Minnesota Draft Climate Action Framework External Stakeholder Workgroups Summary

Summary of external stakeholder workgroup feedback to inform Minnesota's Climate Action Framework

MAY 2022

Convened by the State of Minnesota's Climate Change Subcabinet and the Governor's Advisory Council on Climate Change under Executive Order 19-37, with facilitation and administrative assistance by the Great Plains Institute

About this Report

PURPOSE OF THIS REPORT

During the spring of 2022, the State of Minnesota's Climate Change Subcabinet and Governor's Advisory Council on Climate Change, with administrative and facilitation support from the Great Plains Institute, convened six external stakeholder workgroups to review and provide input on the development of a Climate Action Framework for Minnesota. This document summarizes the process and recommendations from those workgroups. The viewpoints stated in this document are intended to describe what stakeholders shared as priorities or suggested changes for the Climate Action Framework; they do not represent official statements of the State of Minnesota nor its agencies and departments. They also may not reflect the viewpoints of all members of the workgroups. All viewpoints have been anonymized and should not be attributed to any particular individual or organization.

ACKNOWLEDGEMENTS

The State of Minnesota (State), the Governor's Advisory Council on Climate Change, and the Great Plains Institute (GPI) would like to thank the participants for their significant time commitment and thoughtful engagement throughout this process.

QUESTIONS

Questions related to this process summary and/or the overall stakeholder process should be sent to climate.mn@state.mn.us.

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I. Background

This document summarizes the process and outcomes of six external stakeholder workgroups that were convened by the State of Minnesota's Climate Change Subcabinet and the Governor's Advisory Council on Climate Change, with facilitation and logistical support from the Great Plains Institute, to review and provide feedback on a draft of Minnesota's Climate Action Framework.

The Climate Action Framework ("Framework") is a direct response to Executive Order 19-37, which was signed by Governor Walz in December 2019 and established a Climate Change Subcabinet ("Subcabinet") to identify policies and strategies that will put Minnesota back on track to meet or exceed the state's bipartisan Next Generation Energy Act greenhouse gas emission reduction goals, and enhance the climate resiliency of Minnesota's natural resources, working lands, and communities. The Subcabinet is also charged with engaging Minnesotans in the development of these policies and strategies.

The executive order also established the Governor's Advisory Council on Climate Change ("Council") to advise the Subcabinet in its duties. The Council is comprised of up to 15 members appointed by the Governor, and includes civic and community leaders, individuals with experience in business, agriculture, conservation, environmental protection, and other relevant stakeholders. The duties of the Council are as follows:

1. Identify opportunities for, and barriers to, the development and effective implementation of policies and strategies to reduce greenhouse gas emissions and promote climate change resiliency.

2. Promote equity by examining how climate change impacts communities across the state and how potential solutions can address current disparities, incorporating the perspectives of people of color, indigenous people, rural Minnesotans, and other populations who experience disproportionate impacts from climate change.

3. Promote a just transition for impacted workers and communities by examining the trade-offs that may accompany policies.

The Framework is intended to list the policies and strategies identified by the Subcabinet, with guidance from the Council, and accomplish the following:

- set a vision for how Minnesota will address and prepare for climate change;
- identify immediate, near-term actions Minnesota must take to achieve its long-term vision of a carbon-neutral, resilient and equitable future for the state; and
- spur action on climate change for state agencies and other actors.

In order to make the Framework as robust as possible, Council members and the Subcabinet agencies, with support from the Great Plains Institute, convened six working groups of external stakeholders – one for each area of the Framework – to review an initial draft of the Framework and suggest possible improvements.

Stakeholders were asked to share perspectives based on their expertise, listen to others, and aim to find areas of common ground. Stakeholders were not asked to represent their entire

industry or group, but rather to speak to broader priorities or concerns. Participation in this process did not necessarily equate to endorsement of the full Framework.

These workgroups were one of several avenues of input on the draft Framework. All input provided to the Subcabinet will be considered in development of the final Framework.

II. Process

Workgroup Objectives

The six workgroups were tasked with reviewing the draft Framework and identifying the following, for consideration by the Council and the Subcabinet in developing the final Framework:

1. Gaps in or refinements to the Framework that would strengthen Minnesota's climate action

2. Policies and strategies that have broad support from external stakeholders

3. Additional policies and strategies that non-state actors could implement

4. Areas that need further exploration to achieve the goals of the Framework

Workgroup Structure

Focus Areas: Each of the six workgroups was convened to review one of the following six focus areas within the draft Framework:

- Clean transportation
- Climate-smart natural and working lands
- Clean energy and efficient buildings
- Resilient communities
- Healthy lives and climate equity[1]
- Clean economy

In addition, the healthy lives and climate equity workgroup was asked to review and provide feedback to the equity-specific pages within the other focus areas.

Facilitation and Coordination: Each workgroup was facilitated by staff from the Great Plains Institute and guided by a coordination team consisting of at least one representative each from the Subcabinet and the Council.[2] The coordination teams for each workgroup (and full participant rosters) are attached to this document.

Participants: Workgroups were comprised of individuals representing a range of perspectives and organizations pertinent to that group's area within the Framework. Interested individuals and organizations applied to participate on Workgroups through a simple online form. To support the creation of Workgroups with a wide range of perspectives, coordination teams also reached out to potentially interested stakeholders to encourage them to apply. Coordination

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[1] The relevant section of the draft Framework for this workgroup was "Healthy lives and communities," however the workgroup focus was expanded to include climate equity.

[2] The Healthy Lives and Climate Equity workgroup was the exception, as there were no Council members who opted to join the coordination team.

teams reviewed all applications and determined final participant lists. Importantly, coordination teams sought to form workgroups inclusive of a diverse range of voices and perspectives.

Process: Workgroups met between March and May 2022. The number and duration of meetings varied by workgroup, as described below:

1. Clean Transportation[3]: (3) 2-hour long meetings
2. Climate-Smart Natural and Working Lands: (5) 2-hour long meetings
3. Clean Energy and Efficient Buildings: (8) 1.5-hour long meetings[4]
4. Resilient Communities: (5) 1.5-hour long meetings
5. Healthy Lives and Climate Equity[5]: (5) 1.5-hour long meetings
6. Clean Economy: (5) 1.5-hour long meetings

Workgroup Deliverables

Coordinating teams assisted the workgroups with developing two deliverables:

1. **Spreadsheet**: A detailed list capturing all of the feedback that workgroup members shared during the process, regardless of level of support.

2. **Summary:** A document providing a brief list of high-level priorities, ideas, themes from the spreadsheet that the workgroup would like to highlight for the Council and Subcabinet's consideration, with a particular focus on items that had broad support among workgroup members.

This format was chosen so that the Council and Subcabinet could receive all feedback from the process in the form of the spreadsheet, with the summary document complementing the spreadsheet by lifting up priorities and themes.

These deliverables are to be shared with the Council in advance of their June 16, 2022 meeting, at which the Council will discuss the workgroup feedback and provide their additional commentary for Subcabinet consideration. The Subcabinet will receive the workgroup deliverables documents and a separate document capturing the Council's additional feedback, all of which will be considered in the development of the final Climate Action Framework, expected to be published in August 2022.

The workgroup summary documents are listed in the pages that follow.

Finally, it is worth noting again that these workgroups are one of several channels through which the State of Minnesota sought to collect input on the draft Climate Action Framework.

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[3] It was determined the Clean Transportation Workgroup could accomplish the objectives in fewer meetings due to ongoing initiatives in this sector, such as the Sustainable Transportation Advisory Council (STAC).

[4] Three of the workgroup meetings were with the full group, the other five were split between an energy focus or buildings focus.

[5] In addition to the objectives listed for all workgroups, the Healthy Lives and Climate Equity workgroup was tasked with reviewing equity considerations in all goal areas of the Framework. One meeting was spent on this, and the resulting feedback was shared with the other coordinating teams.

III. Workgroup Summary Documents

As described above, each of the workgroups was asked to develop a summary document highlighting a brief list of priorities, themes, or ideas from their discussions, as a complement to the more detailed spreadsheets that captured all workgroup feedback.

Given that the workgroups each followed a slightly different process and to allow flexibility in communicating the priorities and themes, facilitators did not constrain the format of the summary document. For this reason, each document looks slightly different, but communicates the same general information – priorities and ideas that had broad support or that were consistent themes in workgroup discussions.

Importantly, the purpose of these documents is to provide suggestions for what should be maintained or improved upon in the draft Climate Action Framework, for consideration and comment by the Council and for ultimate consideration and decision-making by the Subcabinet as to the development of the final Framework.

Clean Transportation

Note: All items listed below are numbered for reference purposes only and do not reflect a ranking or prioritization on behalf of the group. See spreadsheet for full list of suggested improvements to the framework that were discussed.

I. Top priorities and actions:

1. **The Framework should set strong greenhouse gas (GHG) reduction goals and align those goals with Intergovernmental Panel on Climate Change (IPCC) targets**

    a. The existing goal (an 80% GHG reduction by 2050) should be edited to align with IPCC targets (achieving net zero GHG emissions by 2050).

        i. *Note: There was some disagreement amongst workgroup members on the correct GHG reduction goal to set. Some had concerns that a net zero target might be unrealistic and that the Framework might lose support of the general public. One suggestion was to keep the goal at 80% by 2050 and focus on education to earn greater buy-in.*

    b. To achieve needed GHG reductions, the Framework should include additional numeric goals and timelines for strategies including low-carbon fuel deployment (see number 5), medium- and heavy-duty electrification, and vehicle miles traveled (VMT) reduction across all transportation modalities.

2. **The Framework should include an explicit measure of progress or initiative to eliminate the use of fossil fuels.**

    a. The State should develop a plan for phasing out fossil fuels and should track fossil fuel reduction over time.

3. **The State should take further action to reduce vehicle miles traveled.**

    a. The Framework should set a specific goal for reducing VMT.

        i. This should include different goals in urban and rural areas.

        ii. The Framework should also specify how the State determines what the metrics are and how they are measured.

        iii. *Note: Some participants had concerns around focusing on VMT reductions as some view that VMT reduction takes away options or harms the economy. Some suggested that when educating the public about VMT reduction and mobility options, the emphasis should be on providing choices and emphasizing co-benefits. Some participants noted that the State providing frequent and high-quality choices for travelers will also address economic competitiveness, mobility for an aging population, job growth, and equitable access to jobs and public health.*

    b. The Framework should include specific strategies for expanding transportation actions across all transportation modes.

   i. Strategies should include providing additional funding, improving the connectivity of transit, and better connecting biking and walking infrastructure.

   ii. The State should also provide increased assistance to municipalities for active transportation planning.

 c. The Framework should include strategies for land-use planning that reduce the need for driving, including making changes to zoning laws and working alongside cities and local governments to pursue comprehensive planning.

   i. Examples include making changes to zoning codes, promoting denser housing and mixed-use land developments, and encouraging and supporting "smart-growth" land-use practices.

 d. The State should invest in education and awareness.

   i. Increase awareness of and promote existing multi-modal transportation infrastructure.

   ii. Help people feel more comfortable walking, biking, and using transit.

   iii. Invest in community engagement and education that maximizes the State's return on investment in infrastructure related to biking, walking and transit.

4. The Framework should further accelerate progress on electrification

 a. Increase the electric vehicle (EV) adoption goal and add additional benchmarks related to electrification.

 b. The State should provide support for private and public fleets looking to electrify (including providing financial support, coordination and resources).

 c. The Framework should include additional strategies that increase equitable access to EVs (including car sharing, dealership training, financial incentives, and more).

 d. The Framework should elevate electrification strategies specific to medium- and heavy-duty vehicles.

 e. The State should take steps to ensure the sustainability of EVs.

   i. Acknowledge how we source materials for EV batteries and ensure a sustainable and secure battery supply chain.

   ii. When possible, materials for EV batteries should be mined locally in Minnesota.

     1. *There was some disagreement here among workgroup members.*

   iii. The State should introduce robust public education about EV battery recycling.

      iv. The State should introduce mechanisms for the "harvesting" of electronic waste associated with EVs as the preferred source of minerals (lithium, nickel and manganese) needed for EV battery production before turning to the mining of natural lands, whether in the US or elsewhere.

      v. The State should ensure that clean electricity is used to power EVs.

      vi. The Framework should identify the role of electric utilities in transportation electrification, including in implementing EV charging infrastructure and communicating about electrification opportunities.

5. **The State should strategically deploy low carbon liquid fuels**

   a. The State should prioritize low carbon liquid fuels, including biofuels, in harder to electrify sectors.

   b. Some stakeholders expressed that biofuels are an important tool for reducing emissions in existing vehicles, and that electrification should not be the only answer.

   c. A clean fuel standard, if properly crafted, could serve to further reduce GHG emissions in the transportation sector and, due to its potential holistic approach, serve to provide economic incentives which could result in improved soil and water quality and minimize land-use and other environmental impact.

6. **Implement an integrated *statewide* multimodal transportation system that includes the reintroduction of regional passenger rail service on the network of existing rail lines designated in Minnesota's Statewide Rail Plan**

   a. Introduce clean energy and infrastructure improvements that enhance the safety and efficiency of freight and passenger rail conveyance across Minnesota.

II. Principles/cross-cutting themes

1. The Framework should include calculations for the GHG impact of various strategies.

2. The Framework should include more specific goals and timelines for strategies.

3. The Framework should include differentiated strategies for rural and urban areas.

4. The Framework should ensure that strategies benefit all Minnesotans, especially people living with disabilities, lower-income households, rural households, people of color, and those disproportionately impacted by the transportation sector.

5. The State should focus on the education and awareness needed to meet goals.

6. The State should ensure that a diverse set of voices is involved in the implementation of the framework, with stronger community engagement rather than engagement with only community leaders.

Climate-Smart Natural and Working Lands

I. Note from the Coordination Team

Note: The following note was developed by the Climate-Smart Natural and Working Lands coordination team following the workgroup's final meeting. The workgroup did not have the opportunity to review this.

The Natural and Working Lands Workgroup met five times between March and May 2022 and had constructive and wide-ranging discussions at each meeting. Overall, participants expressed the importance of, and their support for, accelerating climate action. They also voiced an understanding that Minnesota's diverse landscapes present opportunities for climate change mitigation and adaptation.

As with many things, the devil is in the details and while the group was universal in their desire for more specifics on actions, goals and measurement approaches in the Natural and Working Lands arena, there was not consensus on what those actions and approaches should be. Although it would have been great to get to more details, the wide-ranging landscapes and constituencies encompassed in the Natural and Working Lands sector made detailed strategy development impractical in the timeframe available for the workgroup meetings. The workgroup also noted that additional perspectives and voices should be part of the more detailed discussions if we are to achieve the goals of inclusive engagement and advancing equity in the implementation of the Climate Action Framework (of note is the fact that while the coordination team endeavored to include a diversity of perspectives and experience in the workgroup, on the whole we fell short of that goal).

Despite the challenges posed by the breadth of this topic and the timeframe for engagement, several common themes/next steps emerged during the workgroup meetings. These themes, as identified by the coordination team, are summarized below:

Note: numbering is for organizational purposes, not meant to express a ranking or prioritization.

1. **The importance of collaboration to develop specific climate-beneficial actions for natural and working lands to achieve measurable progress**. The workgroup expressed a strong desire for engagement and collaboration to continue in this area, noting the importance of developing more specific strategies and action items for the major landscapes/land uses in the natural and working lands arena. For example, we heard that actions and measures will differ based on land uses, such as row crop agriculture, grasslands and grazing, forests, wetlands, peatlands, prairie, cities and towns. While there was a clear desire for follow-on discussion to get to more specifics, workgroup members also expressed the importance of continuing to make climate-benefiting progress on Minnesota's landscapes while more details are being worked out. Workgroup members also stressed the importance of inclusive and representative participation.

2. **The pressing need for metrics and measurements**. The workgroup expressed (throughout the meetings, and in response to the draft summary) the importance of developing and investing in standard metrics and baseline scientific measurements on

both existing and potential practices for carbon sequestration. Workgroup members endorsed (not complete agreement) that lack of agreed-upon and verifiable metrics is a barrier to setting and achieving targets (i.e., we can't get to our destination if we don't know where we're starting from). Recommendations in this area included the following:

    a. Establishing baselines will enable the development of landscape/land-use specific targets.

    b. Science-based metrics and measurements will inform what is possible and practical. Without the metrics, prioritization and data-driven decision making is not possible.

    c. The measurements and metrics need to be accepted by partners and stakeholders -- in other words, those who will implement and be affected by the implementation activities -- if Minnesota is to achieve the goal of accelerating climate action.

3. **The need to act within natural and working lands subsectors**. The workgroup acknowledged that landscape-based decarbonization and adaptation/resiliency strategies need to consider the unique features and benefits of the varied landscapes/land uses in Minnesota. Some advocated that metrics, goals and strategies be separately developed for agriculture and forestry. Others pointed out that natural and working lands also include grasslands, prairies, peatlands, cities, towns and suburbs, and wetlands. Still others noted that even within forestry and agriculture there are subsectors such as agricultural cultivation, animal agriculture, publicly owned forestland, and privately owned forestland. These observations led to the acknowledgment that:

    a. Minnesota's varied landscapes and land uses have unique ecological functions, social and cultural importance, economic frameworks and benefits, and (in some cases) regulatory considerations.

    b. Landscapes/land uses are interrelated and therefore must be considered from a systems perspective, but discussing natural and working lands as a whole may not be the best path to identifying specific, strategic climate actions.

    c. Partner and stakeholder engagement across an area as broad as natural and working lands is difficult.

    d. Equity, diversity, and environmental justice considerations are often better revealed and addressed on a subsector basis.

4. **The need for, but also difficulties with, employing a landscape-based approach to action**. While the natural, social/cultural and economic considerations of each landscape/land use type need to be acknowledged, the Framework should also think in terms of landscape-level action. A number of workgroup participants noted that including landscape-based action for climate purposes is relatively new, but is the scale at which action is needed. The workgroup described a huge amount of multi-faceted opportunities at the landscape level (although not coming to agreement on the priorities).

5. **Support for initiatives and market-driven approaches that meet climate goals while continuing to sustain local economies.** The workgroup expressed, in both small group discussion and in response to the draft summary, the need for a better understanding of market signals and incentives to enable more informed decision-making by potential market participants. However, as many of the burgeoning market tools for commodifying desired carbon outcomes (both sequestration and emission reduction) are still being formed, the workgroup was hesitant to endorse specific market mechanisms given the uncertainty of effectiveness, transparency, and benefits. The following represent the agreed to items:

   a. Enable and encourage new partnerships and collaborative efforts.

   b. Create and facilitate markets and other voluntary practices that result in desired climate-friendly (sequestration or emission reduction) outcomes.

   c. Promote the ability of incentives to create large-scale climate-beneficial change.

   d. Many workgroup members advocated for showing landowners a better idea and the economic value of new/changing practices before considering regulatory approaches. Some workgroup members noted that regulatory approaches and options are also important tools for consideration.

Finally, it is clear from the feedback received during the workgroup meetings that there is much yet to be done to meet the goal of accelerating climate action on natural and working lands. We need to develop a measurement system to guide the development, prioritization and implementation of the most effective actions to advance climate mitigation and adaptation, and we need to do so while continuing to make forward progress. We also need to acknowledge and discuss the tradeoffs that may come with some strategies, and endeavor to understand and avoid potential unintended consequences. While we did not have the time to delve deeply into how to accomplish the items above -- nor did we have all the diversity at the table needed for truly inclusive engagement -- the workgroup process demonstrated that there are many partners, landowners, resource managers, academics, businesses, nonprofits and individuals who recognize the importance of climate action in natural and working lands, who care about addressing climate change while also achieving other benefits we receive from our landscapes, and who are willing to engage in ongoing efforts to work through the details to accomplish Minnesota's climate goals.

II. Summary Document as Proposed in Final Meeting

Note: The following lists (top priorities and actions; principles/cross-cutting themes) were presented to the group during the final meeting. Notably, some workgroup members <u>disagreed that these lists by themselves adequately captured their perspective</u>; while others said they accurately summarized the discussions. Nonetheless, the coordination team has included them here as they may be helpful for the Council and Subcabinet. See spreadsheet for full list of suggested improvements to the framework that were discussed.

TOP PRIORITIES AND ACTIONS

Enhance climate mitigation and adaption on natural and working lands through the following:

1. Establish standardized measurement approaches and targets to ensure we're achieving our goals.

    a. Set separate/specific metrics and targets for forestry, agriculture, etc.

2. Restore forests, grasslands, wetlands, and peatlands and avoid additional conversions.

3. Protect and manage lands for multiple benefits, including but not limited to:

    a. Biodiversity
    b. Climate
    c. Cultural and spiritual
    d. Economic
    e. Habitat
    f. Health (humans and nature)
    g. Recreation
    h. Water

4. Accelerate soil health initiatives and increase adoption of other conservation practices.

5. Build incentives and increase assistance to private landowners to take climate-beneficial actions that provide multiple benefits, including economic, habitat, water quality, pollinators, recreation, etc.

PRINCIPLES/CROSS-CUTTING THEMES

1. Engage and support historically marginalized communities, partners, and stakeholders.

2. Build up capacity to support this work, including materials, equipment, workforce, services.

3. Acknowledge and be explicit about trade-offs in individual decisions while evaluating progress at the landscape scale.

4. Align with markets to accelerate climate-beneficial practice adoption.

5. Build upon effective, existing programs.

6. Strategically prioritize implementation considering carbon sequestration as well as the multiple other benefits that Minnesota's landscapes provide.

7. Help Minnesotans identify and implement climate actions that are connected to things they care about.

Clean Energy and Efficient Buildings

Note: All items listed below are numbered for reference purposes only and do not reflect a ranking or prioritization on behalf of the group. In addition, these items are intended to be taken as a package, such that individual items are intended to complement one another. These lists lay out high-level priorities and themes that are further detailed in the spreadsheet. At the group's final meeting on May 4th, stakeholders in attendance had the opportunity to review, discuss, and update these lists. There was broad support for both lists, as a package, by the end of the meeting.

I. Top priorities and actions:

1. **Affordability, efficiency, and access**

   There is broad support among stakeholders for doing three key things in combination with one another, in addition to decarbonizing energy supply: 1) making energy affordable for all; 2) making the entire energy system more efficient and specifically targeting efficiency investments towards lower income households; 3) ensuring everybody has access to energy. There are many existing actions in the framework that speak to these priorities for both residents and businesses, and stakeholders discussed a variety of additional actions to strengthen the Framework on these points. One potential new action that was cited is to look for opportunities to consolidate and streamline programs such as energy assistance, weatherization, and utility efficiency programs to make them easier to access, navigate, and scale up in both multifamily and single-family buildings. In addition, cross-sector coupling – the sharing of energy streams across sectors to achieve lower primary energy use and higher energy productivity – can help to lower costs and increase efficiency for both residents and businesses.

   In addition to prioritizing affordability for the most vulnerable Minnesotans, many stakeholders are concerned about keeping costs as low as possible for all energy consumers as the energy system and buildings transition towards net zero greenhouse gas emissions. Stakeholders would like for externalities (environmental and health impacts) to be included when considering investments and believe the best way to facilitate the clean energy transition is to keep costs borne by consumers as low as possible. Stakeholders broadly supported actions to reduce costs, including through policy, research and development, financing, and better alignment of market signals. This can help to ensure the transition to a decarbonized economy occurs as quickly as possible.

2. **Thermal energy decarbonization**

   There is broad support for adding more detail and intention around decarbonizing thermal energy. The current draft includes two actions that speak to this – one is to implement existing and develop new policies to expand the use of low carbon heating sources; the other is to develop clear options for building owners and families to make informed carbon-free selections for their appliances. Stakeholders would like 1) for this

issue to be more prominently featured in the narrative, and 2) more specific actions to address it. Additional actions discussed include a renewable or clean thermal standard, supporting incentives, rate designs, and research and development for heat pumps and systems, encouraging net-zero emissions district energy systems, and deploying multiple approaches to cost reduction that address barriers for all customer segments.

3. **Industrial decarbonization**

    There is broad support for adding more detail and intention around decarbonizing Minnesota's energy-intensive industries. The current draft of the Framework includes actions to improve industrial efficiency and better utilize waste heat. Stakeholders would like 1) for this issue to be more prominently featured in the narrative, and 2) more specific actions to address it. Additional actions discussed (though not necessarily supported by all stakeholders) include engaging industrial subsectors to identify and address their specific needs and encouraging the development of renewable natural gas and hydrogen hubs for industry.

4. **Building codes, benchmarking, disclosure, and performance standards**

    There is broad support for adding more detail and intention around building codes, benchmarking, disclosure, and performance standards (though there is disagreement over performance standards for existing buildings). The current draft of the Framework includes an action to improve codes and standards for all new commercial and large multi-family buildings to achieve net-zero by 2036 and an action to expand access to building performance assessment tools through utility energy audit programs. Stakeholders would like 1) for these issues to be more prominently featured in the narrative, and 2) more specific actions to address them. Additional actions discussed (though not necessarily supported by all stakeholders) include but are not limited to code updates for residential buildings, code enforcement, universal statewide building benchmarking, energy and emissions disclosure at point of sale or renting, and encouraging better performance through incentives and/or penalties. Stakeholders noted that decarbonization costs are minimized when land use supports optimizing efficiency and renewable energy between the building, site, neighborhood, and utility scales and between electrification, storage and other sources of clean energy. Stakeholders agree that the building sector needs to achieve net zero[6] (definition needs to be clarified – see below), but disagree on the specific date that is achievable and how to do it.

5. **Electricity decarbonization**

    There is broad support among stakeholders for decarbonizing electricity supply and increasing the deployment of renewable electricity. There is, however, not consensus in this group about changing the state's carbon free electricity and renewable energy standards. Many stakeholders see government establishing carbon free electricity and

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[6] A significant decision point is whether the energy code goes all the way to net zero energy and carbon or it takes the building to net zero energy carbon ready and then other codes/laws/requirements make the energy supply clean there by achieving a net zero energy and carbon building sector.

renewable energy standards as vital to achieving the goals of the Framework and therefore necessary to do, based on modeling that shows these may be among the most impactful solutions. Others raised concerns that updating the standards may be unnecessary because utility commitments and markets are already moving in the direction of accomplishing them. In addition, there is some disagreement about whether the goal related to electricity should be defined as "carbon-free" or "carbon-neutral" (see more details in spreadsheet).

II. Broadly Supported Themes that Apply to All Topics:

6. Clarify definitions

Stakeholders would like the state to review the terms used in this section and ensure that they are adequately and clearly defined and that they are used as intended. Importantly, some of the definitions in the Framework glossary may not be adequate or sufficient for this section. This includes both "net-zero" and "resiliency" (see spreadsheet items 1a and 1b for details). For example, stakeholders noted that the difference between net-zero energy, carbon or emissions is significant and each requires a different strategy to achieve.

7. Prioritize equity and environmental justice

Equity and environmental justice (as defined in the Framework glossary) were both cited as priorities applicable to this section and the Framework as a whole. Stakeholders in this group discussed several potential new actions to strengthen the Framework in this regard, including supporting (both process-wise and financially) more equitable participation in energy decision-making processes, increased access to energy efficiency and clean energy, investment and re-investment to support better participation and access, and applying a racial equity lens to all actions in the Framework. This group also supports the measure of progress and action on equity investment in alignment with Justice 40 that is already in the Health and Equity section of the Framework. Stakeholders noted that this group lacked the desired diversity and representation.

8. Support workforce development

Stakeholders noted that many of the actions in this section of the Framework require having a workforce that is trained and available statewide to enable these actions. Notably, this section of the Framework has an existing equity action on workforce development for energy efficiency but is lacking a similar action on workforce development to support electrification such as installing, maintaining, and operating air/ground source heat pumps. This overlaps with equity and environmental justice in that it is important to include support for BIPOC individuals and communities to participate in green economy opportunities. Notably, this is an area of overlap with many other sections of the Framework, including the Clean Economy section.

9. Support both community empowerment in decision-making and urgency to address the climate problem

This group discussed the importance of two things that may both complement one another and may be in tension with one another – the need for broader engagement, resourcing, and empowerment in decision-making, including for underrepresented groups and communities, and the need to take action quickly to address the climate problem. Stakeholders suggested that it is possible to do both by identifying the actions that most need broader and in-depth engagement versus those that can be implemented more quickly. In addition, some stakeholders suggested that broader engagement will make actions more robust and durable for the long term.

10. Prioritize actions for immediate implementation

Stakeholders would like the Council and Subcabinet to assess which actions can be implemented in the near term. Achieving these priorities will require a calculation of political and regulatory feasibility, enhanced public outreach and education, and resources for regulators and stakeholders.

11. Ensure state capacity and investment to carry out the Framework

Stakeholders would like the state to ensure that it has adequate capacity and resources and is making the necessary investments to carry out the Framework. This should include significant support for research and development of many different technologies and approaches that align to Framework actions, as well as modeling and data analysis capabilities so that the state can plan, review, and revise its strategies within and across sectors towards the vision of carbon-free, resilient, and equitable.

Resilient Communities

Note: All items listed below are numbered for reference purposes only and do not reflect a ranking or prioritization on behalf of the group. See spreadsheet for full list of suggested improvements to the framework that were discussed.

I. Top priorities and actions

1. **Develop metrics that, inform and drive progress, and align with the initiatives.**
   a. Establish baselines
   b. Set clear goals
   c. Include metrics that can demonstrate avoided costs and cost-effectiveness

2. **Establish durable and reliable resources that expand local capacity to implement community-driven adaptation plans.**
   a. Resources include, but are not limited to:
      i. Technical assistance
      ii. Sustainable funding
      iii. Training
      iv. Community education and engagement
         1. Meeting people where they're at
         2. Having experts share information and collaborate with communities
   b. Capacity building, including but not limited to supporting:
      i. new and existing partnerships
      ii. local governments
      iii. peer-to-peer learning

3. **Create an inventory of tools and guidance to help communities assess tree canopy, stormwater, and green infrastructure opportunities. Prioritize the use of vulnerability assessments to determine community strengths and needs.**
   a. Connect stormwater management to land-use planning and encourage the use of green infrastructure
   b. Improve climate hazard projections for stormwater, drought, heat, and extreme weather
   c. Ensure the tools are tailored to urban and rural settings
   d. Enable the incorporation of community goals, community strengths, and social vulnerability indicators

e. Acknowledge and plan for tree canopy stressors (e.g., emerald ash borer/invasive species, extreme heat, extreme weather events)

f. Involve stakeholders in tree canopy placement, implementation, and maintenance; and expand awareness of available tree canopy assessment and planning tools

g. Build and expand seedling infrastructure and distribution

h. Emphasize co-benefits of healthy urban forest (e.g., wildlife habitat, water and air quality, mental health, carbon storage)

4. **Accelerate training and job creation statewide to advance climate adaptation work and incorporate climate adaptation into clean economy initiatives, including in climate-smart natural and working lands**

a. Develop training programs on multiple levels

i. Work in the education system

ii. Focus on apprenticeship programs

iii. Target underserved populations who live and work in these communities

b. Incorporate climate resiliency into engineering best practices

c. Focus on "hands-on" professional programs

d. Include resiliency-related jobs in clean economy statistics

5. **Expand the role of resiliency in building codes and land use regulation**

a. Acknowledge and address tension with cities that want to be more proactive and state barriers

b. Encourage the use of incentives to drive resiliency and private development

c. Embed justice and equity in building codes and land use regulation

II. Principles/cross-cutting themes

1. Ensure inclusive, representative, and culturally competent engagement is part of adaptation planning and implementation that build resilience

2. Ensure the process to access funding is equitable, flexible, accessible, and scalable to a broad range of communities and other local jurisdictions

3. Develop statewide criteria to prioritize implementation in consideration of vulnerabilities, equity, impact, and community goals

4. Identify opportunities to effectively drive action in the private sector, leveraging diverse partnerships

5. Emphasize that thriving human communities are interdependent with healthy, functioning ecosystems

III. Additional context

1. **Barriers the workgroup identified:**

   a. Lack of accessible funding

   b. Need for resources to be allocated equitably

   c. Limited staff capacity

   d. Political will (essential to build the demand for climate resiliency)

   e. Identify and acknowledge where there are trade-offs between proposed solutions that may pose other threats (e.g., flood control measures that offer short-term solutions but have long-term consequences)

2. **Measures of progress suggested edits:**

   a. By 2030, 100% of Minnesota's local, tribal, and regional governments have plans to assess climate vulnerability and have begun implementing climate adaptation actions to build resiliency

   b. Funding approved for implementing 15 adaptation projects that increase community resiliency by 2026

      i. Increase the ambition (more projects, dollar amount, geography)

      ii. Provide more clarity around how an adaptation project is defined

      iii. Does there need to be matching from the entities getting the funds?

   c. Increase and maintain the overall tree canopy cover of community forests to 30% by 2030 and 40% by 2050.

      i. Provide clarity on the 30% and 40% -- is it a statewide goal, region, community?

      ii. Include equity more in the priority actions

      iii. Having two metrics, one that's outcome driven and one that is process driven

3. **Missing items and links to other workgroups**

   a. Draft framework doesn't mention resilient transportation in this section

   b. Resilience hubs (e.g., microgrids at a community center) supporting socially vulnerable communities

   c. Should address agriculture drain tile and the impacts on flooding, stream bank instability, and coastal erosion (e.g., Lake Superior)

   d. Housing resilience (to withstand heat waves, polar vortexes, storm/flooding events, etc.)

Healthy Lives and Climate Equity

Note: All items listed below are numbered for reference purposes only and do not reflect a ranking or prioritization on behalf of the group. See spreadsheet for full list of suggested improvements to the framework that were discussed.

I. Top priorities and actions:

1. **There needs to be a foundation of trust**

   Implementing the Framework in an equitable way will require a foundation of trust, built upon genuine collaboration with affected communities rather than the Framework being seen as something the State is doing to or for communities.

   a. Rather than the government assuming it knows the problem and the solution, the State needs to:

      i. develop a plan with communities to create spaces of trust and accountability where communities can share their needs and bring forward solutions;

      ii. engage deeply with affected communities and have consistent, dedicated funding and support for organizations trusted in communities to lead climate conversations and implement community-based initiatives.

   b. As action steps are implemented, the State needs to create specific processes to ensure equity is considered in the access to support and resources. This could include addressing system-level obstacles such as complicated application processes which create a barrier to participating in programs and resources provided by the State.

2. **Address equity, race, and disproportionate climate impacts in both urban and Greater Minnesota**

   The Framework needs to discuss the intersectionality of race and ethnicity, geography, age, income level, and other factors and note how these play a key role in inequities throughout the state.

   a. There are lots of barriers for black and indigenous farmers, including lack of access to land ownership. The State needs to improve access to culturally appropriate foods and create opportunities for people to grow those foods. One way to do this is through shared stewardship of public lands.

   b. "Urban and rural" shouldn't be read as urban = people of color and rural = white. The workgroup had great discussions about the strengths and needs of Native communities and black farmers in Greater Minnesota, for example. The group recognized there is diversity across our state and many different types of inequities that impact Minnesota communities.

   c. Naming equity: the Framework should note specifically who is impacted in the individual action steps to make it actionable for folks to address equity.

3. **On-going work to keep the State accountable**

There should be on-going work to develop and refine the right metrics and a mechanism for reporting on them regularly to keep us collectively accountable for progress, including, but not limited to:

   a. In general, the workgroup wanted to see more specificity around how equity and health would be addressed during implementation of the Framework and wants to see evidence-based progress on equity and health goals.

   b. As noted in the Framework, one of the action steps is for the State to develop a climate equity index.

   c. The State should develop a regular occurring report on the state of climate and health in Minnesota.

   d. There should be regular report-outs about progress on the Framework.

4. **The Framework as an economic strategy**

The Climate Action Framework should also be an economic development strategy tool, leading to long-term sustainability of the economy as a whole and equitable access to economic opportunities across the board, rather than just focusing on GHG emission reduction.

   a. The Framework should connect proposed solutions to economic growth, opportunity, and concrete benefits. People tend to get behind things that they can be involved in, and where they can see the clear benefits to themselves, their families, and communities.

   b. Look for opportunities for all jobs to become clean, not just in the energy sector.

   c. Need to diversify leadership. The State's goal should be to help create the "system conditions" that allow/enable more black and brown people to serve in business leadership, be business owners, and partner with the State as vendors for services and programming (e.g., in the clean energy industry). There is a lot of existing talent with transferable skills that often gets overlooked.

   d. Need to support job opportunities and training at all levels, not just at the entry-level or in a few sectors like construction.

5. **Need for better data and ways to visualize it**

The State needs to collect better data and develop ways for people to visualize that data to develop a shared understanding of the problems we are collectively solving for as Minnesotans.

   a. Need not just quantitative data, but qualitative data that pairs with community stories and narratives. Are there success story examples to show what it looks like when we do a good job of making investments to address equity? There is also, a need for stories that can help to illustrate inequities and the role of both the State and the private sector in addressing inequities.

b. Need data that illustrates inequities. This data would ideally be included in all sections of the Framework. This data should also be developed and used more broadly, as it would be helpful to have some numbers and statistics to illustrate at a glance, to the public, what the State is talking about when talking about inequities.

II. Honorable mentions

6. **The State should lead by example**

    a. Work to diversify state agency staff at all levels, but especially leadership. We need leadership representative of the community. The State should add a measure of progress around diversity in state leadership.

    b. The State should lead and make clear its priorities so that grassroots organizations and others can move in the same direction.

    c. Elevate commitment of all agencies to embed equity and justice into the vision, mission, and way that they do their work.

    d. Ensure investments throughout state government are aligned with the Framework.

    e. The State should take the lead on "easy wins", e.g., shift in procurement practices such as not purchasing styrofoam.

7. **Getting the language right is important so that everyone can see themselves in the Framework**

    a. Use language like collaborate, not engage. Consider who is it happening to or with.

    b. Don't use words that exclude people.

    c. Do not use a charity mindset.

8. **The Climate Action Framework and the State's goals and initiatives need to align with science-based international targets, as more and more businesses are doing**

    a. E.g., ~50% reduction in emissions by 2030 and net-zero emissions by at least 2050 if not sooner.

    b. We want to align with existing international goals as much as possible and align with recommendations in the IPCC reports.

9. **Equitable access to healthcare is a significant barrier to protecting the health of Minnesotans from climate change and other health risks that impose a cost on individuals and the economy**

    a. Healthcare is not accessible nor affordable for all. The State needs to encourage accessible/affordable healthcare for everyone.

a. Possible new action step: Ensure access to affordable healthcare to promote management of chronic conditions caused or exacerbated by climate change, such as asthma.

10. **If the Climate Action Framework is to succeed in galvanizing Minnesotans (in a way that previous State efforts have not), it needs to be seen broadly as an "all of society" responsibility and opportunity, and not something that just government does**

Clean Economy

Note: All items listed below are numbered for reference purposes only and do not reflect a ranking or prioritization on behalf of the group. See spreadsheet for full list of suggested improvements to the framework that were discussed.

I. Top priorities and actions

1. **Develop a statewide assessment of employers and what their employment needs are with respect to jobs that are necessary to the clean economy transformation**

2. **In partnership with industry, create the State's workforce development plan using a broad definition of clean jobs and based on job and skillset needs identified in the statewide assessment**

   a. Build a university and technical college pipeline which includes both technical and white-collar jobs (e.g., software and electrical engineering) as well as certificates and/or two-year degree programs

   b. K-12 promoting of diverse career pathways (e.g., apprenticeships, two-and four-year degree programs)

   c. Education and outreach to professional organizations (in particular, those focused on women and people of color), community organizations, and employment service providers to make them aware of these types of jobs and the career pathways and skill sets needed.

   d. Develop higher education financing solutions focused on attracting and retaining Minnesota students to work in Minnesota companies

3. **As part of the statewide assessment, identify the occupations and skill sets where there are clean jobs and define barriers**

   a. Identify and remove the barriers women and people of color face including accessible training (accessible may include things such as providing childcare or transportation) to prepare them for these careers and skill sets

   b. Address the institutional barriers, such as racism, bias, or lack of mentors, that prevent women and people of color from participating in the industry.

4. **Tying workforce to investments**

   a. Those making investments (public or private) should be guided by the workforce plan

   b. General infrastructure investments should be paired with workforce training to ensure it is aligned to create the workforce to enable the activity. For example, infrastructure investments in clean energy, grid upgrades, etc. should also analyze and publicize the related job opportunities.

5. **Creating an environment for entrepreneurship that brings together those with needs, those with ideas, and those with money**

a. Investing in new business and market development in the clean economy.

b. Work with existing regional partners to assess opportunities and risks to develop strategies tailored to each area of the state.

c. Innovation and succession planning within and between existing and new businesses (and business owners)

d. Intentionally targeting spending opportunities for businesses owned by women and people of color.

e. Diversify the supplier base with businesses owned by women and people of color.

6. **Develop standard metrics for clean jobs to better understand the progress Minnesota is making**

a. What is the baseline and measuring progress

b. Track quality of old jobs versus new (i.e., pay and benefits)

II. Principles/cross-cutting themes

1. **Need to diversify the workforce**

a. Diverse leadership

b. Training people of color in clean economy jobs

2. **State activities around workforce and business development should assist both existing and new businesses in securing the workforce, skill sets, and other assistance they need.**

a. The state should actively support business development for new and existing businesses through outreach and education about emerging opportunities to do business with the state.

3. **Think comprehensively about what constitutes a "clean job" such as climate resilience, recycling and waste management, and natural and working lands jobs.**

4. **Adapting known jobs in the economy**

a. Equipping them with what they need for success

5. **Listening and responding to what communities need to ensure a just transition**

a. Finding solutions to the kinds of transition, jobs, or job training they are looking for.

6. **Coordinating a balance between state, private, non-profit, philanthropy and community action – how do all the pieces work together**

7. **Make it clear that these efforts are at least equally applied to greater Minnesota and not just established in the metro area**

IV. Feedback Spreadsheets

The following pages contain feedback that was collected from workgroup members through surveys, meeting discussions, and email throughout the workgroup process. The ID numbers are for reference and organizational purposes only; they do not indicate a ranking or prioritization.

Clean Transportation

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
1a	Set stronger greenhouse gas (GHG) reduction goals	Set strong GHG reduction goals in the measures of progress	An aggressive goal is necessary to avoid the worst impacts of climate change.	measure of progress	Moderate		
1b	Align GHG reduction target with IPCC targets	Modify the framework to change the goal from "Reduce GHG in the transportation sector 30% by 2025 and 80% by 2050" to the IPCC target of net 0 by 2050.	IPCC goals reflect the most recent climate science.	Page 22	Moderate		
1c	Establish midpoint GHG targets for interim years	Add interim GHG targets	Establish midpoint GHG targets to interim years to help keep us accountable and be better able to measure progress. Right now, the only target listed in the transportation section is 80% reduction by 2050 (Minnesota's interim goals are stated earlier in the Framework)	Page 22	Some		
1d	Calculate GHG benefits of actions	Add estimates for the expected GHG impact of various strategies	Action steps should be prioritized and clearly linked to GHG emission reductions. It would be helpful to know if achieving all of the sub-goals and strategies will achieve needed GHG reductions.	Appendix	Moderate		
1e	Align with other planning efforts	Align the goals and policies in this section with the Pathways to Decarbonizing Transportation in Minnesota report	The purpose of Pathways was to explore opportunities for GHG emission reductions from surface transportation: passenger cars and trucks, medium-duty and heavy-duty trucks, buses, motorcycles, and mobile air conditioning.	Throughout	Some		

2a	Add more specific goals and timelines for strategies	Stakeholders requested more specific strategies in a variety of areas: biofuels, medium- and heavy-duty electrification, pedestrian/bike access, as well as more specific timelines for achieving certain aspirational goals.		Throughout	Moderate		
2b	Use action oriented language	Add information about who would be held accountable, and over what timeframe a strategy would be achieved.	For many strategies, language is more aspirational than action oriented. Lack of clarity around the terms "lead," "enact," "encourage". Adding timelines would help.	Throughout	Some		
2c	Clarify definitions	Clarify the definitions of "Enact," "Lead," and "Encourage"	There is confusion about the use of these terms and why different strategies have different terms checked next to them.	Appendix	Moderate		
2d	Reclassify policies	Correct misclassified policies, including policies which are currently listed as "lead" policies but would require legislative approval.		Appendix	Some		
3a	Increase the EV adoption goal	Increase the EV adoption goal (from 20% by 2030) and add benchmarks out to 2050	The EV adoption goal is too low compared to the GHG emissions reductions needed. Also, adding interim benchmarks would keep us on track better to achieving long-term goals.	Page 22	Moderate		
3b	Disconnect with EV penetration goal and GHG reduction goal	There is a disconnect in some of the math in this document—the EV penetration goal is low compared to the greenhouse gas reduction goal.		Measure of progress and Action steps	Some		
3b	Add a fleet electrification strategy		There are some existing goals and strategies around this in the framework.	1.2.3	Some		
3c	EV Financial Incentives	Consider how to tailor financial incentives based on income (higher rebates for lower income households e.g.)	EV incentives should not just be for those who can already afford an EV or a new car. Also, targeted education and outreach is needed so these communities are aware of the incentives.	1.2.3	Some		
3d	EV Pledge	Implement a statewide pledge to make your next car an EV	This could get people excited about purchasing an EV, and raise awareness	1.2.1	Some		
3e	Dealership EV training	Improve access to dealership training for dealers looking to sell EVs	Auto dealers are an important source of information for customers looking to purchase their next car. Customers who have not owned an EV before may have a lot of questions about them.	1.2.3	Some		
3f	Mineral sourcing and recycling	Consider the impact of how we source and recycle the minerals used in EV batteries	Interest in domestic mining, avoiding unintended environmental and humanitarian impacts from mineral mining.	Initiative 1.2	Some		

3g	EV cost sharing	Add EV cost-share language	Would be great to see pilot programs looking at EV car shares at multi-family housing.	1.2.3	Some		
3h	Provide support for those interested in electrifying their fleets	The state should convene fleets, school districts, etc. who are interested in electrifying, and provide support for them.	Many fleets are looking to electrify but lack coordination, resources, and goals from the state.	1.2.3	Some		
3i	Additional EV considerations		• Should pay their share of transportation infrastructure costs – right now do not – AND they get subsidized – causes backlash • Figure out a way to make dealerships benefit – incentivize them to push EV's – not individuals • Agree with assistance for companies looking to transition their fleets – incentivize business to do that • Be extremely careful about government mandates – any approach that can be spun as government forcing people to do this is a bad one – do this in a way that the market does it, with assistance • Support 10D electrifying bus fleets – immediate action item that can be done now and will have an impact		Feedback sent in from workgroup member, workgroup didn't get a chance to review		
4a	EV charging requirements	Include required EV charging to support road map goals, and ensuring charging is beneficially			Some		
4b	Utility customer EV assistance	integrated into electric grid through support and coordination with utilities			Some		
4c	Electric grid planning	Begin long-term planning for state electricity capacity upgrades as a result of increased electrification, including a proposed policy suite and set of best practices for utilities.			Some		
5a	Medium- and Heavy-duty vehicle strategies	Clarify separate strategies for medium- and heavy-duty vehicle electrification	Strategies for light-, medium-, and heavy-duty vehicles will need to be different. There are separate strategies listed in the appendix, but this may need to also be addressed in the narrative.	Initiative 1.2	Some		
5b	Highlight the role of utilities in advancing medium- and heavy-duty electrification		Utilities are an important source of information for their customers in terms of technology options and needs, cost, etc.	1.2.4	Some		

5c	Education about medium- and heavy-duty EVs	Provide education about technology options for larger vehicles and cost	It is important to help early adopters understand their options and what could reduce their costs, and to provide examples of scenarios where these vehicles are being used already (e.g. electrified school buses)	1.2.4	Moderate		
5d	Adopt emission standards for medium- and heavy-duty vehicles	Minnesota should adopt California's GHG standards for medium- and heavy-duty vehicles		1.2.1	Moderate		
6a	Expand access to biofuels	The state should focus on expanding access to biofuels as well as EVs	Support maintaining portions of the framework that increase access to biofuels for various vehicle types.	1.2.1	Some		
6b	Electrification should not be the only answer	Maintain a balance between electrification strategies and strategies involving liquid fuels.	Electrification cannot happen fast enough for it to be the only technology solution. Also need to reduce VMT, and invest in solutions that decarbonize the existing rolling stock (like advanced biofuels).	Initiative 1.2	Moderate		
6c	Add more specific goals related to biofuels	Add a specific goal for biofuel usage and infrastructure, similar to the EV adoption goal.		Initiative 1.2	Some		
6d	Define "clean fuels"		What does the term "clean fuels" mean under "1.2.1 Increase the use of clean fuels, including lower-carbon biofuels"?	1.2.1	Some		
7a	Increase emphasis on land use planning	Add mention that land-use changes require working alongside local government and cities	Existing strategies are under section 1.1 of the appendix.	Initiative 1.1	Moderate		
7b	Zoning laws and housing	Change zoning laws to legalize denser housing across the metro area	Zoning codes need to change to allow more sustainable development. Existing language: Promote land use planning that supports multimodal transportation options	1.1.3	Some		
7c	Zoning laws and parking	Change zoning laws to remove parking space requirements			Some		
7d	Repurposing parking lots					What happens to parking lots and ramps when we have less vehicles on the road?	
8a	Rural and urban strategies	Differentiate strategies/goals for rural and urban areas	Different technology solutions and goals will be needed in rural versus urban areas. For instance, transit is more accessible in urban areas, and people in rural areas may drive further or more frequently.	Throughout	Moderate		

8b	Make specific VMT goals for metro areas vs. rural areas	Set specific goals for VMT reduction that are different for metro areas, smaller communities, rural communities.	Depending on a community's size and geography, strategies will differ.	Initiative 1.1	Moderate		
8c	Message to rural communities about VMT reduction	Proactively reassure rural communities that reducing VMT at this scale will require more changes in the metro area	VMT reduction is more needed and more cost-effective in urban areas.	Initiative 1.1	Some		
9	Emphasize the need for smaller cars	Educate families about the benefits of driving smaller cars rather than light-duty trucks.		1.2.5	Some		
10a	VMT reduction goal	Add a specific goal for reducing vehicle miles traveled (VMT) (20% by 2050 is a good starting point)	Set a statewide goal and goals for metropolitan areas. Current language is vague ("Decrease vehicle miles traveled by 2050")	Page 22	Moderate		
10b	Walking, biking, and transit goals	Add specific goals related to walking, transit and biking.	Similar to VMT, there should be specific goals for increasing these transportation types. Today, 28% of household trips are 1 mile or less. This is the low-hanging fruit and walking, biking, and transit should be encouraged for these short trips.	1.1.1, 1.1.2	Some		
10c	Encourage businesses to encourage walking/biking to work		This could include extra money in their paycheck, health incentives, free transit tickets.	1.1.1	Some		
10d	Community education	Consider education needed to help people feel safe walking and biking.	Many people do not feel safe or confident walking and biking. Education is needed to ensure infrastructure will actually be used.	1.1.1	Some		
10e	Prioritize VMT reduction	Prioritize reducing VMT first	the least polluting car trip by far is the trip not taken		Moderate		
11a	Transit planning assistance	Provide more help for communities to plan transit service	Smaller communities get help from MnDOT to plan service, but medium communities do not always get the same assistance.	1.2.4	Some		
11b	Bus transition planning	Create a transition plan for electrifying Minnesota transit buses		1.2.4	Some		
11c	Clean school buses	Set a goal to electrify Minnesota school buses by 2040 and begin transition planning		1.2.1	Some		

12	Fleet electrification assistance	Create a system to support school districts and fleets looking to electrify	Include additional support for schools in environmental justice (EJ), BIPOC, and Tribal communities	1.2.4	Some		
13	Cap carbon emissions in MN	Implement an economy-wide cap on carbon	The funds could be used to cover the investments identified throughout the draft and help with equity concerns about who benefits from climate action		Some		
14	Increase public awareness				Some	Increase awareness of what Minnesota needs to do to meet climate goals, and the role that Minnesotans have to play in that effort.	
15a	Enact a clean fuel standard with aggressive goals		Goals should reflect the IPCC targets	1.2.1	Some		
15b	Clean fuel standard considerations	Clean fuel standard should consider the impacts of biofuels on water, soil, air, and rural communities.	Minnesota is experiencing impacts from biofuel production and a clean fuel standard should be comprehensive and avoid worsening negative impacts.	1.2.1	Some		
15c	Clean fuel standard considerations	Clean fuel standard needs to involve a circular process with biomass.	For the forest products industry, the abundance of residuals in the state presents a great opportunity	1.2.1	Some		
16	Infrastructure implementation				Moderate		Don't support infrastructure that we are locked into. For example, carbon pipelines. Don't leave rural communities stuck in one path.
17a	Focus on electrification strategies	Focus on electrification strategies over liquid fuels	Concern with biofuels and liquid fuels; electrification is the best option.	1.2.1	Moderate		

17b	Remove ethanol from the action steps	Remove ethanol from the strategies	Concern with environmental impacts of ethanol, which is included as a clean fuel under "Develop a Clean Fuel Standard"	1.2.1	Some		
17c	Limit biofuels to harder-to-electrify sectors		Concern with biofuels and liquid fuels; electrification is the best option.	1.2.1	Some		
17d	Reduce liquid fuel use	Project reduction in demand for liquid fuels over time. Create a plan to phase out liquid fuels for surface transportation vehicles. This should first include an estimate for how much we can reduce the total need for liquid fuels if we follow plans for VMT reductions and vehicle electrification.	This would be a metric to determine whether we are achieving goals.		Some		
18	Community assistance	Provide assistance for communities looking for solutions to address climate change.	California has a program that works through community development districts to provide data and help identify solutions. Funding and planners are needed.		Some		
19a	Clean vehicles in impacted communities	Specifically prioritize deployment of clean vehicles to the most-polluted areas	The communities that have been most negatively impacted by the transportation system will benefit the most from a transition to cleaner vehicles.	1.2.3	Some		
19b	Clean transit buses in impacted communities	Prioritize bus rapid transit with clean electric buses in and adjacent to impacted communities		1.2.4	Some		
19c	Consider the impacts of various strategies on disabled people		Being on a bus can be too long and painful for some people. Cars can be faster and more comfortable for them. How can we create solutions that are equitable for these users?	Initiative 1.1	Some		
20	List specific state agencies to oversee relevant sections of the framework		This creates accountability and gives various agencies ownership over the different strategies	Framework design consideration	Some		
21	Stop perpetuating harm	There is a lot of talk about equity, but we need to consider how to stop perpetuating harm, for instance when we expand lane miles in urban areas.		perhaps add a note in the intro section	moderate		

22	Local communities and organizations should be at the table		Several organizations are working with vulnerable communities and should be at the table. For instance, HourCar and CERTs.	implementation note	broad support	Local communities and organizations should be at the table when transportation decisions are being made.	
23a	Jobs impact	It is important to consider the jobs impact and who is going to build the infrastructure and other things we need.	Consider where we get the minerals we need for EV batteries, are we getting these domestically? Multi-modal projects can also create and sustain a lot of jobs	add in intro text or in Clean Economy Goal Area section	moderate		
23b	Jobs impact	Highlight programs in place to provide job opportunities to people of color and women in infrastructure, acknowledge we can't jeopardize those opportunities by eliminating infrastructure jobs or creating fewer by shifting away from needed highway bridge expansion and repair			Feedback sent in from workgroup member, workgroup didn't get a chance to review		
24	Stop funding highway expansions	Stop funding highway expansions in the metro area					
25a	Funding	Provide panned, ongoing funding streams for clean transportation			moderate		
25b	Funding parity	Ensure funding parity for non-motorized forms of transportation			Some		
25c	Resource allocation	Allocate resources based on mobility and access, not congestion			Some		

| 26a | Reduce, electrify, decarbonize | Prioritization – To avoid wasting precious time and money on dead end pathways like corn ethanol, the framework should prioritize climate actions by working backwards from the net zero by 2050 target. Just like we use the "Reduce, Reuse Recycle" priorities to address solid waste, we should prioritize transportation actions as follows: 1. Reduce vehicle miles traveled, 2. Electrify all possible vehicles, and 3. Decarbonize vehicles we cannot electrify. | This prioritization is built on current understanding of the different carbon impact of different actions and technologies. First, the least polluting car trip by far is the trip not taken. Second, EVs are already significantly less polluting than internal combustion engine vehicles today, based on both the inherent efficiency of electric motors and the current electricity supply which is already greener than in the past due to expanded use of renewable energy like solar and wind. This existing advantage for EVs will only grow as our electric grid continues to improve. This prioritization also recognizes that there is a role for better biofuels in transportation's future. The use of these biofuels should be limited to heavier vehicles, construction equipment or aviation where electric alternatives are further in the future than with smaller vehicles. Additional investments in corn-based ethanol for cars and light-duty trucks is a dead-end pathway that will delay needed shifts to electrification. However, non-ethanol biofuels could help reduce emissions for larger vehicles. | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

| 26b | Measures of progress | The email group(see column F) requests the following updates to the measures of progress: | 1. The first measurement "reduce GHG in the transportation sector by 30% by 2025 and 80% by 2050" needs to change "80%" to "100%" to be consistent with reality as shown by the IPCC. We also need multiple intermediate targets which recognize the last 10-20% is always the hardest and takes the longest time.

2. The second measurement "decrease vehicle miles traveled by 2050" is meaningless without a specific percentage. That could mean a 1% reduction is considered a success. MNDOT's Sustainable Transportation Advisory Committee (STAC) recommended a goal to reduce VMT 20% by 2050. That should be the operational goal until the administration can develop a specific VMT reduction number as part of a complete plan that reaches IPCC goals. It would be wise to proactively reassure rural communities that reducing VMT at this scale will require more changes in the metro area, where VMT has been increasing the most and transit is most cost-effective, not in rural communities. Different goals for different parts of the state would be helpful.

3. The third measurement to "increase the number of electric cars and light trucks on Minnesota roads to 20% by 2030" is also inadequate. We need multiple targets at increments between now and 2050 which take into account the interrelationship between the VMT reduction and electrification goals. Roughly speaking, VMT reduction and electrification together need to equal 100% by 2050. So, if we are not sufficiently
decreasing VMT, then our electrification goal needs to be more aggressive, and vice versa. | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

| 26c | Shifting funding | We must stop funding highway expansions in the metro area where public sector decisions have been maximizing VMT and instead invest money in shifting that system to provide choices for commuters: in transit capital and operations (specifically Bus Rapid Transit (BRT) which can be scaled up quickly), walking/biking infrastructure and direct incentives to buy electric vehicles as proposed by Rep. Zach Stephenson. | The positive exception is land use reform. We would like to praise the draft framework for acknowledging the importance of land use reforms at the state level. This is a policy arena where state leadership can make a huge difference without spending money. Private sector developers are more than willing to build a range of housing options that allow people to live closer to work, school and other destinations. Brookings has data on how big a difference we can make. When it comes to land use, it is government policy that has been preventing sustainable development patterns. Changing this allows for unusual political coalitions. Regardless of how one might feel about the details, the fact that Republican Sen. Rich Draheim produced a bill like SF3259, demonstrates this opportunity. | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

| 26d | Health and equity | Making sure the framework applies an equity lens to each policy area, including transportation | 1. Policies such as clean fuels standards reduce tailpipe emissions and air pollution, with positive impacts on health, especially in communities experiencing high levels of air pollution. 2. While cleaner liquid fuels provide modest benefits, greater benefits for climate and air pollution will be achieved by reducing VMT, electrifying vehicles and prioritizing bus rapid transit with clean electric buses in and adjacent to impacted communities. 3. A Clean Fuels Program will extend the life of liquid fuels which depend on fossil fuels and corn ethanol, thus continuing the environmental injustice of endangering the health of BIPOC communities who live near petroleum refineries and rural communities that are exposed to secondary air pollution produced from growing corn ethanol. 4. Setting ambitious goals for vehicle electrification and reduced VMT will more effectively mitigate climate impacts, which will reap far greater benefits on human health and reduced impacts on BIPOC and rural communities. 5. To assure health benefits and social equity, the framework should specifically prioritize deployment of clean vehicles to the most-polluted areas to reduce air pollution levels in high traffic corridors, which will reap immediate benefits in improved respiratory health and reduced risk of chronic disease. The framework should also dedicate resources to repairing past and ongoing harm from transportation decisions like highway funding. | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

| 36f | Suggested action steps | A non-exhaustive list of action steps include the following (see column D) | - Direct the PUC to develop standard practices and resources for utilities in supporting customers in installing charging infrastructure.
- Begin long-term planning for state electricity capacity upgrades as a result of increased electrification, including a proposed policy suite and set of best practices for utilities.
- Include required EV charging to support road map goals, and ensuring charging is beneficially integrated into electric grid through support and coordination with utilities
- Planned, ongoing funding streams for clean transportation
- a plan to phase out liquid fuels for surface transportation vehicles. This should first Include an estimate for how much we can reduce the total need for liquid fuels if we follow plans for VMT reductions and vehicle electrification.
- Accelerate electrification for all vehicle classes
- Correct misclassified policies, including policies which are currently listed as "lead" policies but would require legislative approval.
- Model out the proposed policies and provide clear emission reduction estimates for the strategies
- Align the goals and policies in This section with the Pathways to Decarbonizing transportation in Minnesota report
- a timeline, list of actions, and point person/agency for each policy in the Climate Action Framework
- Ensure funding parity for non-motorized forms of transportation
- Prioritize transit mobility
- Change zoning laws to remove parking space requirements
- Allocate resources based on mobility and access, not congestion | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |
| 37 | Edits for appendix 1 | It appears many of the policies are mislabeled. For example, clean fuels could be a state "lead" action instead of enact, and many of the policies approved that are marked as "lead" would need legislative approval and should be "enact." This would be good to correct. | | Appendix A | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

38	Edits for appendix 2	Further detail is needed in appendix 2. It is unclear why this modelling was selected or what some of the metrics mean.	Further detail is needed in appendix 2. It is unclear why this modelling was selected or what some of the metrics mean.	Appendix B	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
39	Sourcing of materials	Push for domestic sourcing of minerals needed for batteries and charging stations for EV's	• Cannot build out system without these minerals – right now China, Russia others control the source of minerals – leaves us dependent • What is happening with solar panels right now should be a wakeup call – being dependent on China to manufacture our solar panels is causing major disruption in the market, projects are on hold or being cancelled because of a trade issue – this could happen with EV batteries if we lose access to minerals needed to build them • Recycling will not come close to covering the need – more minerals need to be mined – doing it here is better for environment, national security, and also will increase production to meet demand • Any plan that doesn't include this component is naïve, and makes plan vulnerable to not being taken seriously – will also have political positives to increase potential republican support		Feedback sent in from workgroup member, workgroup didn't get a chance to review		
40	Additional comments		Keep controversial infrastructure reduction items out of report • Don't talk about stopping lanes of highways • Stopping carbon capture 14 • Repurposing parking lots 6c • Emphasize need for smaller cars 8 • VMT reduction goals 9A • 9C encouraging walking, biking • Removing ethanal 15b • Harm caused by lane expansion 19 • 20 – skip local organizations – do direct taxpayer engagement bypass organizations • If these items are in the final report, it will lose credibility with anyone outside of a very small group of activists and organizations that have a set agenda – a MNDOT report should be inclusive of all viewpoints, that means should find broad agreement, politically feasible solutions that can be put forward now and acted on – not solutions that a small number favor		Feedback sent in from workgroup member, workgroup didn't get a chance to review		

41	Tribal considerations		1. The Native Nations Sovereign Nation Statement in Climate Action Plan Framework: did tribal members who aren't tribal leaders help write that statement? If not, they should be brought in to look at it. Based on the relations I've had over the last 30 years with Native peoples, it didn't strike me as very empowering. 2. Add to the State Climate Action Plan Framework: Treaty 101 education will be provided through _____ (how will it be provided? We are all treaty people and it's essential that we're all learning how it applies to the CAP)		Feedback sent in from workgroup member, workgroup didn't get a chance to review		
42	Implement statewide passenger rail plan	Re-introduce Regional Passenger Rail Service to Greater Minnesota using the statewide network of existing rail lines designated in the Revised (2015) Minnesota Statewide Rail Plan	Implement an integrated statewide multimodal transportation system that includes the reintroduction of regional passenger rail service on the network of existing rail lines designated in Minnesota's Statewide Rail Plan; and introduce clean energy and infrastructure improvements that enhance the safety and efficiency of freight and passenger rail conveyance across Minnesota.	new initiative	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
43	Additional edits to this goal area of the Framework	Please see additional document for more detailed suggested edits to this goal area of the framework	The Clean Transportation Action Team will review the additional document to incorporate edits into the Framework where it makes sense.		Feedback sent in from workgroup member, workgroup didn't get a chance to review		

| 44 | Ethanol considerations | Corrective language for the workgroup summary document ... for strategies which include increased use of low-carbon biofuels and rapid deployment of those biofuels....
 • 5.a. -- should not be limited to specific sectors.
 • 5.b. --the facts speak for themselves.
 • 5.c. -- a CFS, if properly crafted, could serve to further reduce GHG emissions in the transportation sector and, due to its potential holistic approach, serve to provide economic incentives to modify certain farming practices which could result in improved soil and water quality. | Renewable ethanol is one of the immediate tools we have to reduce GHG emissions in the transportation sector. Furthermore, as the ethanol production technology continues to evolve with respect to greater use of renewable energy and enhanced efficiency of operation, along with further improvements in the carbon intensity score for the biomass feedstock, the overall carbon intensity of the ethanol will continue to decline, thereby improving efforts to reduce overall GHG emissions in Minnesota's transportation sector
 Tim offered the following factors for consideration for the workgroup summary document:
 • 1.a.-- is consistent with the ethanol industry's overall drive to reach net zero by or before 2050. See, e.g., https://www.agrinews-pubs.com/business/2022/01/06/ethanol-industry-poised-to-play-major-role-in-net-zero-emissions/ (quoting the CEO of the Renewable Fuels Association).
 • 1.b -- fails to fully recognize the role ethanol, a biofuel, is currently playing, and will grow to play, in the timely efforts to reduce a variety of emissions, including GHG emissions, from medium and heavy duty vehicles (see, e.g., ClearFlame Engine Technologies at https://www.clearflameengines.com/).
 • Furthermore, 1.b. fails to recognize the findings of the Argonne National Laboratory, EPA, USDA and other researchers, including finding in a MnDOT report (see, e.g., Pathways to Decarbonizing Transportation in Minnesota (https://www.dot.state.mn.us/sustainability/docs/pathways-report-2019.pdf) wherein ethanol, as a transportation fuel substitute, is indeed found to be effective in reducing GHG emissions.
 • Additional supporting information and documents:
 ○ https://greet.es.anl.gov/
 ○ https://www.usda.gov/media/blog/2019/04/02/building-evidence-corn-ethanols-greenhouse-gas-profile
 ○ https://onlinelibrary.wiley.com/doi/10.1002/bbb.2225 https://mnbiofuels.org/images/pdfs/GHG_Emissions_Reductions_Due_To_The_RFS2.pdf
 ○ https://www.epa.gov/fuels-registration-reporting-and-compliance-help/lifecycle-greenhouse-gas-results | | Feedback sent in from workgroup member, workgroup didn't get a chance to review | | |

Climate-Smart Natural and Working Lands

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
1a	Indigenous land stewardship	Would like to see an initiative or sub-initiative that is specific to supporting indigenous land stewardship		new initiative or sub-initiative	Pulled from survey		
1b	Indigenous land stewardship	Would like to see more emphasis on learning from indigenous land stewardship and less emphasis on maintaining business as usual for the timber and ag industries.			Pulled from survey		
1c	Treaty rights and tribal collaboration	Consider treaty rights and collaborate with tribal to co-manage natural and working lands to promote resiliency and preserve biodiversity with special focus on preserving and protecting culturally important species (i.e. sugar maple, northern white cedar, wild rice, cool/cold water fish species, moose, etc.)		new initiative or sub-initiative	Pulled from survey		
1d	Tribal considerations and concerns	Tribal considerations and concerns are not articulated will in the working document		throughout framework			
2	Need for more specific action steps	Need more specific goals for each of the action step recommended and benchmarks so that we are accurately tracking our progress.	Multiple workgroup members commented this in the survey	Action steps	Broad support		

3	Review existing programs	Require local and state governmental agencies to review existing programs to identify existing rules and processes that institutionally and systematically deter implementation of these actions.	Some of the actions identified in the framework have the potential to conflict with each other, and many of the actions identified in the framework conflict with existing local and state government policies.	new action step or incorporate into existing.	Pulled from survey	
4	Need for more data	Add new sub-initiative around the need for baseline data in this sector.	Without knowing The baselines, how will we know how much work needs to be done. The state should lead on investing in the partnerships to improve the baselines and standards for climate-smart practices. (invest and engage with partnerships with university and private partners)	New sub-initiative	Broad support	
5	Workforce concerns	Need to address there are concerns about having enough workforce to accomplish the work for this sector (restoration, planting, maintaining, etc.)	Not currently in framework.	Add into this goal area or in Clean Economy workforce section	Broad support	
8	Highlight cross-linkage	Need to highlight the additivity or at least the cross-linkage between action items: benefits to the environment that also create jobs and more resilient examples.	Another concept we might use is "seeking multi functionality" - solutions that are designed to produce multiple benefits	Intro text	Broad support	We need to lift up the multiple benefits of natural climate solutions and how every Minnesotan can participate.
9	Lack of funds				Broad support	There is a very serious lack of funds and staff expertise at the state level for public land management and maintenance . The "how's" of implementation make the difference between a success and a flop.
10	Private land	Suggestion to add more mention of strategies targeted at private land owners	(pulled from survey) The challenge will be to significantly affect change on private land where it's driven by much larger market forces, industry/equipment limitations, traditions, federal subsidies, and federal taxpayer funded crop insurance and incentives.	Context section and sub-initiatives	Broad support	

			At some point we need to have the hard conversations around holding the polluters accountable. Many of the actions in the framework are voluntary or incentivize landowners to do the right thing.				
11	Investments in technology	Would recommend references to investments in science or technology to gauge/understand how land use changes equate to progress for natural and working lands.	(pulled from survey) There seems to be limited references to the investments in technology to measure climate benefits.	initiatives/sub-initiatives	Broad support		
12	Livestock measures/plant-based diet	Policies to reduce meat consumption and support a more plant-based diet are shown to hugely reduce greenhouse gas emissions from livestock and from industrial row crop agriculture (corn and soy, which is grown to be fed to livestock). This is an impactful climate solution that requires bravery and taking on the business as usual and industrial agricultural interests. I also do not see livestock measures listed as a sub initiative, such as changing livestock diets to release less methane from enteric fermentation, as well as anaerobic digesters and other technologies for manure management.		initiatives/sub-initiatives	Pulled from survey		
13	State Procurement Policies	Something as mundane as revising the state's own procurement policies can play a key role in making progress against the sub-initiatives.	It isn't super explicit in the Framework that there are clear policy elements to each of the sub initiatives		Pulled from survey		
14	Carbon Markets	Initiative 2.1 does not mention partnering with the private sector in emerging carbon markets.		Initiative 2.1	Pulled from survey		

15a	Reduce GHGs measure of progress	Suggestion to make the "reduce annual GHG emissions…" measure of progress more ambitious	Multiple stakeholders commented this on the survey Note from workgroup member: If emissions reduction is included in the Measures of progress (p. 30), add sufficient strategies to reduce these emissions. For instance, specify strategies beyond nutrient reduction, such as lower emissions farm equipment, sustainable harvest and end use strategies and peatland restoration.	Measures of progress	Broad support	
15b	Update Measures of Progress	Update measures of progress (p. 30) to reflect measures that can be calculated today and that reflect sufficient ambition to do more than the state is already on track to accomplish	For instance: o Increase carbon annually sequestered in natural and working lands by 5 MMT CO2e by 2030 and 10 MMT CO2e by 2040; o Enhance biological diversity and protect habitat corridors on at least one million acres of wetlands, peatlands and grasslands by 2040; and o Commit to nature-based adaptation strategies that support Minnesotan communities.	Measures of progress	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
16	Inclusiveness of the framework	No change. Wanted to highlight the inclusiveness of the framework - in terms of social inclusion and environmental inclusion (co-benefits) - is a great foundation			Pulled from survey as something to highlight in the existing framework	
17	Education for private landowners.	Need for technical assistance and education for smaller private landowners and making sure they are aware of what resources are available. Removing the barriers of entry and being more collaborative in terms of private public partnerships is important.	Some owners of land don't have agricultural background and could use technical expertise to manage their lands the best they can. In order for some of the practices to be sustained, there needs to be an economic component of that for the private landowners. Things like demonstration plots, workshops, educational materials, "climate-smart" educators to help owners improve their lands.	Include in an action step	Broad support	
18	Public grazing to manage grasslands.	Healthy grasslands are an important component of the livestock industry. A state incentive program to restore marginal grassland would benefit various industries.	Public grazing was used to manage grasslands. There is a significant difference in how public grazing is handled at the federal vs the state level. Often the biggest tool to manage grasslands has been burning which is challenging in its own way.		Some support	
19a	Active forest management.	More needed in programs for public and private forests. Nursery and seedlings bottleneck needs more resources.	Don't' talk enough about forest initiatives. EAB and other tree canopies, in both forests and urban forests, more work to be done. There is a lot about expanding forest and seed production. Less about the management and actively management. Plant it, forget it…carbon sequestration is not at the forefront.		Broad support	

19b	Forest management investment	Quantify investment needed in active forest management (p. 31, Initiative 2.1) to improve the resilience of 1 million acres of forest land by 2040, including both state and private lands.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
20a	Expansion of seedling stock.	Stable funding to put the seedlings in the ground.	Bonding falls short of need. We do not have enough supply and need to bring in the containerized seedling production.		Broad support		
20b	Seedling availability	Add a strategy under Carbon sequestration (p. 31, Initiative 2.1) to increase seedling availability by growing state nursery production to produce 10 million seedlings per year as allowed in statute and by exploring opportunities to support private seedling producers (e.g., through grants or low-interest loans) in expanding their seedling production by 20 million per year.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
21	Seek better understanding of peatlands.	A need for better understanding of where the opportunities are for peatlands.	Peatlands are less understood, what are the gaps?		Broad support		
22	Biofuels as a market for working lands.	The State should really be starting to invest in renewable diesel and similar products.	Fuel prices are high. Biofuels have a tradeoff, though. Conversion of grasslands to crops for biofuels is a market problem; if you expand the biofuels market, you accelerate the conversion of land and the commensurate loss of ecosystem services and carbon. Salvage wood and wasted wood in the process could be turned into bio diesel and reduce the transportation component GHGs. Distinct disagreement within the group on the question of biofuels policy driving land use change.		Some support		
23	Additive Actions	All of the initiatives and actions that we're contemplating in NWL, in order to be successful in a broad sense, they need to be additive.	Recognizing that climate, economy, and habitat are all important to the well-being of all Minnesotans	Intro text	Broad support		

24	Acknowledge trade-offs	Acknowledge there are trade-offs between economic and climate, and how to try to balance them	Tradeoffs between carbon actions in forests and business as usual need to be acknowledged and mitigated. Example: Carbon markets have the real potential to increase timber prices to the degree that it makes the timber industry globally uncompetitive.	Intro text	Some support		
25	Emphasize opportunity	Change the tone to emphasizing the opportunity not just to minimize potential losses but to develop new markets and tools.	The current tone emphasizes minimizing risk. This change of tone would make the language more proactive.	Intro text	Broad support		
26	Embracing new systems	It's important to endorse the idea of embracing new systems that create new systems for commodity improved production.	Modified and accelerated practices are a step forward that need to be expanded upon. Scaling up modified practices should be included.	new action step?	Some support		
27	Acknowledge landowner constraints	There needs to be acknowledgment of the constraints within which landowners need to operate.	Sometimes asking landowners to do things differently clashes with their primary directive. Or regulations/requirements need to be modified to allow for these new practices.		Some support		
28	Messaging is important	Make the measures and initiatives accessible and understandable.	It is going to be a challenge to make this content understandable to the general public. It's important to pick measures that will drive social understanding and change. There is some distrust of the process, messaging and outreach is needed to combat this	Measures of progress and initiatives	Broad support		
29	Cross-scale climate efforts	We need "cross-scale" efforts that get communities and players that work at larger scales, like large private-sector firms.	Local communities have only limited ability to achieve substantial changes	action step	Some support		
30	Funding for community-based organizations		Note: We need clarity what "community-based organizations" means. --rural communities have legions but these would not fit the goals of this plan.		Broad support	Community-based organizations will need funding to meaningfully participate in any climate change discussions.	

31	Community thinking	To move initiatives forward, we need agreement with private industry, federal government, and state government.			Broad support		There is substantial potential in the action steps but feasible/cost-effective implementation is the heart of the matter, and also a broad "coalition of the willing" that agrees to work together.
32	Need for state-wide policies	Communities respond to larger policies. Responding just to local communities is not sufficient. - need to address systems our communities are imbedded in.			Some support		
33	Corridor acre mapping	If the corridor acres were already mapped, we could monitor progress of completing them		Measure of progress	Some support		
34a	Set MN up as a leader	MN can be a market leader in the sequestration area. State leadership is needed.	The state can develop the measurement standards to help support the process	Measure of progress	Broad support		
34b	MN as a leader	Add a strategy under Carbon sequestration (p. 31, Initiative 2.1) to demonstrate state leadership by increasing funding to enable reforestation on 100,000 acres of state lands through Acquisition and Betterment of Public Lands.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
35	Stack benefits	We should seek to stack benefits from federal, state, and voluntary programs and funding	We need to ensure there are incentives and voluntary incentives available to help address which lands to apply restoration on Need to be creative about how we link and fill gaps in the federal programs (e.g. state gives funds to a land owner to keep the land in CRP, connects them with someone for haying or grazing, and provides a	Action step?	Broad support		

			revenue gap fill to the land owners for CRP + haying/grazing) It should be acknowledged that stacking benefits should be attempted when programs permit. "Double dipping" is a huge concern in federal programs – penalties are stiff for this type of infraction. Maybe this item could attempt to address are systematic gaps between programs that prevent landowners from participating – for e.g., after a CRP contract for tree planting expires, the presence of the trees prevents inclusion in future CRP contracts – so trees have to be ripped out to be continued in the program.				
36	Link between habitat corridors and GHG reductions	Link between habitat corridors and GHG emission reductions; e.g. restoration of wetlands that could be done without removing too much land from commodity use; where do we include these connections in the measures			Some support		
37	Replacing ash in urban areas	Need a component of addressing emerald ash borer and the pending loss of all the state's ash trees, including and especially the black ash forests in northern MN	Need to get ahead in replacing ash in urban environments and working with private landowners. The loss of ash trees could swamp out the benefits we seek from the agriculture sector	Action step	Broad support		
38	Address barriers to climate-smart farming practices	Address barriers to cover cropping, no-tillage and nutrient management that currently prevent farmers from implementing these practices		Action step?	Some support		
39	Increase resources for non-traditional and emerging farmers	Increase land and financing resources for non-traditional and emerging farmers who are enhancing innovative practices	We need to provide more resources to smaller operations/family farmers. They have a difficult time competing with industrial agriculture.	Action step?	Some support		
40	Address working lands and natural lands differently	Working Lands (working/industrial agricultural and forests) and natural lands (state parks, wilderness areas, SNA's, etc.) may need to be addressed differently	Difficult to categorize different sectors in one "working lands" notion	throughout this goal area of the framework	Broad support		

41	Market drivers	Support for development of and markets for crops that provide multiple co-benefits	Landowner resistance/reluctance in rural communities because of the fear of no markets for crops.	New sub-initiative around this	Some support		
42	Engage communities in the planning process	Engage communities in a planning process to establish strategies that work in their community. Communities have ownership of the plan and process.		Action steps	Broad support		
43	Clarification needed around "Enhance biodiversity" measure of progress	1) is this on 350,000 new acres? 2) Define habitat corridors 3) Does this apply to ag lands? We should have a goal would be more meaningful for ag.		Measure of progress			
44	County by county evaluation of biodiversity	County by county evaluation of biodiversity needs to be recognized. Some counties have a lot, some have very little		Action step?	Some support		
45	Invest in remote measurement systems	The state needs to invest in remote measurement systems going forward		Action step?	Some support		
46	Separate Forestry from Ag and Land Use	Forestry needs to be separated from Agriculture and Land Use in all references, but specifically on Page 12 which suggests that forestry is a GHG emission source.	All data shows that forestry is a net carbon sink while all other areas are carbon sources. We ask that the state recognize the forestry success story, and acknowledge that all efforts in the forests will be to improve upon that success by increasing the rate of atmospheric carbon absorption and the amount stored in carbon pools, while reducing the amount of carbon emitted through decay.	throughout this goal area of the framework			
46	Better recognition of forestry work	There needs to be better recognition that: o Minnesota's forests are already largely protected, and that forest management is governed by voluntary and pseudo-voluntary Standards and Guidelines that impact how forests are managed for carbon and other values. These include the MFRC Site-					

		Level Guidelines as well as FSC and SFI Standards on certified lands. o Only 32.7% of Minnesota is forested, 10.7% of that is reserved from harvest, and 61% of the balance available for harvest is publicly managed. o More publicly owned land is not required to improve carbon management and in fact could be detrimental to the region. o Most of our forests are natural, not managed as plantations, and offer multiple ecological, social and economic benefits. By contrast the non-forested portion of the state is highly disturbed and predominantly privately held. MFI feels this offers the greatest opportunities for improvement in carbon management.					
46	Equity and the importance of forestry workforce	Initiatives that grow the green economy by better utilizing wood fiber to meet human needs will sustain and increase equity and inclusion in that workforce.	From an Equity standpoint we want to point out that the poverty rates in many northern Minnesota counties are among the highest in the state. Forest products industry jobs, and the direct and indirect jobs they support, are disproportionately important in these rural communities. The industry supports efforts to increase the workforce in mills, logging and log truck driving sectors	Add an action step or include in Clean Economy section			
47	Sequestration vs Storage	. There should be two separate measures of progress – a goal for the amount of atmospheric carbon Minnesota's forests absorb annually (sequestration), and goal for how much carbon is stored in the assorted carbon pools annually (storage). The latter should include storage in forest products produced each year.	The "increase carbon annually sequestered..." measure of progress makes the mistake of using sequestration and storage interchangeably. Sequestration is a process with an associated rate and amount.	Measures of progress			
48	Maintain and increase forested wetlands	Initiative 2.4 – Consider adding a bullet to maintain and increase forested wetlands.	In the farmland zone floodplain forests that were converted to cropland are often subjected to flooding and erosion. These could be restored. But perhaps more importantly, retaining black ash and tamarack forests will have important implications for regulating water flow and sequestering/storing carbon. These are both under attack by insect infestations and require	New action step			

49	Additional co-benefit of healthier forests	Page 35: Co-benefits of action – Consider adding a bullet, "Healthier forests that are resilient to climate change, insects, diseases and wildfire."				
50a	Protect Carbon Reservoirs	Add additional action step to initiative 2.1	NEW Additional action step recommended as a TOP GOAL. The Framework is missing the most important action step to achieve Initiative 2.1., Sub-initiative 2.1.1 Maintain, expand, and actively manage forestlands: ***Grow and maintain intact forests to their ecological potential, and protect carbon reservoirs.	Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
51	Tree Planting Goal	Reinstate a specific tree planting goal (p. 31, Initiative 2.1) and quantify with a recommended target of 400,000 acres of reforestation by 2030 and 1 million acres of reforestation by 2045, using climate-adapted trees.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
52	Integrate Equity into "What We will Do"	Integrate equity considerations (p. 30) into the "What We Will Do" framework in addition to appending them.	For instance, create a strategy to specifically address BIPOC and emerging farmers in the context of climate change.	"What we will do" section	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
53	Forest management prioritization	Specify under Carbon sequestration (p. 31, Initiative 2.1) that acres for improved forest management should be prioritized based on climate risk and carbon storage potential, for instance using carbon data as estimated by TNC's Resilient and Connected Network.	The Resilient and Connected Network (RCN) is a tool developed by The Nature Conservancy and many partners to achieve an ambitious vision for land protection: to conserve a network of resilient sites and connecting corridors that will sustain North America's natural diversity by allowing species to adapt to climate impacts and thrive		Feedback sent in from workgroup member, workgroup didn't get a chance to review	
54	Measuring and tracking carbon	Add a strategy under Carbon sequestration (p. 31, Initiative 2.1) to develop and implement a system for measuring and tracking carbon stored across all natural and working lands by 2025.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get	

					a chance to review	
55	Integrating carbon storage, sequestration, and adaptation goals	Add a strategy under Carbon sequestration (p. 31, Initiative 2.1) to demonstrate state leadership by integrating carbon storage, sequestration and adaptation goals into Minnesota state forest planning, DNR Strategic Land Asset Management and other coordination efforts such as Minnesota Forest Resources Council Landscape Plans.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
56	No net loss of forests	Add a strategy under Carbon sequestration (p. 31, Initiative 2.1) to establish and enforce a policy to maintain no net loss of forests for Minnesota.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
57	Carbon in wetland assessment tool	Add a strategy under carbon sequestration (p. 31, Initiative 2.1) to reinforce the consideration of carbon in the wetland functional assessment tool and require carbon sequestration replacement in mitigation projects.		Initiative 2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review	
58a	Restore and expand habitats	Specify under Climate adaptation (p. 32, Initiative 2.2) that habitat complexes should be restored and expanded by fully executing the Minnesota Prairie Plan to meet its 2035 target.		Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review	

58b	Restore wetland and peatland habitat	Specify under Climate adaptation (p. 32, Initiative 2.2) a target to restore 300,000 acres of climate resilient wetland and peatland habitat by 2040.			Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
58c	Restore and expand habitat complexes, corridors and refuge areas on state land	Specify under Climate adaptation (p. 32, Initiative 2.2) that the state should demonstrate leadership by restoring and expanding habitat complexes, corridors and refuge areas on state land, including WMAs, SNAs and School Trust Lands.			Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
60	Rewetting and restoration of degraded peatlands	Add a strategy under Climate adaptation (p. 32, Initiative 2.2) to establish the rewetting and restoration of 200,000 acres of degraded peatlands, including at least 100,000 acres on state lands, by 2040.			Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
62	"Highest and best use"	Add a strategy under Climate adaptation (p. 32, Initiative 2.2) to promote policy that specifically emphasizes carbon and ecosystem services as a qualifying "highest and best use" for state-owned lands including School Trust Lands.			Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
63	Expand Forests of the Future program	Add a strategy under Climate adaptation (p. 32, Initiative 2.2) to demonstrate state leadership by expanding the Forests for the Future program and other state capacity to increase the implementation of climate-adaptive forest management practices by non-industrial private forest owners.			Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		

64	Double the impact of the Reinvest in Minnesota program	Add a strategy under Climate adaptation (p. 15, Initiative 2.2) to demonstrate state leadership by doubling the impact of the Reinvest in Minnesota (RIM) program to protect an additional 250,000 acres of grasslands, wetlands and forests by 2035.		Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
65	Adopt Site Renewables Right	Add a strategy under Climate adaptation (p. 32 and p. 15, Initiative 2.2) to adopt Site Renewables Right as state guidance with the goal of ensuring that new renewable energy development does not conflict with important habitat conservation efforts.	The Nature Conservancy. 2019. Site Wind Right: Accelerating Clean, Low-Impact Wind Energy in the Central United States. https://www.nature.org/content/dam/tnc/nature/en/documents/SWR_Methods_20190703.pdf	Initiative 2.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
66	Soil health practices	Quantify a target under Healthy farmland soils (p. 32, Initiative 2.3) to implement soil health practices on 3 million additional acres by 2025 and 6 million additional acres by 2030.		Initiative 2.3	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
67	Expand agricultural cost share program	Add a strategy under Healthy farmland soils (p. 32, Initiative 2.3) specifying the state's role in expanding the agricultural cost share program to include at least $10 million of support per biennium for the cover crop cost share.		Initiative 2.3	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
68	Support equipment access for farmers making first-time purchases	Add a strategy under Healthy farmland soils (p. 32, Initiative 2.3) specifying the state's role in supporting equipment access for farmers making first-time purchases of cover crop planting and low or no-till equipment via financing, cost share, or other mechanism.		Initiative 2.3	Feedback sent in from workgroup member, workgroup didn't get a chance to review		

69	Funding support for 4R nutrient certification	Add a strategy under Healthy farmland soils (p. 32, Initiative 2.3) to manage nutrients by providing $250,000 support directly to retailers for training and to complete 4R nutrient certification or nutrient efficiency audits on 2.2M acres.		Initiative 2.3	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
70	Living cover on vulnerable drinking waters	Quantify a target under Sustainable water management (p. 33, Initiative 2.4) to achieve continuous living cover planted on 115,000 acres of vulnerable drinking waters supply management areas, as proposed in BWSR 2018 working lands report.	Minnesota Board of Water and Soil Resources. 2018. Working Lands Watershed Restoration Feasibility Study and Program Plan. https://bwsr.state.mn.us/sites/default/files/2018-11/2018%20Working%20Lands%20Watershed%20Restoration%20Feasibility%20Study%20and%20Program% 20P..._0.pdf	Initiative 2.4	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
71	Intergrade climate science	Add a strategy under Sustainable water management (p. 33, Initiative 2.4) to integrate climate science into One Watershed One Plan processes, including adaptation, resilience and carbon sequestration/storage strategies as required resource concerns.		Initiative 2.4	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
72	One Watershed One Plan integration	Add a strategy under Sustainable water management (p. 33, Initiative 2.4) to support the integration of climate-informed reforestation, improved forest management and other NWL opportunities into comprehensive watershed planning through One Watershed One Plan.		Initiative 2.4	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
73	Addition to "Big Impacts" list	Add to the list of "Big impacts" (p. 35) the need for a measuring, reporting and verification system for land-based practices		Big Impacts list	Feedback sent in from workgroup member, workgroup didn't get a chance to review		

74	Carbon Credits	Add a new action step: Explore the opportunity for carbon credits	The weighted average price per ton for credits from forestry and land-use projects that reduce emissions or remove carbon from the atmosphere has been on a steady upward path, rising from $4.33 per credit in 2019 to $4.73 per credit in 2021, with a spike to $5.60 per credit in 2020.	Initiative 2.1.2	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
75	Eliminate pesticides…	Add a new action step: Eliminate pesticides, herbicides, fungicides, fertilizers (has salt), to the greatest extent possible.	Chemicals are increasing the impacts to insects, human health, and our waters. Minnesota's impaired waters list continues to grow. For the draft 2022 list, the MPCA is adding 305 water bodies with 417 new impairments, bringing the total to 2,904 water bodies with 6,168 impairments. Total elimination of synthetic insecticides, and pesticide coated seeds should be required. These measures should be included in all natural and working lands Initiatives.	Initiative 2.1.3	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
76	Additional action steps under 2.2.1	***NEW Additional action steps: •Modify riverine riparian strips in State Forest to serve as the "backbone" of a complete system of climate emergency corridors and microclimates to preserve biodiversity •The microclimate and escape corridors would include other State (and Federal) lands which would be employed to close gaps in the riverine system: State Parks, Trails, Recreation areas, Trout Streams, and Federal WMAs, etc. •Include County, Town, and City equivalents to help bypass or cross urban or semi-urban gaps •Ultimately, private lands associated with all corridors could be identified and cooperation sought to close remaining gaps	A resilient site is one that offers high microclimatic diversity and low levels of human modification that provide species with connected, diverse climatic conditions they will need to persist and adapt to changing regional climates.	Initiative 2.2.1	Feedback sent in from workgroup member, workgroup didn't get a chance to review		

Clean Energy and Efficient Buildings

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
1a	Define net zero	Clarify what is meant by "net zero" in this section and/or the Framework as a whole.	There is confusion about how net zero is used in this section, versus how it is defined in the Framework glossary. Clarify whether it's net zero emissions, net zero energy, or both. For buildings actions, clarify whether net zero is applicable at the individual building level or the sector level. There are many existing resources on "net zero" in the buildings sector.	Framework glossary and/or this section narrative	Broad support	N/A	N/A
1b	Define resiliency for this section	Define what resiliency means for this specific focus area, if different from the definition for the overall framework. Should make sure the ultimate definition includes both energy system resiliency and community resiliency.	The framework's definition of resiliency may not be a good fit for energy system resiliency, especially given attention to this issue after Winter Storm Uri.	Section narrative	Broad support	N/A	N/A
2	Prioritize actions	Assess which actions can be implemented in the near term and make those the priorities.	Stakeholders broadly agree that each action is going to take a lot of effort and coordination, so it's important to prioritize the actions given our current resources. Stakeholders also broadly agree that achieving these priorities will require a calculation of political and regulatory feasibility, enhanced public outreach and education, and resources for regulators and stakeholders. However, there is a point of disagreement about the extent to which political feasibility should constrain prioritization. One perspective is to prioritize actions that could be enacted/implemented in a Walz second term (by a red/purple legislature); another perspective is that building a politics-based ceiling on what Minnesota can accomplish misses the opportunity, and instead we should establish what is needed to address climate change and then stakeholders can work on building political support for those things. Finally, participants noted that there are significant opportunities for work (e.g., NGIA, ECO, the IRP	Priority actions	Broad support	This might establish the priority actions in the framework as those that are ripe for implementation in the near-term.	There needs to be coordination with many different parties to successfully pass legislation.

			process, codes, etc.) that can be done now without new legislation and which will have significant impact on the energy sector.				
3	Carbon emissions budgets	Use carbon emissions budgets instead of carbon reduction goals	Carbon budgets would state the total volume of GHG emissions that can be emitted while still having a likely chance of limiting global temperature rise, as opposed to a percentage reduction. One stakeholder noted the importance of having a marketplace and regulatory authority established to regulate the budgets. Another stakeholder felt that a climate action plan will need both budgets and goals, and they will need to be revised as technology cost and other things changes.	Multiple actions; measure #3	Some support	N/A	N/A
4a	Efficiency, affordability, and access	Ensure that this section of the framework supports three key things in combination with one another, in addition to decarbonizing energy supply: 1) making energy affordable for all; 2) making the entire energy system more efficient and specifically targeting efficiency investments towards lower income households; 3) ensuring everybody has access to energy.	In the second-to-last stakeholder meeting, the group was reviewing a recommendation on energy burden (#4b below) and realized that energy burden is one piece of a bigger set of these interrelated issues. For more detail, see priority action one in the summary document.	Update to narrative; new action(s)	Broad support	N/A	N/A
4b	Energy burden and costs	Add a measure of progress and one or more actions to reduce energy burden statewide to below a certain percentage (e.g., 5%). Also consider adding more narrative about affordability and cost impacts.	Energy burden -- the percentage of household income that is spent on home energy bills -- is a key measure of affordability for the most vulnerable Minnesotans. A focus on energy burden would drive the effective development of programs and policies, including looking at the availability and utilization of energy efficiency and weatherization programs. In addition, affordability and cost is an important issue that must be considered in determining options to reduce GHG emissions.	New measure of progress; new action(s); addition to narrative.	Broad support	N/A	N/A
4c	Inclusive financing	Add an action to implement statewide tariff-based inclusive financing.	Tariff-based inclusive financing would allow customers to finance energy efficiency and electrification improvements on their energy bill, addressing upfront cost barriers and expanding access to financing for many customers. This is a polarizing issue across stakeholders -- some strongly support it and some have significant concerns about it. One stakeholder noted that the details of the implementation matter to ensure energy savings are realized, existing efficiency programs are maintained, and participants and non-participants are protected.	New equity action	Some support	N/A	N/A

4d	Energy navigator offerings	Add an action to deploy energy navigator offerings to help the most burdened customers.	Energy navigators are people or programs that seek to help customers understand their energy usage and take advantage of programs to improve their energy efficiency, reduce costs, and improve comfort and safety in their home or businesses. These programs can be especially helpful for the most burdened customers who, for a number of reasons, may be less likely to take advantage of available programs and opportunities.	New equity action	Broad support	N/A	N/A
4e	Streamline energy assistance and weatherization programs	Add an action to consolidate and streamline energy assistance programs to make them easier to access and navigate.	Energy assistance and weatherization programs are delivered through a variety of complex channels and organizations. Stakeholders suggested that these programs could be streamlined and consolidated to make them easier to access and navigate. This may also make it easier to scale up energy assistance and weatherization across Minnesota.	New action	Broad support	N/A	N/A
4f	Innovative financing for energy efficiency	Add an action to deploy innovative financing for energy efficiency, such as "energy efficiency as a service" and "metered energy efficiency transition structure."	Innovative financing can help to expand the deployment of energy efficiency. See more here: https://www.aceee.org/blog-post/2022/03/utilities-show-promise-using-innovative-financing-efficiency-efforts. This item was suggested at the end of the process and the group did not have an opportunity to consider it, so we have tagged it as "some support" by default.	New action	Some support	N/A	N/A
5a	Regulatory processes	Add an action to improve and quicken regulatory processes around grid modernization and decarbonization, while maintaining ratepayer protections.	Regulatory processes are necessary, but the speed of considering and approving, modifying, or denying proposals can be a barrier to grid modernization and decarbonization. This could include expanding staff capacity at the Public Utilities Commission and Department of Commerce, as well as reviewing current regulatory processes to ensure they are supporting grid modernization, gas distribution modernization/transition, and decarbonization of both the electric and gas sectors at a pace consistent with achieving the state's climate goals while adequately ensuring consumers are protected and investments are in the public interest	New action	Broad support	N/A	N/A
5b	Community involvement in energy decision-making	Add an action to expand community involvement in energy decision-making, including energy system and project planning, siting, operation, and retirement.	Community buy-in is critical to accomplishing a transition to a decarbonized energy system that has tangible benefits for Minnesotans.	New action	Broad support	N/A	N/A
5c	Equitable participation	Add an action to expand equitable participation in energy system decision-making and implementation, including for BIPOC communities, tribes,	Energy system decision-making and implementation processes often leave out customers or constituent groups who will be impacted by those decisions. This action would seek to advance more equitable participation in those processes. This could include providing participation funding or stipends to	New equity action	Broad support	N/A	N/A

		customers with low incomes, and renters.	interested groups. This could also apply to the implementation of the Framework itself. Finally, this should seek to address historic injustices in energy infrastructure siting that is a key contributor to environmental injustice today.				
6a	Racial equity lens	Apply a racial equity impact lens to all of the actions in the Framework.	Framework actions may have unintended negative consequences on BIPOC communities if the impacts are not evaluated upfront; likewise, it may be possible to modify the actions to create benefits or co-benefits for BIPOC communities. A racial equity lens applied to all the actions could help on both fronts.	Whole Framework and/or equity pages	Broad support	N/A	N/A
6b	Equity investment	This item is noting support for the measure of progress and action on equity investment in alignment with Justice 40 that is already in the Health and Equity section of the Framework	Stakeholders support aligning the Climate Action Framework with federal funding opportunities, and feel that this would help to ensure equitable investment in implementing the Framework	Existing measure and action (in Health and Equity section)	Broad support	Also applies to implementation	N/A
7	Direct pay for clean energy tax credits	Add an action to support a direct pay option for clean energy tax credits at the federal level.	Cooperative and municipal electric utilities do not have access to clean energy tax credits because they are tax exempt. Federal action to allow a direct pay option for these tax credits will create access to these benefits for all utilities across Minnesota.	New action	Broad support	N/A	N/A
8	Workforce development	Add an action on electrification workforce development.	One of the key pathways to advancing electrification will be through a workforce that is trained to sell, install, and properly maintain and operate heating/cooling systems such as air source heat pumps, networked ground source heat pumps, and electric water heaters. This section of the Framework has an existing equity action on workforce development for energy efficiency, but does not have an action on electrification.	New action	Broad support	N/A	N/A
9	Local government programs	Add an action to support technical assistance and grant programs at the local level.	Local government technical assistance and grant programs, such as Minneapolis' Green Business Cost Share program, can play a vital role in advancing energy efficiency and reducing emissions. The state could help to set up and fund these programs.	New action	Broad support	N/A	N/A
10a	Thermal energy (generally)	Add more detail on thermal energy decarbonization throughout this section of the Framework.	The current framework focuses more heavily on the electric system than the natural gas system, but the gas system is arguably a greater challenge to decarbonize and the process of decarbonizing it may make electric system decarbonization more challenging if electrification increases winter peak load. Notably, there is disagreement in this group about whether to take a fuel-neutral approach or to encourage electrification as the preferred pathway. One stakeholder suggested the Commission explore these technologies to identify those resources' "best and highest" uses in the Future of Gas docket (21-565).	Overall section	Broad support	N/A	N/A

10b	Thermal energy standard	Add an action to implement a thermal energy standard	NGIA enabled gas utilities to submit voluntary natural gas innovation plans to reduce emissions within a set of constraints. A thermal energy standard would require reducing emissions by a set of target dates, and may include additional provisions to help utilities meet the standard(s). Some participants supported this proposal, while others felt that we should wait and focus on implementing NGIA and other actions that do not require a legislative change. Some stakeholders said they would need more information on what this would look like before they could determine their level of support.	New action	Some support	N/A	N/A
10c	Thermal energy R,D,&D	Add an action to expand research, development, and deployment of net zero emissions heating for residential and commercial buildings, as well as for high heat industrial processes.	Expanding research, development, and deployment for net zero emissions heating can help to bring down costs of needed technologies.	New action	Broad support	N/A	N/A
10d	Cost reduction for carbon reducing technologies, such as electric heat pumps	Add one or more actions to reduce the upfront and ongoing costs for all critical carbon reducing technologies, such as electric heat pumps, including market/supply side incentives and heat pump specific rate designs.	The cost to upgrade any end-use appliance is a barrier for many Minnesotans. Incentives and rate designs can help to lower costs and increase adoption. Stakeholders noted that that rebates are useful to reach a certain segment of ratepayers, but additional market transformation-based programs/incentives, as well as new low- or no-cost programs, should be pursued as not all customers can access rebates nor afford the upfront cost of new appliances. In addition, the state should encourage utilities to develop heat pump specific rate designs that can lower ongoing costs.	Existing action(s); new action(s)	Broad support	N/A	N/A
10e	Lessen ECO limitations	Add an action to update ECO to reduce the constraints on electric utilities to pursue electrification.	ECO enabled fuel switching, but with limitations on electric utilities. Some stakeholders recommended that an update to ECO could unlock additional electrification measures that will be needed to decarbonize heating. However, one stakeholder noted that the Department of Commerce is working to implement fuel switching measures in CIP/ECO that will ensure pathways to expand electrification without the need to lessen the limitations. Additionally, stakeholders noted that NGIA allows electrification (which is essentially fuel switching for gas utilities) and that NGIA should be implemented to allow electrification measures.	Existing action; new action	Some support	N/A	N/A
10f	Delivered fuel customer options	Provide energy efficiency and electrification offerings for customers on delivered fuels, similar to what's available to natural gas customers through CIP/ECO.	There are currently limited or no incentives for energy efficiency and electrification for delivered fuels customers, because CIP is a program for regulated electric and natural gas utilities, not for delivered fuel vendors. ECO changed that in allowing fuel switching	New action	Broad support	N/A	N/A

			from delivered fuels to electrification, but this may still deserve more attention.				
11a	Primary energy usage reduction	Set a target and take action to reduce primary energy usage statewide.	Minnesota's primary energy usage (i.e., total energy demand of the state) is flat and we're wasting 64% of it currently.	New measure of progress and/or action	Broad support	N/A	N/A
11b	Cross-sector coupling	Add one or more actions to encourage cross-sector coupling -- the sharing of energy streams across sectors to achieve lower primary energy use and higher energy productivity.	Two possible actions: 1) Implement policies that removed barriers and facilitate the recovery and reuse of wasted thermal energy from new and existing intensive industrial facilities to heat and cool neighboring buildings with carbon free thermal energy. Also encourage the sharing of thermal energy between buildings by leveraging the efficiency of two-way water to water heat pumps and various forms of thermal storage. 2) Consider the availability of wasted thermal energy from industry, data centers, wastewater treatment facilities, etc., in the siting and design of new multi-building developments, and its ability for this surplus energy to be used to decarbonize building heating and cooling, and potentially produce a revenue stream for the source facility.	New action(s)	Broad support	N/A	N/A
11c	Encourage CHP more broadly	Encourage CHP deployment beyond wastewater and water treatment facilities, while ensuring that systems can be decarbonized (e.g., hydrogen-compatible)	There are beneficial applications of CHP beyond just wastewater and water treatment facilities. These should be hydrogen ready or otherwise able to be decarbonized.	Existing action	Broad support	N/A	N/A
11d	Encourage net zero district energy	Add an action to encourage the deployment of net zero district energy systems and to update existing systems to achieve net zero emissions.	District energy systems, if deployed wisely, can cost-effectively use waste heat, benefit from geothermal heating, and reduce the impact of building electrification on electric system winter peak load. In addition, there are existing district energy systems in Minnesota that need to be updated to achieve net zero emissions. One stakeholder noted that future systems should not be reliant upon fossil fuels to supply the energy to the system, they should rely on solar thermal or heat from the ground/groundwater.	New action	Broad support	N/A	N/A
12a	Industrial decarbonization (generally)	Add more detail on industrial decarbonization, including in the narrative and/or in the actions.	Industry is mentioned in the narrative and in the actions, but stakeholders felt this section of the Framework should more specifically call out industry as an area of focus.	Overall section	Broad support	N/A	N/A

12b	RNG and H2 Hubs	Add an action to encourage the development of renewable natural gas and hydrogen hubs for industry.	There are many high heat industrial processes that will be challenging if not impossible to electrify. However, these processes could be fueled by renewable natural gas and/or hydrogen. Hubs would allow industries to share energy and waste streams to achieve efficiency in using these fuels.	New action	Broad support	N/A	N/A
12c	Industrial engagement	Add an action to engage industrial subsectors on their needs around efficiency and decarbonization.	The industrial sector in Minnesota is comprised of many subsectors that have different processes, equipment, and energy needs. This action would recognize those differences and encourage the state to engage with different industrial subsectors in determining their needs around efficiency and decarbonization and identifying solutions to meet those needs.	New action	Broad support	N/A	N/A
13a	Electricity decarbonization	This item is noting that electricity decarbonization is a priority.	There is broad support among stakeholders for decarbonizing electricity supply and increasing the deployment of renewable electricity, both of which will be needed to decarbonize energy and buildings.	Multiple locations	Broad support		
13b	Carbon-free vs. carbon-neutral	This item is noting that there is disagreement in this group about whether the electricity standard should be carbon-free (as it currently is in the Framework) or carbon-neutral	Some stakeholders prefer carbon free over carbon neutral because it is clearer about the goal and speeds the transition away from fossil fuels. Others prefer carbon neutral because it stays focused on the goal of reducing emissions sufficiently and provides more flexibility to get there. One stakeholder suggested linking with the federal definitions of carbon free vs carbon neutral vs clean energy.	Existing action	Disagreem ent	N/A	N/A
13c	Pace of electricity standards	This item is noting that there is disagreement about changing the state's carbon free electricity and renewable energy standards.	Many stakeholders see government establishing carbon free electricity and renewable energy standards as vital to achieving the goals of the Framework and therefore necessary to do, based on modeling that shows these may be among the most impactful solutions. Others raised concerns that updating the standards may be unnecessary because utility commitments and markets are already moving in the direction of accomplishing them, and meanwhile it could be more productive to work on other policies where this is broad support.	Existing actions	Disagreem ent	N/A	N/A
13d	R&D for electricity decarbonization	There is support for the existing action that includes research and development to integrate more renewable energy in the grid.	R&D for electricity decarbonization can help to lower costs and increase deployment of renewables. Stakeholders suggested that the state should take an active role in supporting R&D for electricity decarbonization.	Existing action	Broad support	N/A	N/A
13e	Regional collaboration	Add an action to support regional collaboration on energy issues.	This is necessary to help us meet our energy goals given that we operate in a regional electric grid.	New action	Broad support	N/A	N/A

13f	Energy storage	Add an action to support the development, deployment, and integration of energy storage technologies.	Energy storage will be necessary to cost-effectively operate a decarbonized electric system because it can help to accommodate the intermittent nature of renewable energy sources, as well as provide other electric grid and consumer benefits. Stakeholders noted that details of the implementation will be important	New action	Broad support	N/A	N/A
13g	Transmission	Expand the existing action that includes "promote grid electrical upgrades" top explicitly include transmission system expansion.	Expanding electric transmission infrastructure is necessary to accommodate higher percentages of renewable energy.	Existing action	Broad support	N/A	N/A
13h	Load flexibility	Add an action to support the development, deployment, and integration of load flexibility technologies and programs.	Similar to energy storage, load flexibility will be necessary to cost-effectively operate a decarbonized electric system because it can help to accommodate the intermittent nature of renewable energy sources. It can also provide opportunities for greater customer choice.	New action	Broad support	N/A	N/A
14a	Achieve new construction net zero sooner	Update actions concerning new construction codes and standards to achieve net zero sooner than 2036	Some stakeholders feel that the current target of net zero by 2036 for new construction isn't soon enough to address the climate challenge. There was disagreement in this group about whether codes should require an all-electric or fuel-neutral approach to achieving net zero in new buildings. One stakeholder also noted that achieving net zero in new commercial and residential construction will need research and support similar to NYSERDA in New York or the BC Step Code council in British Columbia to support the effort. In addition, a net zero built environment requires highly efficient buildings + clean electricity + other renewables at various scales.	Existing action	Some support	N/A	N/A
14b	Code enforcement	Add an action to advance or mandate code enforcement statewide.	Without enforcement, building codes and standards won't achieve what they're designed to achieve. One stakeholder noted the importance of engaging with the code enforcement professionals and the builders.	New action	Broad support	N/A	N/A
14c	Residential energy/building code	Add one or more actions to address residential building and/or energy codes and standards.	The current framework focuses on codes and standards for commercial and large multi-family buildings, but leaves out smaller multifamily and single family residences because code changes in the residential sector are much more difficult to pass. However, some stakeholders requested that the necessary actions be included in the Framework anyways to be clear about what is needed.	New action(s)	Some support	N/A	N/A
14d	Stretch code	Add an action to implement a single statewide stretch code that local governments can voluntarily adopt.	Some municipalities have decarbonization goals that are more aggressive than the base statewide energy code. A single statewide stretch code that is more aggressive than the base code would provide an option for local governments to meet their goals,	New action	Some support	N/A	N/A

			while limiting confusion and complexity for the building trades.				
14e	Expand MNB3	Add an action to expand MNB3 to commercial, industrial, and residential buildings with the addition of funding for deep reviews of submissions and tax implications for non-compliance.	MNB3 tools and programs are designed to help make buildings more energy efficient and sustainable. The B3 programs have been developed for and are required on State-funded projects in Minnesota, however they are easily applied to any project. This action would expand the B3 Guidelines and the SB 2030 Energy Standard to new and renovated buildings during design. In addition, B3 Benchmarking, B3 Energy Efficient Operations and the B3 Post Occupancy Evaluation (POE) could be used to evaluate and improve existing buildings.	New action	Some support	N/A	N/A
15	Statewide green bank	Add an action to implement a statewide green bank to support low-cost financing for energy efficiency and decarbonization measures.	A statewide green bank would expand the ability of many Minnesotans to access capital for energy efficiency and decarbonization improvements. Stakeholders noted that DOE will have $100 Billion in loan guarantees to support state and regional green banks that finance building energy efficiency, and that Minnesota would be wise to take advantage of this opportunity. Notably, the state could tie together performance standards, benchmarking, and a green bank.	New action	Some support	N/A	N/A
16a	Building benchmarking, disclosure, and performance standards (generally)	Add actions, measures, or narrative to include building benchmarking, disclosure, and performance standards in this section of the Framework.	Building benchmarking, disclosure, and performance standards can all help to reduce the GHG emissions from operating buildings, including both existing and new buildings. They can also help create market demand for energy efficient buildings by providing transparency in building energy use for potential tenants and buyers. These tools can be combined and they can paired with incentives and/or penalties to increase their effectiveness. One stakeholder said they oppose mandating energy disclosures.	Overall section	Some support	N/A	N/A
16b	Energy and emissions disclosure	Add an action to encourage or require building energy use and costs and/or emissions disclosure at point of sale or to acquire a certificate of occupancy.	Encouraging or requiring building owners to disclose energy use, costs, and/or emissions data to potential tenants or buyers can create transparency that has multiple benefits. For low income renters or buyers, it can help them to assess energy costs on top of rent or mortgage payments. It can also help create demand for more energy- and emissions-efficient buildings. This would be especially important for multifamily buildings, which have additional barriers to understanding energy use. One stakeholder opposes mandating energy disclosures.	New action(s)	Some support	N/A	N/A

16c	Statewide building database	Add an action to create a statewide database of all buildings, with at minimum building square footage and type.	A statewide building database would help to target energy efficiency programs, track progress in making building more energy efficient across Minnesota, and record the energy efficiency of individual buildings included in the database. To the extent that this participation is mandatory, one stakeholder opposed this.	New action	Some support	N/A	N/A
17	Low-carbon building materials	Update the "low carbon building materials" action (also a priority action) to be more ambitious and specific.	Stakeholders supported this existing action, but felt that it could be more ambitious and specific. For example, low carbon building materials (e.g., straw bale housing) could be incorporated into the building code to expand their approval and use (currently some materials must go through an alternative compliance pathway that can be much more burdensome). Some participants suggested that they should be required for new construction and major retrofits. Others noted that there are already clear pathways and best practices in this space that can be built upon. The department of administration provided a report to the legislature on low carbon materials and setting limits on some materials in the future. A robust embodied carbon effort requires moving the predesign requirements and emerging supply chain requirements in B3 to the broader market. (Developed by CSBR and the Carbon Leadership Forum). One participant noted that materials should have sound research behind them to ensure durability and safety.	Existing action	Broad support	N/A	N/A
18	Adaptive reuse of existing buildings	Update the "adaptive reuse of existing buildings" action to take careful consideration of many factors, including building materials, efficiency and emissions, and the planning and zoning context.	Stakeholders suggested updating this action in three ways: 1) encourage retrofitting to natural building materials rather than reusing existing toxic building materials where applicable; 2) ensure that operational carbon emissions are considered, such as updating insultation materials to lower operational carbon over time; 3) ensure that the local planning context and goals are considered. However, one stakeholder also noted that optimizing existing buildings for operational and embodied carbon while being healthy to the environment is more complex than preferring "natural" materials. Participants also noted that this action as written could lead to the retention of toxic building materials rather than phasing them out during retrofits; in addition, it could lead to the preservation of low efficiency buildings that could have higher carbon emissions than if those buildings had been retrofitted with higher efficiency materials. Finally, the local planning context and goals are important -- reusing a single family building on a major transit line in the city would forgo the	Existing action	Broad support	N/A	N/A

			opportunity to build a larger multifamily building and reduce transportation emissions.				
19	Building siting and design	Add an action to encourage building siting and design that can lower GHG emissions.	Building codes shape design, but by themselves are not the full design picture. The state can work with local governments to encourage building design and siting to reduce emissions; it can also set some baselines and standards for local zoning. Intended results could be siting homes near jobs and amenities, identifying up-stream actions around siting and building design that reduce cost/energy use and improve public health, and modifying zoning requirements such as minimum units sizes, minimum parking requirements and lot sizes, and floor area ratio (gross floor area/land plot area). District energy systems and net zero neighborhoods, campuses, and districts should also be encouraged through this action.	New action	Broad support	N/A	N/A
20	R,D, & D for all climate actions	Expanding research and development in support of all of the climate action work	In addition to expanding R,D, & D for energy and buildings decarbonization solutions, expanding research and development in support of all of the climate action work should be included. This item was suggested at the end of the process and the group did not have an opportunity to consider it, so we have tagged it as "some support" by default.	New action	Some support	N/A	N/A

Resilient Communities

ID#	Quick Label	Proposed changes and/or priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of Support(some, moderate, broad)
1	**Measures of progress**	Ensure the measures of progress align with the initiatives	There are questions regarding the measures of progress - how were they developed are they aligned correctly.		broad support
			Is 40% tree canopy realistic?	3.2	
			Should there be a land cover metric along with tree canopy?	3.2	
2	**Capacity and resources**	Resources and capacity should be sustainable, flexible, and accessible to a broad range of stakeholders.	Projects should be open to organizations beyond local governments. For example, neighborhood organizations or individuals. Similar to CERTs seed grants.	3.1	broad support
			Silos need to be broken down as it related to capacity building so all communities can participate fully		
			Need of ongoing implementation assistance for durability.	3.1	
			Having a one stop shop to have all the funding opportunities listed out would be helpful. This ideal website would also have support for applying for the funding opportunities.	3.1	
			The state action steps identified are good, but most feedback are about the barriers and support needed to move forward with those, e.g., feedback about staffing and manpower, if the support network is not here then communities may not be willing to contribute	3.2	
			Communities need more funding, training, and education	3.2	
		Revisit existing resources to ensure we are proactively planning and leveraging	Need to balance proactive and reactive funding. Reactive funding can sometimes lead to propagation of inequities while proactive funding can take inequities into account.	3.1	

		resources that are already available.	Each county and some cities have a hazard mitigation plan that is updated every 5 years. It has a risk analysis of natural hazards and prioritizes lists of projects for the county and its cities. It is required for certain funding opportunities, including BRIC. Is a tool for local governments to identify their natural hazards that cities should utilize for all partners in their jurisdictions to identify potential hazards and possible solutions. Grant opportunities are laid out in the plan. It is a federal program 75% funded by FEMA and 25% local in-kind	3.1	Broad support
			What is the role of county-wide hazard mitigation plans and how can we use it as a tool for proactive and reactive funding?	3.1	
3	**Accessible funding**	Support entities seeking funding that have limited capacity.	Many of the cities discussed staff capacity and the need for sustainable staffing able to track and apply for grants	3.1	broad support
			Much of the conversation focused on grants: how to pursue them and have the capacity to manage and implement them at the local level. Conversation should be balanced between grants and creating long-term sustainable funding that would carry local governments well into the future.	3.1	
		Ensure the process to access funding is equitable, flexible, and easy to use.	Reimbursement system is inequitable and exclusionary.	3.1	broad support
			Make applications easier to fill out and more straightforward.	3.1	
			Funding opportunities can be over specific, flexibility in funding for local governments is needed.	3.1	
		Identify where funding is most needed and can provide immediate impact	Incentives are needed, if there is no money no one will do it.	3.3	broad support
			What is the obligation of the state to pay for projects in under resourced communities?	3.3	
			Spend a lot of time talking about funding, care for trees, diseased trees	3.2	
			How can we allocate funding that provides opportunity for immediate action?	3.1	
4	**Implementation prioritization**	Develop criteria to prioritize efforts in consideration of vulnerabilities, equity, and impact.	Emphasis needs to be placed on how we decide which areas of the state are prioritized	3.2	broad support
			This goal is heading in the right direction. Growth and maintenance on public and private lands needs to be prioritized.	3.2	
			Pollution runoff kills newly planted trees, how are we choosing where these trees are going, are we prioritizing areas with higher air pollution, and highly impervious areas like parking lots?	3.2	

			Prioritize most vulnerable	3.3	
			State efforts should be targeted and most challenging, most impactful	3.3	
			Importance of local relevance – there is a need to not have one size fits all approaches, we need to allow for local definitions.	3.3	
5	Barriers to action	Address existing and potential political/personal challenges to tree planting.	Political will is a barrier, but also just the perception of political will can stop the conversation early.	3.1	broad support
			Many residents don't like having trees due to the maintenance of leaves dropping, cost of care, and fear of trees falling on and damaging homes.	3.2	
			Planting trees on property costs residents' time and money for care, pest removal, mulching, this is a disproportionate burden on low-income households	3.2	
			With new developments, mature trees disappear, can there be incentives for new developments keeping mature trees?	3.2	
			Trees can become a political and heated discussion especially when talking about property lines	3.2	
		Identify opportunities to effectively drive action for existing, private infrastructure.	Private, existing infrastructure will be the greatest challenge	3.3	broad support
			Moving to action, we need to seek stronger language- more than encourage- incentivize this, provide TA and opportunities.	3.3	
6	Demonstration of success	Establish baselines to inform progress, where appropriate	We can't manage without having a comprehensive idea of what we already have, we may be missing that initial step for finding the baseline. Some communities have these baselines and resources in their communities but others don't	3.2	broad support
		Share and celebrate progress with public	Communities are looking for evidence that this resiliency and preparedness are actually going to show results.	3.3	broad support
			How does the state help provide details and data that these actions are beneficial?	3.3	
7	Communication and engagement	Ensure inclusive, representative, and culturally competent engagement is part of planning and implementation.	Community support is important for grants as well. For example, the City of Winona received funding for a project. Project was moving forward, but when the new city council was elected, they returned the grant and didn't move forward with the project.	3.1	broad support
			How more diverse communities can be brought into the conversation?	3.1	
			Signage should be used to remind people where funding comes from. For example, in MO they put up signs for levy-funded projects.	3.1	

			Equity was discussed, some of these comments had to do with where these actions overlap with other goals and initiatives, specifically neighborhoods prone to flooding and communities most vulnerable to climate change.	3.2	
			Community engagement in both co design and planning of development and projects, engagement in training, education, and messaging, helping associate value with elements that encourage resilience.	3.3	
			Engage and prioritize vulnerable populations	3.3	
			How we engage youth.	3.3	
			Frustration with the word "research" we need to move towards action and progress.	3.3	
			How do we safely think about our communities? Need to not think about only site-specific basis but on a regional basis and a larger scale.	3.3	
			As a part of involving or engaging with communities, don't feel like you are doing a service to them, they are intelligent and aware, we need to have conversations rather than coming in to tell them what is happening. Being mindful and respectful of people in different groups because we are here to help but we don't want to preach to them and turn them away. Partnering with the community to determine where plantings occur, taking this further past the local level and to a neighbor-to-neighbor level	3.2	
		Provide educational opportunities to ensure stakeholders are informed about the benefits of resilient action and how taxpayer dollars are being spent.	Community education and training is a large barrier	3.2	broad support
			In regard to education, many residents may not know the connection of trees and benefits they provide to people and climate resilience	3.2	
			To build political will, education should occur. Rochester's survey on stormwater fee and how it is being used resulted in conversations about level of service and how to let people know. Tying in educational material to other engagement efforts. Need to help people better understand how their money is being sent.	3.1	
			Think about co-benefits and connecting projects more directly and communicate it more clearly. You can insert resiliency into other projects	3.1	
			Education to communities and communicating the value and need of these plantings to residents, cities would need materials to communicate this need	3.2	
8	**Regulation and enforcement**	Tie climate resilience into enforceable regulations.	Values and standards, codes and permit regulations- it will be hard to get a number of MN communities to update codes and standards when it comes to even new development.	3.3	moderate support

#	Category	Recommendation	Comment	Section	Support
			W/ updated codes and permits there will still be a large number of residents left behind due to the costs of updates. Renters whose property owners won't make updates will be left behind as well.	3.3	
		Ensure adequate training is available for professional contractors and code officials.	Professionals understanding the value of different BMPs and differentiating and requiring a standard of sorts so the collective of all BMPs meet a certain standard.	3.3	broad support
9	Timing/alignment	Provide guidance and flexibility on funding to allow for multi-project implementation.	Resiliency infrastructure can't be completed as standalone projects. Oftentimes other infrastructure must be upgraded with it and funding may or may not exist for the project.	3.1	broad support
			Funding timelines do not always match up with project timelines.	3.1	
			Funders should work with funding recipients to make sure their priorities are aligning.	3.1	
10	Missing actions/framework structure	Consider suggestions for missing action items.	We should address ag drain tile. The magnitude of relative recent tiling is huge and the impacts on flooding and stream bank instability are significant.	3.1	some support
			Agree on ag drain tile - farmers have tried to adapt to climate impacts, but this has unintended consequences	3.1	some support
			A lot of this discussion was around flooding/stormwater. Housing is also a resiliency element (to withstand heat waves, polar vortexes, storm/flooding events, etc.) Just an observation-- we didn't talk about housing much today at all.	3.1	some support
			The idea of increasing tree canopy and creating cooler spaces within communities is the overarching goal, so how does this link to the next item? These actions need to link together seamlessly	3.2	moderate support
			Job needs and creation should be tied to the goal areas	3.2	broad support
			Creating Jobs, both training and pay for residents living in canopy scarce neighborhoods	3.2	broad support
			Job creation and wealth generating opportunities are important	3.2	broad support
			If we look at ag conservation, we have to build critical mass in the stormwater BMP space.	3.3	moderate support
Additional feedback sent in from workgroup members following the final meeting (full workgroup didn't get a chance to review)					
11	Integrate equity considerations	Integrate equity considerations (p. 44) into the "What We Will Do" framework in addition to appending them.		"What we will do" section	
12	Additions for "healthy community forests"	Specify under Healthy community forests (p. 41, Initiative 3.2) that the state shall	In addition to funding, provide outreach on emerald ash borer, risks to urban tree canopy and education on grant opportunities for climate-resilient urban tree replacement.	initiative 3.2	

		create a new financial mechanism to help communities fund urban green infrastructure including urban tree planting— such as a revolving loan fund.			
13	**Support for farmers and ranchers**	Add an initiative under Resilient Communities to support climate adaptation and drought and flood planning for farmers and ranchers, who will be severely impacted by climate change.	Specify under this new initiative additional funding for extension agents to support ranchers in developing integrated ranch plans to adapt to climate impacts, reduce grassland conversion and maintain carbon stores.	new initiative	

14	**Prioritization of technology**	Would like to see more language about a prioritization of technology.	- Use best available in the meantime, but consider creating a robust and interdisciplinary team devoted to creating technologies needed by the state, consultants, private industry, NGOs and LGUs.
			  - Create technologies for baseline data collection for citizen scientists and local leaders
			  - Create technologies for natural resource care and management (ex: AI for tree care – water, disease, stress, pollution, etc.)
			  - Create technologies for use in resilience modeling and planning at multiple scales (MIDS is a great start! Look to the EPA Green Infrastructure Toolkit for inspiration)
			- Collaborate with public and private partners across the Midwest to provide better tools and capture the most skilled experts without overburdening the few in MN (begin by talking to Midwest Climate Collaborative, Chris Conry with 100% Campaign, Environmental Resilience Institute – I can talk to you more about why I'm suggesting each one of these if you'd like)
			- New technology standards should include the prioritization of
			  -Accessibility and usability by non-experts (consider tools for LGU staff without specialized training who are responsible for environmental management, and community groups interested in taking action on private property – remember we cannot make it to 30% canopy cover on public land alone) – UX and non-machine specific access to the program need to be considered
			  -Modeling and design that include costs of materials and construction, materials needed, time to develop, qualitative and quantitative environmental benefits (see the EPA GI Toolkit for ideas)
			  - Quality and availability of back end data
			  - Updates and maintenance
			- Ensure the tools are free to LGUs, community orgs and environmental nonprofits		

15	**Expansion of green jobs section**	Would like to see an expansion of the Green Jobs section	o Higher Ed as it is currently structured is failing young professionals and there is a strong call for a re-envisioning of	May want to review clean economy	

		the system as a whole
		  - Incite and participate in this and provide input on the needs of state professionals (hired and elected)
		    - For example:
		      • StormwaterCorps – a partnership between academia, public and private industry
		      • O'Neill School of Public & Environmental Affairs – Professional graduate program, education, practicing professors, research, capstone, internships, and engagement
		o First engage with the professionals you believe will be the target demographic of these jobs including research, management and trade skills – what do they feel like they need now and wish they had been provided in their training and education?
		    - Bring in an interdisciplinary team – this is a part of diversity that has been largely overlooked
		    - I can think about contacts if you're interested, I have a few already in mind
			section as some of this might already be in there.	

16	Best Practices	Would like to see more on best practices and the dire need for proper community engagement	o Consult with the following experts, they will have more folks to connect with
			  -Chao Mwatela – City of Rochester DEI Director
			  -Marcia Ratliff – Director of Engage Winona
			o Reach out to other partners that have already been suggested – what are their thoughts, experiences with partnerships, current needs, potential needs under partnership, vision for collaboration, etc.
			  -UMN Tree Steward Program
			  -MN GreenStep Cities
			  -MN GreenStep Schools
			  -Community Forestry Corps
			  -MN GreenCorps
			  -New Climate Impact Corps
			o Follow the Co-design model for true collaboration and equity
			  -Chao (listed above) is a great person to consult on this, as would be Glen Salmon (he is a phenomenal advocate for natural resource stakeholder engagement and the role of NR managers)
			o What are the experiences of state departments and NGOs in CE?
			o Create a new focus group?		

17	Waste management	Didn't see mention of waste management in the framework	o No mention of "organics" in the document – this is a huge factor that doesn't just consider composting but also food systems, food security and food waste o No mention of metals recovery – big missed opportunity and dire need to provide metals necessary for carbon-neutral energy - Look to companies like Exsolve – they are brand new and only working with industry right now, but may be a good		

			contact to discuss needs to make this possible at the municipal level
			o No mention of landfills – this is a big factor in land use, pollution and EJ
			  - Consider existing capacity, mapping of future sites, projection of future needs under multiple waste management scenarios
			o No mention of hazardous waste – this is an EJ issue to this day despite knowledge of it since the 1980's
			  -Map it and make it publicly available and update with progress to show accountability
			  -Conduct extensive risk modeling under extreme climate events
			o Consult with smaller municipalities struggling with this right now
			  -Winona County's Draft 10-year plan lays out issues that they have no intent to resolve because of lack of capacity, knowledge, funding and control over private vendors they contract with
			o Consult with cities about recycling going to the landfill because of contamination or lack of market
			o Enforce stricter standards on dumping of recyclables – it will be necessary to reach goals so long as dumping is economically the cheaper choice
			o Encourage a new culture of waste management
			  -Highlight the opportunity in making a difference to young professionals – this industry is currently seen negatively and the practices in lesser regulated areas are honestly abhorrent		

18	**Importance of assessments**	I'd like to see more about the importance of these assessments and planning for extreme climate change events	o Currently mentioned usually as "critical facilities" as individuals – but what about them as a system in an emergency situation?		
19	**Resilience Professionals and Resources**	Resilience Professionals and Resources – *This will need to be a priority going forward for the sake of quality and equity*	o There needs to be specific training and certification or licensure of professionals in this field -As I mentioned, we are all passionate, but are not working off of research-based best practices and it's leading to issues in quality, comprehensiveness and equity o Consider developing this in partnership with other Midwest entities as stated above o I would like to see standards for the reports and plans they create too (ex: comprehensive/master plans, surface water management plans, zoning and codes, development plans, etc.)		

Healthy Lives and Climate Equity

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
1	Tie-in local faith organizations	Would like to see a tie-in to local faith organizations. -- Perhaps add into intro text that this is another partner, rather than specifying in every action step.		Overall framework: add a section noting the types of groups/partners that can help move this work forward.	Pulled from survey		
2a	Focus on unhoused and incarcerated populations	Would like to see focus on unhoused and incarcerated populations, which are at high risk for impacts		Add to list of vulnerable populations	Pulled from survey		
2b	Climate justice within prisons	Suggestion to add a new action step: focus on climate justice within prisons, such as extreme heat.		New action step for Goal Area 5	Moderate		
3a	Mental health impacts	Suggestion to add in more considerations on mental health. Climate change is a lot more than just "a lot of rain" it is changing ways of life and jobs and that can impact mental health and sense of community	Think about the mental, in addition to physical, health impacts on vulnerable populations	Mental health is a priority action in Goal 5	Broad		
3b	Mental health services	Would also add to the last bullet "Culturally appropriate and responsive" mental health services		Goal Area 5 Priority Actions	Broad		

4	Climate Equity Index - Community Impacts			Goal 5 action step		One of the action steps is to develop a climate equity index. Will want to discuss the impacts with communities when we develop that. It's very complicated because there are so many different impacts.	
5a	Working with communities	Setting the tone of working with communities, rather than doing things to them.	Are we listening to what people actually need versus assuming we know the answer to that? Are we creating space for people to share their needs?	Keep in mind throughout the entire framework. Change language throughout the document to ensure proper tone	Broad	Develop an implementation/ engagement strategy for shared development of climate solutions	
5b	Working with communities	"…Identify and protect culturally significant places and practices": Do not want this action step to result in situations where state agencies just send maps to Tribes (for example) and ask them to identify where their culturally significant places are.	Make it clear that this is working with communities, rather than state directing. Change to "in collaboration with Tribes and cultural and affected communities…	State Action Step under sub initiative 5.1.2	Broad	There is sensitivity around that type of data. People can use that data for harm. Or institutions often take that type of data and never come back.	
5c	Working with communities	"Conduct research…" There are lots of concerns around the language of this action step. "Conducting research" on communities of color is connected to a lot of trauma and negative experiences with government and academia.	Reword action step to something similar to: Work with communities and Tribes to identify information and data to fill knowledge gaps.	State Action Step under sub initiative 5.1.2	Broad		
6	Charity mindset	When we talk about populations will be disproportionately affected by climate changes, we have a charity mindset. Need to speak to the fact that everybody's future is tied to the future of everybody.		Keep in mind throughout the entire framework.	Broad		

7	Complementary community stories	We need to do better with pairing data analysis to complement community stories and narratives -- where is the data to show what communities are experiencing?		Keep in mind throughout the entire framework.	Broad		
8	Building process into action steps	How to build process into the action steps and models. Example: locally in Olmsted County the state's census approach with the We Count Minnesota initiative worked well by seeding local partnerships to carry out the work.		Keep in mind throughout the entire framework.	Broad		
9	Acknowledge indigenous practices and knowledge	The framework should acknowledge indigenous practices and knowledge.	The framework should reflect that many of these sustainable practices are not new (they may have associated buzz words but many are old concepts that have been practiced for generations).	Add intro text for overall framework (not just this goal area)	Broad		
10	Words matter	Words matter: - Consider using "collaborate" rather than "engage" as "engage" sounds like someone in power is reaching out to other, "collaborate" sounds more like shared power - Be mindful not to intermix "equity" and "equality" - Use "people who" instead of "people that" - "Regardless of race" conflicts with prioritizing communities most impacted	Words can have a different meaning depending on who is reading them, we don't want words to cause exclusion.	Keep in mind throughout the entire framework.	Broad		
11	Farming and food systems	Would like to see something about farmers/farming related to farming native plants and food being central to a lot of cultures.		Consider under the climate-smart natural and working lands section.	Broad		
12a	Educating Clinicians	Insert action step about educating clinicians about climate-related health impacts. Maybe something about exploring current coding mechanisms to see if there are better ways of tracking the health impacts of climate change.		Sub-initiative 5.2.1	Moderate		

12b	Reporting health impacts	Add action: work with providers to determine best ways of reporting on the health impacts of climate change within clinics and hospitals		New action step for Goal Area 5	Broad		
12c	Operationalizing actions	How do we operationalize "Provide education and funding to local public health departments to work with local communities to prepare for the health impacts of climate change" Add working with emergency management to action.	Framework does not deal with the operationalizing of the actions.	Sub-initiative 5.2.1	Moderate		
13a	State as a leader		There is significant value of building the capacity of local public health to play a role in this. "Enact and encourage" should be checked. To make this real, local public health will need legislative support. Building awareness and knowledge around climate impacts locally. Local public health will need the state to lead here and be a collaborative partner.	Sub-initiative 5.2.1	Moderate		
13b	State as a leader	The State should take a lead in making clear its priorities.		Implementation consideration	Moderate	If all of this is important, the State should produce clear guidance and information to help grassroots organizations and other stakeholders move in the same direction.	
13c	State as a leader	The State should take a lead on solving some of the "easy wins". E.g., shift in procurement practices such as not purchasing styroforam.		Action step	Broad		
14a	Educating Communities	Add new action to 5.1.1. About educating communities about unhealthy environments and engaging in processes to improve them.	A lot of people don't know how climate change is affecting their health. If people knew more, they might be more likely to support action to address climate change.	Sub-initiative 5.1.1	Broad		

14b	Educating Communities	Additional items to educate communities about: - MDH could put more attention to those extreme heat days. That illustrates the impacts much better than talking about a gradual warming of the temperature over many years. - Another example is the impacts on air quality due to wildfires.		Goal Area 5			
14 C	Communication strategy	Add an action step around communication strategy. A communication strategy is needed to making data and information more easily accessible.	A communications strategy is needed. Think in a way that permeates multiple parts of society. Meet people where they are, not just using traditional means of communication. Minnesota Department of Health does this better than most agencies, need to build more capacity for every agency to engage with communities and cocreate education and programming with leadership on the ground.	Action step	Moderate		
15	State climate and health report	Add new action that suggests the State develop a regular occurring report on the state of climate and health in MN		New action step for Goal Area 5	Broad		
16	Toxic release inventory sites	"Ensure access to uninterrupted, quality healthcare during and after disasters": Concern over Toxic Release Inventory sites. Does there need to be an interface between those responsible for these and public health? We will double-check with Resilient Communities Work Group.	Action Team will double-check with Resilient Communities Work Group.	Sub-initiative 5.2.1	Moderate		
17	Affordable and accessible healthcare	Would like to see the framework more explicitly tackle how we can ensure that healthcare is financially affordable and accessible for all Minnesotans. Add action about providing Universal Health care or something to ensure that health care is financially affordable/accessible to all people.		Sub-initiative 5.2.1	Moderate		

18a	Healthcare for chronic climate impacts	Add note about Hospital/healthcare also for chronic climate impacts, not just extreme weather		Goal Area 5	Broad		
18b	Align with international goals	Align framework with international climate planning targets. -- add to introductory text.		Overall framework	Moderate		
19	Trust is important	Trust is important		Overall framework	Broad	Creating a resilience hub is good, but without trust, people won't go there. What do we need to do years ahead of time so that people have the trust that's needed to take advantage of the services we'll be providing down the road? Requires a culture of change.	
20	Naming equity	Naming equity: need to make sure we name who is most impacted in the individual action steps, to make it actionable for folks to address equity. Rather than BIPOC use more specific language that honor people's different backgrounds and ethnicities	Being specific – the way the state and government systems define communities, it's very broad. Schools, workplaces, etc. How do you have specific language on communities of color and other areas you want to target? When the state is implementing these, the approach will be very broad. Would help to be very specific about what populations/communities we are targeting with these actions.	Overall framework	Broad		
21	Broad representation during editorial process	In the editorial process, want to ensure there is representation of the broad reach so that the views of those engaged will actually end up in the authenticity of the actions. Word choice, intent, and urgency should be conveyed.		Overall framework	Broad		

22	Diversity and equity in staffing	Need to bring the outside voices in. We have an opportunity to think about the diversity and equity in our staff, for public and private organizations.	This may be something being addressed in the Clean Economy workgroup, but either way we can look at adding this into the Framework	Overall framework, possible action step	Broad		
23	Integration across State initiatives and activities	It's important to think about how these priorities are integrated across various State initiatives and activities.		Implementation consideration	Broad	The State may offer funding specific to these priorities, and that's important. But then how will these priorities be incorporated into other grants to encourage alignment with the Framework?	
24	Addressing conditions in rural MN	Need to address conditions in rural MN more fully (access to healthcare, cascade of impacts in agriculture)	Had to search hard to find the rural aspects of equity, so some of them are there, but might be worth adding more on this. Seeing lots of barriers for black and indigenous farmers, including lack of access to land ownership. Want culturally appropriate food, and also want to create opportunities for people to grow those foods.	Overall framework, possible action steps	Broad		
25	State Geography	The word "geographic" may not fully communicate the environment that people live in (e.g., does "geographic" really cover the idea that some are living in communities with more violence, which is a large public health challenge).	When we talk about communities most impacted, we should make clear that where people choose to live is not just about economics, but also about their choices to be part of a particular community (urban or rural, or part of a community in which they feel welcomed and supported); and people should be able to make those different choices without having to accept poor conditions or disproportionate impacts.	Goal Area 5	Broad		
26	Translating actions into benefits	How do we translate our priority actions into concrete benefits? Need to connect solutions to economic growth, opportunity and benefits.	People tend to get behind things that they can be involved in, and where they can see the clear benefits to themselves, their families and communities.	Priority Actions for Goal Area 5	Broad		
27	Role of MN Department of Education	Still overlooked is the role of MDE and schools in communities for education and action especially for career pathways		Goal Area 5	Moderate		

28	Deconstruct and reconstruct current initiatives and programs.			Implementation consideration	Moderate	Deconstruct and reconstruct current initiatives and programs that are meant to improve equity and health to make sure they are informed by collaboration with the communities they are meant to serve (e.g., inefficiencies in housing impact health—how are communities investing in greater energy efficiency in housing to both improve health and the lifetime costs of that housing)
29	Need for better data and visuals	Numbers and statistics to better illustrate equity: Would be helpful to have some numbers and statistics to illustrate at a glance, to the public, what we're talking about when we talk about inequities.	workgorup support for the idea of focusing on data and visualizations. Can help to make clear that inequity means there may be individuals in your community that carry more burdens, it doesn't mean the entire community is in the same place with regard to equity.	Overall Framework; possible action step in Goal 5	Broad	
30	Storytelling: Success Stories	Are there success story examples to show what it looks like when we do a good job of making investments to address equity? Also stories that can help to illustrate inequities and the role of both the state and the private sector in addressing inequities.		Overall Framework	Broad	
31	Diverse leadership	Add a measure of progress around diversity in state leadership	We need leadership representative of the community. This in not a conversation we want to keep having, at some point we have to master embedding equity into our systems.	Measure of progress or see if it can be incorporated into Clean Economy section	Broad	We need people of color in leadership to help determine priorities. This will be key to successful implementation.

32	Generational planning	How do we plan for multiple generations when thinking about policy? Think about how to incorporate this into the framework.		Overall Framework	Moderate		
33	Importance of Tribal perspectives	The workgroup wanted to highlight the importance of incorporating Tribal feedback into the framework.	The workgroup feels strongly about treaty rights being listed as a priority. Making sure we come to the table having a conversation of how we can work together (State and Tribal government) in this area collectively on a government-to-government basisBeing respectful of the actions tribal communities would like to prioritize	Overall Framework	Broad		
34	Alignment between the Framework and Workgroup priorities	Not sure of the Workgroup felt these were not called out or emphasized enough or if the language used in the Framework didn't capture what they are recommending	The recommendations appear to break down into 3 areas 1) The approach/process of implementing the framework (most of the priorities from the workgroup) 2) Initiatives added to the framework 3) Tools/means to assess success	Incorporate implementation strategies from workgroup into an appendix?	Feedback sent in from workgroup member, workgroup didn't get a chance to review		
35	Community engagment	For the spirit of the Framework and implementation, the Vision Statement seems to capture what the group has been advocating for. (#5 of Honorable Mention) For Implementation, this Foundation of Trust is recognized in the Equity sections for each priority, but not explicitly called out like subpoint "b" of Foundation of Trust from the Workgroup. The Resilient Communities section with Equity also calls out engagement with underserved communities.	Add section on community engagement to the framework		Feedback sent in from workgroup member, workgroup didn't get a chance to review		
36	Be more explicit on supporting black and indigenous farmers	For initiatives, subpoint "b" under #2 is captured under Working Lands Initiative 2.5 "Support local food markets, urban agriculture and emerging farmers". But maybe this could be more explicit?	Share the following with Working Lands: There are lots of barriers for black and indigenous farmers, including lack of access to land ownership. Want culturally appropriate food and want to create opportunities for people to grow those foods to see if they can incorporate some language.		Feedback sent in from workgroup member		
37	Use Economy goal area to help support more people of color	How could we use the Economy section of the framework to help more people of color to serve in leadership and become business owners mentioned in subpoint c of #4?	Share comment with the Economy group, and ask if they can think about this and add something to their section.		Feedback sent in from workgroup member		

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes		Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
38	Access to health care	One area not called out in the Framework is access to healthcare as mentioned in point #4 of the Honorable Mention. Health improves with access, so this could fit under resilient communities or Healthy Lives section.	We have "ensure access to culturally-appropriate mental health services" on page 53 of the framework, but that isn't enough. Should we change this to: "ensure access to culturally-appropriate healthcare and mental health services"?		Feedback sent in from workgroup member		
39	Tools/means of assessment	For tools/means of assessment, the priority #5 is called out in Initiative 3.1 under Resilient Communities as well as with the Healthy Lives section. I will argue that data will be critical to measure our progress and keep communities engaged. #5 of the Workgroup priorities is important to emphasize within all of the Framework sections.	Other workgroups have also mentioned the importance of measuring progress and engaging communities. A next steps section will be developed that can include developing measures of progress. Overall comments about deeper and continuing engagement will be added to the framework.		Feedback sent in from workgroup member, workgroup didn't get a chance to review		

Clean Economy

ID #	Quick Label	Proposed Changes and/or Priorities	Explanation/Rationale/Notes	Location in Framework (page number, sub-initiative, etc.), or "Implementation Consideration"	Level of support (some, moderate, broad)	Implementation notes (as applicable)	Roles for non-state actors (as applicable)
1a	Metrics: more specifics	needing more specifics, having bold metrics, looking beyond the 2–5-year timeframe, and linking actions to what is needed	Need hard numbers to know if we're making progress. Also, need for qualitative (not just quantitative) measures., e.g. where are new industries popping up.	priority actions	broad support		
1b	Metrics: baseline	Need for baseline metrics to know where things currently are to assist in setting equity goals.		priority actions	broad support		

1c	Metrics: benchmarks and targets	having accurate benchmarks, specific targets, and a reasonable baseline	For example, the framework says "increase number of…" but it should be more specific. How much do we want to increase the number of apprentices, jobs? Establish a goal to have x% of women, people of color in apprentice enrollment or jobs.	measures of progress	broad support		
1d	Metrics: evaluating new positions	Evaluate how positions are being created, advertised, and what are the limits (physical, actual, hourly) that are preventing more women participating in this technology rich workforce environment.	Concerned the number of women must be improved in this new green economy - the percentages are not keeping up with the demographics. (8% of women in the field when women make up 50% of the population)	overall section	broad support	jobs that respect family friendly hours and threshold	
1e	Metrics: diversity	Have metrics to check diversity	For example, diversity at different levels (executive, management, entry level), number of companies owned or started by diverse populations, community-wide measures that are more qualitative (where are new industries popping up)	Initiative 6.2 - equitable transition	broad support		
1f	Metrics: quality of jobs	Track the quality of old jobs vs. new (pay, benefits, etc.) and pay equity (especially in non-union work)	"How many net new jobs are created and what will the pay/benefits look like? How does that compare with what we are losing?" do these new jobs have respect for family-friendly hours and threshold?	initiative 6.2 - equitable transition	broad support		
2a	Investment: State investment	Investment from the state can help unlock private capital for clean energy entrepreneurs – especially at the demonstration stage	Entrepreneurs in climate tech have a greater capital expense and requires more investment. This would be a good place for the state to come in and help fund demonstration projects. De-risking some of the early investments can unlock private capital.	overall section	broad support	align the work with IIJA and BBB funding	A larger role for philanthropy as a non-state actor.
2b	Investment: workforce implications	When making investments (public or private), look at workforce implications	How many net new jobs are created and what will the pay/benefits look like? How does that compare with what we are losing?	new action step?	broad support		
3a	training/jobs: k-12 education	Tweak to add k-12 - to create a diverse workforce we need to start early with perception/knowledge to reach out/encourage younger students on these jobs.	Need people in K-12 to think about building the pipeline – an earlier awareness of those career pathways aside from four-year college	pg. 59: priority action "Train, upskill and reskill MN for clean economy jobs, with a focus on equitable outcomes in collaboration with unions, higher education and businesses."	broad support	Grants for schools to start up robotics clubs	

3b	Training/jobs: NWL sector	Emphasis on job creation and skills development in the natural and working lands area		initiative 6.1 - workforce development	broad support		
3c	Training/jobs: relationships with universities	Establish stronger relationships with other universities (even those outside Minnesota) who are doing this training. Letting students know they will have a job in Minnesota after their education.	There is a need for "white collar" jobs such as software and electrical engineering.	priority action	broad support	Get the Department of Education involved early and often	Put together a framework of those who have needs, those who have R&D skills, and those who have money to be able to respond flexibly.
3d	Training/jobs: Drive training programs	Drive training programs in the STEM field, especially focused on women and minorities	Grants for schools to start up robotics clubs, with additional funding for programs with minatory or women leaders	initiative 6.1 - workforce development	broad support		
3e	Training/jobs: leverage existing programs	Fully leverage the existing training programs that we have	Can we customize existing programs to be geared more for this sector?	initiative 6.1 - workforce development	broad support		
3f	Training/jobs: Training strategy	Need a nuanced strategy when thinking about what workforce is needed. The training may look different for individuals.	For example, an individual at the end of their career may have a different training pathway than someone new or midway in their career.	initiative 6.2 - equitable transition	broad support		
3g	Training/jobs: Critical skills list	The state could take the lead on surveying to determine what skills are needed in this up-and-coming workforce.	- We need to identify what new skills will be needed an integrate them into a comprehensive construction career - This would also help schools design curriculums to align with those skills and generate the workforce that's needed - Marketing the skill sets in training and not just specific job is essential	new action step?	some support		
4a	Planning: gather industry concerns	A state led initiative to gather information about industry concerns on topics such as fuel switching or labor demands would be useful		overall section	broad support		

4b	Planning: enable quick adoption	Make it easier to quickly adopt energy efficiency measures or purchase green energy.		implementation consideration	broad support		
4c	Planning: long term planning	Having the state plan long term and smooth out funding to be sustainable, rather than boom and bust cycle of employment for weatherization workers.		implementation consideration	broad support		
4d	Planning: job awareness	Emphasize coordination and communication about where the opportunities are and what is required to participate. The state can open the door for businesses and resources.	We need an earlier knowledge and awareness of where the job market is going and what positions are available.	overall section	broad support	How are we creating opportunities to inform, invite and build capacity for those not currently participating?	
4e	Planning: vulnerabilities	We need to be forward thinking-Supply chain and vulnerability due to people retiring and businesses that may not have a succession plan.	Opportunities to train the leadership for the next generation, and to ensure underrepresented groups can become leaders of companies.	sub-initiative	some support		
5a	Signals/Drivers: partnerships	Opportunities for public and private partnerships to ensure there are signals and support to draw in investment	The framework does not address the need to drive demand to a clean economy. It won't do us any good to have trained people if there is not enough behavior change within the state.	overall section	broad support		
5b	Signals/Drivers: regulation	Need to ensure that the drivers, including regulation, are in place and create opportunities for new businesses. Without the drivers, the opportunities will be short lived	Concern that the actions are not sufficiently linked to need and that we end up creating pseudo-jobs and skills. Businesses also need help navigating the regulatory landscape and getting things approved quickly to enable this transition	overall section	broad support		
5c	Signals/Drivers: engage current workforce	Engage with workers already in the field so we have an idea of what to attract and what will grow		state action step?	some support		
6a	Innovation	Would like to see more attention around innovation in the framework to show how important it will be.	- Thinking about the companies that are the drivers of the clean energy economy. -Nurture innovation by fostering flora and clusters that include those with need, those with ideas, and those with money	overall section	broad support		

6b	Innovation: emerging technologies	Would like to see mention of importance of emerging technologies		sub-initiatives	some support	How do we train workers for industries we don't know are coming yet? We need a to create ways of bringing together the key players to crowd source where we think things are going.
7a	Entrepreneurship	More information and detail on entrepreneurship	Frame the conversation for investors around the economic opportunities rather than the scientific or moral imperative	overall section	broad support	Focus on entrepreneurship in areas where the market is ready
7b	Entrepreneurship: State connections	The state can be useful by providing market connections or developing financial instruments that can help entrepreneurs		action step	some support	
8	Amplifying "green jobs" more broadly	Recognize and amplify the wide array of "green jobs", not just the more traditional ones.	Apply a "clean economy" lens to existing economic drivers/jobs. As noted above, there is a need for "white collar" jobs in addition to the more traditional labor roles. Concern about relying too heavily on industry	action step	broad support	
9a	Just transition: listening to communities	Listening to what communities need as we move through the just transition	Working with communities to identify what they want their futures to be, for example, Becker is looking at a google data center, or large scale solar.	initiative 6.2 - equitable transition	broad support	
9b	Just transition: worker supports	The State action step for sub-initiative 6.2.1 should include worker transition supports in addition to community transition supports	These supports could include relocation assistance, training and education assistance for workers and their families, or wage supplements to transitioning employees.	sub-initiative 6.2.1	some support	
9c	Just transition: inclusive financing	Suggested additions: Inclusive financing and reintroducing Neighborhood Revitalization Programs for neighborhoods to have the power and ability to finance projects in their own neighborhoods.			some support	

9d	Just transition: staffing for low-income programs	Utilities need to be prepared with staff who know the needs of low-income people and people of color as new opportunities from the ECO act come into fruition			some support		
9e	Just transition: decarbonization opportunities	Lean into job opportunities decarbonization efforts create. Focus both on the places where jobs/tax bases may be lost.	- Utilities are investing in EE, leading to job creation-- they will need people that the communities will respond positively to and trust. - Making former coal plants into public space (once buildings and stacks are demolished) may require opportunities beyond traditional jobs, e.g. natural resources services or park services.	just transition sub-initiative	broad support		
9f	Just transition: non-workforce considerations	We also need to be thinking about non-workforce considerations. What support do these communities need?	Communities with coal plants closing not only have a displaced workforce, but the area needs to recover the tax base. Working with communities to identify what they want their future to look like, for example Becker is looking at a Google data center, or large scale solar				
9g	Just transition: geographic consideration	Thinking of host communities-- where are the new jobs going to be?	New barriers may unintentionally be created, e.g. not having transportation to travel to new job opportunities.				
10	Next Steps	Take these questions "on the road" to engage more new and existing businesses	Need for additional feedback since this workgroup is a small sample of perspectives	overall section	broad support		
11a	Lowering barriers	Would like to see language in the framework around "reducing barriers"	-Lower barriers to entry to accommodate a workforce that may lack all the skills they need. -Education support: money makes a big difference -- scholarships, debt relief to make MN schools more appealing -What would it look like to support people for a year or two while they are training?	throughout the goal area	broad support		
11b	Lowering barriers: opportunity costs	Need to acknowledge and think through how to lower the opportunity costs people face when attending training programs.	The training can last 6-9 months, and yet people taking the training face an "opportunity cost," because while they are training they are not able to work a paying job that allows them to pay their bills. An "earn as you learn" model can help, but there are lots of other barriers for people (transportation, childcare, etc.)	state action step?	broad support		
11c	Lowering barriers: job description considerations	Need to evaluate how green job positions are being created, advertised, what are the limits (physical, actual, hourly) that are precenting more women from		state action step?	some support		

		participating in this technology-rich workforce environment					
12	Involving existing businesses	Specifically call out ways that existing businesses get incorporated in the clean economy pathway		throughout the goal area	broad support		
13	Call out those in poverty and first generation college	Appreciate specific elevation of people of color that's already in the framework, and suggest adding those in poverty and/or first generation college		"increase # of apprentices…" measure of progress	some support		
14	Partnerships	Diverse partnerships are needed to move this work forward (Resilient Communities workgroup also mentioned this)		throughout framework	broad support	Work closely with various nonprofits, historically marginalized communities, trade associations, industry, business sector, philanthropic organizations, training centers, etc.	
15	Ensure all Minnesotans benefit					Ensure that all Minnesotans benefit from these policies and strategies, not just private corporations	
16	Incentives	Need to note the importance of policies and incentives in moving this work forward	We need strong policies and incentives to get utilities and companies to do more clean energy	throughout the goal area	broad support		
17	Resources for businesses	Need for the state to have individuals who can help assess business practices to recommend technologies to pursue.	It's a struggle for businesses to figure out how to reduce their carbon footprints. Would be helpful to have assistance with figuring out what's real and what's hype -- ultimately to help businesses make the right decisions more quickly	new action step?	some support		

18	The State as a leader	For example, can the state take the lead on things that are harder to convert, like more efficient refrigeration	What are the tougher decarbonization issues where the state could spend its resources?	new action step?	some support		
19	Messaging	We need to identify our unique skill set or value add -- why businesses should choose to invest in Minnesota. E.g., We have a highly educated workforce, a climate that can be great to test new technologies (hot summers + cold winters = challenges for batteries, windows, etc.)	Also, thinking about what attracts workers (not just businesses) such as expanding transportation or daycare.	throughout the goal area	some support		

V. Appendix: Workgroup Member Rosters

Clean Transportation Workgroup

Name	Organization
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Hilda Martinez Salgado	Advisory Council/Environment and Climate Consultant
Tim Sexton	Minnesota Department of Transportation
Siri Simons	Minnesota Department of Transportation
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Alissa Bemis	Great Plains Institute
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Katie Jones	Center for Energy and Environment
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Emma Struss	City of Bloomington
Mindy Granley	City of Duluth
Shawn Schloesser	City of Mankato, MN
Suzie Nakasian	City of Northfield, MN
Russ Stark	City of Saint Paul
Penny Simonsen	East Central Regional Development Commission
MK Anderson	Fresh Energy
Diana Chaman Salas	Hennepin County
Anne Borgendale	Individual
James Erkel	Individual
Jason George	IUOE Local 49
Charles Androsky	Mankato/North Mankato Area Planning Organization (MAPO)
Tony Fischer	Metropolitan Council
Michelle Shaw	Minneapolis Northside Green Zone
Timothy J. Rudnicki	Minnesota Bio-Fuels Association
Gary Thaden	Minnesota Mechanical Contractors Association & MN Contractors of National Electrical Contractors Association
Katie Frye	Minnesota Power
Madi Johnson	MN350
Sam Rockwell	Move Minnesota
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Climate-Smart Natural and Working Lands Workgroup

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Troy Daniell	Agricultural Producer
Brian Martinson	Association of Minnesota Counties
Dale Gentry	Audubon Minnesota
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Craig Engwall	Minnesota Deer Hunters Association
Steve Morse	Minnesota Environmental Partnership
Karin Schaefer	Minnesota Farm Bureau Federation
Rick Horton	Minnesota Forest Industries
Peter Aube	Minnesota Forest Resource Council (MFRC)
Lucas Sjostrom	Minnesota Milk
Lauren Servick	Minnesota Pork Producers Association
Allison VanDerWal	Minnesota State Cattlemen's Association
John Lenczewski	Minnesota Trout Unlimited
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Aaron Vande Linde	Office of School Trust Lands
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Madelyn Smerillo	Clean Grid Alliance
Metric Giles	Community Stabilization Project

Name	Organization
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Maddie Wazowicz	Midwest Energy Efficiency Alliance
Melissa Partin	Minnesota Center for Environmental Advocacy
Michael Northbird	Minnesota Chippewa Tribe
Bill Grant	Minnesota Community Action Partnership
Barbara Conti	Minnesota Department of Commerce
Jack Kluempke	Minnesota Department of Commerce
Gary Thaden	Minnesota Mechanical Contractors Association & MN Contractors of National Electrical Contractors Assoication
Robert Jagusch	Minnesota Municipal Utilities Association
Shannon Guernsey	Minnesota NAHRO
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Resilient Communities

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Cheryal Hills	Region Five Development Commission
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Beth Tomlinson	Stantec
Eric Weiss	The Trust for Public Land
Karen Zumach	Tree Trust & The MN Shade Tree Advisory Committee
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Anna Wasescha	West Central Initiative
Nicholas Martin	Xcel Energy

Healthy Lives and Climate Equity

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Marco Hernandez	Advisory Council/Tending the Soil
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Sarah Goodspeed	Climate Generation
Carolyn Brown	Community Stabilization Project
Mari Ojeda	Fresh Energy
Kathleen Schuler	Health Professionals for a Healthy Climate
Leslie Moore	Individual/Activist
Clovis Curl	Individual
Kathy Hartley	Individual
Channon Lemon	Intent Energy, LLC
Alexa Horwart	ISAIAH
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Clean Economy

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