Clean Heat Standard Equity Advisory Group

February 20, 2024, 12:30 – 2:30 pm ET

Meeting Link (https://meet.goto.com/552661509)

Draft Agenda

I. Welcome & Begin Recording
II. Review of Agenda
III. Review of Feb. 5 Meeting Minutes
IV. Commission Update on CHS Work
    a. Recent Orders
    b. Reports[1]
    c. Facilitators
    d. Consultants [2]
    e. Technical Advisory Group
V. Officers and Roles
VI. Prioritizing and Sequencing of Duties[3]
VII. Benchmarking Systems to Evaluate Clean Heat Standard Elements[4]
VIII. Credit Ownership Considerations[5]
IX. GREET Model[6]
X. Public Comment

[1] Both the Checkback Report and the Funding Report are available on the CHS website.
[2] Public Engagement Facilitator: Vermont Partnership for Fairness and Diversity (RFP/Statement of Work). Emissions Analysis Consultant: Opinion Dynamics (RFP/Statement of Work)
[3] The Equity Advisory Group's duties are listed in 30 V.S.A. § 8129(a) and Section 6(k) of Act 18 of 2023.
[4] Relevant documents include Climate Action Plans from Portland OR, Austin TX, and MA CHS Framework.
[5] Relevant information can be found in ePUC; use the topic tag "3 Credit Creation" to find relevant materials in Case No. 23-2220-RULE. The transcript from the 12/15/2023 Credit Ownership Workshop can be found under the "Transcript" drop-down in the "All Other Documents" tab.
[6] Relevant documents include Pike Porter's comments submitted to the TAG and the following materials.

Gatti, Dominic

From: Sriram Srinivasan <slsrinivasan@gmail.com>
Sent: Thursday, January 18, 2024 12:23 PM
To: Gatti, Dominic
Subject: Re: Materials for 1/11/24 Equity Advisory Group Meeting
Attachments: cap-equity consideration portland.pdf; Copy of FINAL Equity Tool , Austin.pdf; Massachusetts, CHS-DrftFramework.pdf

Hello Dominic
At the last week's meeting I had mentioned that other cities have done significant work to incorporate equity considerations in their respective Climate Action Plan. Please see summary from Portland, OR that highlights the process and some of the engagement, approach by the equity group with the technical group who designed the specific strategies. Other city CAP's I have looked at who have spent significant efforts on the equity considerations are Boston, Montgomery County, MD and the city of Austin. See Austin's framework for equity considerations with example strategies for their CAP. Hope these reference are useful.

Also I came across a document outlining the framework for CHS for the state of MA, I think concepts outlined here are relevant to VT.
Please distribute to the group.

Best Regards
Sriram Srinivasan(Srini)

On Jan 9, 2024, at 4:51 PM, Gatti, Dominic <Dominic.Gatti@partner.vermont.gov> wrote:

Hello Equity Advisory Group members,

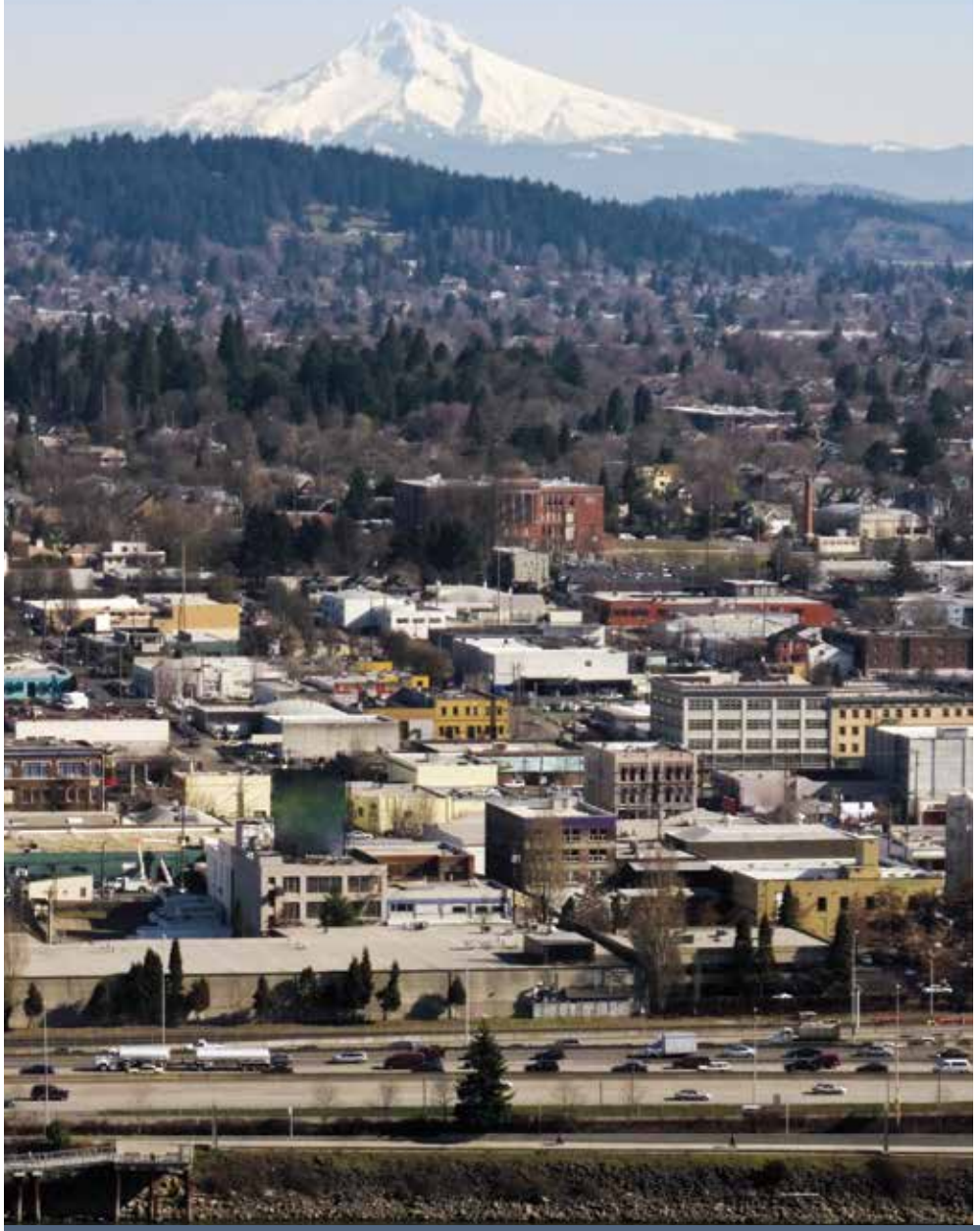
We look forward to seeing everyone this upcoming Thursday. The meeting will be held on GoTo Meeting (this link will take you to the meeting) at 1 pm on 1/11/24.

Attached to this email (and on the Clean Heat Standard website) are the preparatory materials for this week's meeting. They include documents requested by the group at the last meeting, materials for consideration by the group, and the draft agenda.

Please let us know if you have any trouble accessing the materials or have any administrative questions.

All the best,
Dominic Gatti

CLIMATE ACTION
THROUGH EQUITY



The integration of equity in the Portland/ Multnomah County 2015 Climate Action Plan

July 12, 2016

Multnomah County

Lead Authors

Desiree Williams-Rajee, *City of Portland Bureau of Planning and Sustainability and Equity Working Group Co-coordinator*
Taren Evans, *City of Portland Bureau of Planning and Sustainability*

Acknowledgments

City of Portland and Multnomah County Climate Action Plan Project Team

City of Portland Bureau of Planning and Sustainability

Michael Armstrong
Michele Crim
Kyle Diesner
Ingrid Fish

Multnomah County

Tim Lynch, *Equity Working Group Co-coordinator*

Climate Action Plan Equity Working Group

(Affiliations of the Equity Working Group members are provided for identification purposes only and are not intended to represent the endorsement of their organization.)

Faduma Ali, *Groundwork Portland*
Bill Beamer, *City of Portland Bureau of Planning and Sustainability*
Rose High Bear, *Wisdom of the Elders*
Cassie Cohen, *Groundwork Portland**
Claudia Arana Colen, *Upstream Public Health*
Demetria Espinoza, *Coalition of Communities of Color**
Heidi Guenin, *Upstream Public Health*
Tram Hoang, *Upstream Public Health*
Rachael Hoy, *City of Portland Bureau of Planning and Sustainability*
Duncan Hwang, *Asian Pacific American Network of Oregon*
Amanda Kelley-Lopez, *Wisdom of the Elders**
Kari Lyons-Eubanks, *Multnomah County Health Department*
Julia Meier, *Coalition of Communities of Color*
Linda Nettekoven, *Climate Action Plan Steering Committee Member*
Kristey Nguyen, *Asian Pacific American Network of Oregon**
Jonathan Ostar, *OPAL Environmental Justice Oregon**
Vivian Satterfield, *OPAL Environmental Justice Oregon*
Les Shannon, *Groundwork Portland*

**former staff*

Portland State University

Greg Shrock, *Professor of Economics*
Jamaal Green, *Ph.D. Candidate*

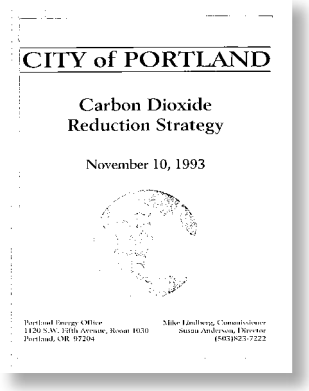
Funders

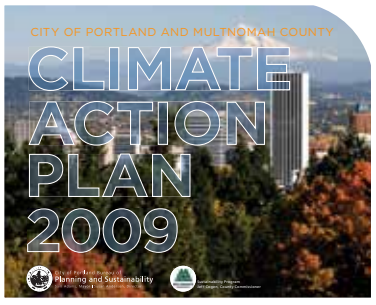
Bullitt Foundation
The Funders' Network for Smart Growth and Livable Communities

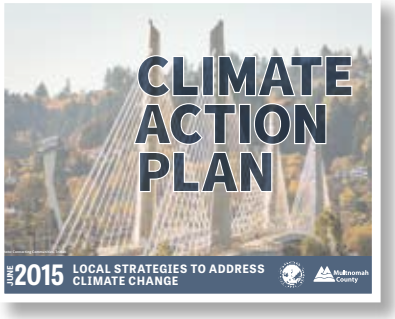
Our changing climate

Two decades of climate action are delivering results

The City of Portland has long been a global leader in addressing climate change. In 1993, Portland became the first city in the United States to adopt a local plan to address climate change. Since then, while carbon emissions have increased nationally, Portland and Multnomah County have achieved significant declines in emissions. In 2014, total emissions were 21% below 1990 levels.







But we still have a long way to go

As Portland increasingly contends with heat waves, droughts, flooding and other extreme weather events, awareness of the need to take action on climate change has grown, yet recognition of the connection between climate action and social equity has often been absent. The City of Portland and Multnomah County have a goal to reduce carbon emissions 80 percent from 1990 levels by 2050. In the face of projected population increases and changing demographics, the need for a more broad-based movement is apparent. Government action alone is not enough; everyone must be a part of the solution and all must benefit from the solutions created. Currently, however, not everyone has equitable opportunities to participate and benefit. The 2015 update to the Climate Action Plan seeks to remedy this.

The City of Portland and Multnomah County's prior climate action plans focused on reducing carbon emissions while lacking discussion of who benefits and who is burdened. The absence of such an assessment resulted in missed opportunities to share the co-benefits that can result from climate action efforts. Co-benefits are positive impacts other than carbon emissions reduction that occur as a result of climate change mitigation. Such positive impacts can include increased access to greenspace, more pedestrian and bike-friendly communities that encourage active transportation, and the creation of green jobs that can stimulate the local economy.

Furthermore, communities of color and low-income populations in Portland have been under-served by programs and investments and under-represented in decision making on climate policy. Lack of low-carbon, safe transportation options, inefficient housing and the inability to afford healthy food are examples of disparities experienced by these communities that result in fewer benefits from climate action opportunities.

These inequities primarily result from ongoing institutional racial bias and historical discriminatory practices that have resulted in the inequitable distribution of resources and access to opportunities.

> ***Climate equity ensures the just distribution of the benefits of climate protection efforts and alleviates unequal burdens created by climate change. This requires intentional policies and projects that simultaneously address the effects of and the systems that perpetuate both climate change and inequity.***
>
> 2015 City of Portland and Multnomah County Climate Action Plan

The Green Divide

Climate change, and other environmental issues are often viewed as issues that are not relevant to low-income communities and communities of color. Concern with the environment is frequently perceived of as being a concern of more affluent and less diverse communities. Yet this narrative paints a false portrait and obscures the real diversity that exists. While there may be a lack of representation of low-income people and people of color in mainstream environmental organizations, this does not then translate to a lack of concern with environmental issues. On the contrary, research has shown that people of color support environmental protection at a higher rate than whites. 68 percent of minority voters feel that climate change is an issue we need to be worried about right now, not something we can put off into the future.

The 2015 Climate Action Plan represents a step in this direction by connecting climate change with other community concerns of low-income communities and communities of color.

Source: Climate Change and Communities of Color, Key Poll Findings and Top Lines Report

Climate change impacts some people more than others

Low-income populations and communities of color will be disproportionately impacted by climate change

Low-income populations and communities of color are more likely to live in areas with less greenspace and to be more vulnerable to heat-related and respiratory illnesses.

Low-income populations and communities of color are more likely to be impacted by extreme weather events that occur as a result of climate change. This is due to reduced access to key information and available programs and services as a result of language, cultural, or geographic barriers. For example, community members may be unaware of the existence of resources such as cooling centers that may be open during heatwaves due to materials not being translated or available in areas that they traditionally access community information. Service boundaries and language restrictions can provide additional barriers in accessing programs and services.

Carbon reduction strategies can exacerbate existing disparities unless there is an explicit equity focus. Communities are not all starting from the same place. Low-income populations and communities of color often have less access to healthy and energy efficient housing, transit, or safe bicycling and walking routes. Consequently, any strategies to reduce carbon emissions must seek to remedy these deficiencies.

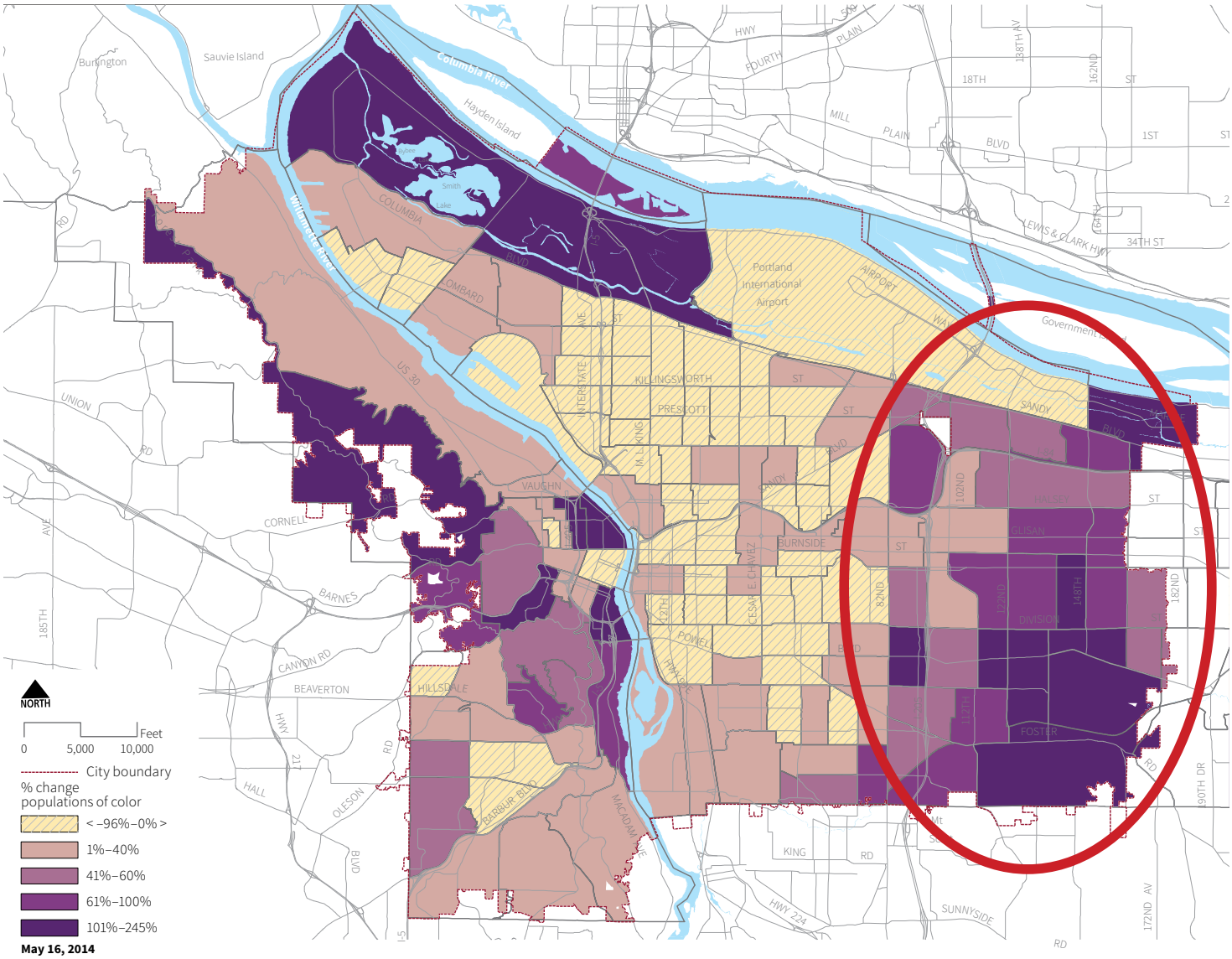
According to a 2014 report prepared for Green 2.0 that studied diversity in environmental organizations, a broadening of the movement must grow and embrace different perspectives to appeal to diverse communities.

Source: diversegreen.org

Mitigating for unintended consequences: investment and displacement

Successful implementation of the Climate Action Plan will include targeted investments, particularly in areas that have seen under-investment in the past. However, investment in some of these locations can be a catalyst for displacement. As areas gain amenities and become more desirable, property values rise and long-time residents who are no longer able to afford the area may be displaced.

This map shows that communities of color are growing in East Portland, an area of town that has less transit connectivity, sidewalks and other infrastructure. Many African-American residents have moved to East Portland from N/NE Portland over the past 20 years and have not benefited from the green investments that have taken place in their former inner neighborhoods. To address this, the 2015 Climate Action Plan emphasizes investing in people as well as infrastructure. Connecting community members with job opportunities that result from actions in the plan and providing training opportunities for local youth can build wealth and avoid displacement in communities.



"A targeted universal strategy is inclusive of the needs of both dominant and marginalized groups, but pays particular attention to the situation of the marginalized group … Targeted universalism rejects a blanket approach that is likely to be indifferent to the reality that different groups are situated differently relative to the institutions and resources of society."

-John Powell, Racing to Justice

Old problems require new thinking

Our vision for a climate-positive future cannot be achieved without advancing equitable outcomes and addressing existing disparities. These approaches must enlist a **targeted universalism** approach, where solutions begin with addressing the needs of those who are most vulnerable to climate change, or experiencing disparate outcomes. Doing so will produce benefits for everyone. For this reason, the 2015 Climate Action Plan used an equity lens that prioritized the needs of low-income communities and communities of color.

How is equity integrated in the Climate Action Plan?

Equity played an integral role in all phases of the 2015 Climate Action Plan, including an intentional community engagement process that included the creation of an Equity Working Group made up of representatives from six community-based organizations representing the interests of low-income populations and communities of color. The insights and local knowledge that these groups provided was invaluable. This work resulted in a plan that is inclusive and recognizes the unique strengths that exist in communities.

Equity is featured from the guiding vision for the plan through the implementation stage. This intentional integration throughout the plan seeks to ensure that the Climate Action Plan is more than just words on paper, but a plan for inclusive accountable implementation.

Equity Working Group Meeting

"A notable success is how the group was able to grapple with the potential negative impacts/missed opportunities for communities of color and low income populations for all topic areas, considering as many aspects as was possible in our short time together. By leading with equity, the recommendations and action considerations were stronger than they would be otherwise."

Vivian Satterfield, OPAL Environmental Justice Oregon, Equity Working Group Member

Vision

The City and the County's vision of equitable climate action is reflected throughout the plan's vision for 2050 for a prosperous, connected, healthy and resilient and equitable future. The 2050 vision specifically imagines a future where everyone has access to a walkable and bikeable neighborhood; employment and small business opportunities are led by and employing underserved and underrepresented communities; and communities of color and low-income populations are involved in the development and implementation of climate-related programs, policies and actions.

Equity Commitments

The City and County are committed to equitably implementing the actions in the Climate Action Plan in ways that address health, safety and livability, access, prosperity and inclusive engagement.

Actions

Strategies and actions to advance equity and reduce disparities are highlighted in the chapter narratives, as well as called out explicitly in several key actions. In addition, actions with a significant opportunity to advance equity are identified with an "E" icon.

Equity Considerations

City and County staff incorporated key equity considerations in the implementation of the actions contained in the plan.

Equity Implementation Guide

The Climate Action Plan Equity Implementation Guide provides support for City and County staff on best practices and tools for integrating equity into their work.

Climate-Equity Metrics

The City and County will develop climate-equity metrics to track the degree to which equity considerations are integrated into the decision-making processes and implementation of the Climate Action Plan, and will report on progress in a transparent manner.

Achieving equitable outcomes starts with new processes

Portland Plan set the stage

The process to update the Climate Action Plan began shortly after the 2012 adoption of the Portland Plan, the City's strategic plan. The Portland Plan established an overarching equity framework that articulated the citywide need to prioritize racial equity and established an intentional action plan to work towards the elimination of racial and other disparities experienced in Portland. Borrowing from this framework, the Climate Action Plan prioritized the needs of communities of color and low-income populations in its approach to applying an equity lens. The Climate Action Plan equity project included three primary goals and project deliverables:

1. An updated Climate Action Plan that better integrates equity to maximize benefits and reduce barriers for communities of color and low-income populations.
2. A set of climate equity metrics that can be used and refined to track progress on 1) ensuring Portland's climate actions are more equitable, and 2) furthering equity goals as defined in the Portland Plan through climate actions.
3. A plan to continue to build relationships with diverse communities, and diverse membership within these communities, around climate change.

Funding identified for community engagement

In 2013, the Portland Bureau of Planning and Sustainability received a grant from the Bullitt Foundation and Partners for Places, a partnership between the Funders' Network for Smart Growth and Livable Communities and the Urban Sustainability Directors Network, to support community engagement and equity integration into the 2015 Climate Action Plan.

- $5,000 for an equity scan of Portland's 2009 Climate Action Plan.[1]
- $5,000 for an equity intern to support staff.
- $20,000 for community engagement.

Community invited to design community engagement process

The budget for community engagement was not enough to support a large engagement effort, but it did provide a unique funding opportunity. Community partners who had been part of the Portland Plan process and new partners who serve low-income populations and communities of color were invited to join staff in a preliminary meeting to design the community engagement process.[2]

Participants explored what was meaningful and feasible to accomplish with $20,000 for community engagement. Feedback from that meeting included:

- Climate change is not a lead issue for most local community-based organizations, and engaging in this effort would be taking away from existing priorities. Having access to new funds could bring attention to the climate action effort.
- There is a need to attract new community leadership to the table. This process could be an opportunity to cultivate new leaders.
- This effort should be a partnership with staff and community members.

As a result of the meeting, a sub-grant process was established. Community organizations were invited to apply for a $4,000 grant to support an organizational representative to participate in the Climate Action Plan Equity Working Group.

[1] The Equity Scan was performed by Dr. Greg Schrock, and Jamaal Green from Portland State University. This report can be found online at: http://www.portlandoregon.gov/bps/article/463573.

[2] The work of Center for Earth, Energy, and Democracy (CEED) and the staff of the City of Minneapolis in the development of the Minneapolis Climate Action Plan provided inspiration for a straw man proposal that was presented to the community in the meeting.

"Although, environmental justice (EJ) communities have historically carried the burden and effects of climate change, funding CBOs and organizations of color to work on EJ issues is new because it's been vastly underfunded. Being on this project, I see the commitment to bring us to the table. I would like to see our perspectives and work materialize in the update of the plan to really highlight this funding model to identify and prioritize the engagement of EJ communities as common practice."

Demi Espinoza, Coalition of Communities of Color, Equity Working Group Member

JUNE 2013

First meeting of the Equity Working Group

JULY 2013

Weekly meetings begin for the Equity Working Group to apply an equity lens to CAP actions

AUGUST 2013

Equity Working Group finalizes nine equity considerations for staff to use in conducting equity assessments of CAP actions

2013

Organizations selected and form the Equity Working Group

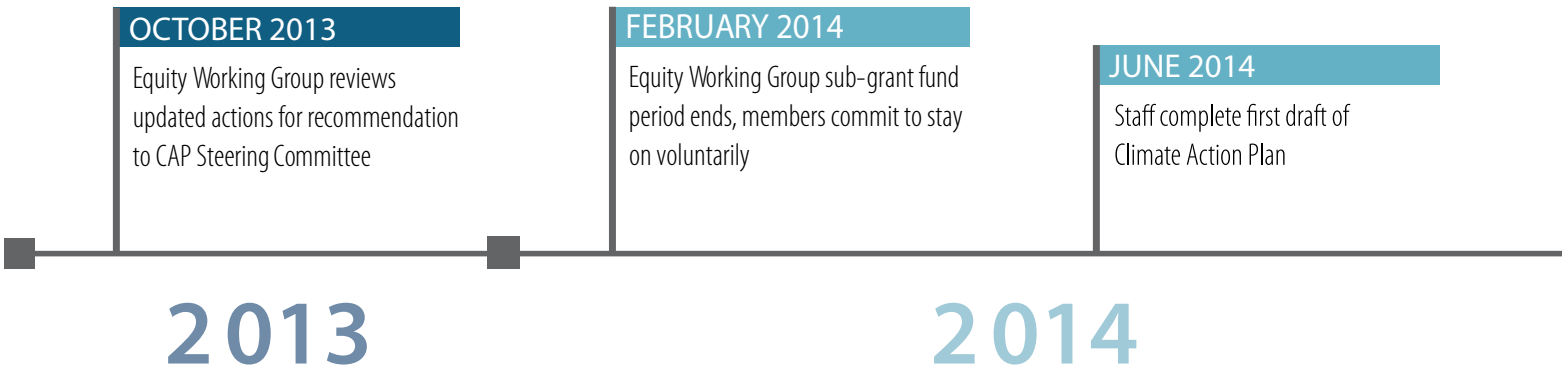
Eight organizations applied, and five were initially awarded sub-grants. Because a sixth was identified as a strong candidate, Multnomah County, the City's partner in the Climate Action Plan, contributed an additional $4,000. Verde, a community partner that is focused on sustainable economic development within the Latino community participated in the process as a grant reviewer. The Equity Working Group community membership consisted of representatives from Groundwork Portland, Upstream Public Health, the Coalition of Communities of Color, OPAL Environmental Justice Oregon, Wisdom Council of the Elders and the Asian Pacific American Network of Oregon (APANO).

Members of the Climate Action Plan Steering Committee were also invited to participate in the Equity Working Group. Their role was to facilitate cross-over communication between the two groups and facilitate the advocacy of policy ideas from a non-staff perspective. To bring in professional perspectives on planning, community engagement and public health, staff from the Bureau of Planning and Sustainability and Multnomah County Health Department also joined the Equity Working Group.

Effective partnership requires a common vocabulary and shared goals

The Equity Working Group began work in June 2013 with a two-part orientation. The first meeting focused on getting to know the participants and staff, as well as establishing shared understanding of the working group's role and the expected outcomes. Because participants were not expected to have a background in climate change, staff provided an overview of both the scientific context and the policy framework for large-scale carbon emission reduction. The second meeting was focused on developing a shared concept of "equity." For this, the group enlisted the help of a tool developed by Multnomah County, the 4-P Analysis, which helps groups develop their own equity lens for a particular policy issue.

[3] The analysis is now called the 5-P Analysis and is available at https://multco.us/diversity-equity/equity-and-empowerment-lens.



Best laid plans go astray

Initially, each chapter (e.g., energy, transportation, solid waste, etc.) of the draft Climate Action Plan was presented to the Equity Working Group via a conference call. Participants were then given a worksheet outlining all of the proposed climate actions for that chapter and were asked to identify the equity implications of each action (e.g., benefits, burdens, unintended consequences). The following week the completed worksheets were due at the in-person meeting where Equity Working Group members were asked to share their feedback directly with the City and County staff that had authored that chapter. This process was to be repeated every two weeks until all nine chapters of the draft Climate Action Plan had been assessed.

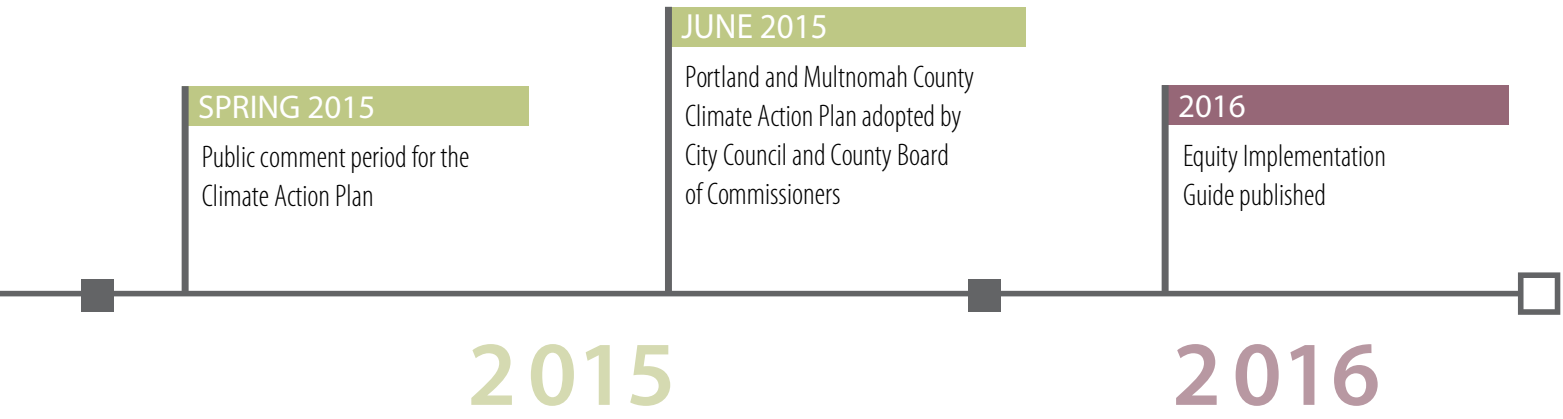
Project staff checked in weekly with the grantee organizations to get feedback on the process. A month into the process staff learned that Equity Working Group members found this approach to be constraining the creativity of the group and creating an imbalanced power dynamic between chapter authors (staff) and grantee organizations (community). So, based on this feedback, staff changed the entire meeting process and structure.

To foster better dialogue, the in-person meetings were scheduled first and used to introduce a topic and to create the opportunity for the grantees to share relevant experiences from their community related to the topic area. Only then did participants review the actions and ask follow-up questions of staff. Participants were given an additional week (per chapter) to review the proposed actions in more detail and provide additional feedback in writing and during a conference call.

The process changed from grantees being tasked with identifying the equity implications of an action such as "adopting context sensitive street design standards for residential streets" to being asked "what are the transportation related challenges and opportunities in your communities," and tasking staff with figuring out how the group's feedback should inform street design standards.

This group process change was sizable and required more time for a project that was already behind schedule. But the time and effort was worth it as it ultimately ensured the process was both accessible and meaningful for all participants.

> ***"I found the responsiveness of staff to issues around process to be commendable. It actually shifted the group from being constrained by existing silos and processes of government to a more broad conversation of 'what kind of outcomes/shifts/ changes do we want to see?' and then have the government process fundamentally change the way it approaches the solutions to those problems."***
>
> **Vivian Satterfield, OPAL Environmental Justice Oregon, Equity Working Group Member**



Feedback was molded into 9 equity considerations

Staff summarized the feedback from these work sessions and finalized them after review by the Equity Working Group. (See Equity Considerations text box for more details).

Staff then used the Equity Considerations to conduct a basic equity assessment of every action proposed in the draft Climate Action Plan. Actions were revised based on that assessment and the updated actions were shared with the Equity Working Group to determine if their feedback had been adequately integrated.

"For the community-based grantees, we learned how to better navigate the government bureaucracy while developing our own internal leadership around the issues of climate change. This small investment in our organizations had great returns in terms of building new capacity within various groups that are often ignored in the civic process due to cultural or language barriers. Moving forward, this grant could be a great model for future meaningful community engagement in a policy making process."

Duncan Hwang, Asian Pacific American Network of Oregon (APANO), Equity Working Group Member

EQUITY CONSIDERATIONS

1. Disproportionate impacts

Does the proposed action generate burdens (including costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?

2. Shared benefits

Can the benefits of the proposed action be targeted in progressive ways to reduce historical or current disparities?

3. Accessibility

Are the benefits of the proposed action broadly accessible to households and businesses throughout the community — particularly communities of color, low-income populations, and minority, women and emerging small businesses?

4. Engagement

Does the proposed action engage and empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner?

5. Capacity building

Does the proposed action help build community capacity through funding, an expanded knowledge base or other resources?

6. Alignment and partnership

Does the proposed action align with and support existing communities of color and low-income population priorities, creating an opportunity to leverage resources and build collaborative partnerships?

7. Relationship building

Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government?

8. Economic opportunity and staff diversity

Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city and county staff?

9. Accountability

Does the proposed action have appropriate accountability mechanisms to ensure that communities of color, low-income populations, or other vulnerable communities will equitably benefit and not be disproportionately harmed?

How actions are implemented is critical to achieving more equitable outcomes

During the process, the Equity Working Group provided considerable feedback about how to implement actions. Their feedback was rich in content but difficult to place in a policy document. This eventually resulted in the development of an Equity Implementation Guide, a companion document to the Climate Action Plan that captures the specific recommendations as well as an overall approach to incorporating equity as actions are implemented. The guide serves as a tool for building staff capacity to effectively implement the policy guidance in the Climate Action Plan.

Building partnerships for the long haul

The committee initially set a timeline to complete the Equity Working Group process within three months and to draft the Climate Action Plan update by the end of 2013. It became clear that effectively incorporating equity into the plan would require more time. When the Equity Working Group finished its meetings in October 2013, it had provided staff with feedback on the chapters and actions, but also a direction for integrating equity throughout the content. Staff set to work on developing the rest of the content of the *Climate Action Plan*, but this process took longer than anticipated.

The grant fund period ended in February 2014, which meant that the Equity Working Group process would end before the Climate Action Plan was completed. At the closing meeting, all organizations that had participated expressed a willingness to continue in a partner role to advise on the content and process even though continued funding was not available. To respect the time of the organizations, they no longer met regularly but were instead reconvened at key times to review the recommended draft and then later the proposed draft of the plan.

When the 2015 Climate Action Plan was ready for adoption, Equity Working Group members testified at Portland City Council and the County Board of Commissioners to communicate the importance of the process, the value of integrating equity into the Climate Action Plan, and the need for public agencies to hold themselves accountable to communities most vulnerable to the effects of climate change through an ongoing commitment to measure progress.

"I believe again the other notable success was having that nine point action statement around equity issues. I think that's very great and I think that as I deal with folks in the community I look forward to sharing that with them just as part of the thing that the city is trying to do as far as bringing citizens in. I personally think that's a great statement in itself and really a nice kind of big picture thing to look forward to and I look forward to just kind of educating folks about some of those issues."

Les Shannon, Groundwork Portland,
Equity Working Group Member

Sharing the lessons we learned

"I felt genuinely valued as a community partner. I also thought that the city staff were very responsive and bent over backwards to accommodate us. I was very impressed by that.

I wish the timeline had been a little less tight. With more time, I might have enjoyed engaging in some more dialogue and learning with city staff and grant partners about some of the ideas that came out of the process."

Claudia Arana Colen, Upstream Public Health,
Equity Working Group Member

Meeting the needs of participants. Learning to recognize and meet the needs of participants was an important component of the process. Rather than strict adherence to a predetermined process, flexibility regarding the form, content and logistics of the engagement was necessary. Notable modifications to the process include:

- Meetings were moved from a downtown location to a more convenient location for Equity Working Group members.
- Printed handouts were provided rather than electronic files.
- Meeting agendas were restructured to foster more productive discussions by focusing on the experience and wisdom of members instead of line item feedback on each action.
- Separate meetings were organized with individual Equity Working Group members to solicit feedback if schedule conflicts prohibited their attendance at the regular meeting.
- The timeline was extended several times to allow time to cover more complex topics.

Facilitating with awareness of power and privilege. Creating a space of mutual learning requires intentional creation of space that acknowledges the inherent power dynamics between community members and government employees, people of color and white people, and socio-economic class differences. Some of the tactics used included creating and reinforcing ground rules, prepping staff for what to expect before coming to Equity Working Group meetings, and frequent one-on-one check-ins with the Equity Working Group participants.

Building capacity and relationships. Successful integration of equity issues into climate planning requires the development of new relationships between staff and community. City and County staff provided technical and logistical support throughout the process to facilitate learning by both staff and organization representatives. For example, the Equity Working Group orientation included an introduction to climate change and an exploration of equity and social justice language to begin building a bridge and shared goals between staff and community representatives and to honor the collective wisdom and experience in the room. Later, Equity Working Group members invited City and County staff to their organizations to meet with and further develop relationships within their communities.

Funding matters. All organizations reported the importance of funding, and for some it was the decisive factor that made it possible for them to participate.

Implementation and metrics. Through discussions with the Equity Working Group it became clear that the potential equity implications (positive or negative) of a given Climate Action Plan action had more to do with how that action was implemented than the action itself. For example, the Climate Action Plan action to plant more trees does not necessarily have equity implications, but decisions about where those trees are planted and who is planting those trees do.

Community members also identified the importance of "being able to see the needle move toward equity outcomes." This proved difficult to solve for within the update period of the plan. The Equity Implementation Guide provides a framework for measuring equity in the implementation of actions, but staff were not able to develop equity indicators or metrics during the planning period. Instead, this became an action of the plan.

This work takes time. The original timeline anticipated completing the update of the Climate Action Plan by the end of 2013. The Equity Working Group, along with City and County staff, worked rigorously from May to October 2013 to complete their initial equity review of the proposed actions for the updated plan. Coordination of the multiple components of the update project, including the significant overhaul of the previous plan to integrate equity (as well as other key topics like consumption and climate preparation) resulted in extending the overall project timeline considerably. The updated Climate Action Plan was adopted in June 2015.

" As a result of the grant, my organization had the opportunity to share our community's concerns and questions dealing with climate change and to understand how the Climate Action Plan may impact/benefit our community. This grant gave us the funds to have our staff on the Equity Committee, justifying our involvement and time on the Climate Action Plan with our board. As well, these meetings were a great opportunity for our organization to connect and partner with other communities on environmental, climate, and health issues."

Amanda Kelley-Lopez, Wisdom of the Elders, Equity Working Group Member

Outcomes

Meaningful partnerships continued beyond the project period

The final 2015 Climate Action Plan update was not completed within the grant period, but the organizations that participated in the Equity Working Group remained engaged with the project beyond the grant period, with several Equity Working Group members testifying before City Council in support of the plan's adoption.

Catalyst for further work

As an outcome of relationships built during this project, Wisdom of the Elders is working to create a Native American Tribal Council on Climate Change. The Asian Pacific American Network of Oregon (APANO) hired a full-time staff person to build out a new program to work on climate change and climate resilience following their experience with the Equity Working Group. Another initiative, informed by the experience of working on this project, was a joint effort by the Coalition of Communities of Color, Verde and the Oregon Environmental Council to begin a process of building relationships between leadership of organizations focused on equity and organizations focused on environmental issues. This effort held its first gathering in February 2014 with participation from many of the organizations involved in this grant, including the Bullitt Foundation and the City of Portland Bureau of Planning and Sustainability, both project funders.

Catalyst for City and County learning

The process proved invaluable for City and County staff involved. Many staff members noted that attending Equity Working Group meetings and hearing community concerns enabled them to see their work differently and better understand its equity implications. This resulted in rethinking actions and modifying them accordingly. The process highlighted that while City and County staff have expertise, there is also tremendous knowledge and expertise at the community level. This model of engagement can be replicated to foster mutual learning.

> ***"I personally feel more committed to environmental and climate changes issues. I benefited from being at the table with my peers to learn about how this issue affects their community. We are prioritizing environmental justice in our organization and hope that we can build more partnerships with community-based organizations and government in the future."***
>
> Demi Espinoza, Coalition of Communities of Color,
> Equity Working Group Member

New Actions for a Better Plan

City and County staff, with guidance from the Equity Working Group, incorporated equity throughout the plan. A few specific examples are outlined below:

New 2030 Objectives:

- **17)** Engage communities, especially impacted under-represented and under-served populations, in the development and implementation of climate change-related policies and programs. (Page 120)
- **20)** Build City and County staff and community capacity to ensure effective implementation and equitable outcomes of climate action efforts. (Page 133)

Added specificity to how actions are implemented:

- **1G)** Small Commercial – Support energy efficiency improvements to small commercial buildings, especially in under-served communities. (Page 64)
- **3C)** Community Solar – Support the development of community solar projects that benefit all residents, particularly communities of color and low-income populations. (Page 68)
- **4Q)** Affordable Housing Access to Transit – Use regulatory and voluntary tools to promote affordable and accessible housing development along…transit routes and in opportunity areas. (Page 81)
- **4EE)** Car Sharing – Partner with car sharing companies ... Consider programs to expand use of car sharing among low-income households. (Page 82)
- **13A)** Tree Programs – Continue tree planting and expand tree preservation and maintenance programs and incentives. Focus on low-canopy neighborhoods and neighborhoods with populations at higher risk of adverse outcomes of urban heat island effects. (Page 104)
- **13B)** Canopy Targets – Revisit urban forest canopy targets: Take into consideration ... equitable distribution of tree-related benefits across the city. (Page 104)
- **17A)** Alignment with Community – Identify and seek resources to support community-based initiatives, especially from low-income areas and communities of color, that align with climate change preparation priorities, carbon emission reduction efforts and low-carbon lifestyles. (Page 120)
- **20D**) Workforce Development – Create cross-bureau initiatives… to strengthen the capacity of firms owned by people of color and nonprofits serving underrepresented and under-served adults and youth to help implement Plan actions. (Page 133)
- **20E)** Career Development – Maximize career development opportunities, especially for low-income populations, communities of color and youth, in the fields of energy, green building, transportation, etc... (Page 133)
- **20L)** Metrics – Develop comprehensive qualitative climate action metrics to measure progress…that incorporate an evaluation of benefits and burdens to low-income populations and communities of color. (Page 134)

Frequently asked questions

1. What was the equity scan and how was it used to support the work of equity integration? Was it duplicative to the work of the Equity Working Group?

The City of Portland hired Greg Schrock, a professor at Portland State University's Toulan School of Urban Planning, to perform the equity assessment of the 2009 Climate Action Plan. This became known as the equity scan and its purpose was to identify gaps and missed opportunities in addressing equity in the City's previous climate plan, to research best practices from around the country and to develop equity metrics recommendations. Dr. Schrock, along with his research assistant Jamaal Green, produced the report and met with staff at length to share their findings and discuss opportunities to better integrate equity into the 2015 plan.

It was not duplicative to the Equity Working Group as their work was about the experience of the community. The Equity Scan provided a comparative analysis, and became a helpful tool for both staff and community members in their application of an equity lens.

2. How will the Climate Action Plan Equity Implementation Guide be used?

The Climate Action Plan has over 150 actions, but not every action is built the same. The manner in which an equity lens is applied varies depending on the type of action. Whether the nature of an action is regulatory, programmatic, policy or an investment shifts the questions staff should ask in applying an equity analysis to their climate work. Programs need to understand who is being served, while regulations should equitably distribute the burdens and benefits—intentional and unintentional—on various communities. This approach helped to structure the Equity Implementation Guide, which is intended to support staff in applying an equity lens. The nine equity considerations were condensed into six objectives that will be assessed in the Climate Action Plan annual progress report. The Equity Implementation Guide is scheduled to be released summer 2016.

3. How were you able to pay community members to participate in an advisory process? Did participants need to have a minimum set of qualifications? Was there a job description?

The City of Portland awarded subgrants from the Bullitt Foundation. The funds were provided to organizations and not individuals. Each organization signed a grant agreement which provided guidance, but did not restrict how funds could be spent to support an organization's involvement in the Equity Working Group. The Equity Working Group was not regarded as an advisory process, but rather a panel of paid community experts working in partnership with government staff on a project. The grant agreement outlined expectations for the participant, the organization, as well as government staff.

Each organization was responsible to identify a representative that would meet specific qualifications as outlined in the terms of the grant agreement. Representatives varied across the participating organizations and included a board member, an intern, program staff and an executive director.

4. Why didn't you have the Equity Working Group members participate as part of the Steering Committee?

Equity Working Group members did participate in Steering Committee meetings and vice versa, however they were managed as two separate processes to ensure the development of a focused work environment for grantee organizations. This was important as the Equity Working Group's task was more intensive in both timeline and topic than the 2015 Climate Action Plan Steering Committee, which had a more general focus.

Creating opportunities is the essential first step

This project enabled the City of Portland and Multnomah County to establish relationships and identify strategies to target climate action efforts that will help 1) achieve equity goals, and 2) reduce existing disparities facing communities of color and low-income households. Importantly, this project has established or strengthened relationships with diverse community organizations that are already generating positive impacts.

Creating the space, time and trust to identify shared interests and opportunities for mutual benefit has proven to be of immeasurable value. The reason that equity is an issue today is that past decisions, deliberate or not, created deep inequities in Portland and nearly every city in the country.

An essential step to addressing these inequities is to create opportunities for the people most impacted to be at the table for today's decisions. That can happen only if policymakers and members of impacted communities know each other and trust each other. This project has made a small but important contribution to that effort.

Additional information

Visit:

www.portlandoregon.gov/bps/cap

Or e-mail:

climate@portlandoregon.gov

CLIMATE ACTION
THROUGH EQUITY

Multnomah County

Austin Community Climate Plan (ACCP) Update

Equity Tool Process

- ➔ Commitment
- ➔ Equity Objectives
- ➔ Process
- ➔ Examples

View Webinar

OFFICE OF SUSTAINABILITY
CITY OF AUSTIN

Last Updated: March 24, 2020

Why Equity and Climate

It is a local necessity and has become part of the national conversation

Every technology / policy action requires people to implement / act

Engaging with communities of color brings wisdom and lived expertise to solve societal problems “experts” haven’t solved yet

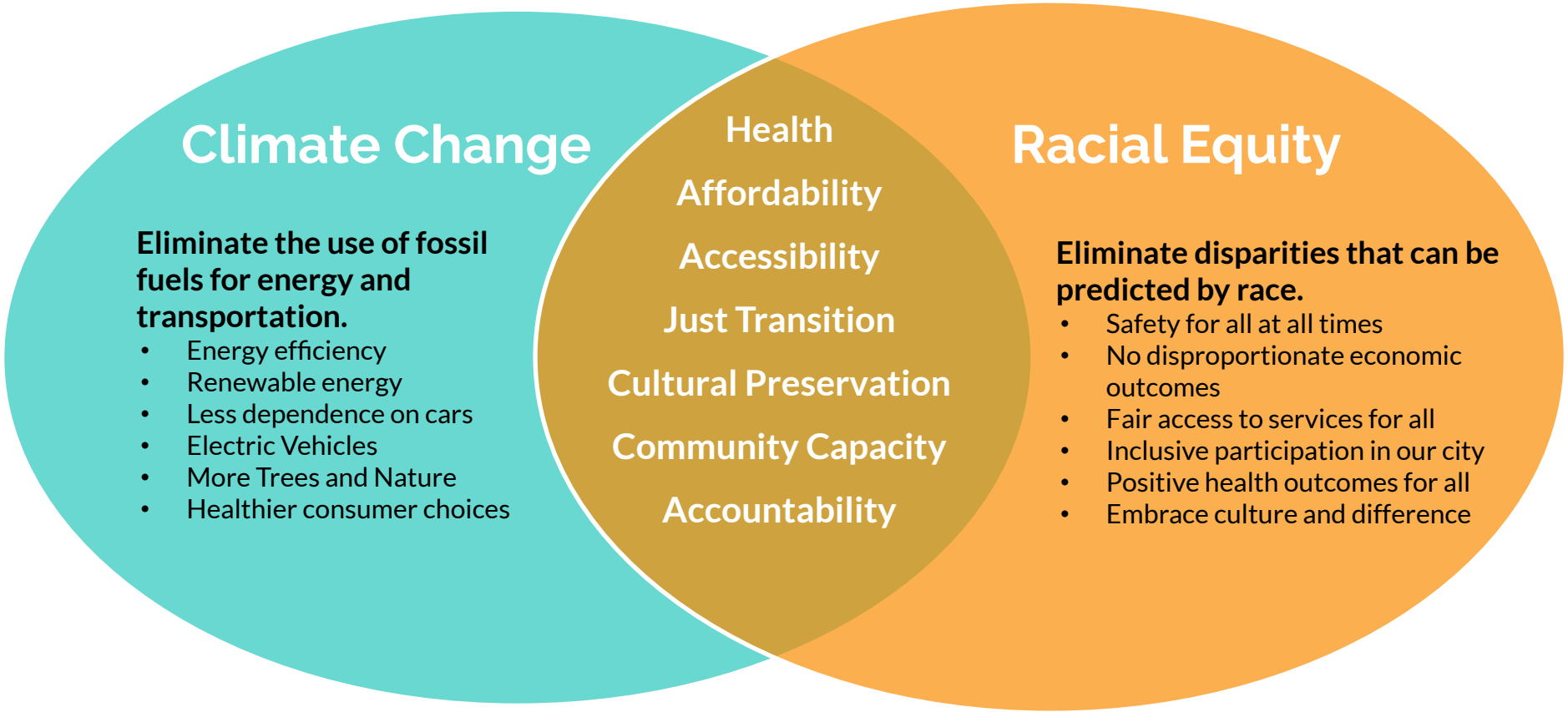
The same systems that exploit the environment also exploit people and animals, we need to change the systems

If we create solutions for those who need it most and can benefit the most, it will work for everyone

If we don’t include everyone in the community in our solutions, we will never reach the scale that’s necessary to solve this problem

If we’re not proactively addressing equity, we’re perpetuating injustice

Commitment: Climate Justice



Our Climate Equity Commitment

Racial equity is the condition when race no longer predicts a person's quality of life outcomes in our community. The City of Austin Climate Plan Revision Process recognizes that racial inequity is wrong and solving climate change is impossible without racial equity. In Austin, this means our Climate Plan Revision Process will only succeed if we center racial equity in the goals, strategies, and plans developed through the Revision Process. We realize that City of Austin infrastructure, policies, and investment have historically and systemically neglected and harmed low-income communities and communities of color. The City acknowledges these injustices and the need to right these wrongs by changing its institutions and creating a culture of equity. We recognize:

- Low-income communities and communities of color are the most impacted by extreme weather, and climate change will worsen existing harms and challenges.
- Low-income communities and communities of color must be prioritized to receive the disproportionate benefits of the transition to a pollution-free society.
- If we design and implement programs to serve low-income communities and communities of color, we will positively impact all residents in the Austin area.

Because of this, we have created the following themes and associated Equity Tool with Screening Questions to ensure our climate plan will increase racial equity: Health, Affordability, Accessibility, Just Transition, Community Capacity, Cultural Preservation & Accountability.

Objectives

Health - Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.

Affordability - Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.

Accessibility - Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.

Just Transition - Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.

Community Capacity - Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt, and thrive.

Cultural Preservation - Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.

Accountability - Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.

Recommended process for advisory groups

Please refer to the following 6 steps for building racial equity, adapted from GARE, as you develop goals and strategies:

Questions

Evaluating responses: through scores or criteria

+, -, 0 (positive impact, negative impact, neutral or not applicable)

- No negative scores will be accepted, will have to revise
- Score all the questions, discuss
- End with an assessment of 0+ score for all 7 themes (improving conditions)
- Could scores be used later to prioritize or stack the goals/strategies against each other?

Overall objective: Have participants ask better questions and to consider more detailed goals/strategies that can increase equity.

Theme 1: Health Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?			
Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?			
Does the proposed action reduce stress, anxiety, and depression, i.e. improve mental health?			
Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?			
Overall response to these questions with justification:			

Theme 2: Affordability Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Could this limit the displacement of residents and small businesses when surrounding property values rise?			
Is the proposed action affordable to all residents, and/or does this offer inclusive financing strategies that prioritize the most income-burdened populations? (be specific about whether you're financing through an organization or the city, etc)			
Does the proposed action reduce cost burden and the number of families that are cost-burdened by housing (including utilities), transportation (defined as spending more than 33% of income on H+T)?			
Does the proposed action generate burdens (including financial, health costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?			
Overall response to these questions with justification:			

Theme 3: Accessibility Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit in order to access essential services (hospital, school), amenities, and/or jobs?			
Does the proposed action improve amenities and essential services in traditionally underserved geographies/neighborhoods? essential services: hospitals, schools, and groceries Amenities: parks / green spaces			
Does the proposed action increase equitable access to information/education around climate, i.e. impacts, benefits, and programs?			
Does the proposed action remove any barriers that might prevent individuals in low income communities and communities of color *(consider language, gender, socio-economic status (SES), digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.)* from benefiting fully if this strategy were implemented as written?			
Overall response to these questions with justification:			

Theme 4: Just Transition Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city staff? *internal* or support training programs prioritizing low-income communities and communities of color? *external*			
Does the proposed action create local opportunities for livable wage jobs for low-income communities and communities of color?			
Does the proposed action place responsibility on institutions to address historical disparities in contributing to climate change?			
Overall response to these questions with justification:			

Theme 5: Community Capacity Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt, and thrive.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action engage and continue to empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner? Does it respect community-based knowledge and is it based on community identified needs and input/feedback?			
Does the proposed action help build community capacity through funding, educational opportunities, and/or other resources?			
Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government? (by leveraging resources and building collaborative partnerships) Does this action strengthen community relationships and partnerships?			
Overall response to these questions with justification:			

Theme 6: Accountability Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action have provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity/income) and public reporting of data? Can this data be validated qualitatively by community members?			
Does the proposed action have clear markers of short-term and long-term success as well as timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation and enforcement)?			
Does the proposed action address consequences if goals are not met? Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?			
Is the proposed action adequately funded to achieve its designed goals?			
Overall response to these questions with justification:			

Theme 7: Cultural Preservation Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action acknowledge/respect/honor the culture, historic assets, and traditions of low income and communities of color?			
Does the proposed action improve social cohesion (engagement and connection within/to the community) among low income communities and communities of color?			
Does the proposed action's decision-making processes go beyond dollars and cents to address shared values and cultural differences in order to support implementation?			
Overall response to these questions with justification:			

Scoring

	Impact Score
Health	
Affordability	
Just Transition	
Accessibility	
Community Capacity	
Accountability	
Cultural Preservation	
Total:	

No negatives are accepted. If there is a negative impact, then the next step is to revise.

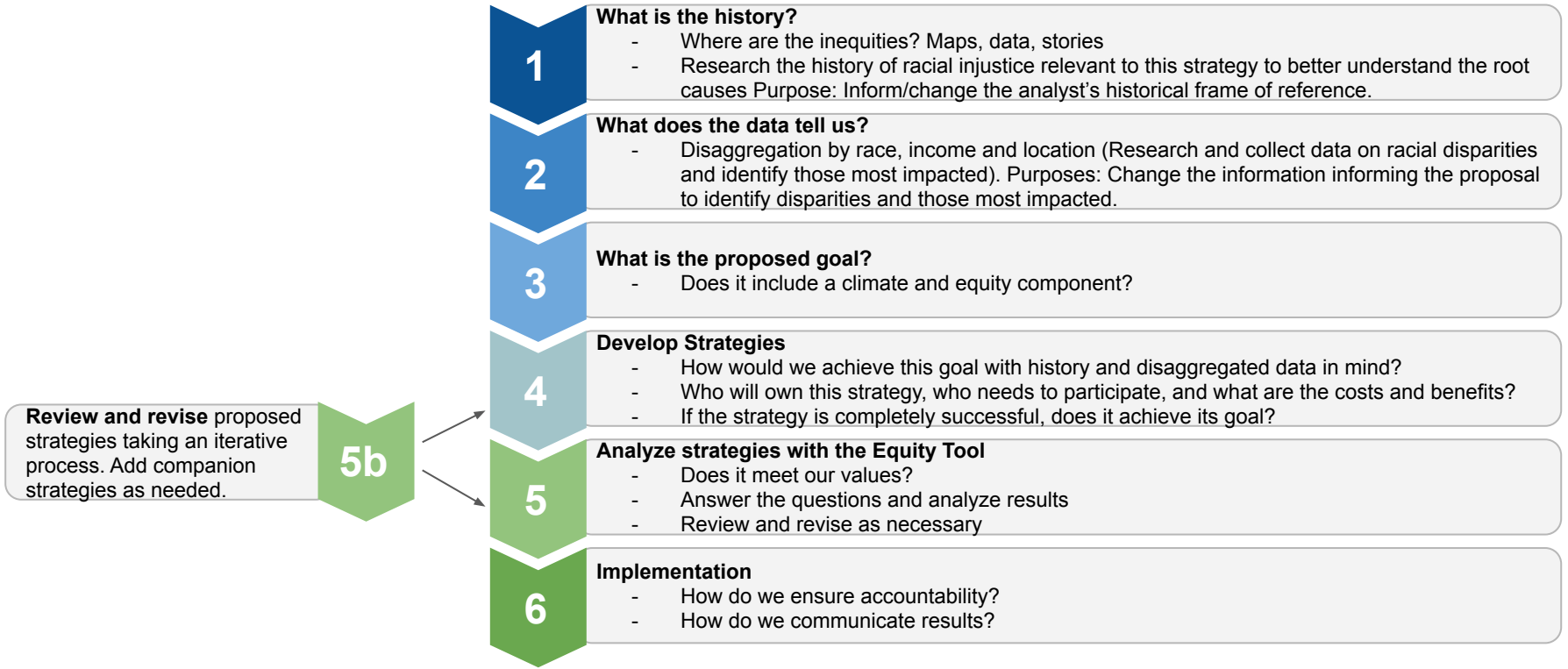
Scores could later be used to prioritize or stack the goals / strategies against each other. The overall goal is to ask better questions, and make better goals / strategies, the numbers are purely arbitrary.

Examples

Full example application

Recommended process for advisory groups

Please refer to the following 6 steps for building racial equity, adapted from GARE, as you develop goals and strategies:



Example 1: EV Charging Stations (Example)

Why this is being proposed: In order to reach the 2030 target for GHG reduction in transportation, we need 200,000 EVs on the road. EVs are purchased new and used by individuals and businesses. EVs all need charging infrastructure at either home (single family / multi-family) work place, or public charging. EVs can create substantial economic benefits for owners in terms of cost savings on fuel and maintenance.

1. **What is the history?** History tells us that EVs have been adopted by white, high income residents in Austin. Air pollution has decreased over time, but people of color who live / work / school near sources and freeways have had the most impact from this pollution
2. **What does the data tell us?** Most existing AE rebates on charging have gone to support those white high income EV owners and public charging infrastructure has been placed with an "equality" strategy. Single family homeowners charge at home, but if you live in multi-family you likely don't have access to charging. Chargepoint Map and AE rebate map
3. **What is the proposed goal?**
    a. By 2030, have 50,000 accessible EV charge points in the City, with at least 50% located at multi-family housing or work places prioritizing low-income communities and communities of color
4. **Develop Strategies**
    a. Incentivize multi-family housing developments to install accessible charging stations
    b. Offer no-cost EV infrastructure for low-income, single family housing
    c. Incentive large employers to install large numbers of workplace changing and also small businesses owned by people of color to install charging infrastructure for employees
5. **Analyze strategies with the Equity Tool**
6. **Implementation**

Theme 1: Health Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?			+1
Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?		-	
Does the proposed action reduce stress, anxiety, and depression, i.e. improve mental health?		-	
Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?			+1
Overall response to these questions with justification: **Action will definitely reduce localized air pollution**			

Theme 2: Affordability Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Could this limit the displacement of residents and small businesses when surrounding property values rise?		-	
Is the proposed action affordable to all residents, and/or does this offer inclusive financing strategies that prioritize the most income-burdened populations? (be specific about whether you're financing through an organization or the city, etc)			+1
Does the proposed action reduce cost burden and the number of families that are cost-burdened by housing (including utilities), transportation (defined as spending more than 33% of income on H+T)?			+1
Does the proposed action generate burdens (including financial, health costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?			+1
Overall response to these questions with justification: **EVs can create maintenance and fuel cost savings for drivers. "How" the stations are installed and paid for is key to affordability.**			

Theme 3: Just Transition Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city staff? *internal* or support training programs prioritizing low-income communities and communities of color? *external*		-	
Does the proposed action create local opportunities for livable wage jobs for low-income communities and communities of color?		-	
Does the proposed action place responsibility on institutions to address historical disparities in contributing to climate change?			+1
Overall response to these questions with justification: **Could go back and add a strategy related to contracting and installation**			

Theme 4: Accessibility Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit in order to access essential services (hospital, school), amenities, and/or jobs?		-	
Does the proposed action improve amenities and essential services in traditionally underserved geographies/neighborhoods? essential services: hospitals, schools, and groceries Amenities: parks / green spaces		-	
Does the proposed action increase equitable access to information/education around climate, i.e. impacts, benefits, and programs?			+1
Does the proposed action remove any barriers that might prevent individuals in low income communities and communities of color *(consider language, gender, socio-economic status (SES), digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.)* from benefiting fully if this strategy were implemented as written?			+1
Overall response to these questions with justification: **The key here is to intentionally make this infrastructure investment accessible.**			

Theme 5: Community Capacity Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt, and thrive.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action engage and continue to empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner? Does it respect community-based knowledge and is it based on community identified needs and input/feedback?			
Does the proposed action help build community capacity through funding, educational opportunities, and/or other resources?			
Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government? (by leveraging resources and building collaborative partnerships) Does this action strengthen community relationships and partnerships?			
Overall response to these questions with justification:			

Theme 6: Accountability Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action have provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity/income) and public reporting of data? Can this data be validated qualitatively by community members?			**+1**
Does the proposed action have clear markers of short-term and long-term success as well as timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation and enforcement)?			**+1**
Does the proposed action address consequences if goals are not met? Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?		**-**	
Is the proposed action adequately funded to achieve its designed goals?		**-**	
Overall response to these questions with justification: **This action is very clearly measured and accountability can be verified.**			

Theme 7: Cultural Preservation Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action acknowledge/respect/honor the culture, historic assets, and traditions of low income and communities of color?		-	
Does the proposed action improve social cohesion (engagement and connection within/to the community) among low income communities and communities of color?			+1
Does the proposed action's decision-making processes go beyond dollars and cents to address shared values and cultural differences in order to support implementation?		-	
Overall response to these questions with justification: **Would need to happen in implementation**			

Scoring

	Impact Score
Health	+2
Affordability	+3
Just Transition	+1
Accessibility	+2
Community Capacity	+2
Accountability	+2
Cultural Preservation	+1
Total:	13

Example 2: Incentivizing low-carbon building materials

(Draft example)

Why this is being proposed:
As the AE grid is decarbonized, it will be important to address additional strategies to reduce carbon emissions related to buildings, including the Scope 3 emissions, or embodied carbon, of materials used for building construction. While building operations account for 28% of global CO2 emissions, 11% of emissions come from just the materials and construction of the building, and when separated, concrete steel and aluminum industries account for 22.7% of global emissions. Additionally, many building materials used in the industry have been proven to have negative health impacts on occupants. This shows us that there is a real opportunity to target using alternative materials that have a lower carbon impact and follow appropriate health standards. Learning about and using sustainable materials will take effort, but also provides an opportunity for education and workforce development opportunities targeted to serve communities of color and low income communities.

1. **What is the history? "**Whether it is as policy makers, advocates, architects, project managers, contractors, or even in the construction workforce, the most impacted communities are underrepresented in the design, construction, and occupancy of sustainable, regenerative, healthy buildings" (Getting Beyond Green, 2019). At the same time, many construction workers face dangerous and unjust working conditions while being on the frontlines of constructing our homes, schools and hospitals here in Austin.
2. **What does the data tell us?** Latinx residents are projected to be the largest sector of the workforce in Austin, yet-- like members of the African-American/Black community, have disproportionate education outcomes and are experiencing a significant racial wealth divide when compared White and Asian communities. There is an opportunity here to target the disproportionate benefit of an emerging sustainable materials economy at Latinx and Black communities, and to create guidelines for fair and just labor.
3. **What is the proposed goal?**
    a. Reduce embodied carbon from building materials by 15% by 2025 and 30% by 2030.
4. **Develop Strategies**
    a. Provide incentive to developers to use low-carbon concrete, steel, aluminum and insulation,
    b. Reserve 50% of funds for affordable housing developers, and incentivize at a higher rate.
    c. Create guidelines to ensure that materials available for incentives follow transparent health declaration guidelines.
    d. Develop workforce development training opportunities through local unions and community colleges.
    e. Ensure that developers that receive incentives are signed on to the Better Builder Program by making this a requirement.
5. **Analyze strategies with the Equity Tool**
6. **Implementation**

Theme 1: Health Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?			+1
Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?			+1
Does the proposed action reduce stress, anxiety, and depression, i.e. improve mental health?		-	
Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?		-	
Overall response to these questions with justification: By incorporating a strategy that looks at building materials through the lens of potential health hazards, this action may mitigate outdoor air quality during construction/renovations and potential indoor air quality issues (that can affect longevity) throughout the building's life cycle.			

Theme 2: Affordability Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Could this limit the displacement of residents and small businesses when surrounding property values rise?		-	
Is the proposed action affordable to all residents, and/or does this offer inclusive financing strategies that prioritize the most income-burdened populations? (be specific about whether you're financing through an organization or the city, etc)			+1
Does the proposed action reduce cost burden and the number of families that are cost-burdened by housing (including utilities), transportation (defined as spending more than 33% of income on H+T)?		-	
Does the proposed action generate burdens (including financial, health costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?		-	
Overall response to these questions with justification: By increasing the incentive amount for affordable housing developers, and reserving an amount for this sector, the strategy attempts to be inclusive of buildings that serve low-income populations and communities of color.			

Theme 3: Just Transition Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city staff? *internal* or support training programs prioritizing low-income communities and communities of color? *external*			**+1**
Does the proposed action create local opportunities for livable wage jobs for low-income communities and communities of color?			**+1**
Does the proposed action place responsibility on institutions to address historical disparities in contributing to climate change?			**+1**
Overall response to these questions with justification: By creating a workforce development program that works with local unions and community colleges, this strategy is aiming for a more equitable and diverse workforce. There will need to be accountability tied to this to ensure that the program is directly serving/target communities of color and low-income communities.			

Theme 4: Accessibility Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit in order to access essential services (hospital, school), amenities, and/or jobs?		-	
Does the proposed action improve amenities and essential services in traditionally underserved geographies/neighborhoods? essential services: hospitals, schools, and groceries Amenities: parks / green spaces		-	
Does the proposed action increase equitable access to information/education around climate, i.e. impacts, benefits, and programs?			+1
Does the proposed action remove any barriers that might prevent individuals in low income communities and communities of color *(consider language, gender, socio-economic status (SES), digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.)* from benefiting fully if this strategy were implemented as written?			+1
Overall response to these questions with justification: The strategy aims to increase accessibility by targeting affordable housing and incorporating workforce development goals tied directly to diversification and equity.			

Theme 5: Community Capacity Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt, and thrive.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action engage and continue to empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner? Does it respect community-based knowledge and is it based on community identified needs and input/feedback?		-	
Does the proposed action help build community capacity through funding, educational opportunities, and/or other resources?			+1
Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government? (by leveraging resources and building collaborative partnerships) Does this action strengthen community relationships and partnerships?		-	
Overall response to these questions with justification: The strategy will aim to provide educational resources through the workforce development program. This can be expanded with partnerships with non-profit organizations/school districts to incorporate information to 9-12 curriculum.			

Theme 6: Accountability Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action have provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity/income) and public reporting of data? Can this data be validated qualitatively by community members?		-*	
Does the proposed action have clear markers of short-term and long-term success as well as timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation and enforcement)?			+1
Does the proposed action address consequences if goals are not met? Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?		-	
Is the proposed action adequately funded to achieve its designed goals?		-	

Overall response to these questions with justification:
Short-term goals have been set as part of the initial goal and can be tracked.

*In order to track equity/diversity outcomes, strategies will need to be in place to track demographic data.

Theme 7: Cultural Preservation Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action acknowledge/respect/honor the culture, historic assets, and traditions of low income and communities of color?		-	
Does the proposed action improve social cohesion (engagement and connection within/to the community) among low income communities and communities of color?		-	
Does the proposed action's decision-making processes go beyond dollars and cents to address shared values and cultural differences in order to support implementation?		-	
Overall response to these questions with justification: This strategy as written has neither a positive or negative effect on cultural conservation, but this can be revised to include this with the team.			

Scoring

	Impact Score
Health	2
Affordability	1
Just Transition	3
Accessibility	2
Community Capacity	1
Accountability	1
Cultural Preservation	0
Total:	10

Example 3: natural systems (Draft example)

Why this is being proposed:
Increased canopy cover reduces greenhouse gas emissions while also creating ecosystem benefits, such as improved health benefits improving quality of life outcomes for all ages across Austin.
50% canopy by 2050 – 35% canopy in 2020 = 15% increase over 30 years = 5% increase/decade.

1. **What is the history?** Legacies of racial segregation has led to inequitable outcomes of services, programs, and infrastructure investment across the city. Austin has a detailed history of environmental injustices that have highlighted these issues of environmental burdens or harms not shared equally. This has brought forth the need to equitably benefit communities of color in access to green spaces and improved canopy cover that create ecosystem health benefits
2. **What does the data tell us?** Asthma risks, and other health outcomes are disproportional for low-income, communities of color. There is canopy cover data available that is not equitably distributed across the city. This also aligns with the fastest-growing youth populations that suffer from loss or lack there-of canopy cover.
3. **What is the proposed goal?**
    a. Increase the City's tree canopy cover to 40% by 2030, prioritizing neighborhoods that are currently below the City's 35% average, which generally coincide with low-income communities and communities of color.
4. **Develop Strategies**
    a. Work with AISD schools that serve primarily low-income communities to get more trees planted on school properties.
    b. Work with forestry department to plant more street trees in neighborhoods in eastern crescent to increase canopy cover.
    c. Work with Tree Folks or similar orgs to provide homeowners with saplings, materials, and expertise to plant trees on their properties.

    These efforts should be focused in neighborhoods with lower tree canopy coverage and higher heat reading as compared to the city average.
5. **Analyze strategies with the Equity Tool**
6. **Implementation**

Theme 1: Health Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?			**+1**
Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?			**+1**
Does the proposed action reduce stress, anxiety, and depression, i.e. improve mental health?			**+1**
Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?			**+1**
Overall response to these questions with justification: **Living in neighborhoods with green space is linked to positive health outcomes. These include better heart health, stronger cognitive development, and greater overall longevity. Framing this strategy as it attributes to positive health outcomes is essential. Through measurement and tracking, these could then be determined if successful.**			

Theme 2: Affordability Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Could this limit the displacement of residents and small businesses when surrounding property values rise?		-?	
Is the proposed action affordable to all residents, and/or does this offer inclusive financing strategies that prioritize the most income-burdened populations? (be specific about whether you're financing through an organization or the city, etc)		-	
Does the proposed action reduce cost burden and the number of families that are cost-burdened by housing (including utilities), transportation (defined as spending more than 33% of income on H+T)?		-	
Does the proposed action generate burdens (including financial, health costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?		-	
Overall response to these questions with justification: **Green gentrification concerns, how does that relate to neighborhood landscaping?**			

Theme 3: Just Transition Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action support communities of color and low-income populations through workforce development, contracting opportunities or the increased diversity of city staff? *internal* or support training programs prioritizing low-income communities and communities of color? *external*			**+1**
Does the proposed action create local opportunities for livable wage jobs for low-income communities and communities of color?		**-**	
Does the proposed action place responsibility on institutions to address historical disparities in contributing to climate change?			**+1**
Overall response to these questions with justification: **Strategies need to be specific when considering contracting and installation. There are many opportunities to ensure that there are increased worrkforce development and local opportunities for neighborhoods to get involved.**			

Theme 4: Accessibility Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit in order to access essential services (hospital, school), amenities, and/or jobs?		-	
Does the proposed action improve amenities and essential services in traditionally underserved geographies/neighborhoods? essential services: hospitals, schools, and groceries Amenities: parks / green spaces		-	
Does the proposed action increase equitable access to information/education around climate, i.e. impacts, benefits, and programs?		-	
Does the proposed action remove any barriers that might prevent individuals in low income communities and communities of color *(consider language, gender, socio-economic status (SES), digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.)* from benefiting fully if this strategy were implemented as written?		-	
Overall response to these questions with justification: **Hopefully, strategies identify targeted areas that currently have historically lacked canopy cover and have health risks related to air pollution that may be remediated.**			

Theme 5: Community Capacity Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt, and thrive.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action engage and continue to empower communities of color and low-income populations in a meaningful, authentic and culturally appropriate manner? Does it respect community-based knowledge and is it based on community identified needs and input/feedback?		-	
Does the proposed action help build community capacity through funding, educational opportunities, and/or other resources?		-	
Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government? (by leveraging resources and building collaborative partnerships) Does this action strengthen community relationships and partnerships?		-	
Overall response to these questions with justification: **Strategies need to consider specific opportunities that foster community capacity through the implementation phases. What are the current procedures organizations such as Treefolks do when they are contracted for projects such as this?**			

Theme 6: Accountability Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action have provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity/income) and public reporting of data? Can this data be validated qualitatively by community members?			**+1**
Does the proposed action have clear markers of short-term and long-term success as well as timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation and enforcement)?		**-**	
Does the proposed action address consequences if goals are not met? Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?		**-**	
Is the proposed action adequately funded to achieve its designed goals?		**-**	
Overall response to these questions with justification: **Through measuring and implementation, strategies will need to be measured and tracked overtime to prove to be successful.**			

Theme 7: Cultural Preservation Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action acknowledge/respect/honor the culture, historic assets, and traditions of low income and communities of color?		-	
Does the proposed action improve social cohesion (engagement and connection within/to the community) among low income communities and communities of color?			+1
Does the proposed action's decision-making processes go beyond dollars and cents to address shared values and cultural differences in order to support implementation?		-	
Overall response to these questions with justification: **This action, if done with the right steps and partnerships in implementation, could help alleviate and right the wrongs of historic inequities and improve health outcomes.**			

Scoring

	Impact Score
Health	+4
Affordability	+0
Just Transition	+2
Accessibility	+0
Community Capacity	+0
Accountability	+1
Cultural Preservation	+1
Total:	8

MassDEP Clean Heat Standard (CHS)
Draft Framework
For Stakeholder Comment Only
November 2023

MassDEP is publishing the attached draft framework to update stakeholders on MassDEP's progress on detailed CHS program design, and to assist stakeholders wishing to comment on program design before MassDEP proposes regulations. All aspects of program design are open for comment. MassDEP will hold stakeholder meetings this fall, and requests written comment on the draft framework no later than December 21. 2023. Additional background is available on MassDEP's CHS web page: https://www.mass.gov/info-details/massachusetts-clean-heat-standard.

The draft framework builds on the CHS discussion document that MassDEP published in April 2023 and oral and written stakeholder comment received over the spring and summer. Key program design topics introduced in the discussion document are addressed, including:

- Topic #1 – Setting the Standard: The draft framework describes a standard that includes separate requirements for "full electrification" conversions (including a low-income "carve out"), and for annual emission reductions from using clean heat. The full electrification standard phases in gradually over time, starting at a level consistent with the current pace of heat pump deployment in Massachusetts.
- Topic #2 – Regulated Heating Energy Suppliers: The draft framework includes annual compliance obligations for suppliers of natural gas, heating oil, propane, and electricity. The electricity obligation starts small but increases over time as more and more customers electrify.
- Topic #3 – Credit Generation: The draft framework limits crediting to electricity and liquid biofuels at program startup, with a scheduled 2028 program review to evaluate revising eligibility based on specific criteria.
- Topic #4 – Compliance Flexibility and Revenue: The draft framework includes credit banking and an alternative compliance payment option with revenue dedicated to supporting future clean heat projects. A "just transition fee" on the initial sale of certain credits is included to support equitable outcomes.

MassDEP has posted the following additional documents on the CHS web page:

- Discussion draft regulatory language for an "early action" full electrification voluntary registration program. Written comments on this document are also requested by December 21.
- A FAQ document addressing basic questions about program design. MassDEP anticipates updating this document regularly in response to stakeholder questions.
- Comments and a summary covering comments received between May 10 and September 1.

I. Setting the Standards. Standards would be established to require annual emissions reductions while ensuring ongoing progress toward full electrification of buildings.

A. To ensure that emissions are reduced over time through ongoing use of clean heat, the program would include a requirement to document emissions reductions each year.

1. The emission reduction standard would be set to require reductions equivalent to an additional 1 million metric tons (MMT) of GHG emissions each year from 2026 through 2050 (i.e., totaling 1 MMT in 2026, 2 MMT in 2027 . . . 24 MMT in 2049). [i]

B. To ensure progress on electrification, the program would also include a requirement to complete a specified number of "full electrification" residential projects each year.[ii]

1. The full electrification standard would be 20,000 residences in 2026, increasing by 20,000 per year to reach 100,000 in 2030 and every later year.[iii]

2. To ensure equitable access to affordable clean heat, the regulations would include an "equity carve out" requirement that 25% of the full electrification standard be met by projects that serve customers who are eligible for low-income discount electricity rates. [iv]

Table 1. Annual standards, as statewide totals.

	2026	2027	2028	2029	2030	2035	2040	2045
Full electrification (number of projects)	20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000
Low income carve out	5,000	10,000	15,000	20,000	25,000	25,000	25,000	25,000
Emission reduction (metric tons)	1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	10,000,000	15,000,000	20,000,000

C. The standards would be inclusive of clean heat supported by other programs, such as federal tax credits. In other words, all clean heat that meets program requirements would count toward achievement of the standards regardless of whether it is supported by other programs.

II. Regulated Heating Energy Suppliers. The regulations would require retail sellers of natural gas, heating oil, propane, and electricity to demonstrate compliance each year.

A. The requirements for electricity sellers would be set in line with current building electrification programs (i.e., Mass Save) in the early years of implementation, and then increase gradually to ensure long-term viability of the standard as fuel providers' customer base declines due to electrification.[v]

1. The full electrification compliance obligations for retail sellers of electricity (including municipal electric utilities) would initially be set at a level not exceeding levels consistent with electric energy efficiency three-year plans, such as for example 16,000 full conversions per year.

2. Between 2027 and 2040, the full electrification obligation on electricity sellers would increase annually by 6,000 per year to reach 100% of the compliance obligation in 2040.

3. The annual emission reduction standard would phase in for electricity sellers after 2030, increasing from 1,500,000 MT in 2031 to the full obligation of 15,000,000 MT in 2040.

4. The compliance obligations for electricity sellers would be apportioned based on projected retail electricity sales. For example, assuming statewide electricity sales of 90,000,000 MWh in 2035, then the standards for that year would be (70,000/90,000,000 =) 0.000808511 full electrification project credits and (7,500,000/90,000,000 =) 0.095744681 MT of emission reduction credits per MWh of sales.

Table 2. Requirements for a retail electricity seller with 10,000 customers, assuming 6 MWh annual consumption per customer.

	2026	2027	2028	2029	2030	2035	2040	2045
Full electrification standard (number)	16	22	28	34	40	47	55	48
Low income carve out (number)	4	6	7	9	10	12	14	12
Emission reduction standard (MT)	0	0	0	0	0	4167	6818	8000

B. The remaining compliance obligations would be apportioned to natural gas, heating oil, and propane suppliers based on their reported carbon dioxide emissions for the year. For example, 2027 building sector emissions may be approximately 23 MMT, and the standard could require 40,000 full electrification projects. If, in that year, the total full conversion requirement on electricity sellers was 22,000 conversions, then natural gas, heating oil, and propane suppliers would be required to document completion of an additional 18,000 full electrification projects. Therefore, the full electrification standard for these

heating energy suppliers would be 18,000/23 MMT or 0.0007826 projects per MT of emissions. In other words, each supplier would calculate their electrification requirement by multiplying 0.0007826 times their emissions. A similar process would be used to determine the annual emissions reduction requirement, which could be met through biofuel blending.

Table 3. Requirements for an example fuel seller with 10,000 customers, assuming 5 MT annual emissions per customer.

	2026	2027	2028	2029	2030	2035	2040	2045
Full electrification standard (number)	8	39	73	110	150	100	0	0
Low income carve out (number)	2	10	18	27	38	25	0	0
Emission reduction standard (MT)	2083	4348	6818	9524	12500	8333	0	0
(As a percent of estimated emissions)	4%	9%	14%	19%	25%	17%		

C. Credit for projects that are completed under Mass Save and comply with all CHS eligibility requirements would be assigned to retail natural gas or electricity sellers in proportion to their compliance obligations.

D. Specific numerical standards such as those presented above would be established in the regulation for every year, but adjustment mechanisms would be included to address variability and uncertainty.

1. The regulation would establish a process for weather normalizing annual emission reduction credit values for electrification projects. (See Section IV.E.)

2. Required program reviews would be used to recalibrate the general requirements, for example if the pace of building sector emission reductions departs significantly from the assumptions used to derive the annual compliance requirements.

III. Credit Generation. Compliance would be demonstrated using Clean Heat Credits (CHCs or "checks"). Regulated energy suppliers would obtain CHCs by implementing clean heat themselves or purchasing credits from third parties, such as heat pump installers.

A. There would be two separate types of credits corresponding to the two standards: full electrification credits and emission reduction credits. Full electrification credits would be generated one time for each electrification project (See III.C.1.), but emission reduction credits would be generated each year on an ongoing basis (See III.F.).

B. A voluntary early action registration program would be used to encourage early action by registering full electrification projects completed before the final program regulations are in place.

1. Early action crediting would be limited to residential full electrification projects that:

a) Install electric heat pumps capable of meeting 100% of the space heating needs of a residence; and

b) Remove all combustion space heating equipment or commit to limiting utilization of remaining combustion equipment to backup or emergency use. [vi]

2. Administrative support would be available to early action projects, with resources targeted toward registering equity carve out projects.

C. Pending further analysis during the first program review, only the following actions would be eligible for crediting:

1. Full electrification projects that meet the requirements for early action crediting would receive full electrification credits on installation and annual emission reduction credits annually beginning the first year of operation.

2. Hybrid systems that retain fossil backup would be eligible for annual emission reduction credits based on evidence of utilization for heating, such as electricity billing records showing a winter-peaking pattern.

3. Documented delivery of eligible liquid biofuels would earn annual emission reduction credits toward compliance obligations of heating oil suppliers.

D. The final regulation would include a requirement to consider expanding eligibility to other fuels in a required 2028 program review. Fuels would be evaluated based on the following considerations:

1. Lifecycle analysis of the greenhouse gas emissions associated with producing and utilizing the fuel, including the time frame of the assessment.

2. Detailed analysis of fuel availability, including the status and potential timeline for production projects and analysis of alternative uses of the fuel.

3. Any local air pollution impacts from production or combustion of the alternative fuel.

E. To avoid unnecessary complexity and redundancy with the Mass Save program, weatherization and energy efficiency measures would not be eligible to earn CHCs.

F. Emission reduction crediting would be based on the following general principles:

1. Substituting clean heat for combustion in a single residence would be credited for an emission reduction of 5 MT per year, regardless of the size of the residence or whether it was an apartment or single-family home.[vii]

2. Heat pump systems at residences that do not meet the full electrification standard but are used for heating throughout a residence would be credited for an emission reduction of 2.5 MT per year.

3. Non-residential commercial projects would receive emission reduction credits based on demonstrated implementation of clean heat and emission reductions. Crediting would be consistent with methods used by the Massachusetts Department of Energy Resources (DOER) or MassDEP's greenhouse gas emissions reporting regulation for facilities.

4. Eligible waste-based liquid biofuels would be credited based on the assumed avoidance of all emissions from combustion of an equivalent quantity of heating oil. Other liquid biofuels eligible for the federal Renewable Fuel Standard would receive half credit through 2030 only. [viii]

G. Credits would include information necessary to address equity, such as a low-income identifier and project locations.

H. Presumptive ownership of any credits would be clearly specified in the regulation.

1. For electrification projects, ownership of credits would reside with the property owner unless and until re-assigned by the property owner to another owner. For example, MassDEP expects that property owners would normally assign full electrification credits to heat pump installers or other intermediaries and that these entities would reflect the value of the credits in prices offered for their services.

2. For blended fuels delivered by companies with compliance obligations, credits would be assigned to the company delivering the fuel.

I. MassDEP would develop and implement verification measures that draw on experience with existing programs such as DOER's Alternative Portfolio Standard (APS) and Mass Save to ensure credit integrity while minimizing the administrative burden of verification.

J. MassDEP would contract for the development and hosting of an electronic Clean Heat and Emissions Tracking System to provide for efficient program implementation.

IV. Compliance Flexibility and Revenue. Several program elements, including the use of marketable credits for compliance, would provide flexibility for regulated energy suppliers and offer opportunities for using revenue to ensure equitable outcomes.

A. Banking of full electrification credits for use in future compliance years would be allowed without limit. In combination with the gradual phase in schedule described in Section I.A, this would ensure an adequate supply of credits in the

early years of the program and support development of a durable and liquid market for credits.

B. Compliance through alternative compliance payments (ACPs) would also be allowed without limit, in the following amounts:

1. $6,000 per full conversion in 2026, increasing by $1,000 per year until reaching $10,000 per year in 2030.

2. For each low-income full conversion, the ACP amount would be doubled (i.e., $12,000 rising to $20,000).

3. For each metric ton of avoided emissions, $190.[ix]

C. ACP revenue would primarily be dedicated toward contracting for additional clean heat (and CHCs) in future years, with all ACP funds resulting from the low-income carve out dedicated to future low-income full electrification projects.[x]

D. A just transition fee of 10% of the annual full electrification credit ACP value would be required for the first transfer of each full electrification credit that is not eligible for the equity carve out, with funds assisting low-income consumers during the clean heat transition.

E. To provide compliance flexibility in years when colder weather drives significantly higher emissions, a credit multiplier would be used in assessing compliance obligations after particularly cold winters. In other words, the value of annual emission reduction credits resulting from electrification projects would be weather normalized in advance of the relevant compliance deadline to reflect the fact that electrification avoids more emissions during colder winters.

F. MassDEP would also consider options for providing additional support to low-income households when cold weather or high energy prices result in abnormally high home heating costs. Such options could include the use of ACP or just transition fee revenue, other MassDEP revenue, or programs implemented with other Massachusetts agencies.

G. Program reviews would be required in 2028 and every five years thereafter to address all aspects of program design and implementation.

---

[i] Building sector emissions have recently been in the range of 24 MMT per year, so reductions of 1 MMT per year over the 2026 – 2050 time period would reduce emissions to near zero in 2050. Reducing emissions by 5 MMT over the 2025-2030 time period would also be consistent with the Massachusetts Clean Energy and Climate Plan for 2025 and 2030 (Table ES.2). Also see Section II.D.2 for discussion of the potential need to regularly re-calibrate this target and Section IV.E for discussion of weather normalization of credit values.

[ii] See Section III.B and C for discussion of the "full electrification" concept.

[iii] The example of 100,000 full electrification projects was presented in the spring 2023 CHS stakeholder discussion document as the pace of electrification necessary to achieve required emissions reductions by 2050.
[iv] As discussed in Section IV, the ACP rate for low-income conversions would be doubled. Therefore, a 25% carve out would correspond to 40% of the maximum economic value of the full electrification standard.
[v] For discussion of including electricity sellers in the standard, see the following documents posted on the CHS web site: *2025/2030 CECP, Appendix B*, p. 59 and *Memo on Obligated Entities*.
[vi] The commitment approach is currently used under the Mass Save program.
[vii] 5 MT is a rough estimate of the fossil fuel emissions resulting from heating a typical Massachusetts residence. Larger residences normally emit more than 5 MT per year, but providing additional credit for electrifying larger residences would not be equitable because larger residences are normally owned by higher-income individuals.
[viii] The Massachusetts Alternative Portfolio Standard program currently limits eligibility to waste-based biofuels. Discounting or limiting crediting for other biofuels would be consistent with this precedent and with US EPA analysis of indirect emissions from biofuel production. Biofuel eligibility would be reconsidered in the 2028 program review.
[ix] The $190/MT would apply to the reduction requirement, not the full amount of emissions. Therefore, this would not be equivalent to a "carbon price" on emissions of $190. $190 reflects a recent US EPA estimate and could be revised during program reviews.
[x] The purchase price of these CHCs could exceed the ACP rate, for example as might be needed to support full electrification at a residence that requires insulation or electric panel upgrades.

23-2220-RULE
23-2221-INV

2/2/2024

Technical Advisory Group Members,

Per federal policy, the GREET model published by the Argonne National Lab treats wood combustion as “carbon-neutral,” and does not count CO_2 emissions from the combustion of wood. The question, “is burning woody biomass carbon neutral?” is both an environmental question and a policy question. At the national level, moderate republican senator Susan Collins annually requires a statement that burning woody biomass is carbon-neutral be inserted into any budget package in exchange for her vote.

2016: https://www.collins.senate.gov/newsroom/senators-collins-klobuchar-king-biomass-amendment-passes-senate

2020: https://www.latimes.com/opinion/story/2020-12-28/wood-burning-power-plants-clean-energy

2022: https://www.eenews.net/articles/carbon-neutral-scores-another-victory-in-omnibus/

2023: https://www.collins.senate.gov/newsroom/bill-to-fund-key-interior-and-environmental-programs-in-maine-clears-appropriations-committee

You find this language on page 922 of the 2023 Senate Appropriations Budget Amendment: (https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF)

Policies Relating to Biomass Energy

SEC. 432. To support the key role that forests in the United States can play in addressing the energy needs of the United States, the Secretary of Energy, the Secretary of Agriculture, and the Administrator of the Environmental Protection Agency shall, consistent with their missions, jointly—

(1) ensure that Federal policy relating to forest bioenergy—

(A) is consistent across all Federal departments and agencies; and

(B) recognizes the full benefits of the use of forest biomass for energy, conservation, and responsible forest management; and

(2) establish clear and simple policies for the use of forest biomass as an energy solution, including policies that—

(A) **reflect the carbon neutrality of forest bioenergy and recognize biomass as a renewable energy source**, provided the use of forest biomass for energy production does not cause conversion of forests to non-forest use;

(B) encourage private investment through out the forest biomass supply chain, including in—

(i) working forests;

(ii) harvesting operations;

(iii) forest improvement operations;

(iv) forest bioenergy production;

(v) wood products manufacturing; or

(vi) paper manufacturing;

(C) encourage forest management to improve forest health; and

(D) recognize State initiatives to produce and use forest biomass.

In 2018, climate crisis denier and Trump EPA director Scott Pruitt declared burning woody biomass carbon-neutral:

Sierra Club on Pruitt on Biomass
NRDC on Pruitt on Biomass
Cliamte News on Pruitt on Biomass
Scientific American on Pruitt and Congress on Biomass

As these articles make clear, while the politicians are declaring the burning of wood carbon neutral, the climate scientists are advising that burning wood adds CO_2 to the atmosphere. This conflict between the policy and the science led the EPA to issue its Biomass Policy Statement in 2018, found here: EPA Biomass Policy Statement. The policy statement recognizes that executive orders and congressional directives have forced it to claim that burning wood is carbon-neutral despite the science:

> To proactively address congressional directives and stakeholder concerns specific to the use of forest biomass for energy, EPA's policy in forthcoming regulatory actions will be to treat biogenic CO_2 emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral….
>
> This statement of agency policy is not a scientific determination and does not revise or amend any scientific determinations that EPA has previously made….
>
> Beginning in 2010, in response to stakeholder comments, EPA sought to advance the technical understanding for assessing the net biogenic CO_2 emissions associated with the use of biomass at stationary sources. In 2011, as part of this process to advance our technical understanding, EPA submitted for peer review with the EPA Science Advisory Board (SAB) a draft technical report presenting considerations for evaluating the biogenic CO_2 emissions associated with biomass use for energy at stationary sources (2011 Draft Framework). The SAB peer review of the 2011 Draft Framework found that it is not scientifically valid to assume that all biogenic feedstocks are carbon neutral, but rather that the net biogenic carbon profile related to the use of biomass feedstocks depends upon factors related to feedstock characteristics, production and consumption, and alternative uses….
>
> The SAB further acknowledged that accounting for biogenic CO_2 emissions associated with stationary sources involves both scientific and policy considerations, including the policy context in which the accounting is applied….

The Argonne National Lab follows federal policy, and thus does not count the emissions from wood-combustion. The GREET model follows this policy, counting only upstream CO_2 emissions from logging activity. I don't believe the ePUC site allows for .xls documents so I've attached a .pdf export of the bioelectric tab from the 2023 GREET .xls spreadsheet. Note that CO_2 is not among the tracked greenhouse gases.

Here in Vermont, the Scott administration falls squarely in the Scott Pruitt camp. It continues to be the policy of the Vermont Agency of Natural Resources (ANR) to consider burning wood carbon-neutral, despite clear evidence to the contrary. In ANR's *Vermont Greenhouse Gas Emissions Inventory and Forecast Methodologies* ANR makes the following erroneous statement:

> Carbon dioxide from electricity generated through biomass combustion is not included because the CO_2 is of biogenic origin, but CH_4 and N_2O emissions are included in the totals. States in the region differ on this accounting practice, however, it is consistent with IPCC inventory guidelines for the treatment of biogenic CO_2.

Again, ANR's statement about IPCC guidelines is incorrect; IPCC guidelines do not claim that biomass combustion should not be included in inventories. ANR Secretary Julie Moore admitted this in an email to me dated May 16, 2023, stating, "You are correct that the IPCC guidelines do not state that biogenic CO_2 shouldn't be included greenhouse gas inventories." Sec. Moore then goes on to incorrectly claim that IPCC guidelines state "that the CO_2 released [from wood-combustion] will eventually be re-sequestered through the regrowth of the biogenic material." IPCC guidelines make no such claim.

In Act 170 of 2012, "An act relating to the Vermont energy act of 2012," the Vermont legislature mandated that ANR draft rules for greenhouse gas accounting by September 1, 2013. Ten years later, Secretary Moore acknowledged that ANR has still not drafted these rules. By fiat only is ANR making the decision not to count emissions from wood, and is doing so without proper rule making or oversight. Further, ANR has directed consultants it hires to exclude the emissions from wood-burning. The recent 2023 Vermont Energy Report published by the Department of Public Service (DPS) demonstrates this. Writing about the *Cadmus/Energy Futures Group Pathways Analysis*, the DPS report advises that ANR guided EFG to consider wood-burning carbon neutral:

> "For example, advanced wood heat is identified as being the most cost-effective measure through 2030, with reductions in vehicle miles traveled (VMT) being the most expensive. It must be noted that, like any modeling, the analysis here is directly related to the inputs. For example, emissions from biomass were, consistent with Agency of Natural Resources guidance,[11] assumed to be zero…." (11, 2023 Vermont Energy Report, DPS)

In order to actually reduce greenhouse gas emissions, the TAG must provide for accurate emission factors for all fuel types, including and especially wood. The emission factors from the EPA website is a good place to start, though the EPA only provides factors on a 100-year global warming potential (GWP) basis. Using emission factors with a 20-year GWP would be even better.

District Energy Systems (DES) that use geothermal heating and cooling systems can play an important role in reducing thermal related greenhouse gases. However, not all DES are created equal. Vermont Gas (VGS) and Burlington Electric (BED) are proposing a DES that relies on the highly inefficient McNeil wood-burning generator to supply heat the University Medical Center (UVMMC). They've modeled their system using GREET. I've attached two slides from a BED and VGS presentation of their DES proposal to the Burlington City Council. They claim that the proposed District Energy System will reduce CO_2 emissions by about 13,000 tons annually. They claim this because VGS and BED also claim that burning wood is carbon-neutral. Climate scientists have thoroughly debunked this belief. Even so, at Vermont's current rate of deforestation, even by the accounting methods used by VGS and BED, ***Vermont forests will be net carbon emitters in only 25 years*** if the Vermont legislature does not take action. Using the MMBTU amounts on the first slide and the carbon emissions factors found in the EPA website: https://www.epa.gov/climateleadership/ghg-emission-factors-hub, we find that the proposed VGS-BED district energy system will actually *increase* CO_2 emissions by 6,778 tons annually.

> Wood: 93.80kg CO_2 per mmBtu 93.8 X 190,000 MMBTU = 17,822,000 kg CO_2

Natural Gas: 53.06kg CO_2 per mmBtu X 220,000 MMBTU = 11,673,200 kg CO_2

Net **increase** by switching to wood is **6,148,800 kg CO_2** per year
or **6,778 tons of CO_2 annually**.

It is no wonder why the VGS representative at the 2/2/2024 TAG meeting promoted the use of GREET: if you count the actual emissions, the DES is more polluting. GREET should not be used to model wood-combustion systems. If the TAG chooses to use the GREET model, TAG must also ensure that clear and significant, well documented and published changes are made to the emission factors for wood and other bio-fuels used in the GREET model.

Sincerely,

Pike Porter
Burlington, VT
pikeporter@gmail.com

This document uses active hyperlinks. If a link is broken, please contact me and I'll supply the correct link.

Bio-Electricity Generation

Hon

1) Scenario Control and Key Input Parameters

Forest resource extraction

Residues collection energy use	2
Source of wood chips	1
Source of wood pellets	1
Properties of pulplogs (for transportation calculation)	2

Assumptions on emissions

Emission factors for bio-power plant	1
GWP for black carbon (BC)	1

Allocation method (lumber mill operation)

	wood chips
Sawing process	3
Planning process	3

2) Key Input Parameters for Electricity Generation Mixes, Combustion Technology

2.1) Regional Combustion Technolgy Shares and Power Plant Energy Conversion Efficien

Fuel	
Combustion Technology	
Region	U.S.
Efficiency	21.7%
Technology Share	100.0%
Emissions (g/kWh)	
VOC	0.032
CO	1.182
NOx	0.679
PM10	0.073
PM2.5	0.069
SOx	0.122
BC	0.010
OC	0.022
CH4	0.113
N2O	0.060

2.2) Urban Emission Share for Stationary Applications

1.30%

2.3) Electric Transmission and Distribution Loss

Region	U.S.
T&D Loss factor	4.9%

2.4) Electricity mix and T&D Loss for each state if NERC level data option is selected

Notice of Non-compliance 2011, No. 170 (Adj. Sess.), § 14., 10 VSA 582(g)

Moore, Julie <Julie.Moore@vermont.gov> Tue, May 16, 2023 at 10:40 AM
To: Pike Porter <pikeporter@gmail.com>
Cc: ANR - Info <ANR.Info@vermont.gov>, "Hughes, Kelly" <Kelly.Hughes@vermont.gov>, "Beling, John" <John.Beling@vermont.gov>, "Schmeltzer, John" <John.Schmeltzer@vermont.gov>, "McKelvie, John" <John.McKelvie@vermont.gov>, "Tierney, June" <June.Tierney@vermont.gov>, pbaruth <pbaruth@leg.state.vt.us>, jkrowinski <jkrowinski@leg.state.vt.us>, "jim@dumontlawvt.com" <jim@dumontlawvt.com>, "McNamara, Ed" <Ed.McNamara@vermont.gov>

Dear Mr. Porter:

Thank you for your email dated May 3, 2023, regarding the most recent Greenhouse Gas Inventory and the supplemental Methodology; below I respond to your concerns about the methodology point by point.

1. **Regarding the methodology for the treatment of the biogenic CO_2 emissions from the McNeil and Ryegate facilities and the suggested inconsistencies with the IPCC inventory guidelines:**

You are correct that the IPCC guidelines do not state that biogenic CO_2 shouldn't be included greenhouse gas inventories. The methodology document is not explicit enough, in that what it should say is "Even though the emissions from these two facilities occur within the state, they are not included in the inventory totals for two reasons. The first is because the combustion of wood for electricity generation produces CO_2 that is considered biogenic, and no biogenic CO_2 is included in the energy related sectors of the GHG inventory totals per IPCC inventory guidelines because it is assumed that the carbon will be captured in the fluxes in the land-use, land use change and forestry sector, and that the CO2 released will eventually be re-sequestered through the regrowth of the biogenic material."

To be clear, the most recent version of the IPCC guidelines state:

> *carbon dioxide (CO2) emissions from the combustion of biomass or biomass-based products are captured within the CO2 emissions in the AFOLU sector through the estimated changes in carbon stocks from biomass harvest, even in cases where the emissions physically take place in other sectors (e.g., energy). This approach to estimate and report all CO_2 emissions from biomass or biomass-based products in the AFOLU sector was introduced in the first IPCC guidelines for national greenhouse gas emissions (IPCC 1995), reflecting close linkages with data on biomass harvesting, and for the pragmatic reason to avoid double counting.* [1]

This was done in the Vermont GHG Emissions Inventory and Forecast (1990 – 2020) report. The Land-Use, Land Use Change, and Forestry (LULUCF) or what is in the more recent IPCC guidelines called the Agriculture, Forestry, and Other Land Use (AFOLU) sector captures emissions from McNeil and Ryegate facilities, consistent with the most recent IPCC guidelines.

2. **Use of outdated IPCC Guidelines:**

The 2006 guidelines were cited because they are a more comprehensive reference for readers interested in the Vermont Greenhouse Gas Emissions Inventory and Forecast reports to review. In addition, ANR generally followed the 2019 refinement document, which contains updates to the 2006 guidelines for specific sectors.

Historically, Vermont has not included LULUCF emissions as part of the official Inventory totals because of the significant uncertainty associated with the data sources and the complexity of the methodology involved. Estimating emissions and sinks of CO_2 related to forests and carbon fluxes related to land use change involves an accurate quantification of very complex processes and ecosystems at a statewide level. Work is ongoing to make these estimates possible, and the recent release of the Vermont Greenhouse Gas Emissions Inventory and Forecast (1990 – 2020) report does include a more comprehensive LULUCF sector than previous iterations of the report based on newly available datasets from EPA and advances in some of these estimates.

Notwithstanding improvements in the estimates for the LULUCF sector, we still have concerns that the accuracy of this forest carbon sequestration and land use change data is not high enough resolution spatially or temporally to be able to adjust emissions from the other sectors, where more accurate data exists to support those numbers.

3. **10 VSA 582 does not allow you to arbitrarily decide which emissions will be counted:**

The accounting decision related to emissions of biogenic CO_2 in the Vermont Greenhouse Gas Emissions Inventory and Forecast reports is not arbitrary but is rather based on the IPCC Guidelines for National Greenhouse Gas Inventories which were developed with the expertise, knowledge, cooperation of, and review by, hundreds of experts from around the world. The issue of accounting for emissions of biogenic CO_2 is a complex one that has been evolving in recent years as more research is done and new data becomes available to help to better understand carbon fluxes through land use change as well as considerations around time scales. The Agency is using the most up-to-date methodology and working with other jurisdictions to understand how other states are dealing with this issue and to work together to inform best practices for accounting in this space.

I trust I have addressed your questions and comments, but please do not hesitate to reach out if you should have further questions or concerns.

[Quoted text hidden]

---

[1] 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/2_Volume2/19R_V2_2_Ch02_Stationary_Combustion.pdf

Why District Energy in Burlington?

- Improve McNeil's efficiency 10%
- Use local renewable thermal resource instead of fossil gas
- Reduces over 220,000 MMBTU of natural gas usage *every year* by creating 190,000 MMBTU of renewable steam (including 3 steam sources - waste heat, steam extraction, and supplementary electric boiler), plus 34,000 MMBTU of efficiency savings
- Cut commercial sector natural gas use 16% in Burlington, cut Burlington carbon dioxide emissions approximately 13,000 tons annually, taking single-biggest step to move towards Burlington's Net Zero Energy 2030 Roadmap goal