Equal Outcomes for a Sustainable Future: Equity in Williamstown's Net Zero Plan



Jack Dickinson, Zoe Getzin, Amelia Linton, Auden Naiman Williams College, Fall 2023 Professor Sarah Gardner Envi 402: Environmental Planning Workshop

Table of Contents

I.	Land Acknowledgement	3
II.	Introduction	3
	A. Relevant Terms	
III.	Project Goals	8
IV.	Project Scope and Methods	8
V.	Case Studies 1	0
VI.	Interviews 2	27
VII.	Survey 4	5
VIII.	Focus Group	4
IX.	Results: Obstacles 5	6
Х.	Recommendations	1
	A. Structural Recommendations	
	A. Structural Recommendations B. Key Action Items and Corresponding Evaluation Matrices	
XI.	B. Key Action Items and Corresponding Evaluation Matrices	6
XI. XII.	B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations	
XII.	B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations Next Steps	8
XII.	B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations Next Steps	8
XII.	B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations Next Steps	8
XII.	B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations Next Steps	8
XII.	 B. Key Action Items and Corresponding Evaluation Matrices C. Additional Recommendations Next Steps	8

I. Land Acknowledgement

We respectfully acknowledge that Williamstown stands on the ancestral homelands of the Stockbridge-Munsee Mohicans, who are the indigenous peoples of the region now called Williamstown.

Following tremendous hardship after being forced from their valued homelands, they continued as a sovereign Tribal Nation in Wisconsin, which is where they reside today. We pay honor and respect to their ancestors past and present as we commit to building a more inclusive and equitable space for all.

Our project scope did not take into account the equity considerations owed to the Stockbridge-Munsee Mohicans. We encourage future work to give thoughtful consideration to this important dimension of equity.

II. Introduction

Background

Over recent decades global concern for climate change has steadily increased and many scientists, international organizations, communities and activists have advocated for reducing greenhouse gas emissions. Net zero is a goal to eliminate greenhouse gas emissions. Scientific consensus is that limiting global warming to 1.5°C above pre-industrial levels is crucial in order to avoid the worst impacts of climate change. Many countries, corporations, and communities have created their own net zero plans which reflects their desire to contribute to limiting the rise of global temperatures. The energy sector currently contributes to 75% of greenhouse gasses, which indicates that energy reduction and a transition to clean energy is imperative to net-zero goals (UNEP Emissions Gap Report. 2023).

Contributions towards climate change are uneven globally, and so are the impacts. The Group of 20¹ (which includes the United States) contributes to 76% of global emissions. The least developed countries globally contribute to 3.8% of global emissions. Small island nations combined contribute less than 1% to total global emissions, yet these nations are among the most vulnerable to the impacts of climate change (UNEP Emissions Gap Report. 2023). This shows that there are great disparities between countries and communities and that equity needs to be centered in addressing climate change.

Equity

Equity is becoming a larger concern in net zero plans. The Municipal Guide to Inclusive Climate Action and Equitable Procurement (NECEC, 2023) provides a helpful framework for centering equity in net zero plans.

It states that "Equity should be a core principle guiding the just transition to a climate economy. It goes beyond merely providing equal opportunities. Instead, we must address systemic disparities and ensure that all individuals and communities, particularly those who have historically been marginalized, have equal access to not just the benefits of climate action but are at the forefront of deciding what these changes should be. In order to address the pressing challenges of climate change and ensure a sustainable future, it is essential for municipalities to prioritize inclusive climate action plans that actively engage and involve communities. Such plans should not only focus on environmental objectives in silos but also emphasize diversity, equity, inclusion and justice (DEIJ) considerations throughout the entire process. By adopting an inclusive approach, municipalities can promote social justice, enhance community resilience and build a more equitable and sustainable future."

According to the Spokane Sustainability Action Plan (2021), the definition of equity should not be rigid or defined in a top-down manner. The definition of equity should be determined by the members of the community.

In regard to including equity in net zero plans, another key component is environmental justice. Environmental justice speaks to the idea that "*those who are most affected and have the*

¹ (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union)

fewest resources to adapt to climate change are also the least responsible for the greenhouse gas emissions—both globally and within the United States" (University of Colorado, 2023). A key component of sustainability should be that it benefits everyone, specifically extending help to those who are most affected and have the least ability to change their circumstances in regard to the changing climate. Historically, many of these communities tend to be made up of people of color and also tend to be low-income (University of Colorado, 2023). Including equity in any plan means acknowledging injustices that exist and striving towards environmental justice with a specific focus on those who are suffering disproportionately more than the people who are largely responsible for the current climate crisis.

Net Zero in Williamstown

In June 2021, Williamstown passed a resolution to pursue a goal of net zero greenhouse gas emissions, committing to achieving this target by 2050. The state of Massachusetts had recently committed to a similar goal, of net zero emissions by 2050, providing the town with the support and guidance necessary to make this target feasible. Following this resolution, the town formed a volunteer Net Zero Task Force, led by Nancy Nylen and Wendy Penner, to develop and implement a comprehensive climate action plan in collaboration with the community (Williamstown COOL Committee, 2023).

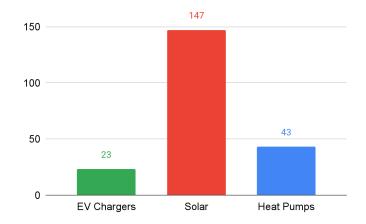
Currently, the task force has written a draft of the Climate Action Roadmap with a focus on six necessary and interdependent components for taking action: reduce energy consumption of buildings and transportation via conservation and energy efficiency, electrify transportation and build EV infrastructure, electrify building systems, provide carbon-free electricity sources and energy storage, reduce/reuse/recycle/compost solid waste, and protect natural resources for carbon sequestration. These strategic frameworks will revolve around actions specific to four sectors residential, commercial, institutional and municipal - that each consist of their own unique set of approaches.

Both the Climate Action Roadmap and the Williamstown Net Zero Resolution explicitly state that Williamstown will strive to ensure that "climate actions recognize the needs of vulnerable members of [the] community and are inclusive and equitable" (Williamstown COOL Committee, 2023). This focus on equity is in line with the global, national and state-wide goals of transitioning in a manner that is inclusive and equitable for the most vulnerable members of society.

The Net Zero Task Force has decided to focus on the connection between income level and net zero in Williamstown. According to the 2020 US Census, Williamstown has a population of 7,663 people and 7.9% are currently living in poverty. The median household income in Williamstown is \$95,682 and per capita income is \$37,560 (United States Census, 2022). This large difference between the median and per capita income suggests that there are extremes of wealth and poverty in Williamstown. This discrepancy is not readily apparent and the town has a reputation of being a relatively wealthy town.

Williamstown is part of the Pittsfield area according to HUD's classification, which categorizes low-income for this area as a household of 1 that has an annual income of \$57,300 or a household of 4 that has an annual income of \$81,850. While these are helpful guidelines for determining low-income status, there are discrepancies in how these cutoffs compare to access to resources. Some programs that provide services for low-income residents use the HUD cut offs and others do not. This means that different residents are eligible for different types of state assistance related to net-zero initiatives. In this report, we will use the HUD guidelines for our estimation of low-income households, however, we acknowledge that this is an imperfect definition that does not capture the experiences of all low-income residents.

The energy efficiency and transition to green energy in Williamston since 2017 has mostly benefited wealthier households. About 6.5% of households have installed solar panels, and other energy efficiency measures such as heat pumps have been installed at much slower rates (Figure 1). The estimated cost of a home solar installation is around \$20,000 (Groff, 2023). This expense is inhibitory to residents who do not have excess income that can be spent on this expensive technology. The average cost of installing a heat pump is \$4,000 to \$8,000 (Consumers Review Team, 2023) which can still be prohibitive to low-income residents. State programs like MassSave can provide assistance for installation, however, the cost for this technology might still be too large of an energy burden.





Relevant Terms

<u>Net Zero</u>: Reducing fossil fuel emissions to as close to zero as possible. Getting to net zero usually comes from a combination of energy efficiency, clean energy production, and purchasing of renewable energy.

Energy burden: The percentage of gross household income that is spent on energy costs.

<u>Carbon footprint</u>: The amount of carbon dioxide and other emissions released due to the consumption of a particular person, group, building, municipality or other group.

<u>Equity</u>: An equitable solution does not necessarily imply that individuals get an equal share, but instead means that resources are allocated so that outcomes are equal. Equity requires facing structural inequities so that systemic barriers can be uprooted. In order for this to happen marginalized voices must guide the direction of future action.

<u>Environmental Justice</u>: The concept that those who have contributed the least to climate change will likely suffer disproportionate consequences as a result of it. Communities that are more exposed to climate change consequences tend to be communities of color and low-income (University of Colorado, 2023).

<u>Low-income</u>: We do not have a set definition of low income, since there is no set income that determines eligibility for all programs and services. Families also have a wide range of circumstances that place different constraints on disposable income. The HUD's² definition of

² The U.S. Department of Housing and Urban Development

low-income will be used as a guide for quantitative analysis. Low-income for a one person household is at or below \$57,300 and for a 4 person household is at or below \$81,850.

In our survey analysis we define low-income as individuals making under \$50,000 in order to ensure that we are not including individuals who may not fall into this group because we do not know about household size.

III. Project Goals

Our project goal is to identify the needs of low-income residents in Williams so that they can be included in Williamstown's efforts to achieve net zero. The recommendations that we come up with are intended to be positive, solution based, economically viable strategies that additionally establish pathways for potential long-term relationships with local low-income communities.

IV. Project Scope and Methods

Project Scope

- Residential energy consumption
- Project deliverables

Initially, the scope of our project was to incorporate equity into the net zero report in order to help create an inclusive vision for the future of Williamstown. Wendy and Nancy asked us to apply a lens of equity to all six specific areas outlined in the climate action road map and listed above. These strategic frameworks revolve around actions specific to four sectors - residential, commercial, institutional and municipal - that each consist of their own unique set of approaches. Our clients hoped that we would focus on the residential and commercial sectors.

Through our meetings with our clients we were able to narrow the goal of our project to a couple of specific deliverables:

- 1. Develop a framework for a focus on equity and prioritization of equity throughout each item in the net zero plan
- 2. Develop action items with a specific focus on equity that could be included in the plan and will actively create a more inclusive and equal future Williamstown

For these deliverables, we narrowed our scope to primarily focus on action items for the residential sector. The deliverables focus specifically on reducing energy consumption because this is the area that would lead to the greatest potential impact. Electrification and reduction of energy consumption are key sectors that residents have control over and will dramatically reduce residents' emissions and consequently, the town's emissions. Additionally, electrification and reduction in energy consumption have the potential to cut the energy bills of residents, as weatherization and other energy saving measures will reduce heating costs and electrification, especially when combined with solar, can reduce heating costs, as well. However, reducing energy consumption is more economically feasible than electrification for many low income community members, as electrification is costly.

Methods

- Case studies
- Key stakeholder interviews
- Community-wide survey
- Focus group

Our clients recommended the research methodologies they thought would be most informative: interviews with key stakeholders in the Williamstown community and reviewing case studies of other cities, municipalities, and towns. The case studies consisted of other net zero reports that paid particular attention to equity throughout their creation and execution. We examined 10 such case studies and interviewed leaders in 11 towns.

However, through our initial analysis of case studies and conversions with key stakeholders, we came to the consensus that in order to truly create an equitable plan for the future of Williamstown, the voices of those whom the plan will effect the most must be heard and accounted for. Prescribing solutions derived from the viewpoints of a few opinionated community members onto the many cannot be the basis of an inclusive plan. Therefore, we broadened the scope of our project to include a community-wide survey and a focus group with key stakeholders in the hopes of hearing from community members who are not involved in town government and whose opinions are rarely considered in town decisions. We focused on hearing from low-income community members, in particular, because this group is often left out. We dive into each of these components of our project in more detail below.

V. Case Studies

The first portion of our research process was analyzing case studies of other cities, towns, and municipalities that have implemented climate action plans, some with a specific focus on equity. We used the case studies to see examples of how Climate Plans are typically structured and to help guide the framework used to effectively incorporate equity into the climate plan.

Our clients, Wendy and Nancy, recommended numerous climate action plans that they believed were most relevant to our work. These case studies can serve as examples for Williamstown. Each can provide pieces that can be potentially implemented in Williamstown's comprehensive plan. In total we reviewed 10 case studies:

- 1. Acton Climate Action Plan
- 2. Austin, TX Climate Action Plan
- 3. Bainbridge Island Climate Action Plan, Section 8
- 4. King County Strategic Climate Action Plan
- 5. Methow Valley Climate Action Plan
- 6. Pierce County Sustainability 2030: Greenhouse Gas Reduction Plan
- 7. Spokane Sustainability Action Plan, Implementation and Monitoring
- 8. Tacoma Environmental Action Plan
- 9. Thurston Climate Action Plan
- 10. Municipal Guide to Inclusive Climate Action and Equitable Procurement

These case studies cover cities and municipalities that are a variety of sizes located all across the country. Although the characteristics of these places may not be perfectly aligned with Williamstown, certain aspects of climate plans transcend place and size. We have provided literature reviews for each plan below. These reviews include a brief summary of each plan's background and the key takeaways that are relevant to Williamstown.

Acton Climate: The Road to a Resilient Net Zero Future, 2022, Town of Acton, MA

- Defines environmental justice and incorporates it as a key part of the plan, informing every step and every recommendation.
- Includes equity concerns at every level.
- Advancement in terms of sustainability should not come at the expense of increased housing costs or displacement.
- Continued outreach and feedback

In order to form this plan, the Town of Acton carried out surveys, workshops, open houses, and was responsive to phone calls and emails. The plan was created in response to a declaration of emergency in the Town of Acton to guarantee sustainable futures to all residents. The Acton Plan highlights what Climate Change will likely look like in the future in their specific region and community and the plan suggests means to address these possible outcomes.

A definition of environmental justice is included as a framework for equity within the Acton Plan at the very beginning as a key point of consideration throughout the entire plan. The goals of the plan are broken down into categories: Building and Housing, Energy, Mobility, Nature Based Solutions, Solid Waste, and Resilience.

Specific Equity concerns for low income residents come up in each one of these sections and are addressed head on. In regard to building and housing, it is suggested that advocacy codes are created that prioritize environmental justice. It is also mentioned that gas leaks often occur in low-income households and majority communities of color neighborhoods. The plan states that these issues should be addressed most quickly. In regard to energy, it is noted that there are many programs that have created avenues for low income households to gain access to solar energy. The plan states that Acton should review these existing programs to determine which programs are the best fit for low income residents. It also mentions that continued outreach work should be done with low-income populations in regard to their energy needs and priorities. Further, the plan mentions that opportunities for women-owned business and minority-owned businesses to do sustainability work should be incorporated into all solutions. In regard to mobility, the plan suggests that the distribution of charging stations be more equitable, and advocates for the creation of financial incentives for electric vehicles. Ensuring equal access to a car sharing program is also suggested in addition to the creation of a pre-owned EV trade program. The plan also highlights that these initiatives must not come at the expense of increased housing costs or displacement. Within the nature based solutions section, the plan suggests that environmental justice communities be prioritized and, again, that improvements not come at the expense of increased cost and displacement. The plan further suggests that tree planting initiatives should take place in areas most likely to experience the heat island effect. In terms of solid waste management, the plan recommends clear signage and increased access to these services in all populations. In regard to resilience the plan advocates for better information dissemination strategies along with increased education initiatives. Recommendations in this area include prioritizing training and career development in sustainable fields as well as providing financial subsidies to those residents facing economic barriers.

Sustainability 2030: Pierce County's Greenhouse Gas Reduction Plan, 2021, Pierce County, WA

- Outlines equity as guiding principle initially
- Has an Equity Assessment that will be carried out 2 years after the report to evaluate the extent to which the report has been successful in promoting equity
- Lists co-benefits of every action item, including "promotes equity" and uses this to prioritize action items
- Provides some examples of possible action items that may be beneficial for Williamstown to include in their own report, listed below

Pierce County's GHG reduction plan emphasizes a focus on equity throughout the plan by explaining how equity is a key focus and "guiding principle" in the initial sections and then making it clear what actions are directly focused on ensuring equity throughout each section of the plan. The first page of the report is home to a land acknowledgement, ensuring that the local native american populations are recognized. The Stockbridge-Munsee tribe should be considered throughout Williamstown's report, but at the bare minimum, a land acknowledgement should be included front and center in the climate action plan. This acknowledgement is followed by a statement regarding how the plan will embed equity into its GHG strategy, with a focus on community engagement. By 2023, the council plans to have a list of community-generated GHG reduction actions, once the plan has begun to be implemented and the community is able to reflect on what is working and what is not. Although this list is yet to be finished, a 2023 update to the plan includes comments directly from high school students and a section on community voices in each of the different areas of focus, such as waste reduction and transport. Another key component of the plan's focus on equity is an Equity Assessment that will be carried out in the first two years of the report, focusing on outcomes and what has worked and what could be improved upon.

The bulk of this report is dedicated to action items that the municipality will take to reach their net zero goals. For each action, co-benefits, including "promotes equity" are indicated. This focus on co-benefits directly specifies the actions that may have a positive impact on vulnerable populations, allowing for a later reflection on how successful these items were in actually promoting equity. Williamstown should include a similar indicator of what actions have a specific goal of promoting equity. Some of the action items that may be directly applicable to Williamstown included in this report, grouped by category, are:

Education and outreach

- 1. Host annual youth sustainability summit
- 2. Support k-12 teachers in implementing appropriate GHG reduction and climate impact curriculum

3. Promote reuse of goods through sharing information for landfill alternatives Transportation

- 4. Establish a mixed use development parking and zoning regulations that support electric vehicle and active transportation infrastructure, parking requirement reductions and car sharing
- 5. Increase bike infrastructure and create e-bike pilot program
- 6. Consider access to high frequency transit, walkability and bicycle infrastructure whenever the county builds or leases space

Energy and built environment

- 7. Expand incentives for new construction projects that exceed energy efficiency standards with a focus on affordable and multifamily housing
- 8. Work with utilities to explore strategies to reduce GHG emissions in multifamily housing

Overall, this plan emphasizes transparency and community engagement, which are key components of a report that successfully incorporates a focus on equity and should be kept in mind by Williamstown as equity is incorporated into its net zero action plan.

Methow Valley Climate Action Plan, 2021, Methow Valley, WA

- Progress in regard to the plan will be reported on the Methow Valley website
- Acknowledges the forcible removal of indigenous people in Methow Valley
- Recommendations for specific sectors in regard to equity
- Pathway to equity: 1. Embed Equity in the Mission, Vision, & Values 2. Build Equity into the Process 3. Ensure Equity Outcomes 4. Measure & Analyze for Equity.

The Methow Valley Climate Action Plan provides a great opportunity to investigate how to apply equity to the Williamstown plan as it includes equity as a core value in its mission and equity informed its creation. A task force and subcommittees were composed of experts and stakeholders from five sectors (agriculture, health and emergency services, infrastructure, natural systems, and the economy).

In regard to pathways for continued communication with the Methow Valley population, networking and connection was made abundantly clear. Quarterly action group networking meetings were to be held along with an easy to access and current resources page on the Resilient Methow website. Progress reports will be added to the website as well to keep the community accountable.

Importantly, the plan notes that indigenous tribes native to Methow Valley were forcibly removed and that "this historic injustice must be reconciled" which should be taken into consideration in terms of this plan. Additionally, the plan provides specific definitions of equity for Methow Valley and identifies the communities that are particularly vulnerable to climate changes and the communities that are particularly disadvantaged. The plan defines equity for the Methow Valley context, explicitly states a commitment to equity, and works to facilitate pathways of communication that involve community members. Further, the plan contains four key steps in relation to equity: 1. Embed Equity in the Mission, Vision, & Values 2. Build Equity into the Process 3. Ensure Equity Outcomes 4. Measure & Analyze for Equity.

The plan also includes recommendations for specific sectors in relation to equity. In regard to the economic sector, the plan states that its goal is to diversify the local economy. The plan recommends adaptations such as moving to alternate forms of commerce (barter, skill sharing, equipment libraries) as well as creating a local currency through platforms like Venmo. The plan also recommends that new methods be used to re-imagine the ways in which natural resources can be used for everyone's benefit. Another recommendation that the plan puts forth is to create more recreation facilities in order to emphasize and encourage community connection. The plan also highlights the importance of education on climate-friendly practices across all sectors.

In regard to transportation and housing equity, the plan states that low-emission vehicles and accessible and affordable housing should be made available to everyone. The plan states that this goal could be reached by providing low-interest loans, rebates, and subsidies for new/used electrical vehicles or hybrids. The plan also suggests that whatever regional transportation model exists should be used as a basis to expand on along with the creation of ride share programs.

The plan also suggests that all voices be incorporated, even voices that are not often heard from (youth voices). The plan suggests that a youth board member should be a part of those who make decisions in regard to the implementation of the plan and its continued and evolving mission.

Spokane Sustainability Action Plan, Implementation and Monitoring, 2021, Spokane, WA

- Defines equity as equal outcomes, not equal consideration
- Outlines how the plan will work to create a more inclusive definition of equity with the community member's help
- Includes an impact analysis equity checklist to be applied to every action item in the report to ensure every action in their net zero plan will promote equity

• Example question: disproportionate outcomes: does the proposed action generate direct or indirect burdens (including costs) to historically underserved communities? If yes, what opportunities exist to mitigate these impacts?

Spokane's Sustainability Action Plan begins by deliberately defining equity. The report explains how equity does not mean everyone gets an equal share, but instead means that **outcomes are equal.** Therefore, equity requires a critical focus on communities facing structural inequities and benefits must be distributed in a way to address systemic barriers. The plan goes on to explain what local communities face barriers. Defining equity is key to ensure that all those implementing the report, reading the report, and considered in the report have a shared understanding of what equity is and how it is implemented throughout the report. Similarly, the Williamstown Net Zero Plan should provide a preliminary definition of equity and what marginalized communities have been given a key consideration throughout the formation of the report. In Williamstown, these communities of focus have largely been low-income and elderly populations.

The report also includes an equity checklist that outlines questions that should be asked about each action and its outcome. Questions that are asked and focus on impact analysis are included below:

Impact Analysis

- Disproportionate outcomes: Does the proposed action generate direct or indirect burdens (including costs) to historically underserved communities? If yes, what opportunities exist to mitigate these impacts?
- Shared benefit: Are the benefits dispersed not only equally, but equitably? Does the proposed action reduce disparities as indicated on the Washington Environmental Health Disparities Map?¹¹
- Accessibility: Are the benefits of the proposed action broadly accessible to all residents and businesses throughout Spokane, with consideration of small businesses and those owned by marginalized groups?
- □ Capacity: Does the proposed action help build community capacity through funding and expanded knowledge base, or other resources?
- Accountability: Does the proposed action have appropriate accountability mechanisms to ensure that the communities mentioned above, as well as any other vulnerable communities, will:
 - 1. Not be disproportionately harmed
 - 2. Share in the benefits equitably

Overall, this report highlights that in order for any plan to be equitable, it must not only focus on the plan's implementation, but must pay particular attention to the plan's impact and outcomes. Moreover, this plan incorporates a focus on equity in every action item, not only those with a direct focus on equity, by asking specific questions to ensure that all other action items do not impede equity and advance equity considerations when possible. Williamstown should incorporate a similar framework for each of the action items developed in its net zero plan.

King County Climate Action Plan, 2020, King County, WA

- No climate justice without racial justice
- Places import on community voices and community engagement as core part of the plan
- Specific definition of climate equity in relation to the King County community
- Community task force was created with 22 community leaders
- Your workshops
- Strategies for continued engagement

The King County Climate ActionPlan emphasizes that there cannot be climate justice without racial justice. The plan further highlights that solutions to climate change should focus on challenging the "upstream system" and work to include community voices and community engagement as a core part of the plan. In order to draft this plan community engagement was widespread. The plan also defines climate equity specifically for its context. A Climate Equity Community Task Force was created among 22 community leaders who met to create the Sustainable & Resilient Frontline Communities section of the plan. Topic-based convenings occurred in which specific areas of the plan were discussed with experts from public and private sectors. Youth workshops were carried out to provide an avenue of access to the conversation for youth. Public workshops, King County Comprehensive Plan Meetings, community presentations, and an online information survey were also carried out. Lastly, King Country employers carried out employee engagement lunch-and-learns and advisory meetings to get their input. Importantly, the plan focuses on establishing pathways of engagement with communities that it outlines in the graphic below:

Thurston Climate Mitigation Plan, 2020, Thurston County, WA

• There are many dimensions of equity to consider: procedural, distributional, structural and transgenerational.

- It is important to align national, regional and local goals in order to harness resources and collective action.
- Stakeholder involvement should include people from all different demographics, particularly those who are most marginalized. Stakeholders should not be limited to so called experts.

The Thurston Climate Mitigation Plan is a regional plan with a strong focus on equity. It acknowledges the need for procedural, distributional, structural and transgenerational equity. This plan does not claim to perfectly embody these visions of equity. The authors see it as a living document, "a framework of solid strategies that will guide next steps, not lock them into specific tasks that may not make sense as we work out the details. We'll need to do more to understand the potential costs of actions, how they may impact different parts of our community, and the tools and resources available to get the work done." In the report, all actions are scored for greenhouse gas reduction and other co-benefits. The sectors that are focused on are energy, transportation, water and waste, agriculture and offsets.

This plan focuses on the work that local governments play in achieving net zero in an equitable way. It creates its goals in alignment with state and national goals. In order to create goals that are beyond numeric carbon reduction targets, community engagement was used to mold the direction of this plan. This engagement included pop-up events, public presentations, social media campaigns, questionnaires, and interviews with stakeholder populations such as Native and Latino communities, and low income residents. The success stories in the document that highlight successes in past efforts include education campaigns, zero-fare programs for public transportation, implementing renewable energy strategies in landfills and weatherizing houses. These efforts were made possible through local organizations, local government, educators who had a variety of funding sources including taxes.

The Municipal Guide to Inclusive Climate Action and Equitable Procurement, 2023, MA

- Equity should be a core guiding principle throughout the entire transition to net zero.
- Representative community voices should be present throughout the transition to net zero.

• Engagement with diverse stakeholders takes careful planning so that community members feel empowered and encouraged by the engagement itself and future action.

The Municipal Guide to Inclusive Climate Action and Equitable Procurement outlines equity. It states that "equity should be a core principle guiding the just transition to a climate economy. It goes beyond merely providing equal opportunities. Instead, we must address systemic disparities and ensure that all individuals and communities, particularly those who have historically been marginalized, have equal access to not just the benefits of climate action but are at the forefront of deciding what these changes should be. In order to address the pressing challenges of climate change and ensure a sustainable future, it is essential for municipalities to prioritize inclusive climate action plans that actively engage and involve communities. Such plans should not only focus on environmental objectives in silos but also emphasize diversity, equity, inclusion and justice (DEIJ) considerations throughout the entire process. By adopting an inclusive approach, municipalities can promote social justice, enhance community resilience and build a more equitable and sustainable future."

In regard to community engagement, this report gives specific recommendations for effective outreach. An important aspect of effective outreach is making sure that the people you are outreaching to are comfortable and feel respected throughout the outreach process. This means that in planning outreach, some key features should be considered: *Will the meeting environment be supportive and encouraging? Will people find other people who look like them and who they can relate to there? Do community members feel empowered to voice their opinions and believe that their input will be valued? Do they have confidence in their local government's commitment to their needs and concerns?* The goal of these types of questions is to make sure that they are involved in the decision making process. Any plan that is created should reflect the needs, aspirations and priorities of community members. Follow up is particularly important so that community members have a chance to make sure that their desires were represented accurately and are being implemented. It is also a good idea to have an advisory committee that reflects the population, this way representative voices can contribute to forming plans.

Bainbridge Island Climate Action Plan, Section 8, 2020, Bainbridge Island, WA

- Inspiring the community as a whole as well as individuals to care about an issue is vital for its success
- They format of having each goal and multiple strategies under each is a good example of a format to effectively communicate action items
- Potential action items mentioned that can be useful or relevant to equity in Williamstown
 - Provide accessible educational materials across community about topic
 - Partner with local and regional organizations; create a more direct relationship in order to help and advocate for your residents
 - Ensure city (and relevant organizations in the case of Williamstown) are empowered with capability to implement actions that will make a true impact

Bainbridge Island's Climate Action plan went into effect in 2020. This plan is detailed but the part most relevant to our needs is Section 8, in which it discusses community engagement within their Climate Action Plan. Specifically this plan looks at the goals, strategies, and challenges of community outreach while emphasizing climate education and empowering the community. The overarching goals of this portion of the Climate Action Plan is to provide Bainbridge Island residents with more information about the impacts of climate change, and then to supply information on how to best mitigate and adapt to those impacts. It aims to stimulate action in the community. Lastly, it looks to integrate climate change into the city's emergency preparation plan. It also wants to emphasize the role of individual actions in these larger goals. There is a wealth of valuable information in the Bainbridge Island Climate Action Plan - a few of them are relevant to the development of Williamstown's Climate Plan.

First, the plan describes its goals. The first goal stated in Bainbridge Island's Climate Action Plan is to make the collective Bainbridge community more aware of both the current and future impacts of climate change, as well as the ways to decrease them. The second goal is to stimulate action in the community to mitigate and adapt to these impacts. This can be done through local organizations. The last primary goal is to prepare the municipality and its businesses for climate change impacts and potential emergencies.

The plan then delves into the challenges of promoting community engagement when it comes to climate change. It lists five main challenges. The first is that the results of actions are not readily adapted - trying to reduce climate change impacts often includes actions that don't have tangible results in the short term, but rather over longer time horizons. The second challenge is skepticism - some people are skeptical that climate change is an issue that needs to be attended to. The next challenge is perceived future like - given that the issue is so large, individuals cannot make an impact. Another challenge is inadequate funding - city funding isn't enough to undertake necessary actions. The last listed challenge is that coordination with outside entities is required - effective change requires interaction and collaboration with organizations the city does not have direct influence on.

Next, the plan looks at the current actions aimed at fighting climate change on Bainbridge Island. From a municipal perspective, there are already numerous resolutions that have already been approved and there are more plans being formulated by various task forces. Regarding community actions there are alright multiple community groups that see the issue of climate change and have committed to fighting it. Additionally, public entities have begun to acknowledge the issue as well and there are numerous educational forums in place to inform community members who are interested in the topic.

Lastly, the plan examines possible strategies and actions. For each of the overarching community engagement goals, the plan delves into multiple strategies that will help accomplish them. Within each of the strategies, there are multiple primary actions needed to execute the strategy as well as other actions.

There are a few action items that are especially relevant to Williamstown. The first is to suggest providing accessible education materials across the community about the topic of climate change. They mention a few means of accomplishing this overarching goal. First, they mention dedicating a webpage on the city website with links to various relevant resources. Next, they acknowledge a potential need for hard copies of information - they mention the need to consider good locations for hard copies of the Climate Plan. Another sub action of this goal is hosting events to communicate to the community what the city and other local organizations are doing to combat climate change. The last specific suggestion is a social media presence being a good potential avenue for education.

The next large action item the Bainbridge Climate Plan suggests is partnering with local and regional organizations. They believe it is important to create a more direct relationship in order to help and advocate for your residents. There are a few ways the plan suggests doing this. The first is working with other jurisdictions in the area. Next, they propose encouraging more coordination between advisory committees so all are on the same page. Lastly, they emphasize the need to support existing community groups attempting to address issues and inequities in the community.

The last strategy relevant to Williamstown is to make sure the city (and relevant organizations in the case of Williamstown) are empowered with capability to implement actions that will make a true impact. One action that is apart of this strategy is reviewing laws, regulations, etc. to ensure the town has the power needed. Next, the plan suggests hiring an officer that is primarily responsible for overseeing the city's efforts directed at remedying climate change. Lastly, they suggest dedicating part of the city budget to climate change solutions and strategies.

Austin Climate Equity Plan, 2020, Austin, TX

Key Takeaways:

- Equity is essential to climate change action because marginalized communities are disproportionately harmed by the effects of climate change. They also have less resources, such as social services like healthcare, to help them recover and adapt.
 - Therefore they must be prioritized during just transition a
- A framework for incorporating equity throughout a climate plan is essential to establish. A good framework for this is:
 - Understand the history of the place and why inequities have developed
 - Equity is incorporated with the intention of producing environmental and economic just outcomes
 - Equity tool/checklist
 - Asks screening questions around particular themes to evaluate how well a given strategy considers equity
 - Possible themes include health, affordability, accountability, accessibility, just transition, community capacity, cultural preservation, and accountability.
 - Use this tool to recognize potential harms or burdens to low-income communities. Then strategies and goals can be built to minimize these burdens and harms.

• Engage and include the voices of marginalized communities in the development of the plan

The Austin Climate Equity Plan was created in 2020. However, in 2015 the city adopted its first Climate Action Plan. The plan focused on taking action to combat climate change through mitigation and adaptation tactics. Although beneficial, the plan didn't concentrate on equity and social justice. Their new Climate Equity Plan was written to address this missing aspect - it looks to have equity at the center of every aspect. The plan acknowledges that the existing inequities mean that climate change will disproportionately impact marginalized communities, such as lowincome communities and communities of color. Therefore, the plan states that climate change cannot be solved without addressing equity.

This plan has many interesting and important characteristics. But, the portion that is most applicable to Williamstown is how equity is incorporated into the plan. Austin is a distinct place than Williamstown. The population demographics, size, and area of the country are vastly different. However, despite their differences, how Austin has thoughtfully included equity within its Climate Plan is something that Williamstown can learn from as they develop their own Climate Action Plan.

At the beginning of the plan it is immediately apparent that equity is important. The word is mentioned and its significance is emphasized immediately. They start by clearly stating why equity is essential to include within the Climate Plan. The plan states "race predicts quality of life outcomes in our community, which means communities of color in Austin are disproportionately impacted by the effects of climate change." In Williamstown, this statement is applicable to the low-income community. Low-income communities are more likely to work jobs that can be harmful to their health without proper access to social services to combat the harms. In sum, "marginalized groups often experience heightened risk and increased sensitivity to climate change and have fewer resources to help them cope with, adapt to and recover from climate disasters. Therefore in order to effectively mitigate climate change impacts, existing inequities need to be addressed.

The plan then identifies three areas where equity and climate change intersect. The first is unjust impacts, which we just described. This is the notion that marginalized communities, such as the low-income community, are disproportionately impacted by climate change events even though they contribute less to the issue than anyone else. The next place where these concepts intersect is just transition. Since marginalized communities bear the brunt of climate change impacts they "must be prioritized to receive the disproportionate benefits of the transition to a pollution-free society to remedy disproportionate harm done historically and presently." The last intersection is that no one is free until we are all free. Here it says that prioritizing and helping marginalized communities during transition will ultimately benefit everyone in the community.

Additionally, the Austin Climate Plan provides a few overarching strategies that will be used to achieve the net zero goals with a focus on equity. First, is to create entrepreneurship opportunities and green jobs in low-income communities. Next, is to prioritize community initiatives led by local organizations. Another strategy is to collaborate regionally with other towns and municipalities within the state. Lastly, Austin looks to establish projects locally aimed at reducing carbon and supplement this with carbon offsets when necessary.

Next, the plan provides an overview of the climate challenge. Within this summary, there are a few areas that are relevant to Williamstown. First, this section makes several references to housing and how it interacts with both climate change and equity. Low-income communities are already experiencing housing challenges, and increases in extreme weather events put additional strain and burden on them. Also, connections and social ties are dismantled when communities are displaced or separated. This makes responding and recovering from climate events more difficult. Lastly, the affordable housing crisis will be heightened as climate events increase in both intensity and number. A potential solution is to create more safe and affordable housing. Next, the background information also discusses environmental racism. Generally, marginalized communities live and work in areas that are most affected by climate change and that are the most exposed to other health dangers. This is not coincidental; areas near communities of color and low-income communities are more frequently selected for facilities that cause health problems. These inequities have led to worse health outcomes in these marginalized communities, including various chronic diseases. A lack of access to healthcare and other services amplify this.

Next, the plan discusses how it can ground climate action in equity. This is the most important aspect of Austin's plan that can be applied to Williamstown. The first step of grounding climate action in equity is understanding history. By understanding the history of a place, one can understand how existing systemic inequities were created. Therefore, one can understand why lowincome communities bear a greater burden of climate change. The environmental and climate issues in Austin have been redefined as economic and social issues - this presents them as human rights issues. The plan also mentions that the changing demographics create a need for a "diverse engagement and implementation process that is culturally inclusive and accessible to these populations. This includes ensuring linguistic accessibility and targeted outreach." This can be applied to Williamstown by engaging with non-English speaking residents. Next, the grounding climate action in equity section discusses the need for a shared vision and an equity focused approach. The city sees climate change as one part of "normalizing and institutionalizing equity" overall within governmental operations. The intention of the plan is to directly incorporate equity in climate policies in order to achieve "more environmentally and economically just outcomes." The plan includes a venn diagram that depicts the intersection of solving climate change and racial equity. There are parallels to class equity in this diagram.





The last portion of grounding climate change in equity is advancing equity through our goals and strategies. The plan states "if we aren't proactively addressing equity, we're perpetuating injustice." The most significant part of this process includes an equity tool. For each proposed goal or strategy, the equity tool asks screening questions around particular themes to evaluate how well a given strategy considers equity. The themes of questions surround health, affordability, accountability, accessibility, just transition, community capacity, cultural preservation, and accountability. Below is an example of the equity tool related to the theme of health.

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			
		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:					

This tool is used to recognize potential harms or burdens to low-income communities. When these are recognized, strategies and goals can be built to minimize these burdens and harms. It is supposed to guide discussion in "mindful, long-term thinking." Lastly, an element of grounding climate action in equity is getting community input. Throughout the development of the Climate Equity Plan a significant effort was made to connect with groups and communities that historically had been excluded from conversations about climate change. Austin did this through a Community Climate Ambassador Program, in which the paid ambassadors conducted conversations about climate with marginalized communities and heard their concerns.

VI. Interviews

The next piece of our research process was interviewing key stakeholders in the Williamstown and larger Berkshire community. Wendy and Nancy introduced us to a number of people affiliated with various organizations who would be able to provide us with insight. Our goal for stakeholder interviews was to learn about the low-income community in Williamstown through people who directly work with the population. Although this was not direct outreach to low-income communities, these conversations would be able to provide us with a macro perspective on the challenges faced. It was an important foundation that helped guide us to the greatest opportunity to improve equity in the Williamstown community.

Next, in total we conducted interviews with 11 key stakeholder interviews. We interviewed:

- 1. Renee Schmidt, Berkshire Community Action Council (2 interviews)
- Andi Bryant, Williamstown Housing Authority member, Net Zero Task Force member, Low-Income resident in Williamstown
- 3. Paul Mark, State of Massachusetts Senator
- 4. Carin DeMayo-Wall, Landlord & Works at Food Pantry
- 5. Todd Holland, Senior Mechanical Design Engineer at UMass Amherst
- 6. Jason Moran, Assistant Director of Energy and Utilities & Tanja Srebotnjak
- 7. Andrew Groff, Community Development Director and Williamstown Planner
- 8. Brian O'Grady, Harper Center
- 9. Jane Tekin, Residential Energy Auditor for Center for Ecotechnology
- 10. Cheryl Shanks and Andy Hogeland, Williamstown Affordable Housing
- 11. Li Platz, Former Envi 402 Student

Below are the summaries and key takeaways from each interview. The title of each summary includes the name, date, and position of each interviewee. Each summary includes information describing who the interviewee is, how their work intersects with low-income residents, what the main takeaways from the conversation were, and (if applicable) any resources they provided us.

Renee Schmidt, Berkshire Community Action Council, 10/24/2023

- Residents of Williamstown who are behind on their home energy assessments are not eligible for home energy assessments.
- Access to assistance is an issue. Many people feel ashamed and that they do not need the services as much as others, when BCAC actually gets more funding for the more people that utilize the services.
- Need increased outreach to eligible individuals. Current means of outreach is a flier and people call in to receive services.

- Many houses have issues that need to be taken care of before insulation can occur that are expensive and present barriers to low-income people looking to weatherize.
- Since not every house is compatible with heat pumps, community solar is a good idea.

Renee Schmidt works for the Berkshire Community Action Council (BCAC). For context, the BCAC was established in 1966 and was intended to be the anti-poverty community agency in the Berkshires. Their purpose is to help low-income Berkshire residents become self-sufficient and lead sustainable lives. Their mission statement reads: "Berkshire Community Action Council works with our community to find creative and sustainable solutions that promote economic stability and alleviate the destabilizing effects of poverty on our neighbors." BCAC's focus on low-income community members made them a great organization to connect with in order to hear their perspective on how to make Williamstown's Net Zero Plan equitable. Within the BCAC, Renee works in the weatherization department. Her work predominantly consists of insulating people's homes - she believes this is the first step to reducing a building's carbon footprint while making a residence more affordable to live in. Renee's insulation work is a byproduct of BCAC's fuel assistance program. Within the program, the BCAC has two audit systems. The first is an appliance audit that allows out of date appliances to get replaced. The other sends a skilled auditor to examine a particular building. Weatherization and insulation of a residence can happen after the building audit.

Renee's work intersects with the low-income community in the Berkshires. Through the nature of her work, unlike some of the other interviewees, her interactions are direct. The weatherization services BCAC provides are available to those who qualify based on household income. A significant portion of those who are eligible for the program are low-income residents. Therefore, in the process of insulating she is directly interacting with and helping the low-income community.

One of the takeaways from this meeting was an outline for potential responses for Williamstown to assist with the work the Berkshire Community Action Council is doing. For instance, people who are behind on their income taxes are not eligible for the program offered by the council. One thing that Williamstown could do is provide a pass to residents to allow them to insulate their homes through the assistance program without being up to date on their taxes. Another solution might be to provide people with some sort of support or with resources to help them get on top of their taxes.

Renee also brought up that one major barrier for some people is accessing these services. Many people feel that they do not need assistance, feel ashamed to ask for help, or are worried about taking away from other people. In reality, the service receives more funding when more people apply for fuel assistance. Further, when people become eligible for fuel assistance they also become eligible for many other services. Additional outreach issues reside in the fact that people have to call in to receive this service, and outreach does not appear to be extensive (there are some fliers and ads in local newspapers). Therefore, one method to increase participation in this free insulation program might be to conduct more outreach and to educate people more about the service.

Once people do ask for assistance, further barriers emerge. Sometimes houses are in such bad shape that much more work needs to be done on them before they can be insulated (for example if a house has "flimsy paneling"). Some examples are moisture issues that would make insulation ineffective, lack of structural integrity, removal of knobbing and wiring, vermiculite removal, and sheetrock installation. Telling low-income residents that their house is not eligible until it is fixed in ways that they can not afford is not really all that helpful to those people. Additionally, insulation is a starting point from which sometimes heat pumps and then solar panels can be added to a house. Not every house is compatible with heat pumps, which is why community solar is also a good idea. Right now the council is attempting to accumulate data on which houses are insulated in Williamstown and the rest of the Berkshires, noting that many houses in Williamstown are in much better condition than houses in other neighboring regions.

The BCAC is funded by deductibles that are written into people's electricity bills. The funding comes from the National Grid utility and in order to use this funding to carry out knob and tube removal as well as vermiculite removal and sheetrock installation, contractors have to be national grid certified. The process of obtaining this certification is one that takes three days and is quite intensive, something that many contractors do not have time for. Of four electricians in the area, only one is National Grid certified. One opportunity for Williamstown to assist in this might be to incentivize contractors to become certified or to simplify the process of becoming certified.

Renee Schmidt, Berkshire County Action Council, 11/15/2023

- Data surrounding BCAC fuel assistance program in Williamstown
 - 201 people on fuel assistance
 - Average benefit is \$1,548
 - Currently serving 31 people for weatherization, installing heat pumps, etc.
- Provided the income qualifications for BCAC fuel assistance program
 - Located in appendix
- Some residents are unable to participate in the fuel assistance program because they are behind on taxes and therefore won't be able to get a building permit pulled
- There are a variety of reasons that Williamstown residents are reluctant to allowing auditors into their home including:
 - Drug user and worried about being reported
 - Embarassed of their home because of hoarding
 - Bad dogs
 - Don't want another task on their plate
- How fuel assistance program operates in mobile home parks
 - Need to blow in the belly of a mobile home to properly insulate which presents a large upfront cost
 - Approximately \$10,000

Renee was a great resource for our group during our first interview. In fact, there were a few topics we were not able to get to so we scheduled a second call. We were also able to ask a few follow up questions relevant to our first conversation and other information gathered during our project. This discussion delved into three general topics.

The first topic we covered was data the BCAC had collected through their work with the Berkshire area. Given that much of our interview research is by nature qualitative, any hard statistical data was something we wanted to incorporate more when possible into our project. Renee was gracious enough to share Williamstown and Berkshire data relevant to her weatherization work.

- In Williamstown there are 201 people on fuel assistance.
- The average benefit is \$1,548.

- This is what an average resident gets provided for their heating bill. This sounds like a high number, but there are some houses where it can cost ~\$3-4k a year to heat. It should be noted that these numbers incorporate extra funding provided during the pandemic.
- BCAC is currently serving 31 people
 - 4 people getting air source heat pumps
 - 13 getting regular heating systems
 - Stick with traditional oil heating
 - 4 people are currently experiencing roadblock
 - Typically knob and tube wiring
 - 14 getting weatherization
 - 2 people getting new windows
 - Throughout Berkshire county, BCAC receives ~ 50 no heat emergency calls

This data was all pulled recently - within the last month. There are a few additional things to note about this process. First, the field assistance program has to go in order. This means that, for example, before someone can get windows or a heat pump, they have to be fully insulated. They start all projects with insulation unless they have no heat. Next, emergency no heat calls frequently occur in the Berkshires during the winter. When there is no heat it is freezing cold inside of a residence and there is concern about pipes freezing. Typically, National Grid helps pay for these emergencies but if they don't cover the entirety of funding BCAC will reach out to the state department for help. This data was extremely helpful as hard numbers can help support our recommendations in different ways than case studies and interviews. Renee also provided us with an income eligibility pamphlet for BCAC's assistance program.

The second subject that was touched on was any reservations residents have about the program or to auditors coming into their home. It was apparent in our conversation with Renee that there is sometimes concern with the program and resistance to auditors. First a reason people may be resistant to participate in the fuel assistance program is because building permits are needed and if someone is behind on their bills or taxes the town won't pull a permit for them. If a hasn't paid, they might just avoid the program because they don't want to interact with the town. Next, even though audits are required in the fuel assistance process, Renee mentioned a few reasons for why residents don't like auditors to come into their homes. First, sometimes a person might be a

drug user and they do not want anyone to find out because they are worried they will be reported. Another reason for resistance is some people are hoarders and too embarrassed to let someone in. Another cause is bad dogs - a person might not know how to control the situation. One more reason is that people simply do not want another task on their plate - it can push them over the top. Last, Renee said that elderly people who are struggling mentally would evade audits out of fear of someone seeing that they don't have it together. In terms of assuaging concern, Renee said that many auditors are experienced and know how to work a situation to make someone feel the most comfortable.

The last topic discussed in this interview was the role the BCAC's fuel assistance program plays in mobile home parks. Since Pines Lodge, a mobile home park with a large proportion of low income residents, this was important to our project. Renee said that there are quite a few people residing in Pines Lodge who get fuel assistance. A big part of BCAC's work in Pines Lodge in insulating the mobile homes. It was evident that this is consistently a challenge. In order to insulate a mobile home one needs to "blow in the belly." An issue with this is it costs approximately \$10,000 while most of the homes only cost \$20,000-\$25,000 in total. She said that it is still important to give these people help regardless of the cost. The other big roadblock is the contractors. don't want to do the work because it is gruesome and messy - they have to climb around under the trailer constantly. She suggested incentives for contractors could possibly help. Also, frequently something goes wrong during the job and it is then the contractors job to fix it; they then are not being paid extra to fix the problem that they created.

Andi Bryant, Williamstown Housing Authority member, Net Zero Task Force member, Low-Income resident in Williamstown, 11/3/2023

- Information dissemination of low-income residents is lacking.
- Low-income voices are not included in current net zero planning, or town planning in general. This plan is a possibility to
- Low-income residents need to feel comfortable and safe with using services without possible repercussions.
- More compassion is needed within current systems, there is a lot of stigma towards being low income in Williamstown that is both internalized and projected from higher-income residents.

• MassSave programs can fail to get back to clients about eligibility and funding. This lack of communication and transparency is discouraging.

Andi Bryant is a Williamstown Housing Authority member and Net Zero task force member. She self identifies as a low income resident of Williamstown. Andi has lived the life of a low-income resident in Williamstown for her whole life.

Andi joined the local government and found out that there were resources available to lowincome residents that she was never aware of. There is a devastating lack of information that blocks other low-income residents from knowing that there are services that they could qualify for. There are different income qualifications for different services and many people think that they need to be eligible for SNAP benefits, in order to qualify for other assistances (eg. fuel assistance). There also seems to be a fear around allowing home inspections to see if one qualifies for certain programs. There is also a stigma attached to being low-income in Williamstown. She said that some low-income residents feel as though they are being treated as second-class citizens.

Throughout the interview, she expressed that the economic inequalities have led to lack of considerations that also creates a lack of community. It seems like there are opportunities for economic justice and health considerations to be centered in the net zero plan.

Paul Mark, Massachusets Senator, 11/29/2023

- Senator Mark pushed for the creation of a green bank in Massachuesttes, which will gain some funding that can be used by the end of fiscal year 2023
- 10% of funding will be dedicated to rural communities, such as Williamstown
- Initial goal of the bank is to provide low interest loans to decarbonize the housing stock
- Loans would be available for small-scale projects, so single family homes in Williamstown would qualify for the bank's loan products
- Paul Mark is a State Senator representing Berkshire Country, which includes Williamstown, and other neighboring countries. He has played an integral role in the creation of a green bank in Massachusetts. Senator Mark was the petitioner of Massachusetts Bill H3340, the bill that passed in 2021 to 2022 cycle and codified the Massachusetts Green Bank into law, meaning that he brought the bill in front

of the senate. In this interview Senator Mark explained how the Green Bank came to be and how Williamstown could best utilize the Green Bank.

Green banks are non-profit, governmental, or quasi-governmental financial institutions that seek to accelerate the transition to clean energy and decarbonize the area that it serves. They offer loan products at lower interest rates with longer repayment periods for specific sustainable projects that would not be financially feasible otherwise, making decarbonization more affordable. The Massachusetts Green Bank currently has \$50 million in seed funding. This seed funding will serve as the initial source of a revolving loan fund. It will also serve to attract other investments from outside investors and qualify the bank for the federal fund of \$27 billion that is available to green banks nationally. Although the bank has not begun to offer loan products, a meeting is set for January 2024 where the specifics of the bank's products will be discussed and product rollout is expected to begin by the end of fiscal year 2023. Senator Paul Mark said that he would forward the team the information that comes out of this meeting.

While the bank's specific loan products are yet to be formalized, the products will consist of some selection of loans for weatherization, electrification, and renewable projects. 10% of the loans will be put in a specific Rural Communities Fund and go towards projects in rural communities. The bank will use the State's definition of a rural community, which is defined as a municipality that has fewer than 10,000 people and a population density of less than 500 people per square mile. Williamstown qualifies as a rural community and will be able to obtain some of this funding.

The funding that this bank may be able to provide in the near term may prove to be the tipping point for weatherization projects in Williamstown that have previously been financially infeasible. The town should keep a close eye on the products that this bank is set to roll out and make sure to keep the residents of Williamstown informed of how they can qualify for these programs that will help with weatherization and decarbonization more broadly. Additionally, Senator Mark hopes that organizations such as BCAC will be able to work with the bank to provide funding to low-income residents. Therefore, Williamstown should pay particular attention to pathways for these local non-profits to utilize the bank's funds and connect these funds to low income populations.

Carin DeMeyo-Wall, Landlord & Food Pantry 11/2/2023

- There is a disconnect between the town residents, Williams College and local town politicians
- It is difficult for people who are struggling to prioritize net zero initiatives. Communal resources, funds or interest-free loans may be helpful in this transition
- Landlords need to be incentivized to make changes towards net zero
- Better information dissemination is needed

Carin DeMayo-Wall is a landlord and Williams College graduate. She grew up in Williamstown and has been involved in local politics. She provided important insight into the disconnect between the college campus community and Williamstown. She also described a discrepancy between the values prompted by the town leadership and actions that are taken. DeMayoWall suggested that the local businesses need more support. In particular she mentioned that local farmers are really struggling. They don't have enough workers and don't have enough time to adopt the attitude that net-zero is a priority. DeMayo-Wall mentioned that landscapers are in high demand, and aren't hugely wealthy, but that their equipment has to be turned over. She suggested that low interest loans from them to transition to electric equipment might be helpful. She made a point that starting with bite sized pieces might be easiest: leaf blowers and wackers and lawn mowers.

Further, DeMayo-Wall highlighted that "long term planning can't just be people who are providers." And that there is a disparity between people who are able to attain sustainable practices and appliances are those who can afford them – she mentioned how broken the system was that only the people who can afford these changes are supported.

Additionally, DeMayo-Wall mentioned the lack of centralized trustworthy information sources available to the town. There is no local paper, just the Berkshire Eagle, so getting information out to people in the town is often a struggle. There is also an inability to reach older populations.

In discussing her role as a landlord, DeMayo-Wall brought up the fact that there are many regulations (both state and local) that are put on landlords. If more regulations are put on them, it is likely that landlords will start turning their places into single family homes. Additionally, if certain practices in regard to sustainability are forced on landlords, they will be reflected in the

rent, which will then make some people unable to rent there, and reinforce the loop of the elite being most able to reap the benefits of sustainable infrastructure. To address this issue, DeMayo-Wall recommends that some incentives be provided to landlords. She mentioned that Mass Save has some, but these changes should be executed in a way that supports people making good choices without being mandated.

Todd Holland, Senior Mechanical Design Engineer at UMass Amherst, 11/3/2023

- College students and community members can be trained to weatherize homes.
- Attitudes that condone waste are very prevalent in this region and that applies to energy waste as well. There is a need to shift attitudes in order to work towards net zero.
- Community spaces that are used by low-income residents are important places for sharing information.
- Weatherization is a potential career path for people who wish to be involved in an up and coming industry.

Todd Holland is a former Williams college employee who worked at the Zilkha Center. His title was Energy Efficiency Project Engineer. During his time at Williams he worked on a variety of projects that have had long lasting impacts on the Williams Campus. He coordinated the Winter Blitz, a weatherizing project. He worked on the Low-Income Heating Assistance Program (LIHAP). During this he trained students on how to weatherize homes. He also worked on the Bicycle and Pedestrian Initiative to work on traffic and biking accessibility on campus. Since Williams he has worked at Hampshire College, was a Senior Mechanical Engineer at Tighe & Bond, and currently works at University of Massachusetts Amherst. He brings a wealth of experience from working on sustainable practices and energy efficiency projects throughout his professional career.

Todd's work intersects with low income residents in many ways. He has spent time working with people who need assistance with fuel, with weatherizing their house, promoted EV transition, and helped provide visibility to incentives and funding for energy efficiency where they exist. He did many of these things at Williams. Further, Todd has a lot of experience working with low income communities around the institutions of higher education institutions he has worked at to promote equity. For example, he has recently been a part of a project to renovate the library at

UMass. Some people wanted a portion of the funding to go to other projects, but Todd highlighted during our conversation that the library is an important place of equity because of the people who most frequently access. It provides youth programs, resources for many people in the community that don't speak English. Generally, it is a community space that serves marginalized groups.

There are key takeaways from our meeting with Todd. First, is that New England attitudes generally don't mesh well with energy efficiency, Net Zero ambitions, equity, and transition, especially when it requires overcoming barriers. As a native New Englander, Todd says there is a deeply ingrained lifestyle of frugalness even though this lifestyle is wasteful. There are attitudes that being efficient and sustainable with high-performing green building strategies is a luxury item that most people don't have the ability to adopt. While this is incorrect, Todd did emphasize the point that while there needs to be a way to promote the idea that being sustainable doesn't mean you need to buy a \$100k Tesla.

The other large takeaway from our conversation is that the housing stock performance, especially in Williamstown, is extremely poor. The homes lack efficiency which lead to high energy costs for residents. If the homes are leaky there is space for rodents and bugs to get in which is also detrimental to air quality. These issues can be solved by effectively insulting residential buildings. They focus on the attic and the basement during these projects. Just this greatly decreases energy costs - reduces the need for heat in winter as well as air conditioning in the summer. Additionally, insulation work is a good opportunity to create jobs in the area. Todd mentioned an instance in which a company called Holy Oak provided the weatherization services. They provided these services when he worked with the Five Colleges before Williams. He also contracted them to do the weatherization work at Williams. Holy Oak takes low income people and trains them to insulate houses. This provides long term work for those who are trained. Fast forward to today, and after 20 years a few of the workers split off from Holy Oak to create their own weatherization business. The federal government also sponsors insulation training. This seems to be a potential opportunity to further promote equity.

Jason Moran & Tanja Srebotnjak, Williams College, 11/14/2023

- The College is mainly focused on its own contribution to the town's transition to net zero (opposed to helping the town to transition to net zero), but is willing to collaborate.
- Energy reduction is an important step working in tandem with a clean energy transition.

Tanja is the Director of Sustainability at the Zilkha Center. She is involved with the built environment and landscaping and habitat, sustainable food, waste management and the 3 R's reducing, reusing and recycling. Woven through these are student engagement opportunities and partnerships with surrounding communities, such as Community Climate Fund which is a \$100,000 annual fund that supports local environmental effort in the Berkshire region. Jason is the Assistant Director for Energy and Utilities. He is in charge of the campus wide Carbon Master Plan. They both work closely with reaching the colleges net zero goal which is an 80% reduction in scope 1 and scope 2 emissions from 1991 emission levels as soon as they can (the lack of a specific deadline is intentional).

Their work intersects marginally with low income communities through the Community Climate Fund. This is a fund that funds local efforts in the Berkshire region on a wide array of sustainability issues. They collaborate with the town to meet the goal of carbon neutrality as partners. Jason tries to work with local contractors whenever possible, however, due to current low workloads at the college, there are limitations to how many contractors can be hired. In the future he sees possibilities to work with more local companies as the needs of the college change. Both interviewees see themselves as focusing on taking action to decarbonize rather than pushing the college to reconceptualize equity in its practices. They see opportunities to consider equity, but think that equity is the directive of other offices such as the Davis Center.

They were able to provide us with detailed information about the steps that Williams has for decarbonizing. They see that there is a need to negotiate with the electric company so that Williamstown can access more electricity which will be especially important for the transition to solar. The price that National Grid is charging for updating the grid is around \$400,000 and neither the town or the college are willing to pay for this. In the meantime, the college is planning to hire an energy manager who is able to assess campus buildings and suggest ways of reducing energy use. Because the college serves so many different students, the goal is to reduce energy use while keeping the campus functioning well for all students. The college sees its contribution to the Williamstown Net Zero plan starting with infrastructure upgrades that reduce energy consumption and are compatible with cleaner forms of energy.

Andrew Groff, Community Development Director and Williamstown Planner, 10/20/2023

- There is limited data available on the demographics of low income community in Williamstown
- Provided us with resources for statistics about the town demographics and electrification and renewable installations in Williamstown
- Housing shortage in Williamstown, especially for middle and low income houses
- Middle income households are sometimes left out of energy incentives

Andrew Groff is the Community Development Director and the Town Planner of Williamstown. As Community Development Director, Andrew ensures code compliance for projects of all sizes in the community, from things as miniscule as a homeowner installing windows, to as large a multi-million dollar construction project carried out by Williams College. As Town Planner, Andrew works with the public and community board members to make land use decisions for Williamstown. His interactions with low-income residents are primarily via his role as Town Planner, specifically through partnerships with developers who are building affordable housing units. For example, Andrew worked with the developer of the Cable Mills Building on Water Street to assist them in the utilization of low income housing tax credits, which allowed for the inclusion of income-restricted apartments. However, outside of his role in the creation of affordable housing, Andrew's work seems to rarely intersect with low-income communities and other vulnerable populations directly.

Through our interview with Andrew, we learned that there is no centralized data source that reports statistics on low-income residents in Williamstown. The population of low income that is reported in the census also includes Williams College students. This has the potential to skew data that is meant to represent permanent residents. There is information on which housing units are zoned specifically as rental units, however there is no data on homeowners that may identify as low income. There also is minimal interaction between low income residents and local government, making a lot of the information that we hear backed by lived experience through narratives and observations.

We also learned about equity concerns for middle income residents. All the funding that low-income residents are eligible to receive comes from the federal government and those who are outside of that economic bracket are not eligible to receive federal assistance in their efforts to become net zero. This is also further complicated by entities such as the current electric providers who are univentive (compared to the electric company in Vermont for example - Andrew talked about the installation of Tesla powerwalls) and are acting as a barrier to this transition. Right now cost is a huge barrier to people at different economic levels.

Brian O'Grady, Director of Williamstown Council on Aging, Harper Center, 10/27/2023

- There is support for senior residents.
- People want to make energy improvements but there needs to be increased awareness about these energy efficiency and money saving programs.

Brian O'Grady is the director of the Williamstown Council on Aging which focuses on the needs of people 60 years and older. It is a hands-on service that provides transportation, technology assistance, social work, and social services (such as yoga classes). People typically hear about the programs provided by the council through email list serves, the Williamstown Website and Facebook page, paper fliers, and posters at Wild Oats as well as the town libraries. O'Grady remarks that he is always surprised when people haven't heard of their services, but that this does happen. The program is blind to people's economic status and will serve anyone.

O'Grady also mentions that many elderly residents are interested in ecology and environmental protection. He states that they have noticed the lack of snow in the winter and the changing conditions as "a lot of people are aware and they know because they have a long lifespan." To address these issues, O'Grady recommends pushing weatherization as it is free and everybody should be able to do it. Further, O'Grady mentioned an outreach initiative for free home evaluations (BCAC) that some people have taken advantage of, but recently he hasn't seen much of. He suggests the importance of going door to door as a means of reaching elderly populations.

Jane Tekin, Residential Energy Auditor for Center for Ecotechnology, 11/30/2023

- Many people are unaware of the energy inefficiencies in their homes and lack information on funding sources and how to utilize government services.
- Roadblocks moisture, asbestos, knob and tube wiring can stall or inhibit weatherization services. Addressing these roadblocks can be expensive. The MassSave Heat Loan offers 0% interest loans for eligible homeowners.

• It is hard to find good contractors to do the work. Contractors need to be certified by MassSave to work with.

Jane works for the Center for Ecotechnology (CET). As an auditor, she audits 2-3 homes per day. This is a thorough audit of the condition of the home to see if it is ready for weatherization services. Many people are unaware of potential energy leaks in their home, so Jane informs residents of any areas that could use extra insulation and what funding sources exist. This service is free for anyone who uses it. Clients who want to proceed with energy efficiency measures are matched with contractors by CET. However, if their home has any roadblocks: moisture, asbestos, knob and tube wiring, they need to first fix these roadblocks before proceeding. Fixing these roadblocks can be expensive and time consuming. In this region, there are many old homes so asbestos is very prevalent and expensive to fix.

CET serves clients at a range of socioeconomic levels. The MassSave Heat Loan offers 0% interest loans for eligible homeowners. However, this still might not be the ideal solution for some homeowners. The Williams College Community Climate Fund has also helped to provide funding for addressing roadblocks in some cases. The MassSave Insulation program will also pay for up to 75% of insulation services for residents who qualify.

Cheryl Shanks and Andy Hogeland, Williamstown Affordable Housing, 10/26/2023

- There said there are limited incentives for electrification and energy efficiency in low income housing projects
- State and national level energy efficiency programs are difficult to navigate
- Renewable electricity programs seem to be more abundant and information is easier to navigate compared to energy efficiency and electrification programs

Andy has been on the Select Board and Affordable Housing Trust for three years and does statewide advocacy work for affordable housing and energy efficiency with groups of municipal officials. Cheryl is a faculty member at Williams College that has served on the mobile home rent control board, affordable housing committee, and has been involved with the local chapter of Habitat for Humanity. Both Andy and Cherly's work has intersected with low income community members through the Affordable Housing Trust, which provides homebuyer and renter assistance to low-income residents and works with Berkshire Housing Development Corporation and Habitat for Humanity to build housing for low income residents.

In our conversation, we spoke about the lack of affordable housing in Williamstown and Cherly explained how, when those low-income and affordable housing projects that do exist are built, there is little upfront consideration for energy efficiency measures, electrification, heat pumps and solar. Habitat for Humanity has recently had discussions about including energy efficiency measures or solar in their building projects, but no real progress has been made.

One barrier to including these energy efficiency and renewable measures is that state programs providing funding are difficult to navigate and are lacking when it comes to the building of single family homes. There are grants for energy efficiency measures for large construction projects, generally five houses or more, and on the per-home basis for installing heat pumps or solar, but these incentives are insufficient during the initial construction phase. Regardless, projects such as house builds by Habitat for Humanity have the goal of providing low-income individuals with housing they can afford to live in. Adding these energy efficiency measures would only make the houses more affordable in the long run at a slightly higher cost than the initial build, but the cost difference would likely only involve a limited increase in fundraising and would strengthen the mission of nonprofits such as Habitat for Humanity. Williamstown should prioritize advocating for state-level incentives for smaller construction projects, as well as encourage lowincome housing projects to include energy efficiency in the initial build. Moreover, the development of a fund for these small projects by the town could go a long way in helping ensure that low income households have these benefits upfront.

Li Platz, Former Envi 402 Student, 11/1/2023

- Li held a focus at the local elementary school for her Envi 402 project
- Her format for the focus group was informative for how we planned our focus group

Li Platz is a senior at Williams College majoring in Environmental Studies. She worked with Williamstown for her Environmental Planning project last year to help with the creation of the Williamstown strategic plan–the plan for Williamstown's future development. Li provided us insight about how she reached out to de Mayo at the food pantry, which was key for our survey outreach and interviews. Additionally, she explained the process of a focus group her project group conducted at the local elementary school. Although this focus group was in a different setting, the process her group went through was informative for the creation of our focus group.

VII. Survey

Introduction

Surveys are an important way to gain community feedback. The 14 question survey used in this project was adapted from The Williamstown Community Survey which was a prior version of this survey created by our clients. This prior edition focused on collecting data on the general Williamstown population. In our edition of this survey, low-income residents were the main target group. The questions used in this survey were intended to assess the qualitative experience of lowincome residents in terms of energy burden, comfort of homes in summer and winter, barriers to accessing weatherization services, information dissemination, experiences with feeling included in the town etc. We engaged in five main different distribution methods, each allowing different levels of engagement and access to our target demographic. In order to incentivize participation, the survey was advertised with an option to be entered into a raffle for a \$25 gift card. The survey was also kept anonymous in hopes that respondents would feel more comfortable providing income information and answer honestly.

Distribution Methods

1. Online Distribution, Flier Distribution, Word of Mouth (22 respondents)

- a. Online Distribution: Williamstown Elementary School Newsletter, Pines Lodge Listserv, Andi Bryant's Listserv
- b. Flier: Wild Oats Grocery Store, Stop and Shop, Williams College Dining Hall Advantages: Reach a wide and diverse audience Disadvantages: No in-person engagement, low response rate
- 2. Employees of Williams College (4 respondents)

Advantages: Engagement with people associated with one of the main economic entities of Williamstown and are invested in Williamstown regardless of residency

Disadvantages: Not always easy to find appropriate timing to engage with staff

3. Grocery Store (26 respondents)

Advantages: Engagement with residents of mixed income levels

Disadvantages: Busy environment leads to low-engagement

4. Food Pantry (13 respondents)

Advantages: High level of engagement with target demographic, allowed for longer conversations with target demographic

Disadvantages: N/A

5. Focus Group (7 respondents)

Advantages: Highest level of engagement with target demographic, highest response rate, high potential to long term community engagement

Disadvantages: N/A

Qualitative Results

Respondents that live in neighboring towns or work in Williamstown but are not residents were included. They were included under the assumption that income based living standards in neighboring towns are similar enough to Williamstown and would not skew the data.

Questions:

What would make you feel more included in this town?

Do you feel like the town government hears your concerns?

Any other comments on how living in Williamstown could be improved (affordability, being involved in decision making, accessing information etc.)

1. Question: What would make you feel more included in this town?

Comparison of **low-income** (n = 33) and **high-income** (n = 18) responses to what would make residents feel more included in town. Low income is defined as an income from \$0 - \$74,999. High-income is defined as over \$100,000. All data outside of these income categories were not included. Of the n = 33, 18 low-income people surveyed responded to this question. Of the n=18, three high-income people surveyed responded to this question.

- People want more of a sense of town community, through more events, programs, and community interaction opportunities. There is the fear that a sense of community no longer is present.
- People think that there is a need for more activities for children.
- Specifically low income residents want easier access to the rest of the town (better transportation specifically a bus stop at 330 Cole).
- The need for more bilingual workers in hospitals and bilingual counselors should be investigated.

Key Low Income Responses:

"I would like to do some speaking events, maybe sharing my story. I feel like I have so much to give back."

"It needs more activity for teens and kids, there is nothing to do out here in Williamstown. Also needs more bilingual people in the hospital and bilingual counselors."

"Lived here most of my life. I'm fifth generation here. This is a community. Unfortunately, employment opportunities (our manufacturing) have disappeared. People are moving from other places and replacing us. They bring their own biases and add them to the social mix. There is no easy solution. Tolerance is key."

2. Question: Do you feel like the town government hears your concerns?

Comparison of **low-income** (n = 44) and **high-income** (n = 18) responses to whether or not they feel as though the town government hears their concerns. Low income is defined as an income from \$0 - \$74,999. High-income is defined as over \$100,000. All data outside of these income categories were not included. Of the n=44, only. Of the n=33, 24 low-income people surveyed responded to this question. Of the n=18, 11 high-income people surveyed responded to this question.

- High income residents appear to feel more heard by the town government
- Generally, people feel that the town government doesn't care, and doesn't hear their concerns. They do not know how to gain access to town hall meetings.

• There is a fear that the college needs are represented more than town needs in the town government. Additionally, residents fear that the town is "two-tiered" and that the needs of college students and wealthier individuals are more represented.

Key Low Income Responses

"No, I feel overlooked because the wealth gap is so great. Most of the town population is very wealthy and I don't think they understand how some of us have to live with daily hardships of keeping a household running."

"Too much focus on accommodating the college & the town's wealthier residents and defining the town's overall character based on these narrow constituencies. Need greater effort on the part of town officials to communicate, deliberate & govern in a way that acknowledges, in an affirmative & non-patronizing manner, the existence & interests of lower-income residents. Also, at town meetings, moderators should maintain scrupulous neutrality & even-handedness to allow for the widest array of citizens' voices - a protocol not always followed in recent years."

"My interactions are limited but I find they are responsive when I need assistance."

"I feel there should be an elder advocate within the government."

"I worry that Williamstown is a two-tiered society - there's the college people + similar, then there's the town folks. I think the town folks often get left out or looked down on."

3. Question: Any other comments on how living in Williamstown could be improved (affordability, being involved in decision making, accessing information etc.)

Comparison of **low-income** (n = 44) and **high-income** (n = 18) responses to whether or not they have any other comments about improving quality of life in Williamstown. Low income is defined as an income from \$0 - \$74,999. High-income is defined as over \$100,000. All data outside of these income categories were not included. Of the n=44, 23 low-income people surveyed responded to this question. Of the n=18, 12 high-income people surveyed responded to this question.

- Desire for more inclusion and broader community engagement (better transportation, creation of a public swimming pool or more recreational communal spaces)
- Desire for more affordable housing.
- People think the college has too much of a role and power over local decisions and funding issues.
- Lack of feeling that the government represents and is responsive to residents' concerns about housing and energy needs.

Key Low Income Responses

"Love the small town community. The children at the end of Cole Ave could use a playground. Create a sense of place in this community. Feels like we stick out like a sore thumb. Strong stigma of rich vs poor."

"I understand Williams College is the main supplier of revenue (now) in this town. This is becoming a 'second resident town.' Well-to-do people are looking to further their own gains. Here is a dying population ripe for the taking. Gentrification is in full swing."

"More affordable, local shopping. Williamstown shops are pretty pricey. Affordable sustainable housing - in line with preserving farms, natural areas - planned community housing."

"It is very hard for a person relocating here to find info about civic groups, common interest groups, etc and contact info for joining, unless you already know someone who belongs to them." "Stop the current gentrification going on and stop the classism town is known for."

Quantitative Results

The low number of respondents that live in neighboring towns but work in Williamstown were included in the data analysis.

Measures:

Energy burden: Scale of 1 (Affordable) to 5 (A Burden)

Home comfort in the winter:

Scale of 1 (Cold and Uncomfortable) to 5 (Warm and Comfortable)

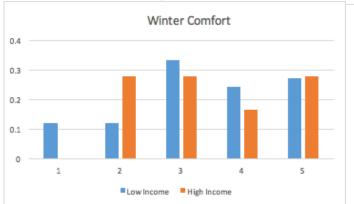
Home comfort in the summer:

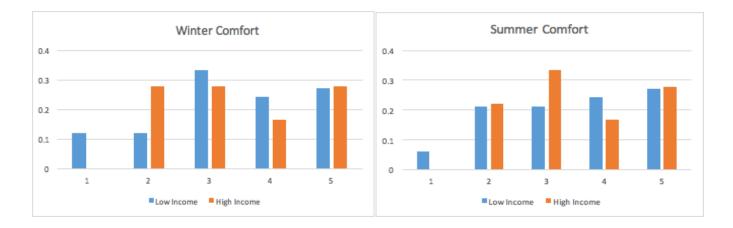
Scale of 1 (Hot and Uncomfortable) to 5 (Cool and Comfortable)

Comparison of low-income (n = 33) and high-income (n = 18) responses to subjective experiences of energy burden, home comfort in the winter and in the summer. Low income is defined as an income from \$0 - \$74,999. High-income is defined as over \$100,000. All data outside of these income categories were not included in this analysis.

- Both high and low income residents experience energy burden
- Only low income residents reported feeling level 1 (Cold and Uncomfortable) in their homes during the winter
- Only low income residents reported feeling level 1 (Hot and Uncomfortable) in their homes during the summer

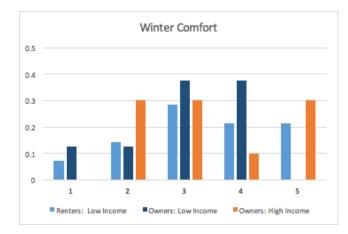


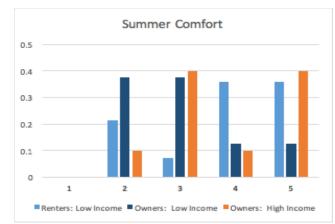


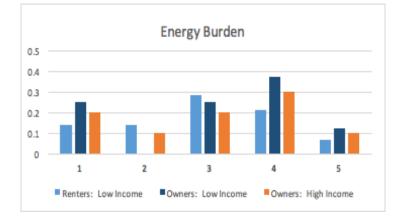


2. Comparison of low-income renters (n = 14), low-income homeowners (n = 8) and high-income homeowners (n = 10) responses to subjective experiences of energy burden, home comfort in the winter and in the summer. Low income is defined as an income from \$0 - \$74,999. High-income is defined as over \$100,000. All data outside of these income categories were not included in this analysis. High-income renters were not included in this analysis since there was only one respondent in this category.

- Low income owners experience both extremes of energy burden. As a group they experience a higher energy burden than low income renters.
- Only low income renters and owners reported feeling level 1 (Cold and Uncomfortable) in their homes during the winter
- Low income owners and renters reported feeling more extreme level 2 (Hot and Uncomfortable) compared to high income homeowners

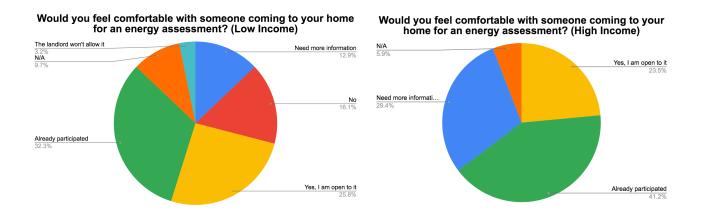






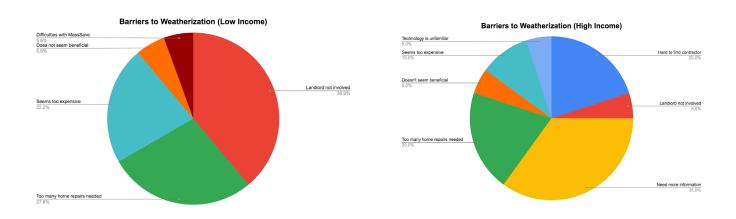
3. Comparison of **low-income** (n = 33) and **high-income** (n = 18) responses to "Would you feel comfortable with someone coming to your home for an energy assessment?"

- Only low income residents report that "No" they would not feel comfortable with a home energy assessment
- Both low-income and high-income residents are similarly open to home assessments, and both need more information.
- Both groups have already engaged in home assessments.



4. Comparison of **low-income** (n = 33) and **high-income** (n = 18) barriers to weatherization.

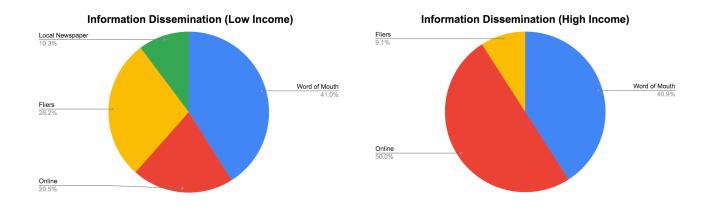
- More low income residents report that their landlord is not being involved, and it seems too expensive as barriers.
- Both groups report that too many home repairs are needed.
- High income households also need more information.



5. Comparison of **low-income** (n = 33) and **high-income** (n = 18) populations engagement with different sources of information dissemination.

Key findings

- Word of mouth is effective for most groups.
- Fliers are used more by low income residents compared to high income residents.
- Online is used more by high income residents compared to low income residents.



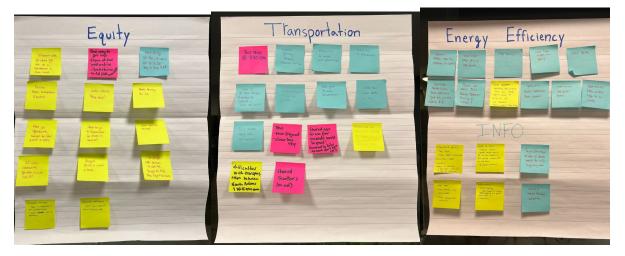
VIII. Focus Group

Introduction

Focus groups are an important avenue to hear directly from low-income community members. Our focus group was conducted at 330 Cole Ave which is a 42 unit Affordable Housing Project (Allegrone Companies, 2023). This format of engagement allowed us to hear from the

individuals who are at the heart of this project. Unlike the survey, we were able to ask follow up questions and start to build connections through informal socializing in addition to structured conversations. It also gave an opportunity for the community members to identify who else in their community was experiencing the same reality as themselves, engage in meaningful exchange of ideas, and provide feedback on the recommendations that were formulated based on survey results, interviews and case studies. There were a total of 7 people who participated in this focus group. Even in this small group there was a diverse range of age, neurodivergence, sex and ethnicity.

Community Responses



Below are some of the responses shared at this focus group.

Equity: Lack of sense of community

- Divide between renters and homeowners
- Town is dependent on college
- More cheap places to eat, more entry level jobs
- More affordable housing needed

Transport: Improve public transport

- Bus stop at 330 Cole
- More frequent bus stops
- Shared scooters or cars

- Transport to North Adams is difficult
- Better transport to Walmart

Energy Efficiency: prefer new heat pumps to oil or gas

- Gas, oil more expensive than electric
- Use heating assistance

Information: many avenues for some, others only through existing connections

- Flyers and newsletters
- Used to have "welcome wagon"
- Get information from BCAC and Berkshire Housing

Qualitative Reflections From Conducting This Focus Group

- It is important to have an attitude of learning through listening and to be open to connect with the all participants
- Flexibility is key: the number of participants and can greatly influence the format or the focus group. Being open to large group conversations, small group conversations and individual conversations are important. Flexibility in accommodating for late comers is also important.
- It is an important space to identify people who may desire deeper engagement with this work. Following up with them is key to sustained community engagement and empowerment.
- Perseverance: For our first attempt to conduct this focus group, the wrong flier was put up so one one showed up. Next time, fliers were put at all the residents' doors and residents showed up. During the focus group participants invited neighbors who originally were not planning to attend.
- Providing incentives such as food is helpful to increase attendance and also helps with socializing.
- It is important to meet people in physical spaces that are comfortable, convenient and familiar.

Obstacles Williamstown is Facing in Achieving Net Zero Equitably

The obstacles listed here were compiled after our analysis of both the quantitative and qualitative results from the reviewed case studies and conducted interviews, surveys and focus group. They represent the main barriers that we have identified for Williamstown in this current stage of planning for an equitable transition to net zero. They are not meant to be exhaustive and should be reviewed and updated as this project progresses.

1. Lack of information dissemination and awareness

One of the most prevalent obstacles discovered throughout our research process is a lack of awareness and communication regarding programs available to low-income residents in Williamstown. Various programs typically help income eligible residents become more energy efficient. The programs provide funds to aid with fuel, weatherization, etc. Even though these programs would help many Williamstown and Berkshire residents reduce their carbon footprint and save money on their energy bill, they are not well known. There are a few reasons communication and awareness about programs that will help Williamstown move towards its net zero goal is lacking.

First, many people are unaware that these various programs exist because there is no central location to access this information. Programs such as BCAC's fuel assistance and weatherization programs as well as energy audits are available for no cost but there is not a resource that contains all available programs into one place. Information is available on individual websites, but many don't know where to find it and it is taxing to have to visit multiple different sites to find all existing programs. There are some websites that have information about various resources, such as the COOL committee website. This site contains information about how individuals can take action to move towards Net Zero in Williamstown. However, the information it contains is limited relative to all the programs available. Additionally, there are not effective techniques to direct people to the particular resource. Overall,

Next, there is no centralized information source and organizations have inadequate methods for promoting their programs. Renee Schmidt of BCAC said it was apparent that they do minimal outreach regarding their fuel assistance program which also includes energy audits and the potential for home weatherization (Renee interview). She stated that when someone applies for fuel assistance they will send that individual an application along with information about the services BCAC can provide. Also, people can call at any point and they will provide information. Additionally, BCAC is attempting to improve their tracking system. This way they will know who has gotten a weatherization service, or field assistance, which will help people avoid falling through the cracks. But, from our conversation it appeared that the BCAC does not heavily promote the program. This contributes to a lack of awareness overall.

Next, many individuals in Williamstown are unaware of the qualifications for certain programs. For most programs that help with energy efficiency, there is an income level a person must be below in order to get funding. This information is difficult to find, and when there isn't program information all in one place, it makes it even more challenging for an individual to determine if they can receive benefits of a program. For example, BCAC didn't have the income qualifications for the field assistance program available online - a photocopy of the flier had to be emailed. This speaks to the generally unavailability of information. Additionally, in the case of programs available to Williamstown residents income qualifications are typically higher than expected. For example, for the BCAC fuel assistance program the income ceiling qualification for a family of 1 is \$45,392 and for a family of 3 is \$73,326. It isn't that they don't know what exists, but many are unaware of important details in plans that should incentivize them to participate. For example, in the BCAC fuel assistance program the more people that participate the better. The more people sign up for the program the more funding will be available in the future to help with fuel assistance and weatherization.

In conclusion, it is apparent that many low-income residents are unaware of some programs, and if they are, many are unsure of their qualifications. The lack of awareness overall is important because these programs are essential to promoting equity within energy transition and the elimination of fossil fuels.

2. Attitudes towards low-income residents

Through our survey, stakeholder interviews, and focus group discussions, the feeling of low-income residents that there is stigma in the community towards them repeatedly was brought to our attention. Community members in the survey and key stakeholder interviews cited how they would not want to utilize the weatherization assistance program because they did not want people coming into their own homes to avoid feelings of judgment or stigma. We also found, through our key stakeholder interviews, that individuals are sometimes hesitant to use other resources that may

signify they are low-income, such as the local food banks. Additionally, in the focus group multiple individuals cited that they feel a stark divide between homeowners and renters or people who cannot afford the expensive houses that are on the market in Williamstown. Regardless of how many residents hold stigmas against low income residents, it is clear that those on the upper end of the income spectrum and those on the lower end have limited interactions and those on the lower end perceive a stigma. Therefore, it is the responsibility of those who are involved in town decision making, to ensure that the lower-income residents' needs are taken into account. This barrier presents an obstacle to creating an equitable future for Williamstown because if there is a divide in the community, the voices of low-income residents will continue to go unheard and their needs will continue to be overlooked. All residents must be involved in decision making processes and the first step towards inclusion is making sure that no group feels isolated or hesitant to speak up.

3. Lack of outreach to low-income residents

As explained in the previous obstacle, through our stakeholder interviews, survey results and focus groups, we found that attitudes toward low-income residents are a barrier to equity in the transition to net zero in Williamtown. This barrier is one component that fuels a lack of outreach. Many stakeholders who hold positions on town boards or in town hall talked about the importance of including the voices of low-income residents, however when asked about outreach they consistently talked about the challenges of outreach. There seems to be an acknowledgement that it is desirable to strive for equity, but putting that belief into action is the stumbling block. Many low-income residents that we talked to during our outreach agreed that they did not feel represented. Despite these feelings, many low-income residents wanted their voices to be heard and were happy to speak with us candidly. Throughout our interactions the feedback that we received was that showing genuine curiosity and having a desire to listen are important qualities that make residents more receptive to participating.

Outreach to this group is difficult, as oftentimes involvement in town government and town affairs sometimes falls to the bottom of individuals to-do list. Therefore, active outreach is even more critical, yet simultaneously more challenging, to involve this population. There has been little effort to involve this population through efforts such as focus groups, the use of involvement in town services to build connections and facilitate conversations, surveys that target this group, or even an effort to enter spaces where conversations with these community members can be facilitated, such as 330 Cole or Pine's Lodge. This group in particular has financial and time barriers towards getting involved themselves and finding the programs they need on their own. Therefore, outreach to this specific group of community members by actively entering the spaces they reside in is crucial in order to create an equitable community.

4. Lack of accessible programs

Programs such as the BCAC require that homes be in a condition in which they can receive weatherization services. However, many homes are not in the necessary condition for these services to be provided. If a home has flimsy paneling, moisture issues, or a lack of structural integrity, weatherization can not take place. Repairs for these issues are expensive. This leaves low income residents in the lurch, knowing that their homes need to be repaired in order to receive free weatherization services, but unable to afford the necessary repairs that are a requirement for this free service. Additionally, insulation is a starting point from which sometimes heat pumps and then solar panels can be added to a house. Not every house is compatible with a heat pump, which places even more of an inequitable barrier on low income residents who end up paying more on their energy bills.

Additionally, contractors who work for BCAC need to be National Grid certified. Obtaining this certification takes three days and is intensive, which many contractors do not have time for. Even once contractors have been certified, there is a lack of contractors willing to do the work necessary for weatherization and home repairs. This is particularly an issue for mobile homes in which doing repairs often creates more issues that need to be fixed. As a result many contractors will not sign on to do these repairs. A lack of accessible programs along with a lack of contractors willing to do the work combine to form a major barrier for low income residents.

IX. Recommendations

A. Structural Recommendations

This section seeks to address the project deliverable: "Develop a framework for a focus on equity and prioritization of equity throughout each item in the net zero plan".

Embracing Intersectionality with Every Decision

Intersectionality is an important aspect of equity and inclusion. Throughout our research and community engagement is clear that people have a variety of needs that do not neatly fall into any specific category. Through an intersectional lens it is possible to simultaneously address multiple needs that might at first thought seem unrelated. This approach entails being open to learning about and caring for the diverse and interconnected needs of low-income community members. It also entails creativity and the willingness to experiment. This approach also has the potential to engaging more people who would not otherwise be receptive to net zero action to join in on the efforts.

Two key areas for an intersectional approach are community building and economic development. Whatever spaces that are created and activities that are engaged in can be places to share information around net zero initiatives and also build bonds between people or address economic needs. Some preliminary ideas from our research thus far include: help community members address net zero goals (eg. weatherization) that can become a long-term profession (see example in interview with Todd Holland), create community dance nights, have recreational sports that are available to low-income families etc.

Equity as a Guiding Principle within the Williamstown Climate Action Plan

A recommendation that applies specifically to the construction of the Williamstown Climate Action Plan is how to use equity as a guiding principle throughout the plan. This is an essential recommendation because finding the best way to incorporate equity in the plan was the overarching goal throughout this entire project. Effectively incorporating equity will allow each action taken in pursuit of creating a net zero reality to be fair, equitable, and increase the quality of life for all residents of Williamstown.

Many of the case studies our group reviewed discussed equity and provided well-founded strategies for embodying the principle within their respective plans – one plan that was especially informative in this vein was the Austin Climate Plan. After reviewing the literature, there are two main ways it must be effectively incorporated: within the language of the plan and in the framework of analyzing proposed action items.

First it is essential that equity is correctly communicated within the language of the plan. It needs to establish both what equity is in a clear way and why equity is so important to the climate plan. We have provided a baseline working definition of equity, but from our research we found that it is best for a community to define what equity means to them. Therefore, we think that Williamstown should find a way to develop a definition of equity for themselves with input from residents of all backgrounds. Additionally, it is imperative to clearly state why equity must be a part of the Climate Equity Plan. Austin's Climate Equity Plan provides a great explanation. Marginalized communities are disproportionately effected by climate change even though they contribute the least. They often experience "heightened risk and increased sensitivity to climate change, and have fewer resources to help them cope with, adapt to, and recover from climate disasters." These resources include things such as healthcare. Therefore, to effectively mitigate the impacts of climate change, existing equities must be addressed. Marginalized communities must "be prioritized to receive the disproportionate benefits of transition" to a net zero society in order to rectify the harm they have experienced. Additionally, programs and initiatives that benefit marginalized groups, such as low-income residents, will benefit everyone in Williamstown.

Next, in order to best include equity in the climate plan there must be a framework established to evaluate potential actions and strategies that aim to mitigate climate change impacts. The Austin Climate Plan once again provides a good example. First, it is essential to recognize and understand the history that has brought systemic inequities into existence. Then the plan states that moving forward an effort will be made to incorporate equity across all governmental operations in order to achieve more just outcomes overall. Next, it discusses how goals and strategies within the plan should be utilized to promote equity. In order to do this Austin developed an equity tool. The equity tool poses questions surrounding various themes to discern how a particular proposed action will impact equity - it aims to "identify potential burdens and harms to low-income communities and communities of color." The themes are health, affordability, accessibility, just transition, community capacity, cultural preservation, and accountability. They evaluate the equity implications by scoring the action's impact on each of the screening questions. An example is in the Austin Case Study literature review, where there are screening questions relating to the theme of health. After this evaluation, goals can be developed to minimize these burdens and harms. We believe that this framework, or something similar, can be used in Williamstown to evaluate proposed goals and strategies.

A full list of screening questions used in the Austin Equity Plan can be found in the appendix.

B. Key Action Items and Corresponding Evaluation Matrices

This section seeks to address the project deliverable: "Develop action items with a specific focus on equity that could be included in the plan and will actively create a more inclusive and equal future Williamstown".

1. Outreach: Weatherization Awareness Campaign

A key proposal for the Williamstown Net Zero Plan is a focus on community outreach, particularly through the development of a Weatherization Awareness Campaign. Through our conversations with Williamstown residents and key stakeholders, we have found that one of the main barriers towards increasing the equity of Williamstown's Net Zero Action Plan is that lowincome communities are unaware of the opportunities and programs that are available to them that will not only reduce their carbon footprint, but will also lower their energy bill. Some examples of such initiatives are BCAC's fuel assistance program and the free energy audits provided by the state. These energy audits provide opportunities for homeowners to pinpoint what their weatherization needs are and then use programs that help them weatherize their homes, reducing their energy consumption, which provides the dual benefit of decreasing both heating and electric bills, as well as lowering home emissions. Although the COOL Committee has a website that outlines how individuals can participate in energy efficiency incentives, composting and solar, methods to direct residents to this website and information it provides are limited. Therefore, few seem to be aware of the site's existence. Additionally, the website does not make it initially clear who qualifies for what sustainability initiatives and energy assistance programs from a brief overview. Individuals who want to spend a limited amount of time on this website may be discouraged by the lack of immediate simple graphics.

In order for an awareness campaign to be successful, the first step is creating a standardized list of programs that individuals in Williamstown qualify for by income level. Renee Schmidt from BCAC has provided us with a list of who qualifies for BCAC's fuel assistance program and electricity bill rate reductions based on income. One of the action items for Williamstown's Net Zero plan should be to extend this list to include all government programs available to help residents weatherize, reduce their electricity bill, electrify, or other relevant programs related to the town's net zero goals. This list should be updated on a regular

basis, potentially yearly, as those who qualify for these programs will change over time and new programs will be developed that meet current needs as the energy transition takes shape.

Through our outreach to residents of Williamstown and conversations with individuals that professionally provide services to Williamstown, we have been to develop a list of preliminary outreach methods that may be successful in disseminating this newly developed resource guide and other information regarding Williamstown's Net Zero plan and resources available for marginalized communities:

- 1. Outreach through school newsletters
 - a. The Williamstown Food Pantry shares information through school newsletters, which clients have cited as where they found out about the service
- 2. Keep an open line of communication with stakeholders whom our project group has interviewed
 - a. We have spoken with many individuals in the community including, but not limited to: Carin DeMayo at the Food Pantry, Renee Schmidt at BCAC, Andi Bryant who self-identifies as a low-income resident, and Brian O'Grady from the Council on Aging. All of these individuals graciously provided us with some of their time to hear about their experiences with these communities and insights about what the community's needs are. These individuals are in direct contact with the marginalized communities this campaign seeks to reach, so they may prove invaluable points of contact for outreach efforts
- Go to the Williamstown Food Bank to share information about the Net Zero Action Plan and programs
 - a. We went to the Food Bank and individuals there were happy to speak with us about their experiences in Williamstown and excited about the prospects of their voices being heard and the availability of programs that could help them reduce their electricity and heating bills. Additionally, Carrin DeMayo explained that there is a network of organizations that help disseminate awareness of their programs to their separate clients, such as the Food Banks in different communities.

- 4. Use existing mailing lists
 - a. Pine's Lodge has a mailing list where information could potentially be periodically sent out through
 - b. BCAC has a mailing list where they share information with their clients
- 5. Put up flyers at Stop and Shop and Wild Oats
- 6. Use methods that were used in the Solarize Program Wendy spearheaded
 - a. We have heard from multiple community members that the Solarize Mass Campaign in Williamstown was successful. Therefore, outreach methods used in this program may be a good start. However, the demographics that adopted solar are likely to be a different group than the target population for this outreach campaign, so additional methods, such as those listed above, will need to be employed, as well.
- 7. Navigable and user friendly website containing this information
 - a. As well as links to organization's websites for further details
 - i. Also, directs residents to apply for resources that they qualify for
- 8. Part of electric bill (idea from class discussion)

While this campaign may have an initial push where most of the resources are focused and requires manpower that cannot continue indefinitely, the key to the success of this campaign is that awareness efforts must continue for the long run, especially given that the needs of these communities will change over time, as well, so the programs that have seen success in the past may become obsolete and new programs will need to be advertised.

Evaluation Matrix

Strengths	Weaknesses
• Reach populations that are not aware	• Weatherization initiatives are not
of opportunities to weatherize	directly applicable to renters
• Addresses a baseline community need	• Requires time and resources, which
that is required before electrification	are limited for the local government
• Make community members feel like	• May require volunteers
their voices matter to the local	• May be difficult to reach community
government	members because direct lines of

 Directly address lack of knowledge and lack of relationships Avoids overburdening the electric grid, which is nearing capacity in this area Reduce electricity and fuel usage of houses that utilize programs Utilize the relationships our group has begun to develop to become more in touch with the community 	 communication are currently not established between the local government/COOL committee and these communities Feasibility
 Opportunities Has the potential to reduce electricity costs for homeowners Increase funding to programs where funding is dependent on the number of participants Branch out of Williamstown and work with other organizations, municipalities and the state government to disseminate information, strengthening these relationships Hear directly from individuals in the community 	 Threats May be difficult to reach all populations, including target low income population Has the potential to be a one-time campaign and then die out, when should be a continued, consistent line of communication Feasibility: economic, time, etc. Various barriers that prevent people who qualify for weatherization from getting that service

2. Work with local organizations and state governments to create a program that helps homeowners with house repairs that are required preceding home energy efficiency improvements

Another important proposal for the Williamstown Net Zero Plan is the creation of a program that helps fund eligible homeowners to make home repairs needed to reap the benefits

of existing energy efficiency programs. Throughout the course of our project a common thread among those that we have been able to talk to is the importance of weatherization.

Weatherization is the process of insulating a residence so it will become more energy efficient. Insulation of a building traps air inside and keeps air out. In the winter, it helps keep the cold air out and the warm air in. Although insulation is typically thought of as only advantageous in the winter, it also helps maintain climate in the summer too - it keeps the hot air out and the cooler air inside of the residence. Beyond increasing the comfort of a house, weatherization has a few benefits. First, it greatly decreases energy costs. Since weatherization prevents leakage, during the winter cold air isn't constantly seeping in and requiring more heat to maintain a comfortable environment. This means less energy is needed to warm a house when properly insulated. The same goes for air conditioning in the summertime. Second, since weatherization leads to lower energy usage overall, it decreases the overall carbon footprint of an individual and the area in which they reside.

There are a few different organizations in the Berkshire area that have programs that provide weatherization services to low-income residents. An organization that has a program that insulates many homes in Williamstown is the Berkshire Community Action Council (BCAC). The BCAC has a fuel assistance program that offers assistance based on income level. The program is extremely accessible as the income level needed to qualify for the fuel assistance program is higher than expected. However, before one can get insulated the BCAC performs two different audits. The first is a base load audit in which they examine the efficiency of appliances. The second audit is an energy audit in which it is determined if a residence could benefit from insulation and if the structure qualifies for weatherization. If a residence has good reviews on the audits then it can be weatherized.

However, there are a few barriers that present themselves during the energy audit that prevent many from being able to insulate their homes. The main obstacles are that frequently there are structural issues with a house that disqualify it from being insulated. For example, if a house has knob and tube wiring or vermiculite insulation can't be installed. If the roof leaks, which would potentially dampen insulation, weatherization can't occur. If the house doesn't have sheet rock on the ceiling or if the foundation is crumbling it can't be insulated. These costs to fix these issues are usually expensive and up front. These barriers can be unaffordable for many low income residents, and consequently they are unable to receive weatherization services. Even if insulation is funded by utility companies and the state, if residents can't afford to fix structural issues in their homes, they can't take advantage of weatherization services.

The solution we are proposing is to create a program that is targeted at housing rehabilitation for low-income residents so they are able participate in home energy efficiency programs. This funding would be available to people who qualify for the fuel assistance program and weatherization. We imagine this program being run on the ground level by a local organization already involved in funding energy efficiency work while being partially funded by the state government. This is a similar structure to how the weatherization program through the BCAC operates. However, there are many creative options for how this program could be structured effectively

Strengths	Weaknesses
• Addresses the most prevalent barrier	• Would involve heavy lobbying
preventing many from receiving	• Local workforce in rural areas might
weatherization services	not currently exist
• Allow for increased insulation and	• Many current contractors do not want
weatherization of residential buildings	to work with alternative types of
• Better air quality in homes (place for	housing such as mobile homes, may
rodents and)	require additional incentives
• Reduce overall energy usage in town;	• Requires the initiative of landlords and
this leads to smaller energy bills and a	homeowners, renters do not have
overall lower carbon footprint in the	much of a say in home weatherization
long run	even though the current excess heating
	costs may fall on them
Opportunities	Threats
• Dramatically reduce energy costs;	• May isolate low-income population
allows for money to be spent in other	• Some inspectors are mandated
productive ways	reporters which may unintentionally
• Reduce electrical burden on the grid	involve the state in other aspects of
• Precedent for positive impacts in	residents life

Evaluation Matrix

66

municipalities outside of	• Might require more greenhouse gasses
Williamstown and the Berkshires if	
funded at state level	
• Increase longevity of residential	
homes	
• Increased quality of life from better	
and more comfortable living	
• Bolster a new industry that is currently	
lacking in rural areas (home repairs	
and weatherization)	

3. Representative Advisory Board / Outreach Task Force on the COOL Committee

The COOL Committee is currently composed of community members, Williams College staff and members of town government. There are currently 11 members and none of these members identify as low-income. This means that the population that this committee most hopes to serve is not represented in the decision making processes. From our interactions with this group we found that they are members of the community with many connections but no sustained connections with low-income residents or low-income communities. This means that this group thus far has not been learning about the needs of low-income communities or including their voices into their work. There is concern for equity and it is their stated focus however the practice is currently lacking.

A change that could be implemented would be to intentionally include low-income residents onto the committee so that they can be included in decision making. If there are no identifiable community members that are currently interested in this type of work, a special task force can be formed to undertake outreach and try to find ways to include low-income residents at all levels of decision making. This task force could focus on intersectionality at the heart of inclusion, doing work in group spaces and with building community in the town overall to lead to more inclusion in governmental decision making processes. Thereby inclusion in one area leads to greater inclusion overall. If there are low-income residents who do want to engage with this work and represent other members of their communities, they should be financially compensated for their work. This financial compensation will ensure that participating in making change for the betterment of the community does not become a burden on a specific individual.

This group should work to define equity in their own terms, taking into consideration the history of inequity in Williamstown and how they want to define equity for their community moving forward.

Strengths	Weaknesses
• Financially feasible	• Requires time from current and future
• Aligns with stated goals that the	COOL Committee members
COOL Committee lays out	• Requires time commitments from low-
• Ensures that low-income residents are	income community members that
heard in the long-term	might not have this time to give.
• Allows for sustained relationships with	
low-income residents and	
communities	
Opportunities	Threats
• Includes low-income residents in	• Could be a burden to low income
higher and higher levels decision	community members if not financially
making	compensated
	• Could allow for some low-income
	residents to feel heard while others
	remain still left out of the conversation

Evaluation Matrix

4. Increased Involvement of Williams College in Town Improvements and Community Building Throughout our engagement, many low-income residents have expressed dissatisfaction with the way that the College relates to the low-income community. There is a strong sense that the college functions as a bubble. It is socially and financially separate from the town. Since it is the only large employer in Williamtown, many people are dependent on the College for employment. Many town members, however, do not reap any of the benefits of being situated near such a well endowed higher education institution. The Colleges own mission statement proclaims that "an education at Williams should not be regarded as a privilege destined to create further privilege, but rather as a privilege that creates the opportunity and responsibility to serve society at large" (Office of the President, 2017). This ideal is not something that is modeled by the Colleges own uses of institutional privilege. The lack of sincere effort in this area is deeply felt by the townspeople.

Through our own experience as students within the Environmental Studies department here at Williams College, we are encouraged to study environmental justice, yet in the majority of our classes we do not engage with the environmental justice issues in our own town. There is a need for the education that we receive as students to be more deeply embedded in local issues of equity.

Beyond the classroom setting, the college's investing office, upper leadership, department heads, faculty and staff, the Center for Learning in Action and student groups all play an important role in changing the current dynamics. Systemic changes do, however, ultimately need to be made by senior staff so that current policies that condone the neglect of townspeople are eradicated.

This recommendation needs further investigation into the specifics of how the College could work towards increasing equity and a sense of a community in the town. However, some initial ideas are: more events with a focus on community building, inclusion of community members in the winter study weatherization training program, meals with college students, staff, faculty and community members, more classes that work to find solutions to issues faced by locals. While the Williamstown government does not have control over the actions of the college, they can and should advocate for the college to both work to integrate the local and college communities and provide resources for the community to facilitate the creation of an equal and sustainable future Williamstown.

Evaluation Matrix

Strengths	Weaknesses
 Financially feasible Aligns with stated goals of the college Ensures connection between students and the Williamstown community Provides means of connection and learning opportunities on both sides Addresses the idea of intersectionality - creating group and community spaces 	 Requires time and input from senior staff at college Requires commitment from both Williams students and community members Might be difficult to set up and implement Not all residents or all students might want to take part
Opportunities	Threats
• Possibility of new insights and growth	• May not bring everyone in town
through continued work and exchange	together
of ideas	• May further isolate some residents
	who already feel left out

C. Additional Recommendations

The following section contains a more detailed list of recommendations we have developed throughout this project. The recommendations are organized by category into the following groups: Outreach, Equity Checks, Weatherization, Grant and Funding Possibilities/Incentives, Transportation, Community Inclusion Initiatives, and Electrification Recommendations (long term goals). These recommendations can serve as a starting point for the Williamstown Net Zero Committee as they dig into additional action items they hope to carry out throughout the Net Zero plan's lifespan. An additional set of recommendations for improving our methodology is included at the end of this list in order to inform follow-up efforts carried out by the Net Zero Committee and other Williamstown government committees.

Outreach

- Communication should be carried out with the DIRE committee. They were not interviewed for this project, but future conversations might prove very helpful and this should be prioritized.
- 2. Outreach to landlords should be initiated to incentivize sustainability and money saving initiatives for low income residents.
- 3. Outreach at 330 Cole and Pines Lodge should be continued. We found that sliding survey's under people's doors at 330 Cole was the best way to get a response.
- 4. Outreach through fliers is effective as well as sending out list serves to key members of different communities
- 5. A sustainability director and outreach coordinator should be hired by the town with a specific focus on equity.
- 6. Town hall meetings should be more accessible.
- 7. A guide should be created that highlights which programs different individuals qualify for based on income.
- 8. An annual meeting should be hosted about net zero/sustainability with a focus on hearing from youth voices (Pierce County Case Study)

Equity Checks

- 9. Develop a systematic review following the plan's implementation to analyze the equity implications and the success of the plan in regard to equity.
- 10. Create a preliminary definition of equity for Williamstown. This definition will need to be revised with community feedback.
- 11. A land acknowledgement should be included in the plan. This goes hand in hand with recognizing the history of the area and why equity is important. More work should be done with the Mohican Munsee Community to ground the injustice that is embedded within this region. (case studies)

Weatherization

 Consideration of granting tax exemptions for people who want to receive BCAC support but are unable due to the fact that they are behind on their taxes. (Interview with Renee Schmidt)

Grant and Funding Possibilities/Incentives

- 13. Apply for rural community loans from Massachusetts Green Bank. Ten percent will go to rural communities, starting with the goal of decarbonizing houses.
- 14. Work with the Green Bank to ensure that there are loans available that will satisfy the needs of community members, with a focus on low income community members. (Interview with Senator Paul Mark)
- 15. Advocate for energy efficiency grants for smaller scale construction projects
- 16. Advocate for state-level energy efficiency incentives for small construction projects and low-income and affordable housing projects to ensure that low-income residents are able to reap the benefits of electrification and become part of the net zero campaign upfront. (Interview with Cherly Shanks and Andy Hogeland)
- 17. Expand new incentives for construction projects that exceed energy efficiency standards with a focus on affordable and multifamily housing. (Pierce County Case Study)

Transportation

- 18. Look into a car share program (Ithaca Car Share program)
- 19. Look into an electric scooter ride share or bike ride share program. (Focus group, case studies)
- 20. Create a bus stop at 330 cole. (Focus group)
- 21. Establish mixed use development parking and zoning regulations that support electric vehicle and active transportation infrastructure as well as parking requirement reductions and car sharing. (Pierce County Case Study)

Community Inclusion Initiatives

- 22. Revive the welcome basket (Focus group)
- 23. Create more shared community spaces for engagement. (Surveys)

Electrification Recommendations (long term goals)

24. Lobby National Grid to increase the electric capacity of Williamstown. (Interview with Tanya and Jason, Williams College)

Method Improvement Recommendations

- 1. Survey Improvement Recommendations
 - a. Tabling at Stop and Shop proved to be the most effective method
 - b. Improve language of survey (Greenblatt, 2023)
 - i. When asking about incomes, ask how many people are in the household
 - ii. Break up income into categories that align with the definition of low income that will be used to analyze survey results
 - iii. In future do not make all questions required as it could skew the data if people don't want to answer one question
 - iv. *What is your relationship to Williamstown?* There should be a check-all-that-apply addition if people fall into multiple categories
 - v. Make sure the idea of financial burden is defined and more clear
 - vi. *How comfortable does your home feel in the winter*? This question could be seen as combining different concepts. Some people might have insulation issues while others might keep the heat low due to being concerned about the cost
- 2. Focus Group Considerations and Improvement Recommendations
 - a. Ensure that flyers are placed at the doors of individuals, if possible
 - b. Be flexible in the format of the focus group; it is okay if the focus group shifts to be more of an interview framework

X. Next Steps

• Focus group at the Harper Center (have contact person)

We reached out to the Harper Center and had an interview with Brian O'Grady, but were not able to hold a focus group. The elderly population that leaves here is a key sector of our community that is often overlooked and left out of the decision making process, that we have not been able to hear from directly. Therefore, a focus group could reveal additional obstacles to achieving net zero equitably. • Focus group at Pines Lodge (have contact person)

We hoped to have more communication with the individuals at Pine's Lodge, but had a difficult time reaching this group. Although there is no indoor space to hold a focus group, there is potential to host a focus group in the warmer months outdoors. This possibility should be pursued further. Mary Kennedy is our contact person at Pine's Lodge and may be helpful in setting up this focus group.

• Interview Mary Kennedy

Mary Kennedy lives at Pine's Lodge for part of the year and kindly offered to discuss her experiences with us. However, we were unable to set up a time to meet. She may be a very helpful contact to begin developing a relationship with individuals at Pine's Lodge and hearing about their experience in Williamstown. She may also have insights about how to set up a focus group there. Reach out to the group members or Professor Gardner for her contact information. It is not included here to ensure her privacy.

• Follow up with focus group member from 330 Cole to see how they might want to engage (Dianne)

Dianne was a participant in the focus group at 330 Cole who had lived in Williamstown for a while and was very knowledgeable about what it is like to live in Williamstown as a low-income resident and what the energy needs of this group are. She left us her number following the focus group and could be a key community member to facilitate the inclusion of voices that are at risk of being left out. She could be a great candidate for an advisory board member if she is interested.

• Reach out to youth

Another, often disengaged group, that we were not able to reach was the youth population. Our focus was on low-income residents, but to ensure equity, all groups who are at risk of being left out of conversations and the decision making process must be engaged. Having a youth summit or going into local schools are possible avenues for hearing from these populations and ensuring their needs are being considered as the report is being drafted.

• Engage Landlords

Landlords are one population that we also struggled to hear from. Time and time again when we spoke to renters, they expressed that they were not sure if their landlords had their best interests in mind. Landlords hold the power to make most of the decisions about energy efficiency measures that directly impact renters and the town's push towards net zero. The Net Zero Committee should speak with landlords to develop a better understanding of how they can be incentivized to improve the efficiency of their units and become part of the movement to decrease emissions.

• Focus on the needs of renters

Focusing on the needs of renters goes hand in hand with engaging landlords. While we did hear from renters about their concerns, most of our recommendations will directly impact land owners, but not renters. The Net Zero Committee should focus on developing solutions to address the needs of renters. The power imbalance that exists between renters and landlords must be addressed in order to focus on the needs of renters.

XI. Bibliography

Acton Sustainability Office. 2022. Climate Action Plan - ActOn Climate: The Road to a Resilient Net Zero Future. Town of Acton.

Allegrone Companies. 2023. 330 Cole Avenue. Allegrone Companies.

Austen Climate Equity Plan Steering Committee. Austen Climate Equity Plan. 2020-21. City of Austen.

- Consumers Review Team. 2023. How Much Does Heat Pump Installation Cost? (2023 Guide). American Society of Home Inspectors.
- Groff. A. 2023. Williamstown Electrical Permits. Unpublished.
- Greenblatt, C. 2023. Feedback on Survey Questions. Unpublished.
- King County Council. King County Strategic Climate Action Plan (SCAP). 2020. King County.
- NECEC. 2023. The Municipal Guide to Inclusive Climate Action and Equitable Procurement. NECEC Publications.
- Pierce County Council. 2021. Sustainability 2030: Pierce Country's Greenhouse Gas Reduction Plan. Pierce County.
- Resilient Methow Planning Team. Methow Valley Climate Action Plan. 2021. Methow Valley.
- Sustainability Action Subcommittee. 2021. Spokane Sustainability Action Plan. City of Spokane.
- Thurston Regional Planning Council. 2020. Thurston Climate Mitigation Plan. Thurston Regional Planning Council.
- UNEP Emissions Gap Report. 2023. For A Livable Climate: Net-Zero Commitments Must be Backed by Credible Action. United Nations.
- University of Colorado. 2023. Climate Justice. University of Colorado Environmental Center.
- United States Census Bureau, 2022, Williamstown, Berkshire County, Massachusetts, United States Census Bureau.

Williamstown COOL Committee. 2023. Net Zero Emissions. Williamstown COOL Committee. Retrieved from https://www.coolwilliamstown.org/net-zero-emissions.

XII. Appendix

1. Interview Structure

Each interview varied based on the subject and their organization or role in the community. However, we established a set of interview questions to help guide our conversations. Below is the general interview format we used throughout our project:

- 1. What is your role professionally/in the community?
- Does your work intersect with low income residents and other marginalized groups? If so, how?
 - a. Do you have any programs that serve low income residents? What programs are related to energy, transportation, or waste/recycling?
- 3. What populations do you serve?
 - a. Do you work with homeowners, renters, landlords?
 - b. (For each category) How do you serve them? How do you find them? How do you deliver your service? How do you define low income and how many residents do you serve?
- 4. Broadly, what are the barriers that you have seen these communities face when it comes to electrification, home energy efficiency/building improvements, transportation, and waste disposal/recycling?
 - a. What types of challenges are there related to energy cost? What incentives are there? What subsidies are available (for electricity)?
 - i. Are these programs widely used? Are they accessible? Are the communities you serve satisfied with these programs?
- 5. Do you have or know of any data that can be shared with us?
 - a. For example, how many people in Williamstown do you serve? Where do these people live? Are most of them homeowners or renters? Any other relevant information/data?

- 6. What recommendations do you have for reaching net zero and moving away from fossil fuels and towards electrification?
 - a. For example, is sustainable transportation a big issue you have seen in the people you serve? If so, who is impacted, and how can we improve access to electric vehicles and other more sustainable transportation?
 - b. Helping people recycle?
 - c. Helping people transition to cost efficient electric appliances?
- 7. How do you define low income? What are the metrics?
 - a. Who counts as low-income to your organization?
- 8. Is equity conceptualized in your institution? What does that look like in practice?
 - a. Do you prioritize service delivery to any specific institutions/populations?
 - b. (we want to know what they do) If you do, how do you conceptualize that in your organizations
- 9. Who else would you recommend we talk to?
- 10. We are hoping to do a focus group with low income residents to hear directly from them about what actions would benefit them most in the transition to net zero.
 - a. Do you have any suggestions for who we should speak to or what groups to get in touch with?
 - b. Or could you help us get the word out about a focus group we hope to host and suggest any locations? We will have free food and some broad questions to get input from community members on. We are thinking we would hold them at Pine's Lodge Mobile Home Community and 330 Cole.
 - c. Would you be interested in helping spread the word?
- 11. Thank you so much for your time. Is there anything else you would like to add?
- 2. Additional survey Results
 - a. Link to raw survey data: <u>https://docs.google.com/spreadsheets/d/1TrY7mAkmcDnBm7vCs2fBjXGooHhmz-</u> <u>dICSPnGtazAzo/edit#gid=378927862</u>
 - b. Additional survey responses
 - *i.* What would make you feel more included in this town?

1. Additional low income responses

"If there was more stuff to do and ways for the community to expand."

"Work together."

"Longer bike trail to South Williams."

"Yes, Identify historic areas of town for blue collar workers and address specific issues."

"Issues: racial profiling, falsely arrested, chief of police doesn't care."

"I like it here."

"More local community events within walking distance. Bus stop installed near this apartment complex (330 Cole)."

"Summer programs and fundraisers."

"Friends"

"Recreational activities, ballroom dancing."

"Work at community preschool so feel very connected to the town"

"Nothing really. Williamstown is a nice town."

"Mens club (carpenting, workshops, sports, performance/music), likes the senior center

fine the way it is."

"South Williamstown - people don't want anyone down there anymore - there is an attitude down there that food pantries are for the poor. Feels included because of the food pantry."

"Playground at 330 Cole, condition of bridge, safer transportation to 330 cole."

2. High income responses

"More places for the kids to hang out."

"More community events, better communication in town meetings."

"If the college let townies into decisions from the "Purple Bubble."

ii. Do you feel like the town government hears your concerns?*1.* Additional low income responses

(x2)"Yes."

(x2)"No."

"NOT AT ALL. Pay attention."

"I haven't been involved enough and I am new to the area."

"Most concerns are about the college. The gov is fine."

"Pipes burst so slept in car, house was too cold, room was 30 degrees"

"I feel like they hear my concerns well."

"No, I think it is one-sided."

"Yes, no complaints."

"They are good enough."

"Town hall meetings? Unsure of where government buildings are located."

"My personal feeling about any government is that they do so much promises until they win and then nothing is done so I don't really believe in none. There is a lot of talking but nothing has changed. When we first moved here it was a quiet place and my twins didn't have to worry about anyone being racist towards them because of them being hispanic and since last year they been bully in school...I have done everything to have my voice be heard and again nothing the government does!! And everything is all about money to these governments."

"I really don't think they care."

"We are the town government. This is an open town meeting structure."

"Starting to."

"Good job."

"Town meetings should start earlier. Better managed. No props, 60 seconds to speak. It should really be faster paced."

2. High income responses

"I feel like the town government represents the needs of the college more than the tax paying citizens."

"I haven't been very involved in the process lately."

(x2) "Yes."

"No! Listen!"

"They are trying."

"Census meetings with open public forums for specific causes."

"Sometimes."

"Don't be so influenced by the college."

"Absolutely not."

"I am not sure how to share my thoughts. Is there a regular meeting or email?"

- *iii.* Any other comments on how living in Williamstown could be improved (affordability, being involved in decision making, accessing information etc.)
 - 1. Additional low income responses

(x4) "No."

"Ok"

"Listen to the people who have lived here for a long time."

"We need to get the YMCA in North Adams fixed. So many people in Williamstown relied on that pool for winter exercise. It shouldn't be only in the town of North Adams to come up with the money."

"We need to negotiate & maintain a dedicated PILOT program whereby the college makes regular payments in lieu of taxes to support town services and help fund efforts to make Williamstown more affordable (i.e., new multi-unit housing; conversion of larger houses). Current mode of college "gifts" to certain town projects that it sees fit to support, with no citizen input, is bad fiscal planning & undemocratic, and gives the college an inappropriate outsized influence of town affairs. A PILOT agreement devoting annual college payments to the general town budget would ensure public control over the use of such funds."

"Traffic/speeding traffic needs to be dealt with! Pedestrians are always in danger when crossing streets, and speeders are rarely caught. There is no enforcement of leash rules. It's a danger for small children and other dogs when aggressive dogs with careless owners are on the "multi-use path. There should be a designated, fenced in off leash area for dogs to run in, and you can 'opt-in' to being around off leash dogs. Leash rules need to be enforced!"

"Interacts at Williams College, has good experiences."

"Public swimming pool, better bus transportation."

"They also need a better system in school for kids with special needs, my son has ADHD and there is not a lot of help in school and there are a lot of teachers that treat this [with] kids. I have seen it with my son."

"Reducing bills for lower income residents who still contribute to town society would help greatly. In addition, most of the college's lower income employees are from out of town and there is no regard for town residents to fill these positions over out-of-towners. Though this may seem unfair, it would help keep wealth in our town and boost affordability of town living by giving higher consideration for filling those positions with town residents. I worked for the college for many years and I was terminated for filing a complaint about a coworker who resides out of town. It is a place where you have to be liked by management and there is no say nor regard for employees in decision making, even with a very long family history of residence and service to the college." "Better roads."

"Inclusion."

"More affordable housing, better landlord, mine currently is not fixing things, I have been living here for over 21 yrs and I have been begging for new carpet and new floor in the kitchen and they refuse to do it, they have not painted the indoors for 21 years! I finally painted myself but I cannot do the floor by myself! Very frustrating!! I went to the town hall to report it to the health inspector who never responded to my email. I went to the housing authority and they said they could not help me either. Very upsetting!!"

"More information, language access (Spanish)."

"Rent caps. My rent was raised 11 percent in January. I live in Berkshire Housing and do not get any help paying my rent."

2. High income responses

"No."

"Better schools, more affordable housing to make it possible for public sector workers and staff (eg. janitorial) at the college to live in town."

"Less affordable housing, tax the college more."

"It'd like the Williamstown government to enact policies that help the town grow bigger and broaden its tax base."

"Better public transit."

"Affordability."

"Affordable senior housing."

"Strength or the internet? May be addressed currently? More diverse perspectives needed. What are the indigenous conditions/engagement?"

"Make the former Spruces property into a more public friendly space."

"Better town/government involvement - there are over 1,000 employees or students who drive to and from - also too many parking lots." "One size solutions do not fit all. Promotion of electrical heating over every other source is bound to fail and penalize those most vulnerable - the sick, elderly, fixed income and those who subsist with aged housing stock. The new HERS ratings have virtually destroyed the ability to selectively upgrade or recondition stock without EXPENSIVE upgrades to electrical service, insulation, and the walls themselves. WOOD FOSSIL FUEL is RENEWABLE. Split wood, not atoms." "Affordable housing, community gatherings (more events like the holiday and July 4 parade)."

3. Focus Group Agenda

- Greet people as they come in, offer pizza
- Introduction to the project
- Participants fill out survey
- Discussion Format
 - a. Participatory conversation that can be in a large group format or one-on-one conversations
 - b. Discussion Topics
 - i. Transportation (10 mins)
 - 1. Are you satisfied with your current options for transportation?
 - 2. How could your transportation needs be improved?
 - ii. Energy efficiency (15 min)
 - 1. Are you aware of any programs that would help you meet your home energy needs?
 - a. If yes, where did you learn about them?
 - b. If not, what would be an effective way for the town to communicate what programs are available to you?
 - 2. Have you or someone you know used these programs? Have they been helpful? Have there been any issues?
 - iii. Equity (15 min)
 - 1. How could Williamstown become more inclusive?

- 2. We have been thinking about equity in the net zero report as equal outcomes, what would an equitable future williamstown look like to you?
- iv. Recommendations (15 mins)
 - 1. Ask for community input on our intended recommendations based on data from the survey and interviews
- 4. Additional Barriers to achieving net zero

The grid is at capacity, so electrification in the long term may not be plausible

- National grid has no more capacity to transmit energy
- If nothing changes, this will impede electrification and Williamstown reaching net zero
- Households who have the resources and ability may be able to circumvent this challenge by installing rooftop solar
- Electricity prices may continue to rise due to limited supply
- At risk of energy blackouts if demand surpasses supply

One obstacle towards Williamstown fully electrifying and electrifying in an equitable manner is that the electrical grid, the system of transmission and distribution lines that connects places where energy is produced to areas where energy is consumed, is nearing capacity. This does not mean that more energy cannot be generated, but that this energy cannot be transmitted because there are not enough power lines to move this power. In our conversations with Wendy and Nancy they have noted that National Grid, the company that supplies energy to the area around Williamstown, is nearing capacity. Therefore, a limited amount of renewable energy can be added to the grid and little more electricity can be consumed by houses that want to electrify by switching to an electric stove, electric car, or heat pump, an electric alternative to gas sources of heating. Additionally, in our interview with Tanja and Jason, they cited that the college has built out a master plan for its transition to net zero that accounts for this constraint of additional energy is first looking to electrify and cut back their energy consumption because they believe that National Grid

has no ability to provide them with more energy for the near future. Moreover, the area is at risk of blackouts if demand exceeds supply.

This energy constraint not only provides an obstacle towards Williamstown as a whole reaching net zero, but also will impede an equitable transition. Because there is a limited supply of electricity and the demand for electricity is expected to continue to grow, prices may rise, which would disproportionately impact low income households that already have high energy burdens. Additionally, rooftop solar can still be installed in some instances even when the grid is at capacity because households with rooftop solar do not need to be connected to the grid and can pull directly from the energy produced on their roof. However, many households, particularly low income households, may not be able to install rooftop solar for a multitude of reasons, such as the large upfront cost or their house may not be in a condition to have solar installed. Consequently, individuals who have the resources may be able to electrify despite the constraints placed on the grid, while those who may not have the resources are left behind in the energy transition.

While addressing the limitations of the grid is a crucial step for the community as a whole to meet net zero, it is more directly applicable to net zero efforts, generally, as opposed to net zero efforts that focus on equity. For this reason, this obstacle is important to know, but does not contribute to the overall goals of our report, so is located in the appendix.

5. Full List of Austin Climate Equity Plan Screening Questions

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.

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)?

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.

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 the cost burden and the number of families that are cost-burdened by housing (including utilities) and transportation (defined as spending more than 33% of income on housing and transportation)?

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?

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.

Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit, 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 from benefiting fully if this strategy were implemented as written? (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.)

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.

Does the proposed action support low-income communities and communities of color through workforce development, contracting opportunities, or the increased diversity of City staff? Does the proposed action create local opportunities for livable wage jobs for low-income communities and

communitiesofcolor?Does the proposed action place responsibility on institutions to address historical disparities incontributingtoclimatechange?

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. *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?

Accountability: Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation. 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 and timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation *enforcement*)? and 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? the proposed action adequately funded achieve designed goals? Is to its

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. *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 sharedvaluesandculturaldifferencestosupportimplementation?

6. Background Information and Resources

a. Resources from Wendy Penner and Nancy Nylen

Commonwealth of Massachusetts. Documenting Climate Change and Health Equity. 2023. Retreived from https://www.mass.gov/info-details/learn-about-climate-change-and-health-equity.

Commonwealth of Massachusetts. Environmental Justice and Equity. 2022. Retrieved from https://resilient.mass.gov/mvp/content.html?toolkit=justice.

Commonwealth of Massachusetts. Municipal Vulnerability Program. 2017. Retrieved from https://resilient.mass.gov/mvp/

The C40 Knowledge Club. Climate Action Planning Guide. 2023. Retrieved from https://www.c40knowledgehub.org/s/guide-

navigation?language=en_US&guideArticleRecordId=a3s1Q000001iaiBQAQ&guideRecordId=a 3t1Q0000007lEWQAY.

The C40 Knowledge Club. Tools for Embedding Equity and Inclusivity in Climate Action Planning: Nature Based Solutions. 2023. Retrieved from https://www.c40knowledgehub.org/s/article/Tools-for-embedding-equity-and-inclusivity-inclimate-action-planning-Nature-based-solutions?language=en_US.

b. Resources From Senator Paul Mark

Berkshire Regional Planning Commission. Town of Williamstown, Massachusetts: Housing Needs Assessment. 2022. Retrieved from https://williamstownma.gov/wp-content/uploads/2022/10/Housing-Needs-Assessment-2022.pdf.

Environmental Protection Agency. US EPA Solar for All. 2023. Retrieved from https://www.epa.gov/greenhouse-gas-reduction-fund/solar-all.

Municipal Research and Services Center of Washington. Equity and Engagement in Climate Response. 2023. Retrieved from https://mrsc.org/exploretopics/environment/sustainability/climate-equity-and-engagement.

Municipal Research and Services Center of Washington. Centering Equity in Climate Plans and Programs. 2023. Retrieved from https://mrsc.org/stay-informed/mrsc-insight/may-2023/centering-equity-in-climate-plans-and-programs.

Wasser, M. Massachusetts New 'Green Bank' for Climate Friendly Housing, Explained. 2023. WBUR. Retrieved from https://www.wbur.org/news/2023/06/26/green-bank-massachusetts-affordable-housing-decarbonization-climate-explained.

c. Resources from Andrew Groff

Bigham E., Revolledo J., and Sommer N. The Williamstown Farmland Project. Environmental Planning Workshop. 202. Retrieved from https://ces.williams.edu/files/2021/01/WT-Farmland-Project-Final-Report-public-MR-Edit.pdf.

Elizabeth Bigham, Juan Rebolledo, Nicholas Sommer ENVI 302 Environmental Planning Workshop

Department of Housing and Urban Development. 2023. Retrieved from https://www.huduser.gov/portal/datasets/il.html

Groff, A. Electrical Installations in Williamstown. Retrieved from https://docs.google.com/spreadsheets/d/1AmoylWx18FB5zCL-My5LkdEpIe6kz4Yj/edit#gid=234843591.

United States Census Bureau. American Community Survey. 2020.

Williamstown Comprehensive Steering Committee. Williamstown Comprehensive Plan Draft. 2023. Retrieved from https://s3-us-west-

2.amazonaws.com/mysocialpinpoint/uploads/redactor_assets/documents/46ca38bf1ed08b6785c3 b42ce2330300086247b7480b1b1d1cd6e6cc98c5137e/84967/9.19.23_DRAFT_Envisioning_Will iamstown_2035.pdf.



d. Income Qualifications for BCAC Fuel Assistance Program