity (medium), preserving fish habitat, fire management, and some human health concerns.
 - Several planning processes, including the recent process for revising CSKT’s climate adaptation plan, and the commitment to a 100% clean electricity target by 2030 in Missoula, have referenced the need for revising plans in light of new scientific evaluations of global climate change and implications for mitigation timelines, like the 2018 IPCC Report on limiting warming to 1.5 degrees Celsius, and the 2018 National Climate Assessment.
 - Many of the local and tribal plans identify a need for additional funding and the need for coordination with state and federal entities.
- One available resource for implementing new climate mitigation and adaptation planning processes on the local or tribal level is the Americorps Energy Corps program, which certain nonprofits, tribes, and municipalities can apply for. Montana Energy Corps members have helped communities inventory emissions, identify clean energy solutions, and supported climate action planning groups and committees.

GAPS

Gaps that can be filled as part of the council’s deliberations:

- Are there other existing climate action or climate resilience plans missing from this list? Are there other local or tribal planning processes in progress?
- Climate solutions symposium: create an outreach process for inviting all community-based and tribal environmental agencies to submit and discuss climate solution recommendations, as well as values and evaluation criteria that should drive future climate mitigation, transition, communication, and adaptation efforts.
- ID stakeholders who need to be engaged in development of recommendations or their implementation

- Including tribal environmental offices, key authors of existing climate plans, local leaders working on climate mitigation and/or adaptation
- Identify and prioritize mitigation strategies with co-benefits for local adaptation, and vice-versa.
- Identify which other kinds of local or tribal priorities should be considered as part of this process. There are many other local and tribal environmental health and environmental planning agencies that focus on concerns overlapping with the concerns of this committee, including water quality and the environmental and social impacts of energy infrastructure.
- Identify recommendations the council can make to assist in local planning and tribal planning.

STAKEHOLDERS (IN PROGRESS)

- Identify stakeholders who need to be engaged in either development of recommendations or their implementation:
 - Gerald Wagner, Blackfeet GAP Program Manager (and member of adaptation committee)
 - Michael Durglo, Jr., CSKT Historic Preservation Department Head and Chair of the CSKT Climate Change Advisory Committee
 - Charlene Alden, Cheyenne Nation Environmental Director (and member of adaptation committee)
 - Paul Lachapelle and the Climate Smart Montana network
 - Representatives from other Montana tribes
 - Representatives from local agencies focused on environmental planning, climate mitigation, or energy conservation strategies.
 - Representatives from Montana public interest groups that represent most-impacted community concerns (i.e. tribes, low-income Montanans, racial minorities, unions)
 - Montana League of Cities and Towns
 - Montana Association of Counties
 - County or municipality staff responsible for implementing local, existing climate plans.

RECOMMENDATIONS

RECOMMENDATION 1: INVESTIGATE THE FOLLOWING IDEAS

Local mitigation and adaptation support:

- Develop a template, toolkit, and funding mechanism for supporting communities and tribes to create climate plans and identify opportunities and challenges to mitigation.
- Develop a template, toolkit, and funding mechanism for supporting additional communities and tribes to create climate resiliency plans (in development in adaptation committee).
- Identify mitigation recommendations and funding mechanisms that could assist local communities and tribes in achieving existing climate mitigation goals.

- Develop recommendations relating to:
 - Offering audits of community street lighting
 - Making household, business, municipal, or county energy data available to any customer (including municipalities and counties) that requests said data.
 - Tracking and studying the impacts of oil spills in Montana. Create an oil spill database.
 - Rescinding state support for proposed energy infrastructure projects that have been identified as issues of great concern by Montana tribes or municipalities.
 - Establishing a public state bank and/or other state funds aimed at financing and funding new infrastructure and retrofits to existing infrastructure in line with climate mitigation and adaptation goals.
 - Developing programs that help fund and incentivize home and commercial energy efficiency improvements.
 - Enabling community choice aggregation.
 - Implementing a state-wide cryptocurrency mining moratorium and/or developing restrictions on cryptocurrency operations and other energy-intensive industries, such that large increases in energy demand do not incentivize additional construction for greenhouse gas-intensive energy sources.
 - Implementing policies to discourage urban sprawl in riparian corridors and the wildland-urban interface.
 - Investigating state policy changes that would encourage, incentivize, and support local food production, regenerative agriculture, and support food sovereignty efforts across the state.
 - Zero waste goals/ phasing out disposable plastic and styrofoam

Tribal consultation:

- Consult with all Montana tribes before finalizing the list of climate recommendations.

Communication, coordination, and planning on the state-wide level:

- Create a long-term coordinating structure for consultation, communication, and implementation of climate solutions that includes representatives from all Montanan tribes, as well as representatives from frontline communities (recognizing both geographic and identity-based vulnerability to climate impacts).
- Establish a mechanism for regular communication and coordination between the state of Montana and local and tribal governments aiming to mitigation and/or adapt to climate change.
- The state government could regularly update Montana.gov with information on current, widely-accepted scientific understanding of climate risks on the state and global level (recognizing that the national and global impacts over climate change have implications for the state, as well as very specific expected changes, like increased smoke and wildfire) and implications for Montanans.
- Establish state recommendations in line with the most ambitious existing local energy and climate mitigation targets in Montana (i.e. 100% clean electricity by 2030).

RECOMMENDATION 2: USE THE FOLLOWING EVALUATION CRITERIA TO CONSIDER AND PRIORITIZE PROPOSED CLIMATE SOLUTIONS

Governmental decision-making or coordinating bodies should use the adaptation principles referenced in the adaptation committee white paper as a starting point for evaluating climate solutions, in addition to the following principles:

- Prioritize ongoing consultation with tribes and recognition of tribal sovereignty in development and implementation of recommendations.
- Recognize local and tribal climate, environmental, and social concerns as part of risk evaluation, mitigation and resilience planning on the state level.

- Strive to respect the most ambitious local and tribal climate mitigation and adaptation goals in the state of Montana in implementing state solutions.

The following is excerpted from an early draft of the adaptation committee's white paper:

"The following principles are based on a recent letter to the U.S. House Select Committee on the Climate Crisis from the Association of Adaptation Professionals (ASAP), a group of senior officials working on climate adaptation across the country. While these cross-cutting themes focus on Federal policy, they resonate for Montana and are based on years of experience. Edited for Montana.

- Mainstream climate. Evaluate all projects and policies through a climate lens that includes social equity and ecological integrity.
 - Integrate climate considerations into existing agencies and policies to the greatest extent possible. Reform and fill gaps where necessary.
 - Prioritize accessible tools for users on the ground within existing programs.
 - Coordinate adaptation, mitigation, and multi-hazard interactions to maximize the co-benefits of climate planning.
- Be proactive. Incentivize proactive planning for communities and encourage preparedness for rebuilding more resilient communities if disasters occur.
- Develop lasting authority. Create statutory authority for guidelines, approvals, and funding in place of executive action.
 - Emphasize resources for planning and implementation over research; for research, prioritize making downscaled projections available statewide and solutions-focused research.
 - Borrow from previous executive orders, task forces, and councils to avoid re-inventing processes and include enforcement capacity.
- Elevate social equity. Avoid maladaptive planning that simply shifts existing vulnerabilities in time or place.
 - Engage front-line communities as partners.
- Support nature-based solutions. Redesign evaluation processes to fully consider blue/green infrastructure as an alternative to conventional infrastructure.
- Facilitate local and regional action. Use the state's coordinating and convening capacity to support collaboration across sectors and levels of government.
 - Prioritize frameworks for state guidance and community-based solutions.
 - Borrow from existing successful models of regional collaboration."

As Appropriate, consider the following relevant to the recommendation:

- **Who could implement the recommendation (legislature, Governor, local government, utility/co-ops, homeowners, businesses, agriculture, landowners, industry etc.)?**
 - All decision-making entities could use the above principles in implementing climate solutions.

- **Describe the pros and cons of the recommendation, including any co-benefits for mitigation and adaptation to climate change.**
 - The criteria are meant to recognize the interplay of adaptation and mitigation efforts, and the need for coordination.

- **Identify whether this recommendation would likely have a high, medium or low effectiveness or impact in addressing the issue and why. How does the recommendation advance the guiding principles or theory of change identified by the committee?**
 - It would have a high impact in mitigating and adapting to climate change, if applied to ambitious solutions. Climate solutions will be stronger if all decision-making entities consider both the immediate impacts of any one solution and the bigger picture.

- **Identify whether this recommendation would have any significant adverse impacts on specific groups of people, industries, businesses or others. If there are significant adverse impacts, what mitigation strategies could be used to reduce those impacts? Similarly, are there adverse impacts to the environment to consider?**
 - It is meant to reduce adverse impacts.

- **What are the estimated costs or resources (both public and private) needed to implement this recommendation (if possible)?**
 - N/A

- **Provide an estimate of a reasonable timeframe to implement this recommendation.**
 - It could be implemented immediately.

- **What needs to happen to determine whether this recommendation, if implemented, is successful in achieving its goals? Does this recommendation address short, medium, or long-term goals?**
 - This recommendation would address short, medium, and long-term goals.

NOTE: The GHG Committee discussed this proposal and agreed to work with the Adaptation Committee on the development of the Adaptation Committee's recommendation relevant to state and local climate action plans-- to ensure that that recommendation speaks to both mitigation, as well as adaptation. Sally Ericsson, co-chair of the Adaptation Committee who was on the call, concurred with that approach.

NOTE: This proposal may serve as a guide in considering how to incorporate mitigation into the recommendation, but with the caveat that some GHG Committee members expressed opposition to aspects of the proposal, including the evaluation criteria listed in recommendation 2.