Dear Select Board Members:

Our planet is facing a climate emergency, as the burning of fossil fuels has increased global temperatures by an average of 2 degrees Fahrenheit since 1900. Global warming is causing extreme weather events, including both unusually cold polar vortexes in the winter and more frequent droughts, storms, wind and flooding events here in Needham. Worldwide, climate change is reducing snow cover and sea ice, intensifying heavy rainfall and flooding, and changing habitat ranges for plants and animals—expanding some and shrinking others.

The Massachusetts Legislature recently passed a Climate Roadmap bill with ambitious targets for reducing Greenhouse Gas (GHG) emissions across the state, including a 50% reduction by 2030 and Net Zero emissions by 2050. As Governor Baker said when he signed this legislature into law, "Climate change is an urgent challenge that requires action, and this legislation will reduce emissions in Massachusetts for decades to come while also ensuring the Commonwealth remains economically competitive."

To respond to the climate emergency, and the legislation passed in Massachusetts, the League of Women Voters-Needham, Mothers Out Front-Needham, and Green Needham Collaborative are requesting that the Town of Needham Select Board commission a Climate Action Plan (CAP) for the Town of Needham. The following Needham organizations thus far have also endorsed this request: Temple Beth Shalom, First Parish – Needham, Olin College, Needham Community Farm, Christ Episcopal Church Needham.

For the Commonwealth to meet the goals set forth in the Climate Roadmap bill, cities and towns will play a crucial role. A CAP is a tool which cities and towns can use to ensure that they do their share. A CAP is a comprehensive roadmap which outlines the specific activities that the Town of Needham will undertake to reduce greenhouse gas emissions and strengthen our Town's resilience to climate change. Towns that have a CAP will be at an advantage in meeting the recently adopted targets in an environmentally just way; mitigating and adapting to the effects of climate change; and taking advantage of federal and state programs, funding, and support as it becomes available.

Additionally, implementing a CAP will save Needham taxpayers money and make Needham more resilient by reducing municipal, business, and homeowner heating, cooling, and transportation expenses and by better preparing Needham for extreme weather events.

We offer our support to the Select Board as it considers this request. We have conducted some preliminary research into CAPs and have interviewed sustainability coordinators and committees from Massachusetts towns and cities that have developed CAPs. We have prepared the attached brief, outlining what goes into a CAP and sharing the experiences of neighboring communities, for your consideration. We would note, in closing, that Needham has had an excellent track record in recognizing and coming to grips with these issues.

Regards,

Green Needham:

Michael Greis
Eleanor Rosellini
Stephen Frail
Donna Vello
Deb Schmill
James Glickman
Moe Handel
Maureen Commane
Nick Hill
Ed Quinlan

League of Women Voters - Needham:

Karen Price
Eileen Mullen

Mothers Out Front - Needham:

Liz Gregg

An Overview of Municipal Climate Action Plans

Prepared for:
Needham Select Board
June 8, 2021

Prepared by:
Green Needham
League of Women Voters - Needham
Mothers Out Front Needham

Executive Summary

This document presents the following sections, summarized in brief below.

What is a Climate Action Plan?

Briefly, a Climate Action Plan (CAP) is a roadmap that begins with a baseline of the Town's Greenhouse Gas (GHG) emissions and details how a city or town, along with its businesses, organizations and residents, will move toward Net Zero GHG emissions. A CAP often will also identify measures the town should take to adapt to and be resilient in the face of climate change.

Why should Needham develop a Climate Action Plan?

We are already in a climate emergency and solving the crisis will require action at every level of society across the globe

The State of Massachusetts has committed us to a Net Zero future, and that can only happen if cities and towns are on board

Needham will be better positioned to take advantage of grants, programs, and other support to reach those goals, as well as ensure that Needham residents and businesses are fully engaged in the new green economy

Implementing a CAP will save taxpayers, homeowners, and business owners in the long run through increased efficiency and better resilience to climate change

Needham can be more proactive in building the climate resilient infrastructure we will need to mitigate the impacts of climate change our Town will experience in the coming decades**.**

We can help ensure that all Needham businesses, nonprofits, and residents are able to partake in the new green economy regardless of income, age, race, language, residential status, etc.

How does a Town create a Climate Action Plan?

Most towns form some sort of working group to direct the process, which includes representation and/or participation from key town departments, as well as community stakeholders such as commercial building owners, community leaders, subject matter experts, and Needham residents. Often municipalities choose to also bring in consultants, such as the Metropolitan Area Planning Council (MAPC) or another organization, to advise or lead the group. Other municipalities have felt comfortable proceeding without a consultant.

What will creating a Climate Action Plan cost?

A CAP usually takes from 1 to 2 years to develop and finalize. Depending upon the amount of outside consultants commissioned, a CAP might cost the Town very little, or up to $150K. Competitive grants are sometimes available to offset the cost of developing a plan.

How much does it cost to implement a Climate Action Plan?

There will likely be both upfront costs and downstream savings incurred by projects that are identified in the CAP. As the Town has already experienced with other projects, often the downstream savings result in positive return on investment for incremental upfront costs. We must also consider the high cost of inaction. Ultimately, each project will have to be assessed in the context of budget priorities within the town at the time they're taken on.

Building Equity into a Climate Action Plan

Socially and economically disadvantaged people are likely to experience greater harm from climate change, compounded by an inability to afford air conditioning or heat. We must center equity throughout the planning and implementation of our entire CAP.

Exemplar Climate Action Plan(s)

We have identified Concord's and Arlington's CAPs as excellent examples of CAPs that the Town may wish to study prior to embarking on its own CAP. This section (below) provides links to the plans.

Additional Climate Action Plans from other cities and towns

We have researched CAPs from several other cities and towns and have provided links and brief summaries of the work that went into those plans.

What is a Climate Action Plan?

Briefly, a Climate Action Plan (CAP) is a roadmap that details how a city or town will move toward Net Zero GHG emissions. In the case of Needham, we would begin with a baseline of our Town's GHG emissions, and outline steps that the town, its businesses, and residents can take over the next years and decades to reach Net Zero GHG emissions in the most cost-effective manner. A CAP often also identifies measures the town can take to adapt to and mitigate the effects of climate change.

Here's how the Metropolitan Area Planning Council defines CAP:

> "Climate and energy action plans, including Net Zero and energy reduction plans, detail specific steps for a city, town, or region to use to combat and mitigate the effects of climate change. These projects support MAPC's MetroFuture goals of creating healthy environments and decreasing consumption of energy."
> Source:
> https://www.mapc.org/our-work/expertise/clean-energy/local-energy-action-plan/

A CAP is a holistic tool that identifies and measures the major contributors to GHG emissions to a level of detail sufficient to evaluate and prioritize GHG emission-reduction projects. There are several key areas that a Town can focus on to reduce GHG emissions: adoption of green energy supply sources; home, municipal, and business building efficiency improvements; electrification of heating, cooling, and cooking; electrification of transportation; improvement and diversification of alternatives to automotive transportation.

The feedback we have gathered from local cities and towns that have undergone the process of developing a CAP is that the process of developing the plan is at least as important as the actual document that is created. They have found that just by developing the plan, the Town achieves a shared understanding of the importance of reducing GHG emissions whenever possible. This ensures that agency and accountability are pushed down to the individuals and departments making decisions that will have the biggest impact on the town's progress towards achieving its targets.

Most cities' and towns' CAPs focus on the "biggest bang for the buck" GHG-reducing initiatives the town can feasibly implement in the upcoming 5 to 10 years. The CAP is a powerful tool to

prioritize initiatives and ensure that major projects, whether municipal, residential, or commercial, take into account their impact on GHG emissions from the outset.

Why should Needham develop a Climate Action Plan?

It is in Needham's long and short term interest to be active in this realm. There are several reasons that Needham should develop a CAP:

We are already in a climate emergency

Climate change due to human activity, most notably the burning of fossil fuels for electricity, heating, cooling, transportation, as well as food production and refrigeration, is already a reality. The planet has already warmed by about 1° Celsius (C) since the start of the industrial revolution, as humans have burned coal, oil, and gas to fuel economic growth. Most of those fossil fuels have been burned in the past few decades, which has coincided with a sharp increase in average temperatures, as well as measurable increases in extreme weather events such as more destructive storms, floods, extreme heat and extreme cold, and droughts. Sea-level rise already threatens the homes and livelihood of tens of millions of people around the world, including here in Massachusetts, where we have seen more flooding, both during storms and "sunny day flooding" from high tides. Food insecurity is on the rise, as crops are at risk of lower yields due to extreme weather, pests, and diseases.

While the planet is already experiencing significant impacts from climate change, climate scientists have projected that if we can keep warming below 1.5° C, the worst impacts of climate change can be avoided. The Intergovernmental Panel on Climate Change's 2019 special report, Global Warming of 1.5°C, concludes that limiting global warming to 1.5° C worldwide will require a 45% reduction of GHG emissions by 2030 and that we reach Net Zero GHG emissions by 2050.

Massachusetts has committed us to a Net Zero future

In January, 2021, the Massachusetts State Legislature passed Bill S.9, *An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy.* That bill sets a binding goal for the state to achieve Net Zero GHG emissions by 2050, as well as an interim target to be 50% below 1990 emissions level by 2030 and 75% below that level by 2040.

Meeting the Net Zero targets will require nothing short of a complete overhaul of the Massachusetts economy and infrastructure. Recognizing this reality, the bill sets emissions

targets for GHG reductions in electricity generation, transportation, commercial and industrial buildings, residential buildings, industrial processes, and natural gas distribution.

The law also codified Environmental Justice (EJ) into law. The definition of what constitutes an EJ community is based on race, income, and English language-proficiency criteria. The law will help policy makers better measure how climate change disproportionately impacts EJ communities and ensure that the programs and benefits prescribed by the bill are adequately directed to those vulnerable communities.

The *Roadmap* also requires the state to set a new Opt-In Municipal Stretch Code that would require buildings to be built to Net Zero standards. The MA Department of Energy Resources has until the end of 2022 to define the new "Net Zero stretch code," and the public has the right to advocate for how strong those codes will be. It is the hope of this group and many others across the state that the Net Zero stretch code will require more efficient building performance standards, including full electrification (i.e., no fossil fuels) of all new buildings, supplemented by renewable energy production.

The *Roadmap* accelerates requirements of the electric utility sector to source energy production from renewable energy sources. This section of the law is intended to help spur more utilities to invest in wind and solar. The law also offers flexibility to natural gas utilities to experiment with new geothermal or other renewable alternatives to their existing business model.

The *MassSave* state energy-efficiency program will change under the new law, focusing more on electrification as opposed to just more efficient fossil-fuel heating or cooling systems. This will help homeowners with the conversion from gas or oil furnaces to new emissions-free technologies, such air-source or ground-source heat pumps.

Home appliances will also be subject to stricter efficiency standards under the new law. The law doesn't require homeowners to get rid of existing, functioning appliances, but will require more efficient appliances when a replacement is needed.

The electric vehicle industry stands to benefit under the new law through numerical targets for the number of EVs needed to replace existing internal-combustion engine cars over the coming decades. The state is required to come up with new incentives, programs, and infrastructure to support those EV targets.

Increases in community and residential solar are targets of the new law, and the law explicitly sets out to make solar more affordable to lower-income populations, and it makes it easier for nonprofits and businesses to afford to add solar panels, and sell excess power back to the grid.

Finally, MassCEC will spend $12 million per year to help the state develop the green energy workforce it will need to support our economy's transition to Net Zero.

Needham will be better positioned for the green economy if it has a CAP

Because the *Roadmap* law touches upon so many sectors of the Massachusetts economy, there will be many opportunities for cities and towns to take advantage of new programs and funding sources. Some of the ways Needham may be better positioned once it has a CAP include:

- New municipal building development, such as replacements for Mitchell, Pollard, and Emery Grover, can be built or renovated to Net Zero standards, which would dramatically lower operational costs in those buildings over the coming decades, offsetting the small incremental costs associated with building to Net Zero standards. Such an approach may become a factor in future state grants for such projects, including MSBA funding decisions.
- As home efficiency programs and rooftop solar programs are increasingly tied to affordable housing grants, the Town can make progress both on increasing the diversity of its housing stock and on lowering GHG emissions.
- The Town of Needham may be able to take advantage of more grants to electrify its fleet and offset the costs of building out EV charging infrastructure to support growing municipal and civilian high-speed charging needs.
- Needham Town Meeting will be more likely to adopt the Net Zero stretch building codes when they become available, which will ensure that future major development (e.g., if the Muzi property is redeveloped or additional development occurs at Needham Crossing) will be built to the highest performance standards.
- With a CAP, Needham will have the framework and communication platform in place to guide Town residents and businesses toward state and federal programs that allow them to lower their GHG emissions affordably.
- With a CAP, Needham can stay ahead of state-mandated GHG emission guidelines, reducing the risk of any potential penalties or increased costs to meet those mandates if the town delays action.
- A CAP may help the Town of Needham identify general laws and/or permitting requirements that need to be revised in order to effect change in local building practices.

- Once the Town has established its baseline GHG emissions, Town Meeting may opt to authorize the Town to pursue Community Choice Electricity (aka Green Municipal Aggregation) to more quickly decarbonize the town's electricity, which may be possible at similar or even lower electricity production costs than rate payers are currently paying.
- As the Town continues to consider re-zoning and development, a CAP will ensure that the impact of any plan on our GHG emissions is considered at the outset, and that operational and GHG savings during the life of the building will be compared alongside any difference in capital spending.
- As the Town replaces old building infrastructure, such as boilers or air conditioners, having a CAP in place would ensure that zero-emission alternatives, such as heat pumps, are given priority over simply replacing what is worn out with a new piece of fossil-fuel burning equipment. We already have experience with geothermal at the PSAB.

Implementing a CAP will save money for Town residents and businesses

As the Town reduces emissions across all sectors, there will likely be additional upfront costs for which the Town, business owners, and individuals will need to plan. However, there are many offsets to those additional initial outlays that residents and business owners will benefit from, including:

- Grants from federal and state programs, including tax incentives, to offset upfront costs
- Increased efficiency of homes and buildings, resulting in lower energy bills
- Increased access to Community Solar and grants for roof-top Solar, both of which can dramatically lower energy bills over the life of a home
- Lower fuel, operational, maintenance costs of EVs relative to internal combustion engine cars
- New approaches to public transportation can help more residents choose alternative forms of getting around town that don't involve driving a car.

Needham can be more proactive in building climate resiliency infrastructure

- Responsible planning will allow *t*he Town to assess its resources and promote maximum readiness of all Town departments for extreme weather events.
- Having a detailed plan in place can allow the Town to build upon the work already begun with last year's Municipal Vulnerability Preparedness grant.
- Implementing a plan will increase public safety, as potentially hazardous heating sources such as natural gas, propane, and oil are phased out of businesses and residences.

- Public house is improved as particulates in the air from automobile emissions or from gas cooking appliances are reduced

We can help ensure that all Needham businesses, nonprofits, and residents are able to partake in the new green economy

With a well-crafted CAP, all sectors of the Needham community can benefit from the green economy.

- Homeowners can be directed to programs that offer them significant savings, such as the MassSave program, as they upgrade home heating, cooling, and electricity to low- or zero-carbon sources.
- Small business owners and commercial real estate owners can reduce operational expenses as they increase the efficiency of their places of business.
- Non-profit organizations, such as Needham Community Council and houses of worship, can take advantage of new policies and programs aimed at helping those organizations reduce GHG emissions.
- Renters, including those who live in low-income housing, can have access to clean energy sources and lower utility bills.
- Developers can leverage best practices for constructing Net Zero buildings that will be in much higher demand as the State's Net Zero targets loom closer.
- Needham's municipal buildings can be built to the highest performance standards, with full electrification, for marginal up front cost increases, and significant operational savings over the life of the building, saving taxpayers money.
- Needham's youth can grow up in a town committed to meeting its civic and moral obligations, and begin to imagine a future where climate change is not an existential threat.

How does a Town create a Climate Action Plan?

A CAP is a strategy document that outlines a collection of measures and policies that reduce GHG emissions. Creating a CAP begins with a GHG emissions inventory, which is then used as a foundation for defining goals, priorities, and a guiding framework for achieving those goals. MAPC has developed a tool that can be used by Town Staff and volunteers to create the GHG inventory.

There are many paths the town can take to create a CAP, but to ensure success, there are several steps that are critically important. According to Megan Aki of MAPC, the most critical

success factors include having alignment within the town on the goals of the CAP, and to include those who will ultimately be tasked with implementing the plan from the beginning.

Most towns form some sort of working group to direct the process, which includes representation and/or participation from key town departments, as well as community stakeholders such as commercial building owners, community leaders, subject matter experts, and Town residents. The working group is often 10-12 people, or even smaller, with other stakeholders weighing in during the entire process through interviews, focus groups, surveys, etc. Often municipalities choose to also bring in consultants, such as the MAPC or another organization, to advise or lead the group. Other municipalities have felt comfortable proceeding without a consultant.

No matter what leadership formula Needham might choose, those working on the CAP should be empowered in their efforts and given a framework of principles to guide their work. The working group members should be aware that the final plan they develop is expected to be malleable -- implementation goals will evolve based on ever changing circumstances. Megan Aki and others also caution against trying to be too detailed in a CAP. For example, the plan should provide direction, but isn't intended to be a cost-benefit analysis of each project to be considered. The CAP should also be biased towards projects and actions over the next 5 to 10 years. It would be too speculative to try to plan out all the way to 2050, as so much will change between now and then, including technology, policies, and our understanding of the science of climate change.

An essential step in the CAP process is taking a community-wide greenhouse gas (GHG) inventory: an accounting of the emissions from all sources in Needham in a given year. The inventory, or baseline, will include municipal, residential, commercial and industrial GHG emissions, and will become the foundation on which the CAP is built.

Another important piece of the CAP development process is communication and engagement with government officials, town staff and public stakeholders. One method used to collect broad community input is holding Community Visioning Meetings. These meetings can be helpful in establishing or solidifying goals for the CAP working group. The importance of involving all municipal departments in this process cannot be overstated. By doing so, all staff begin to look at their processes through a climate lens and can make impactful changes even before the CAP is implemented. The input of department heads is also beneficial when considering implementation of the Plan and measurements to evaluate our success at meeting goals.

The following list of guidelines, taken from the United Nations Habitat for a Better Urban Future,[1] may be a helpful framework for the creation of a CAP for Needham.

Possible Guiding Principles
CAP should be…

- Ambitious - Setting goals and implementing actions that evolve iteratively towards an ambitious vision
- Inclusive - Involving multiple town government departments, stakeholders and communities (with particular attention to marginalized groups), in all phases of planning and implementation
- Fair - Seeking solutions that equitably address the risks of climate change and share the costs and benefits of action across the region, including to disadvantaged communities that face additional challenges from climate change
- Comprehensive and integrated - Coherently undertaking adaptation and mitigation actions across a range of sectors within the town, as well as supporting broader regional initiatives and the realization of priorities of higher levels of government when possible and appropriate
- Relevant - Delivering local benefits and supporting local development priorities
- Actionable - Proposing cost-effective actions that can realistically be implemented by the actors involved, given local mandates, finances, and capacities
- Evidence-based - Reflecting scientific knowledge and local understanding, and using assessments of vulnerability and emissions and other empirical inputs to inform decision-making
- Transparent and verifiable - Following an open decision-making process, and setting goals that can be measured, reported, independently verified, and evaluated

What will creating a Climate Action Plan cost?

Towns and cities that we interviewed have completed CAPs in as little as a year. Some have taken up to two years to complete their plans. Towns that more recently completed their plans seem to be able to complete work more quickly, as they are able to build upon well-established playbooks that have been developed by MAPC, other towns, or consultants. MAPC and other consultants are available to provide technical assistance to cities and towns.

[1] https://e-lib.iclei.org/wp-content/uploads/2016/02/Guiding-Principles-for-City-Climate-Action-Planning.pdf

We have seen cities and towns budget as high as $150K to hire consultants to facilitate, provide technical assistance, and report writing, and as low as $0. In the latter case, the burden of creating the plan was placed on Town Staff and volunteers. Towns have used a variety of different grants, such as the Municipal Vulnerability Program and Executive Office of Energy and Environmental Affairs, to offset the cost of developing a CAP.

How much does it cost to implement a Climate Action Plan?

This is hard to answer. There will absolutely be upfront costs to incur to accomplish the goals of any CAP, but the cost of not starting this process immediately will certainly be greater. Some measures in the plan might have higher upfront costs, but will result in long-term cost savings. Today, a Net Zero single family home can be built for a cost comparable to the cost of building a home powered by gas, yet the operating costs of the Net Zero home will result in savings for the owner for the lifetime of the home. This is true even without the implementation of federal or state carbon pricing, fossil fuel restrictions, and renewables incentives, which would make the economics of all-electric construction even more favorable. Similarly, the cost of EVs has been steadily dropping, and they are expected to be less expensive to purchase than comparable gasoline vehicles after 2025. EVs are already less expensive to maintain and fuel. These cost savings will only grow larger as the cost of renewable energy production continues its trend downward.

Some of the measures in the Plan will have upfront costs without direct cost savings, like measures that build up our resilience. These measures will provide indirect savings by preventing damage in the face of extreme weather events.

Most importantly, the cost of not taking action, or even of taking too little action, are significant. This cost will not only be financial, but also in terms of public health, loss of biodiversity, and loss of the infrastructure that we all rely on. If nothing else, the pandemic has given us all a new perspective on the kind of physical and mental pain and the level of loss an extreme event that is not within our control can cause.

The implementation of the CAP is an essential part of being prepared for future natural disasters. As the Town considers this implementation, we must also be sensitive to financial impacts on residents and businesses, and be prepared to modify the Plan as needed, while still targeting Net Zero emissions by 2050 or earlier. This is particularly true when it comes to those who are economically disadvantaged.

Building Equity into a Climate Action Plan

Climate change is an existential challenge, but it is also an opportunity to re-imagine Needham's future. That future has the potential to be both safe and equitable for all who live and work in our community. As Massachusetts municipalities have been progressing in their climate mitigation and adaptation efforts, more and more they have also been seeking ways to incorporate equity into these efforts. An equitable Net Zero carbon future must be our goal from the outset of our planning. We should be conscious of the history of our region and the differences in how populations are able to respond to the changing climate. As we witnessed first hand in Massachusetts with the pandemic, we must recognize that the negative effects of climate change have, and will continue to disproportionately impact vulnerable populations. According to the U.S. Census Bureau almost 3% of Needham residents live in poverty, 3% of residents under the age of 65 have a disability, and 17% of Needham residents speak a language other than English at home. [2]

Socially and economically disadvantaged people are likely to experience greater harm from climate change, including inability to afford air conditioning or heat. While action to mitigate climate change by reducing GHG emissions will benefit these populations, we must also assess the potential inequitable impacts of climate mitigation strategies to ensure these strategies do not negatively impact those most vulnerable among us, for example by significantly increasing the cost of housing or utilities. In addition, the action items in our plan should be structured and marketed so that all Needham residents and businesses can take advantage of them. Reaching a broad range of people can often be difficult, including reaching those with a primary language other than English, homes without high speed (or any) internet access, and the huge challenge of marketing energy efficiency and renewable energy programs to renters and landlords who have opposing incentives. For Needham's Plan to be actionable and for its vision of the future equitable, we must center equity throughout the planning and implementation of our entire CAP.

Implementing this plan will require dedication and commitment from all of Needham's departments, businesses and residents over the next 30 years. The Plan will build on the many collaborative efforts to reduce emissions that the Town has engaged in over the past many years, and will serve as an organizing framework on our path to Net Zero.

[2] https://www.census.gov/quickfacts/fact/table/needhamcdpmassachusetts/POP815219#POP815219)

Exemplar Climate Action Plans

We have reviewed several exemplar CAPs, and would like to call the Select Board's attention to two: Arlington and Concord. We feel these plans in particular merit study because of the quality of the plans.

Concord 's Plan prioritizes not only reducing GHG emissions but also improving the community's resilience to the impacts of climate change. The plan delineates priority actions, implementation blueprints, champions for each action, and a timeframe for the entire plan for the next five years, plus has an informative community portal to explain the planned actions. The plan includes enhancing the town's natural resources to maximize resilience benefits, biodiversity, and carbon sequestration.

The Arlington plan clearly explains the concept of net zero energy and provides comprehensive steps to reach that goal. The Plan utilizes "equitable planning" to ensure that all individuals are allowed to thrive, including those who are economically disadvantaged or vulnerable in other ways. Appendix A of the plan contains Roadmap Action Summary Tables which include for each action, examples, time frame, type of expense, leader, key partners, measures of success, and equity considerations.

Concord

Climate Plan: ***Climate Action and Resilience Plan*** June 2020

- **Target:** 80% GHG reduction by 2050
- **Greenhouse Gas Inventory:** baseline conducted in 2008, updated in 2016
- **Municipal Light Plant:** Yes
- **Process:** Led by the Town's Director of Sustainability; collaborative effort of a municipal advisory team representing many Town departments; community support (including Climate Action Advisory Board); and a consultant team: Kim Lundgren Associates, One Architecture, Center for Sustainable Energy.
- **Funding:** included a Municipal Vulnerability Preparedness (MVP) Action Grant
- **Other Links**: Community Portal, with link to the plan, video introduction, & information for each sector.
  https://www.mass.gov/doc/case-study-3/download

Town Staff / Contact: Kate Hanley, Director of Sustainability, khanley@concordma.gov

Arlington

Climate Plan: ***Net Zero Action Plan***: February 2021
(earlier Climate Action Plans (CAP) dating from 2005)

- **Target:** Net Zero emissions by 2050
- **Greenhouse Gas (GHG) Inventory:** 2020 (based on 2017 data); prepared in house using Metropolitan Area Planning Council (MAPC) tool
- **Municipal Light Plan:** No
- **Process:** Arlington worked with the MAPC, Natick and Melrose to develop GHG inventories and Net Zero plans for all three communities. The Arlington Clean Energy Future Committee (CEFC) led the effort in the town, involving town staff, volunteers, and community members. The CEFC, established by the Arlington Select Board in 2018, currently has 13 members, including some town staff.
- **Funding:** included a grant from the Executive Office of Energy and Environmental Affairs to pay for consulting from MAPC.
- **Town Staff / Contact:** Ken Pruitt, Energy Manager, kpruitt@town.arlington.ma.us

Additional Climate Action Plans from other cities and towns

This group interviewed sustainability representatives from several other cities and towns, and we provide the following summaries for the Select Board's benefit. We can provide additional details gathered during our research upon request. All of the contacts from these other cities and towns have been generous with their time, and have offered to participate in follow-up conversations if it would help Needham progress on its own CAP.

Dedham

Climate Plan: ***Sustainable Dedham Climate Action & Resiliency Plan***: June 2020
(updating earlier CAP)

- **Target:** 80% GHG reduction by 2050; zero waste by 2050
- **Greenhouse Gas Inventory:** 2018; prepared with help from UNH students
- **Municipal Light Plan:** No
- **Process:** With leadership from the Environmental Coordinator (position created in 2007), the Plan was developed by the seven-member Sustainability Advisory Committee, appointed by the Select Board, with advice and support from a 30-member Climate Action Stakeholder Group. Input was received from community members and representatives from town government, community groups, nonprofits and local businesses. Consultant team: VHB and Kim Lundgren Associates.
- **Funding:** included a Municipal Vulnerability Preparedness Program (MVP) Action Grant

- **Other Links**: Sustainable Dedham website with link to the plan, details about each sector, and news and events.

Town Staff / Contact: Environmental Department, (781) 751-9210

Lexington

Climate Plan: ***Sustainable Action Plan*** 2018
Getting to Net Zero Emissions Roadmap & Recommendations 2018

- **Target:** Mitigation -- Net Zero emissions in the built environment (residential, commercial, municipal) by 2043; Adaptation - Aspirational goal to establish the capability of the town to provide essential services for 10 days following an extreme weather event.
- **Greenhouse Gas Inventory:** Lexington Energy Inventory prepared by Peregrine Energy 2017
- **Municipal Light Plan:** No
- **Process**: Sustainable Action Plan created by the Sustainable Action Committee appointed by Select Board. Getting to Net Zero Emissions Roadmap created by a 12-member task force including building owners, community leaders, municipal staff, elected officials, subject matter experts, and stakeholders representing residential, commercial,and municipal interests. Consultants: Integral Group, Sustainable Performance Institute
- **Funding**: included a Town Meeting appropriation of $40,000/year for 3 years for consultants, not all of which was spent.

Town Staff / Contact: Stella Carr, Sustainability Director, (781) 698-4538

Natick

Climate Plan: ***Natick's Net Zero Action Plan*** 2021

- **Target:** Net Zero emissions by 2050
- **Greenhouse Gas Inventory**: 2020 (completed using the MAPC Greenhouse Gas inventory tool)
- **Municipal Light Plan:** No
- **Process:** With support from MAPC and the communities of Arlington and Melrose, the Net Zero Action Plan was developed by the Town of Natick in 2019-2020. The effort was led by the Sustainability Committee (a seven-member group appointed by the Select

Board), with participation from elected boards and committees along with public engagement.
- **Funding**:included a grant from the Executive Office of Energy and Environmental Affairs to pay for consulting from MAPC.

Town Staff / Contact: Jillian Wilson-Martin, Sustainability Coordinator, jwmartin@natickma.org

Newton

Climate Plan: ***The City of Newton Five-Year Climate Action Plan, 2020-2025*** 2019
Newton Citizens CAP 2019

- **Target:** steps for the next 5 years with success measured through action-specific performance indicators with a long-term goal of Net Zero emissions by 2050
- **Greenhouse Gas Inventory**: 2018 (baseline 2013 inventory) using available data and work done by the Newton Citizens Commission on Energy. The MAPC provided the City with a simple methodology that can be regularly updated to track progress on climate goals.
- **Municipal Light Plan:** No
- **Process**: The five-year plan was developed by the City of Newton with the help of the MAPC. Involved in the process were city staff and elected officials, a 12-member CAP Working Group and ideas from the Newton Citizens Commission on Energy, which produced the Newton Citizens CAP.
  Funding: $30,000 from the City budget, most of which went to the MAPC for help with developing the CAP.

Town Staff / Contact: Ann Berwick, Sustainability Coordinator, aberwick@newtonma.gov

Belmont

Climate Plan: **Belmont Climate Action Plan** 2009**;**
Belmont Climate Action Roadmap 2019

- **Target:** 80% GHG reduction by 2050 (through strategic electrification)
- **Greenhouse Gas Inventory:** Baseline in 2007; **2016 CO2 Emission Inventory Update** prepared by Belmont Energy Committee member James Booth
- **Municipal Light Plant:** Yes
- **Process:** 2009 CAP prepared by all-volunteer Sustainable Belmont; Climate Action Roadmap 2019 prepared by the Energy Committee, a permanent committee of volunteers established by the Belmont Board of Selectmen in 2016.
- **Funding:** no specific appropriations or grants.

Town Staff / Contact: James Booth, co-chair of Belmont Energy Committee, jameswdbooth@gmail.com

Wellesley

Climate Plan in progress: *Climate Action Plan 2021-2022*

- **Target:** building resilience and achieving Net Zero emissions by 2050.
- **Greenhouse Gas Inventory:** The Sustainable Energy Committee calculates emissions each year and compares the figures to 2007 emissions.
- **Municipal Light Plant:** Yes
- **Process**: A CAP is currently being formulated. The effort will be led by the Climate Action Committee (formerly Sustainable Energy Committee), established in 2010 and consisting of seven members. The Select Board, Wellesley Municipal Light Plant, and School Committee each appoint one board member, officer, official or paid employer. The Select Board appoints the remaining four members from residents with relevant interests and expertise.
- **Funding**: includes $50,000 from Select Board budget

Town Staff / Contact: Marybeth Martello, Climate Action Director, mmartello@wellesleyma.gov

Additional Area Cities/Towns with Sustainability Actions in Process

- Auburn - Climate Action Plan
- Beverly - Climate Action Plan
- Brookline - Climate Action Plan (2018)
- Cambridge - Climate Action Plan (2018)
- Gloucester - Climate Action Plan
- Medfield - Net Zero Goal and Action Plan (in process)
- Melrose - Climate Action Plan (2020)
- Norwood - Sustainability Action Plan contemplated
- Salem - Climate Action Plan (in process)
- Somerville - Climate Action Plan
- Watertown - RFP for Climate and Energy Plan (2020)
- Wayland - Climate Emergency Resolution (2021) committing to GHG reductions
- Weston - Climate Action and Resilience Plan (2021)
- Westwood - Sustainability & Resiliency is included in the draft of Town's comprehensive plan (2020)
- Winchester - Climate Action Plan (2020)
- Worcester - Climate Action Plan (2020)