ActOn Climate:
The Road to a Resilient Net Zero Future

July 2022

INCORPORATED
ACTON

MAPC

ERG
www.erg.com
In memory of Jartu Flamma and Rudolph Vah, for their commitment to climate action, equity, and their community.
# TABLE OF CONTENTS

A Call to Action................................................................................................................................................................................... 3
Acknowledgements.................................................................................................................................................................................... 4
Guiding Principles ................................................................................................................................................................................... 5
What Led Us Here? ............................................................................................................................................................................... 6
What is a CAP? ..................................................................................................................................................................................... 6
  Phase I and II of the Town’s Planning Process ................................................................................................................................. 8
  Massachusetts Context........................................................................................................................................................................ 8
Definitions ......................................................................................................................................................................................... 9
Managing the Risks of Climate Change Impacts in Acton ........................................................................................................ 10
Acton’s Community Profile ........................................................................................................................................................... 12
Engaging the Community ................................................................................................................................................................ 13
  Visioning Workshop ..................................................................................................................................................................... 14
  ActOn Climate Festival ................................................................................................................................................................ 15
  Community-Wide Survey Results ................................................................................................................................................ 16
  Acton-Boxborough Regional High School Resource Force Student Team ......................................................................................... 17
Community-Wide Emissions in Acton ............................................................................................................................................... 18
Municipal Emissions in Acton .......................................................................................................................................................... 19
Carbon Sequestration ...................................................................................................................................................................... 20
Technical Analysis ........................................................................................................................................................................... 21
Business-As-Usual ........................................................................................................................................................................ 22
GHG Analysis ................................................................................................................................................................................ 23
Remaining GHG Emissions ............................................................................................................................................................ 24
Tackling What Remains ................................................................................................................................................................. 25
Acton’s Climate Goals ...................................................................................................................................................................... 26
Summary of CAP Strategies & Supporting Actions ...................................................................................................................... 27-31
Buildings and Housing ................................................................................................................................................................. 32
  Strategy B1: Support residents and businesses to improve the energy efficiency of their homes and buildings and transition to clean heating and cooling ........................................................................... 33
  Strategy B2: Align Acton’s zoning and planning with clean energy and sustainability standards .................................................... 39
  Strategy B3: Lead by example to improve the energy efficiency of the Town’s municipal buildings and schools and transition building stock to net zero emissions ............................................................................ 43
  Strategy B4: Advocate for policy changes and resources at the state and federal level that will enable the rapid and affordable transition to carbon-free buildings in Acton ................................................................. 46
Energy .............................................................................................................................................................................................. 50
  Strategy E1: Provide residents with 100% carbon-free electricity by 2030 .......................................................................................... 51
  Strategy E2: Increase local clean energy access and adoption for all Acton residents ................................................................. 54
  Strategy E3: Power municipal buildings with 100% renewable electricity by 2030 ........................................................................ 58
  Strategy E4: Advocate for policy changes and infrastructure investments that more rapidly move the state to a 100% clean energy supply ................................................................................................................................. 60
Mobility ........................................................................................................................................................................................... 64
  Strategy M1: Increase the adoption of electric vehicles ................................................................................................................... 65
  Strategy M2: Lead by example: electrify school buses and town vehicles .......................................................................................... 69
  Strategy M3: Expand public and opportunities for private electric vehicle (EV) charging infrastructure ........................................ 73
  Strategy M4: Expand zero-emission mobility options .................................................................................................................... 77
  Strategy M5: Advocate for the electrification of personal and shared transportation ....................................................................... 81
Nature-based Solutions ..................................................................................................................................................................... 86
  Strategy N1: Increase the protection of existing open space and potential spaces throughout town in line with the Open Space and Recreation Plan ............................................................................................................... 87
  Strategy N2: Support sustainable agriculture ..................................................................................................................................... 91
Strategy N3: Electrify municipal lawn mowing equipment and support residents to transition to electric mowing
................................................................................................................................................................................. 95
Strategy N4: Advocate for policies that support nature-based solutions implementation in Acton............... 98
Solid Waste Resources ........................................................................................................................................................ 101
Strategy SW1: Improve and expand services to reduce waste and increase the waste diversion rate .......... 102
Strategy SW2: Advocate for zero waste initiatives ................................................................................................ 106
Resilience ............................................................................................................................................................................ 108
Strategy R1: Pair nature-based solutions with resilience ...................................................................................... 109
Strategy R2: Prepare the town for the impacts of climate change ....................................................................... 113
Education and outreach...................................................................................................................................................... 115
Strategy E01: Provide resources and information to support residents and businesses that want to reduce their greenhouse gas emissions .......................................................................................................................... 116
Cross-cutting Action............................................................................................................................................................ 119
A CALL TO ACTION

Dear Reader,

This Climate Action Plan is the product of more than a year of workshops, conversations, and analysis. It includes 22 detailed strategies and over 50 actions for Acton to rapidly address climate change. The actions listed in this document represent broad input and ideas from Acton’s community – captured in surveys, at our workshops, at the CAP Open House, and via your emails and phone calls. This is a living document and one that we’ll continue to build on together as we strive to reach net-zero emissions by 2030, as directed by our town’s Climate Emergency Declaration passed at Town Meeting in 2020.

As noted in the Declaration, Town government and staff, and all Acton civic groups, businesses, and residents are called “to commit to a climate mobilization effort, with appropriate support from the state and federal governments.” This plan identifies major opportunities for achieving our emissions reduction goals with the available tools and resources we have today. The analysis also demonstrates the challenges to climate action within the bounds of Acton based on what the state is currently projected to support, both in policy and funding.

We can look forward to a tremendous amount of innovation and advocacy between now and 2030 to meet our climate goals. There are already great initiatives coming to Acton like the deployment of e-bikes, potential geo-districting projects that will help speed the shift from natural gas to efficient electric heating and cooling, our first installation of a DC Fast Charger, and many more innovations to come that will make the transition to a net-zero future more feasible and accessible to everyone.

At the same time, it’s important to understand the current barriers and what we need to overcome to make the goal of net-zero by 2030 achievable. For this reason, our CAP contains a set of advocacy-oriented actions to address those limitations, such as calling for greater incentives and better financing tools to make electrification retrofits more affordable, continued advocacy to ban fossil fuels in new construction, in line with the Town of Acton bylaw passed at Town Meeting in 2021, or actions to encourage greater state and federal incentives to support electric vehicles and charging infrastructure adoption, especially for low- and moderate-income households.

We’ve laid a broad foundation of strategies and actions, and now it’s time to get to work!

Yours in Climate Action Implementation,

The Acton Sustainability Office
ACKNOWLEDGEMENTS

The Climate Action Plan was developed through a collaborative process between municipal staff and the community with support from our consultant team courtesy of a generous grant from the Community Compact Program, the MAPC Technical Assistance Program (TAP), and the Massachusetts Executive Office of Energy and Environmental Affairs Municipal Vulnerability Preparedness (MVP) Program. The list of acknowledgements includes participation in interviews and workshops.

Municipal Entities
- Acton-Boxborough Regional School District
- Acton Water District
- Town Manager

Student Organization
- Resource Force

Committees & Boards
- Acton Housing Authority
- Commission on Disabilities
- Diversity, Equity & Inclusion Commission
- Economic Development Committee
- Green Advisory Board
- Select Board
- Transportation Advisory Committee

Community Organizations
- Acton-Boxborough High School Resource Force
- Acton Chinese American Civic Society
- Acton Climate Coalition
- Acton Conservation Trust
- Congregation Beth Elohim
- Discovery Museum
- Energize Acton
- Green Acton
- Haartz Corporation
- Housing & Climate Justice for Acton
- Insulet
- Lion’s Club
- Mothers Out Front
- Rapscallion
- West Acton Village Merchants Association

Thank you to the many members of the community who participated in public input opportunities throughout the CAP’s development.
GUIDING PRINCIPLES

The process of developing the Plan has been informed by multiple guiding principles:

- Centering equity to ensure that those most impacted by climate change will benefit from the transition to net zero emissions and not be negatively impacted
- Using robust and inclusive community engagement and inviting voices that have not been involved in these processes before to be at the table and share their priorities and perspectives
- Rapidly driving down Greenhouse Gas (GHG) emissions within the town and influencing reductions across the region
- Maximizing co-benefits by making clear connections to public health, resilience, affordable housing, and biodiversity central to the plan’s strategies
- Addressing low-hanging fruit first and quickly building on that with more ambitious projects, policies, and programs
- Becoming an active voice that pushes for state and federal and systems change needed to meet our climate goals
- Celebrating the unique histories and community characteristics that make Acton home to all residents
WHAT LED US HERE?

Acton has a long history of sustainability, with a passionate and engaged community that continues to push for actions that protect and preserve the Town’s rich natural resources and also speed the shift towards cleaner and greener technology and development in response to climate change.

2008
Green Advisory Board established to investigate how Acton can improve our energy efficiency and use of renewable energy sources. The 2008 charter identifies the priority to identify, investigate, build the case for, and prioritize significant energy initiatives for the town and schools.

2008
Acton is designated a Green Community becoming eligible for grants, technical assistance, and local support from Regional Coordinators from the Department of Energy Resources to reduce energy use and costs by implementing clean energy projects in municipal buildings, facilities, and schools.

2014
The Town develops first solar projects: Solar PV landfill (1.59 MW) and solar at DPW roof (100 kw).

2014
Town achieves 20% energy reduction in municipal and school operations. (We have since surpassed this, achieving a 30% reduction)

2016
Town votes to construct two net-zero buildings: North Fire Station and Douglas Gates Elementary School.

2019
The Town receives funding to install electric vehicle (EV) chargers in Town Hall. (We have since installed a total of eight EV chargers.)

2019
The Town, together with the Green Advisory Board, publishes its first Greenhouse Gas Inventory.
At a Special Town Meeting in 2020, the residents vote, nearly unanimously, to declare a Climate Emergency.

...which explicitly states that “members of Acton Town Meeting call on Town government and staff, and all Acton civic groups, businesses, and residents to commit to a climate mobilization effort, with appropriate support from the state and federal governments, to bring net Town-wide carbon emissions to zero as quickly as possible, with a target date of 2030.”

2020

Acton hires its first Sustainability Director.
The Town receives the Leading By Example Award, an award administered by the Department of Energy Resources and given to communities that have spearheaded initiatives to reduce the environmental impacts and associated energy costs of government operations.

2021

The Climate Emergency Declaration explicitly states that the “Town of Acton's climate mobilization should also: (1) accelerate adaptation and resilience strategies in preparation for intensifying local and global climate impacts; (2) protect trees, forests, and other open spaces because of their ability to draw carbon out of the atmosphere and store it; and (3) ensure that the costs of such mobilization efforts do not unfairly burden those who are economically or socially disadvantaged, and that the benefits of a realized, sustainable future accrue to all.”
WHAT IS A CAP?

The Town of Acton’s Climate Action Plan (CAP) provides a detailed and strategic framework for measuring and planning to reduce greenhouse gas emissions while also building community resilience to prepare for climate change impacts.

This CAP builds a roadmap for Acton to make informed decisions regarding where and how to achieve the largest and most cost-effective emissions reductions, while also ensuring that the benefits of a sustainable future accrue to all. The CAP will serve as a living document to guide the Town’s work towards meeting its net-zero by 2030 goal.

Phase I and II of the Town’s planning process

Acton’s climate action planning process was done in one year and two phases and included more than 20 community engagement activities.

Phase I of the planning process (June – December 2021) resulted in the development of the Town’s CAP Blueprint. This document outlines the community’s climate goals, priorities, and strategies.

In January 2022, the Town moved into Phase II to conduct technical analysis on the draft strategies to project potential greenhouse gas (GHG) reductions, associated costs, and benefits.

In conjunction with this community-wide climate planning process, the Town and the Acton-Boxborough Regional School District also collaborated to develop an Electrification Roadmap — an analysis of priorities and next steps for the electrification of seven key existing public municipal and school buildings.

MASSACHUSETTS CONTEXT

Acton’s Climate Action Plan comes as the Commonwealth enacted a historic “Act creating a next-generation roadmap for Massachusetts Climate Policy” in March of 2021. Among its provisions, the Act codified the state’s target of achieving net-zero greenhouse gas emissions by 2050 and raised the 2030 target to a 50% reduction in emissions levels. The Roadmap also defined Environmental Justice (EJ) populations for the first time in state statute and requires more outreach and engagement from state agencies enacting policies and programs that impact EJ communities. The Act increased the state’s Renewable Portfolio Standard (RPS), requiring 40% of the state’s electricity to come from renewable sources by 2030, and also significantly increased offshore wind procurements for the state. The Roadmap also requires the state to establish a new opt-in net-zero stretch code for municipalities and required that the Mass Save program includes the social cost of carbon in its cost-benefit analyses, rather than just energy savings.

While this legislation brings major and important changes to the state’s climate policy, its provisions are not strong enough to support Acton’s net-zero by 2030 goal. As such, this plan includes state and federal policy advocacy strategies throughout as an essential component to reaching the community’s climate goals.
DEFINITIONS

BEV: Battery electric vehicle powered entirely with electricity and no fuel tank

Carbon offsets: Purchase of a certificate or other mechanism to balance or compensate for a small amount of remaining greenhouse gas (GHG) emissions that the Town has been unable to reduce, by supporting additional verified projects that avoid or sequester the GHG elsewhere (usually at lower cost). See Carbon-Free Offsets: Technical Report by Boston University for the City of Boston: https://open.bu.edu/handle/2144/39217

Criteria air pollutants: Criteria pollutants are air pollutants of concern that harm public health and the environment. These pollutants are emitted from vehicle tailpipes, onsite building energy and power plants, among other sources. We estimated the value in reducing particulate matter (PM2.5), nitrous oxides (NOx) and sulfur dioxide (SO2), using EPA’s CO-Benefits risk Assessment (COBRA) tool. The tool estimates the health benefits of reduced pollutants at the county level.

Greenhouse gases (GHGs): are gases that contribute to the greenhouse effect by absorbing infrared radiation. Examples include carbon dioxide, methane, and chlorofluorocarbons.

ICEV: Internal combustion engine vehicle

Renewable Energy Credit (REC): One REC is created when an eligible renewable energy source generates one megawatt-hour (MWh) of electricity for the grid. A REC represents the environmental (e.g. non-energy) benefits of the energy generated. MA Class I RECs are from commercial renewable energy operations built after 1997 in New England that generate electricity using solar photo voltaic, solar thermal electric, wind energy, small hydropower, landfill methane and anaerobic digester gas, marine or hydrokinetic energy, geothermal energy, and eligible biomass fuel. For more information on Class I RECS in Massachusetts, please visit: https://www.mass.gov/service-details/program-summaries.

Net Zero: The Climate Action Plan definition of Net Zero means reducing GHG emissions as much as possible and sequestering, removing, or offsetting any remaining emissions.

Social Cost of Carbon: The social cost of carbon (SCC) is an estimate of the associated costs of releasing an additional metric ton of carbon into the atmosphere, including, for example, health impacts. The Environmental Protection Agency (EPA) calculates the value using a variety of models and discount rates (e.g., 3%), and produces an average value (e.g. $58/ton for 2025) and a value for a high impact climate change scenario (e.g., $176/ton for 2025). We used EPA’s estimate of the SCC to provide the cost of inaction of each strategy.

Other terms are defined in the text.
MANAGING THE RISKS OF CLIMATE CHANGE IMPACTS IN ACTON

Communities across the Commonwealth, including Acton, are already experiencing climate change impacts. Average annual temperatures and the number of hot days per year have increased, and more annual precipitation and extreme precipitation events have been observed. These conditions will likely intensify, along with associated impacts, according to future climate projections.

In 2018, Acton facilitated a Community Resilience Building workshop, as part of the state’s Municipal Vulnerability Preparedness (MVP) program, to better understand the community’s climate vulnerabilities as well as our strengths, opportunities and priorities in responding to and preparing for climate change impacts. In upcoming months, Acton will also prepare a Hazard Mitigation Plan Update, a five-year plan that will enable the town to be eligible for FEMA grant funding to implement strategies that address identified natural hazards and climate risks.

![Diagram showing Mitigation and Adaptation actions]

**Mitigation**
- Action to reduce emissions that cause climate change
  - Sustainable transportation
  - Clean energy
  - Energy efficiency

**Adaptation**
- Action to manage the risks of climate change impacts
  - Water conservation
  - New energy systems
  - Local food
  - Education
  - Complete communities
  - Urban forest
  - Infrastructure upgrades
  - Disaster management and business continuity
  - Flood protection

*Image credit: City of Calgary (CAN) Climate Change Program*
WITH A CHANGING CLIMATE, ACTON CAN EXPECT....

In addition to increasing annual precipitation, climate change will bring more large rain and snow events.

This will lead to more stormwater flooding, as most stormwater drainage (built for 1961 standards) is not sized for larger rain events.

While total annual rainfall and large rainfall events are projected to increase, summer and fall rain is projected to decrease slightly.

Due to the combined effects of earlier snowmelts, less rain, and higher temperatures, summer and fall droughts may become more frequent. These events can cause major disruptions at the local level, including energy outages and disruption of food and commodities supply chains, directly impacting livelihoods.

Increase in number of days with elevated temperatures, particularly days over 90°F

Increase in length and severity of heatwaves.

Small changes in average temperature can have significant impacts on seasons and species.
ACTON’S COMMUNITY PROFILE

As part of the planning process, we need to consider who will be impacted by natural and climate hazards. Not everyone will be affected equally. Here’s a snapshot of Acton’s demographics.

Population: 23,627
(U.S. Census Bureau, 2020)

$141,665 – median household income (ACS, 2019)

3.3% of residents are below poverty level (ACS, 2019)

Environmental Justice in Acton

According to Massachusetts’s definition and designation for Environmental Justice (EJ) populations, parts of Acton meet the criteria given that 40% or more of the town’s total population are minorities. Designated EJ block groups in Acton are shown in yellow on map.

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. In Acton, it means prioritizing resources and support for identified climate vulnerable populations, including seniors (particularly those who live alone or in assisted living situations), non-English speaking communities, low-income residents, renters, and those with medical needs. It also means ensuring that the benefits of climate action and our resiliency measures accrue to all as stated in the Climate Emergency Declaration.
ENGAGING THE COMMUNITY

Acton’s Climate Action Plan sought to inclusively engage the public during every step of the planning process. Multiple means of public engagement methods were utilized during both Phases I and II to create this plan, which included: public workshops, focus groups, public surveys, flyers, and social media. In collaboration with MAPC, more than 20 community events were held between June 30th, 2021, and June 1, 2022. Due to the COVID-19 pandemic most of the events took place in an online format for consideration of the safety of all residents and staff. Engagement included regular communication with residents via a newsletter from the Town’s Sustainability Director and website opportunities.

- **Select Board**
  - Presentations of the CAP process, and Phases I and II outcomes

- **Survey**
  - Online survey to understand community priorities

- **Advisory Group**
  - Two meetings to gather input on CAP goals and strategies

- **Walk & Talk**
  - An outdoor hangout and discussion of nature-based solutions at NARA Park

- **Student Workshop**
  - Led by ABHS’s Resource Force (student group) to review draft CAP strategies

**Visioning Workshop**
- Community-wide visioning workshop at the start of the process

**Thematic Workshops**
- Six workshops focused on defining CAP priorities and strategies

**Phase I Open House**
- An outdoor gathering for residents to provide input on potential CAP strategies

**Focus Group**
- A meeting with renters in Acton to understand their needs and priorities

**Phase I Comment Period**
- For residents to review the CAP’s draft strategies and offer written feedback

**Phase II Workshops**
- Four workshops to introduce technical analysis approaches and present preliminary findings

**Focus Groups**
- Continuation of periodic meetings with renters for their input on proposed CAP strategies

**ActOn Climate Festival**
- Celebration of Acton’s first Climate Action Plan!

**DEIC Presentation**
- Meeting with Diversity, Equity & Inclusion Commission to present on Phase II

**Phase II Comment Period**
- For residents to review the draft Climate Action Plan and offer written feedback

**Publish & Translate**
- Publish a final draft, seek written input, and circulate.

**Implement!**
- Stay engaged and help Acton implement this Plan.
VISIONING WORKSHOP

The first public engagement event for the CAP saw over 60 participants in the online Zoom Workshop in June 2021. Participants were asked to write a postcard from their future self to gather input on their vision for Acton. The specific prompt was:

"The year is 2040 and you are writing a postcard from your future self to your current self in 2021. What happened in 2030? And what does Acton look like now in 2040?"

"Our generation of young people mobilized to make widespread change in Acton and beyond. Quickly others followed suit and we now live in a world where climate change is not at the forefront of our minds. The principles of JEAQ (justice, equity, and anti-oppression), were prioritized in our change-making, causing the climate movement to truly be representative of all people. Acton has reached net-zero carbon emissions by electrifying buildings, making a greener grid, and revolutionizing transportation. Everyone now has the option to travel on convenient and affordable public transit. And this only happened because organizers, policymakers, and everyday people came together to fight for the livable future we deserve."

"2030 was a good year. The community has finally reconciled many competing interests and has been able to develop a shared vision for the future. By 2040 that shared vision has begun to flourish where housing inequity has been addressed, renewable energy is abundant, and a sustainable balance of land use has been achieved. With the community living within its financial and natural resource means, the population is happy, healthy, and more productive."

"Well I’d like to begin with the fact that Acton has become a town to be proud of. The efforts of the Climate Action Plan task force have not gone to waste! In 2030 many of the goals of the CAP were fulfilled and we now have greener homes because of eco-friendly building codes, and most homes are electrified. The town has also built more sidewalks and bike paths along the roads making foot traffic safer! There is also a lot more public transport and most of them rely on renewable energy sources. The town has also built more parks similar to Nara Park which allows for more interaction between residents in Acton!"
On June 11, 2022, more than 150 residents gathered at Nara Park to celebrate Acton’s climate action progress and accomplishments to date. They enjoyed local food, music, and entertainment (e.g., face painting, lawn games, scavenger hunt, test driving an e-bike, etc.) and connected with community resources and organizations including Mothers Out Front, ABHS student-led Resource Force, Acton Conservation Trust, Boston Area Gleaners, and Energize Acton.

*Top left and right photos by Van Du; bottom left photo by Karen Root Watkins; bottom right by Srini Rao*
A total of 386 residents completed the community-wide survey available from June 10 to September 20, 2021. Residents were asked to identify priorities from a list of actions. Over 200 respondents listed the following actions as high priority: Make buildings more energy efficient; Coordinate with utilities to repair gas leaks; Incorporate green infrastructure in new development projects; and Advocate at the state and national level for more programs, policies, and funding that move the Commonwealth to net zero faster.

Other survey results included:

**Increasing global temperatures**

69.8%

**Rising cost of living**

41.9%

**Impacts to environmental and natural resources**

78.5%

**More severe weather events and impacts**

75.1%

**Rise in public health issues**

61.0%

**Nothing, climate change is not important to me**

7.2%

**Other, please describe:**

14.1%

climate migration; rising coastlines; political conflicts over scarce resources; impacts on future generations; public infrastructure; loss of wildlife/biodiversity; increased social inequity
ACTON-BOXBOROUGH REGIONAL HIGH SCHOOL RESOURCE FORCE STUDENT TEAM

The Resource Force circulated a survey, which received 242 responses, to solicit feedback on four themes of the CAP: Mobility, Buildings, Energy, and Nature-based Solutions. The survey results showed that 88.5% of students believe we need to act on climate change very quickly; 105 of the students listed negative consequences in the future as to why climate action matters to them, and 69 students listed the reason of wanting to protect the planet and the environment. During the survey, respondents were asked to select their top three priorities for each CAP sector, and the results are shown below:

### Top Priorities for Mobility
1. Improve town walkability - 152 (62.8%)
2. Improve biking infrastructure - 143 (59.1%)
3. Electrify town-owned vehicles - 117 (48.3%)
4. Encourage electric vehicles - 105 (43.4%)

### Top Priorities for Buildings
1. Electrify all School and Town Buildings - 162 (66.9%)
2. Clean electric heating, air conditioning, and water heating in Acton homes - 120 (49.6%)
3. Affordable housing using renewable energy - 109 (45%)
4. Update building codes so new buildings must be built with clean energy - 104 (43%)

### Top Priorities for Nature-based Solutions
1. Reforestation - 170 (70.2%)
2. Protect drinking water - 91 (37.6%)
3. Encourage composting - 90 (37.2%)
4. Protect and improve local rivers - 90 (32.7%)

### Top Priorities for Energy
1. More wind/solar energy to power the town - 175 (72.3%)
2. Make renewable energy affordable for consumers - 146 (60.3%)
3. Incentives for home solar panels - 97 (40.1%)
4. Repair gas pipe leaks - 94 (38.8%)

Students provide input on the CAP at the workshop led by Resource Force.
In 2019, the Green Advisory Board (GAB) led the development of a greenhouse gas inventory, which includes 2017 data of community-wide emissions as well as municipal emissions. The largest source of emissions came from on-road transportation, followed by residential and commercial energy consumption.

In 2017, the Town emitted 241,390 metric tons of carbon dioxide equivalent (MTCO₂e), which is equivalent to approximately 30,400 home’s energy use for one year.

(Source: EPA Greenhouse Gas Equivalencies Calculator)
MUNICIPAL EMISSIONS IN ACTON

The Town of Acton municipal properties, Acton-Boxborough Regional School District, and Acton Water District accounted for 10,361 MTCO$_2$e of these emissions. The largest source of municipal emissions came from municipal facilities and infrastructure, followed by off-road vehicles/equipment and municipal fleet.

**Municipal emissions by sector**

- **Facilities and Infrastructure**: 39%
- **Wastewater Treatment Facility**: 6%
- **Off-road Vehicles / Equipment**: 8%
- **On-road Vehicle Fleet**: 16%
- **Employee Commute**: 3%
- **Water Treatment & Delivery**: 25%
- **Solid Waste**: 3%
- **Streetlights and Traffic Signals**: 0%
A tool developed by the USDA Forest Service and partners called i-Tree allows for cities and towns to estimate the canopy cover and carbon sequestered annually from the trees within its boundary. Based on a statistical estimate using a randomly selected points method, Acton has a 61% tree/shrub canopy cover, which translates to 9,050 metric tons of carbon that is sequestered annually.
Together with input from Town staff, MAPC, and the community at three public workshops, Eastern Research Group (ERG) developed a methodology and grouped the blueprint actions into 20 overarching greenhouse gas reduction strategies. ERG identified strategies with greenhouse gas reduction potential and supporting strategies. Supporting strategies are key steps to enacting mitigation policies, but don’t have greenhouse gas reduction potential on their own. ERG estimated the costs and benefits of each key strategy by determining the baseline (e.g., what happens without the strategy), and then evaluated the lifetime costs and benefits of the strategy. For more detail on methods please refer to the Appendix.
Based on Acton’s 2017 GHG Inventory and a forecast of future population in Acton developed by MAPC, the following graph illustrates the forecast of future emissions by category through 2030. This is the “business-as-usual” scenario, assuming that no actions are taken to mitigate GHG emissions from 2017 levels and assuming that per capita emissions do not change as the population grows.
GHG ANALYSIS

Using the business-as-usual forecast of emissions as a baseline (the dark blue line at the top), this graph illustrates the modeled GHG reduction potential of the strategies outlined in this document. Each colored “wedge” represents the emission reduction of a specific strategy through 2030. The dashed line represents the linear target for emissions reduction beginning in 2020 when Acton declared a climate emergency to the goals of carbon neutrality in 2030. The large red area represents the remaining emissions after mitigation.
REMAINING GHG EMISSIONS

This chart provides a breakdown of the remaining emissions in 2030 (after GHG mitigation) to illustrate the sources of those remaining emissions. As modeled, over 70 percent of remaining emissions will come from the transportation sector while one-quarter will come from buildings and housing (including residential, commercial, and industrial sources).

2030 GHG Emissions Remaining After Mitigation by Category
By taking actions to meet the assumptions in the analysis, the Town of Acton will still have about 98,200 MTCO$_2$e remaining in 2030. Of these emissions, 73% are within the transportation sector and 23% are within buildings.

Within the transportation sector, some of these emissions can be reduced at a cost savings by increased purchases of electric vehicles (EVs). Residents who are ready to purchase a new EV between now and 2030 will likely be able to do so at a cost savings over the life of the vehicle. The battery technology in EVs should continue to make the prices come down as they are manufactured on larger scales. The purchase of an EV, however, will not be as cost-effective for someone who is not ready to sell their vehicle as the annual operational costs of keeping their conventional used vehicle may be cheaper than purchasing a new EV. This is where the expansion of charging infrastructure and increased incentives for EV adoption may play a critical role in reducing Acton’s emission inventory.

Within the buildings sector, many of the remaining buildings may be able to adopt air source heat pumps or ground source heat pumps at a very low cost per MTCO$_2$e reduced. Those who can transition from oil or more expensive sources or have less complicated installation costs will typically be amongst the early adopters. The remaining households in 2030 that have not electrified will typically be the more complex cases (e.g., much higher conversion costs because of feasibility and installation complications). Since building electrification is a key pillar of achieving net zero by 2030, it is essential to make immediate progress on feasible retrofits while also tackling the more complex sources of building emissions.

Given that most of the easier, more cost-effective conversions for both building and vehicle electrification will have occurred already to get to this point of emissions reduction, the average cost to reduce remaining emissions could be on the higher side, in the range of $100 to $300 per MTCO$_2$e for both buildings and vehicles (on the higher end for buildings and lower end for vehicles). This implies that overall, it will cost about $10 to $30 million to get to near to zero absolute emissions for the remaining 98,200 MTCO$_2$e. We are publishing this Climate Action Plan in 2022, and it is important to be clear-eyed about the challenges and up-front costs of climate action. It is possible that the cost of reducing the most challenging sources of emissions will decrease over time, especially in comparison with the costs that climate change will impose on our communities. With this in mind, it is vital that we take action on accessible emission reductions while preparing for the necessary steps that net-zero will require.
ACTON’S CLIMATE GOALS

BUILDINGS & HOUSING
Commercial and industrial buildings and homes in Acton are built and retrofitted to be energy efficient, net zero carbon, healthy, affordable, and resilient.

Acton actively influences policies at the state and federal level to support rapid and affordable building decarbonization.

ENERGY
Acton’s electricity is fossil-fuel free, renewable, reliable, and affordable.

Acton’s residents, businesses, and municipal government use locally owned renewable energy from New England whenever possible.

MOBILITY
All community members have access to safe and affordable transportation choices that will result in zero carbon emission, reduce Vehicle Miles Traveled (VMT), and lead to healthier and stronger communities.

Acton neighborhoods, commercial, and community centers are interconnected through infrastructure improvements and redesign that allows reliable and multiple modes of transportation.

Acton actively influences programs and policies that support zero emission, affordable, accessible, and reliable regional transportation systems

NATURE-BASED SOLUTIONS
Acton’s natural resources are protected, managed, connected, and restored to increase carbon sequestration, equity, resilience, and biodiversity.

Local land use policy encourages affordable, diverse, transit-oriented and net zero housing while also enhancing nature-based solutions.

SOLID WASTE
Acton increases its waste diversion rate through town-wide programs, bylaws, and policies to streamline, prevent, reduce, reuse, compost, and recycle waste.

RESILIENCE
Acton prepares for climate impacts, including drought, flooding, more frequent and/or severe storms, extreme heat, biodiversity loss, and local supply disruptions.
# SUMMARY OF CAP STRATEGIES & SUPPORTING ACTIONS

## BUILDINGS & HOUSING

### STRATEGY B1: Support residents and businesses to improve the energy efficiency of their homes and buildings and transition to clean heating and cooling

- **Action 1:** Work with Mass Save to improve outreach about financial and technical assistance available for landlords, condo associations, and renters to improve their homes' energy efficiency and switch to efficient electrified heating and cooling systems.
- **Action 2:** Expand outreach about the Property Assessed Clean Energy (PACE) program to increase program participation.
- **Action 3:** Pilot and implement geothermal micro-districts that can make it more affordable to transition to electric heating and cooling systems at scale.
- **Action 4:** Pursue an aggregated triple electrification model in Acton to decarbonize buildings while improving energy efficiency and adding onsite renewables.

### STRATEGY B2: Align Acton’s zoning and planning with clean energy and sustainability standards, while also ensuring diverse town housing options are available for people of all means, prioritizing access, affordability, and public health

- **Action 1:** Pair zoning with sustainability, allowing for broader and more multifamily housing choices and flexible approaches to achieve housing affordability and accessibility.
- **Action 2:** Explore opportunities for affordable housing and mixed-use development within 1/2 mile of public transit and near existing business centers and village districts.
- **Action 3:** Exclude fossil fuel use in new construction projects and major retrofits across Acton, with exceptions as appropriate.

### STRATEGY B3: Lead by example to improve the energy efficiency of the town's municipal buildings and schools and transition that building stock to net-zero emissions

- **Action 1:** Adopt a net-zero carbon standard for new municipal buildings and major retrofits and town-funded affordable housing.
- **Action 2:** Complete retro-commissioning and energy efficiency improvements for all buildings owned by the Town of Acton and Acton-Boxborough Regional School District.

### STRATEGY B4: Advocate for policy changes and resources at the state and federal levels that will enable the rapid and affordable transition to carbon-free buildings and infrastructure in Acton

- **Action 1:** Advocate for more incentives for electric heating and cooling from Mass Save.
- **Action 2:** Advocate for financial assistance and low-cost financing options from the state and federal government to support triple building electrification.
- **Action 3:** Advocate for a net zero building code.
- **Action 4:** Expand program to track gas leaks and advocate to the utility for fixes for the most dangerous or major gas leaks.
<table>
<thead>
<tr>
<th>ENERGY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRATEGY E1: Provide residents with 100% carbon-free electricity by 2030</strong></td>
</tr>
<tr>
<td>• <strong>Action 1:</strong> Make 100% renewable energy default option in Acton Power Choice and include a subsidy or other options to ensure affordability for lower-income households.</td>
</tr>
<tr>
<td><strong>STRATEGY E2: Increase local clean energy access and adoption for all Acton residents</strong></td>
</tr>
<tr>
<td>• <strong>Action 1:</strong> Partner with solar developers to create community solar program options for Acton residents and provide a participation pathway for low-income residents.</td>
</tr>
<tr>
<td>• <strong>Action 2:</strong> Run a Solarize+ campaign to help residents procure solar, storage, air source heat pumps, electric vehicle charging stations, and other clean energy technologies.</td>
</tr>
<tr>
<td>• <strong>Action 3:</strong> Create an Energy Advocate position within the sustainability office or develop a program to provide energy advocacy support services for residents.</td>
</tr>
<tr>
<td>• <strong>Action 4:</strong> Create a pilot program for solar energy on multifamily buildings that benefits residents.</td>
</tr>
<tr>
<td><strong>STRATEGY E3: Power municipal buildings with 100% renewable electricity by 2030</strong></td>
</tr>
<tr>
<td>• <strong>Action 1:</strong> Maximize the installation of renewable energy and energy storage systems wherever feasible on all municipal buildings and Acton-Boxborough Regional School District buildings.</td>
</tr>
<tr>
<td>• <strong>Action 2:</strong> Move the town’s electricity supply to 100% renewable energy</td>
</tr>
<tr>
<td><strong>STRATEGY E4: Advocate for policy changes and infrastructure investments that more rapidly move the state to a 100% clean energy supply</strong></td>
</tr>
<tr>
<td>• <strong>Action 1:</strong> Advocate for greater clean energy investments at the state level.</td>
</tr>
<tr>
<td>• <strong>Action 2:</strong> Support the development of state or federal incentives to promote investments in renewable energy</td>
</tr>
<tr>
<td>• <strong>Action 3:</strong> Build stronger utility relationships and monitor and advocate for policy changes needed to the Public Utilities Commission (PUC) discussions.</td>
</tr>
</tbody>
</table>
### MOBILITY

#### STRATEGY M1: Increase the adoption of electric vehicles
- **Action 1:** Promote electric vehicle adoption.
- **Action 2:** Create an incentive program to help provide increased access to EVs for low-income residents.
- **Action 3:** Implement an income-tiered EV car-sharing program in partnership with community organizations and affordable housing developments.

#### STRATEGY M2: Lead by example: electrify school buses and town vehicles
- **Action 1:** Adopt electric-first vehicle policy for the Town’s municipal fleet, meaning that electric vehicles, including school buses and micro-transit services like the Minuteman Van and the CAT shall be prioritized when the Town purchases or leases motor vehicles for its municipal operations.
- **Action 2:** Expand the service region of the Cross-Acton Transit (CAT) by incorporating new fixed routes or providing on-demand services.

#### STRATEGY M3: Expand public and private opportunities for electric vehicle (EV) charging infrastructure
- **Action 1:** Fill EV charger gaps near major thruways and at key locations that have frequent visitors, including trailheads, garages, parking lots, and other facilities.
- **Action 2:** Adopt EV-ready and/or installation requirements for new residential and commercial buildings or major rehab.
- **Action 3:** Explore policies and incentives to enable multi-family housing residents to expand electric vehicle charging options.

#### STRATEGY M4: Expand zero-emission mobility options
- **Action 1:** Develop and implement a bicycle and pedestrian plan.
- **Action 2:** Continue implementing, supporting, and evaluating the Complete Streets Policy.
- **Action 3:** Work with local businesses to support public transportation needs and co-fund innovative transportation initiatives (bikeshare programs, shuttle services, electric car share programs, etc.).

#### STRATEGY M5: Advocate for the electrification of personal and shared transportation
- **Action 1:** Advocate to electrify the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail and other public transit. Currently, the MBTA operates Commuter Rail entirely with diesel-locomotive hauled trains.
- **Action 2:** Participate in regional discussions on transportation and increase coordination with neighboring towns; support the linkage of north and south commuter rail lines.
- **Action 3:** Advocate for regulatory changes in utility electric rate structures that support time of use rates for electric vehicle charging stations and demand response incentives for vehicle to grid integration.
- **Action 4:** Encourage greater state and federal incentives to support electric vehicles and charging infrastructure adoption, especially for low- and moderate-income households.

---

**SUMMARY OF CAP STRATEGIES & SUPPORTING ACTIONS (CONT.)**
## NATURE-BASED SOLUTIONS

### STRATEGY N1: Increase protection of existing open space and green spaces throughout town in line with the open space and recreation plan

- **Action 1:** Prioritize increasing equitable access to green space and prioritize the protection of green spaces near water table recharging areas.
- **Action 2:** Develop a tree planting plan.
- **Action 3:** Explore the opportunity to establish a municipal nursery.
- **Action 4:** Ensure development is paired with nature-based solutions.

### STRATEGY N2: Support sustainable agriculture

- **Action 1:** Provide resources to support Community Supported Agriculture (CSA) memberships for low-income residents.
- **Action 2:** Explore opportunities to encourage agrophotovoltaics (APV).
- **Action 3:** Partner with organizations supporting sustainable agriculture.

### STRATEGY N3: Electrify municipal landscaping equipment and support residents to transition to electric landscaping equipment

- **Action 1:** Transition to electric landscaping equipment.

### STRATEGY N4: Advocate for policies that support nature-based solutions implementation in Acton

- **Action 1:** Advocate for sustainable land management and landscaping practices that protect local natural resources.
- **Action 2:** Explore programs that support a no net loss policy for trees in the town.
- **Action 3:** Advocate for the restoration and protection of wetlands by incorporating future climate change projections and their potential impacts into the Massachusetts Wetlands Protection Act and regulations as well as Acton's local wetland bylaws.
### SUMMARY OF CAP STRATEGIES & SUPPORTING ACTIONS (CONT.)

#### SOLID WASTE RESOURCES

**STRATEGY SW1: Improve and expand services to reduce waste and increase the waste diversion rate**

- **Action 1:** Promote programs for farms and restaurants to donate extra food to food pantries or shelters.
- **Action 2:** Promote a culture of reuse by promoting the community-wide swap shop and local businesses that collect used items.
- **Action 3:** Conduct a waste audit in Acton to explore private hauling options to reduce waste, increase composting, improve efficiency and reduce emissions.
- **Action 4:** Ensure recycling options are offered for residents in multi-unit buildings as mandated by the state, and at no cost to low-income residents.
- **Action 5:** Reduce emissions from Water & Wastewater treatment (cluster, septic, and sewer).

**STRATEGY SW2: Advocate for zero waste initiatives**

- **Action 1:** Advocate for initiatives that increase waste diversion, including state and federal Extended Producer Responsibility programs.

#### RESILIENCE

**STRATEGY R1: Pair nature-based solutions with resilience**

- **Action 1:** Explore opportunities to promote and/or pilot projects with natural carbon sinks and sequestration solutions.
- **Action 2:** Explore policies and programs to reduce impervious surfaces in line with the Municipal Separate Storm Sewer System (MS4) permit.
- **Action 3:** Support sustainable and resilient water management.
- **Action 4:** Provide emergency funds to low-income residents to manage climate change related disasters.
- **Action 5:** Explore opportunities to promote green roof installations.

**STRATEGY R2: Prepare the town for the impacts of climate change**

- **Action 1:** Ensure town-wide planning efforts incorporate the latest available climate change data and include resilience-focused strategies.
- **Action 2:** Review and update bylaws and procedures to incorporate climate change and sustainability considerations.

#### EDUCATION AND OUTREACH

**STRATEGY EO1: Provide resources and information to support residents and businesses that want to reduce their greenhouse gas emissions**

- **Action 1:** Provide resources and information for residents, organizations, and businesses that want to reduce their greenhouse gas (GHG) emissions (e.g., information about solar, electric vehicles, heat pumps, and other clean energy technologies).
- **Action 2:** Foster careers in the sustainable and environmental sector.
- **Action 3:** Create an educational program for contractors and real estate agents active in Acton to provide updates on clean energy technologies.
BUILDINGS AND HOUSING

Insulation of the Memorial Library attic. Credit: John Mangiaratti
STRATEGY B1: Support residents and businesses to improve the energy efficiency of their homes and buildings and transition to clean heating and cooling

Actions to achieve the strategy:

1. Work with Mass Save to improve outreach about financial and technical assistance available for landlords, condo associations, and renters to improve their homes’ energy efficiency and switch to efficient electrified heating and cooling systems.

2. Expand outreach about the Property Assessed Clean Energy (PACE) program to increase program participation.

3. Pilot and implement geothermal micro-districts that can make it more affordable to transition to electric heating and cooling systems at scale.

4. Pursue an aggregated triple electrification model in Acton to decarbonize buildings while improving energy efficiency and adding onsite renewables.
COST-BENEFIT ANALYSIS

Scope Analyzed: Retrofit homes from fossil fuel to electric heating and cooling; insulate and weatherize homes; install smart thermostats.

Assumptions

19,100 MTCO₂e Reduction Potential

- The HVAC conversion analysis is based on quotes provided to municipal light plant communities in Massachusetts for whole building electrification from oil and gas to Air-Source Heat Pump (ASHP). It includes the purchase of the equipment and the conversion costs associated with shifting the system to be fully electric.
- Assumes the current $10,000 Mass Save rebate for whole-home electrification is incorporated in the final price. Participants will be eligible for the Mass Save Rebate for the next 3 years.
- Applies to Acton’s existing building stock (i.e., it does not include future construction which is addressed in Strategy 2).
- Assumes the Town as a whole can achieve a 49% reduction in total energy use through a combination of actions, including whole building electrification, insulation, and weatherization, and via the installation of thermostats, which aligns with the state’s Clean Energy and Climate Plan (CECP)’s goal for both residential and commercial heating by 2030.

Social Cost Of Carbon:
Approximately $0.5 - $1.7 million per year in 2030

Health Benefits:
Approximately $1.2 - $3.2 million per year in 2030, assuming 100% adoption

GHG Reduction Potential

12%

Annual savings per home*:
For 15-year ASHP Lifespan
- switching from gas: $660 savings
- switching from oil: $1,860 savings

*Savings assume heating systems are ready for conversion

Air-Sealing and Insulation Savings:
- $72 annual savings for ASHP homes
- $182 annual savings for natural gas homes
- $392 annual savings for oil homes

Smart Thermostat Savings:
- $36 annual savings for ASHP homes
- $91 annual savings for natural gas homes
- $196 annual savings for oil homes
STRATEGY B1: Support residents and businesses to improve the energy efficiency of their homes and buildings and transition to clean heating and cooling

ACTIONS

1. Work with Mass Save to improve outreach about financial and technical assistance available for landlords, condo associations, and renters to improve their homes' energy efficiency and switch to efficient electrified heating and cooling systems.

Mass Save is a ratepayer funded program that provides incentives and information to improve building energy efficiency. Mass Save programs will continue to evolve and focus more on reducing carbon emissions in existing buildings in alignment with the State’s climate goals. This effort will include coordination with Mass Save and with other actions in this plan to increase the benefits to residents of multi-family buildings in Acton.

**Action Type:** Training/Education/Outreach

**Co-benefits**

- Improves local resilience
- Centers equity and environmental justice
- Improves public health

**Equity Considerations**

- Tailor messaging and outreach to connect with low- and moderate-income renters and their landlords. Work with Mass Save and the Select Board to identify and implement measures to protect renters from undue increases in costs if improvements are made that lower energy bills and increase the desirability of a unit.

**Partners for Implementation**

- Acton Housing Authority, Committee for Housing and Climate Justice for Acton, landlords, condo associations, Mass Save, All In Energy, Energize Acton

**Measures of Success**

- Increase in the percentage of rental properties, condos, and low- and moderate-income and multi-family buildings served by Mass Save and aggregated estimates of energy, GHG emissions, and costs savings, if available. No increase in displacement of renters as a result of improvements to energy efficiency.

**Take Action!**

You can take action now to use Mass Save to improve the energy efficiency of your home or business, whether you own or rent. Acton residents and landlords can get a free energy audit and learn about available incentive programs. If you live in a single-family home or have a business, you can reach out to Mass Save and if you live in or own a building with 1-4 units, you can contact All in Energy for a free consultation today.

To explore clean heating technologies, the Town of Acton has partnered with Abode to help residents transition to clean heating technologies. Abode can provide a no-cost consultation to residents about your options and available incentives.
2. Expand outreach about the Property Assessed Clean Energy (PACE) program to increase program participation.

The PACE program allows a property owner to take a transferrable lien on their property and undertake energy efficiency and renewable energy upgrades, which saves money on energy bills, with a longer payback period of up to 20 years. Eligible buildings include commercial, industrial, multifamily properties with five or more units, and buildings owned by nonprofits. This effort will include researching mechanisms to ensure that these programs do not negatively impact the cost of living for renters.

**Action Type:** Training/Education/Outreach

**Co-benefits**

- Supports "green" workforce development
- Centers equity and environmental justice

**Equity Considerations**

- Explore and build into the program design meaningful opportunities for women- and minority-owned businesses to perform this work. Similar to Action 1, explore and implement mechanisms to protect renters from undue increase in costs if improvements are made that lower energy bills and increase the desirability of a unit.

**Partners for Implementation**

- Committee for Housing and Climate Justice for Acton, landlords, condo associations, business owners

**Measures of Success**

- Increase in the percentage of eligible properties participating in PACE and aggregated estimates of energy and cost savings, if data is available.
- Increase in the percentage of low- and moderate-income rental and business properties served by PACE. No increase in displacement of renters as a result of improvements to energy efficiency.
**ACTIONS**

3. **Pilot and implement geothermal micro-districts that can make it more affordable to transition to electric heating and cooling systems at scale.**

A geothermal micro-district connects adjacent buildings using a shared ground source heat pump system to provide fossil fuel-free heating and cooling.

**Action Type:** Feasibility assessment / Pilot program  
**Co-benefits**
- Produces local energy
- Improves local resilience
- Scalable or transferable to other neighborhoods
- Improves public health
- Supports “green” workforce development

**Partners for Implementation**
- HEET, National Grid, Eversource, MassCEC, Energize Acton, South Middlesex Opportunity Council, Inc.

**Equity Considerations**
- Prioritize pilot project locations in income-diverse areas of Acton that meet the geographic density requirements needed. Ensure inclusive and broad-reaching engagement with potential neighborhoods and residents that would participate.

**Measures of Success**
- Pilot program planned and executed, and evaluated if deemed feasible

---

*HEET’s GeoGrid*

**HEET geo-grid uses networked ground source heat pumps. National Grid recently received the green light to build four GeoGrid demonstration projects in Massachusetts. Graphic and concept by heet.org.*
### ACTIONS

**4. Pursue an aggregated triple electrification model in Acton to decarbonize buildings while improving energy efficiency and adding onsite renewables.**

An aggregated electrification model uses a combination of private and public funding sources to raise capital and offer low-interest loan and lease programs to help groups of residents improve the energy performance of their homes. In this model, Acton will explore hiring a third-party vendor, or retrofit aggregation contractor or partner, to provide a financing strategy and retrofit services for groups of buildings and landlords that include options such as energy efficiency improvements, electrification of home heating and cooling systems, onsite renewables and storage, and smart technologies. The program will include mechanisms for robust outreach to homeowners, landlords, and renters, and offer a zero-cost or very low-cost financial product for low- and moderate-income residents, and, if needed, longer-term financing to supplement Mass Save HEAT loans. To ensure rapid implementation and economies of scale, the Town should consider setting ambitious target goals of homes to retrofit in the first phase of the program (e.g., 500 homes and 100 rental units in year 1, 1,000 homes and 250 rental units in year 2, etc.). This action should run in alignment with Strategy 4, Action 2, Solarize+, and the Energy Advocate program to ensure there are cash-flow positive and income-inclusive financing options to support these conversions. It is anticipated that the Retrofit Aggregation Contractor would offer financing options that utilize existing programs, like the HEAT Loan and Mass Save incentives, and longer-term and affordable financing for residents beyond these offers to make large-scale retrofits feasible and affordable.

<table>
<thead>
<tr>
<th>Action Type:</th>
<th>Feasibility assessment / Pilot program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td></td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td></td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
<tr>
<td>• Supports &quot;green&quot; workforce development</td>
<td></td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
<td></td>
</tr>
<tr>
<td><strong>Partners for Implementation</strong></td>
<td>Retrofit Aggregation Contractor, Eversource, Mass Save, MA DOER, MassCEC, Communities in the MAGIC subregion/MAPC region</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Equity Considerations</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Engage a diverse range of residents in program design and ensure that the program offers zero- or low-cost financing that allows low- and moderate-income homeowners to participate. Work with landlords and renters to encourage program participation and to design anti-displacement mechanisms so costs are not passed on to renters.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Measures of Success</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• GHG reductions in our buildings</td>
<td></td>
</tr>
<tr>
<td>• Pilot program planned, executed and evaluated to offer decarbonization for all existing buildings.</td>
<td></td>
</tr>
<tr>
<td>• No increase in displacement of renters as a result of improvements to energy efficiency.</td>
<td></td>
</tr>
</tbody>
</table>

**Spotlight Corner**

Ithaca, NY developed a Building Energy Efficiency Retrofit and Thermal Load Electrification Program. The program will use a combination of incentives from the State of New York, combined with private financing, to offer affordable financing and services for residents and businesses to perform deep energy retrofits, combining energy efficiency, electrification, and onsite renewables. - http://www.cityofithaca.org/DocumentCenter/View/13214/City-of-Ithaca-Retrofitting-Electrification-RFP
STRATEGY B2: Align Acton’s zoning and planning with clean energy and sustainability standards, while also ensuring diverse town housing options are available for people of all means, prioritizing access, affordability, and public health.

Actions to achieve the strategy:

1. Pair zoning with sustainability, allowing for broader and more multifamily housing choices and flexible approaches to achieve housing affordability and accessibility.

2. Explore opportunities for affordable housing and mixed-use development within 1/2 mile of public transit and near existing business centers and village districts.

3. Exclude fossil fuel use in new construction projects and major retrofits across Acton, with exceptions as appropriate.
COST-BENEFIT ANALYSIS

Scope Analyzed: All new residential buildings built with LEED standard and electric heating and cooling air source heat pumps (ASHP)

Cost-effectiveness: Approximately $300-$400 savings per MTCO₂e reduced.

Social Cost of Carbon: $55k - $168k per year

Health Benefits: $40k - $70k per year in 2030

Net Cost:
Annual cost savings of $100,000 to $450,000 dependent on ASHP lifespan across approximately 600 new construction houses (approximately $100 to $700 annually per house).

Savings come jointly from ASHP adoption and LEED certification. Assumes small to no incremental cost to embed energy efficiency into construction planning process.

Assumptions

4,300 MTCO₂e GHG Reduction Potential

- 50% reduction in electricity usage in new buildings compared to BAU
- Zero fossil fuel usage in new buildings
- Applies to all future residential construction after 2023 (approximately 600 between now and 2030)
STRATEGY B2: Align Acton’s zoning and planning with clean energy and sustainability standards

**ACTIONS**

1. **Pair zoning with sustainability, allowing for broader and more multifamily housing choices and flexible approaches to achieve housing affordability and accessibility.**

   This includes allowing smaller-scale units, Accessory Dwelling Units (ADUs) of various sizes, and mixed-used developments such as apartments over commercial businesses. Ensure zoning aligns with land conservation goals by working closely with Natural Resources Department and stakeholders in developing these changes. Explore ways to use zoning to encourage housing development to be as sustainable as possible. This action also includes protecting existing multifamily housing choices.

### Action Type: Feasibility Assessment/ Pilot Program

**Co-benefits**
- Improves local resilience
- Centers equity and environmental justice
- Improves public health

**Equity Considerations**
- Ensure inclusive and broad-reaching engagement with potential neighborhoods and residents that would participate.

### Partners for Implementation

- Acton Housing Authority, Sustainability Office, Committee for Action on Housing and Climate Change, Landlords Condo associations, Mass Save, All In Energy, Energize Acton, Housing for All

**Measures of Success**
- Increased development of ADUs.
- Increase in the number of multifamily housing options.

2. **Explore opportunities for affordable housing and mixed-use development within 1/2 mile of public transit and near existing business centers and village districts.**

   In addition to alignment with the Planning Department, Town’s Housing Production Plan, and new state policies, ensure sustainable land use practices, access to green spaces, and improved infrastructure for bikes and pedestrians are part of these developments. Prioritize rehabilitation or reuse of existing buildings, where feasible.

### Action Type: Feasibility Assessment/ Pilot Program

**Co-benefits**
- Centers equity and environmental justice
- Scalable or transferable to other neighborhoods
- Improves public health

**Equity Considerations**
- Ensure inclusive and broad-reaching engagement with potential neighborhoods and residents that would participate.

### Partners for Implementation

- Acton Housing Authority, Sustainability Office, Committee for Action on Housing and Climate Change, Landlords Condo associations, Mass Save, All In Energy, Energize Acton, Housing for All

**Measures of Success**
- Increased affordable housing units within ½ mile of public transit, business centers, and village districts.
ACTION

3. Exclude fossil fuel use in new construction projects and major retrofits across Acton, with exceptions as appropriate.

Acton will advocate for and pursue approval from the state legislature of its home rule petition to require that all new building construction or significant renovation projects qualify as fossil-fuel free or to obtain a waiver (emergency generators and central hot water for large buildings would be exempt).

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
</tr>
<tr>
<td>• Preserve green and open spaces</td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
</tr>
<tr>
<td>• Improves public health</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure inclusive and broad-reaching engagement. Work with developers, landlords and renters to encourage program participation and to design anti-displacement mechanisms so costs are not passed on to renters.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Acton Housing Authority, Sustainability Office, Committee for Action on Housing and Climate Change, Landlords Condo associations, Mass Save, All In Energy, Energize Acton, Housing for All</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• All new construction projects and major retrofits in Acton are fossil-fuel free.</td>
</tr>
</tbody>
</table>
STRATEGY B3: Lead by example to improve the energy efficiency of the Town’s municipal buildings and schools and transition building stock to net zero emissions

Actions to achieve the strategy:

1. Adopt a net-zero carbon standard for new municipal buildings and major retrofits and town-funded affordable housing.

2. Complete retro-commissioning and energy efficiency improvements for all buildings owned by the Town of Acton and Acton-Boxborough Regional School District.
COST-BENEFIT ANALYSIS

**Scope Analyzed:** Complete electrification and decarbonization of municipal and school buildings

**Assumption:**
4,042 MTCO$_2$e GHG reduction potential
- All municipal buildings are electrified by 2030.
- Utilizing Electrification Roadmap, extrapolated analysis to all buildings.

**GHG Reduction Potential**
- 1.7%

**Total Cost:**
- Capital and conversion costs: $12 million for all town buildings; $43 million for all schools
- Total 30-Yr incremental operational savings: $1.1 million in savings (all town buildings over 30 years); $5.6 million in costs (all schools over 30 years)

**Social Cost of Carbon:**
- $140k - $430k/year across all municipal buildings and schools

**Health Benefits:**
- $37k - $84k annually across all municipal buildings and schools

**Cost-effectiveness:**
- $380-$850 cost range per MTCO$_2$e based on capital costs, operational cost savings over 30 years of heating conversion, and emissions reduction over 30 years.

To read the Electrification Roadmap click [here](#).
1. **Adopt a net zero carbon standard for new municipal buildings and major retrofits and town-funded affordable housing.**

The Town will research and set a policy and timeframe for all municipal buildings and town-funded affordable housing to be net zero emissions. This will include establishing trigger points, such as retrofits at a certain threshold and new construction, that require these buildings to transition to net zero emissions. The Electrification Roadmap developed by both the Town and the Acton-Boxborough Regional School District provides a starting framework towards this policy. Explore strategies and new innovations to achieve a complete zero standard for a new building or major retrofits.

**Action Type:** Policy /Regulations/ Standards  
**Co-benefits**
- Scalable or transferable to other neighborhoods
- Improves public health
- Centers equity and environmental justice
- Supports “green” workforce developments

**Equity Considerations**
- Ensure inclusive and broad-reaching engagement. Work with developers, landlords and renters to encourage program participation and to design anti-displacement mechanisms so costs are not passed on to renters.

**Partners for Implementation**
- Acton Housing Authority, Sustainability Office, Committee for Action on Housing and Climate Change, Landlords Condo associations, Mass Save, All In Energy, Energize Acton

**Measures of Success**
- All new construction projects and major retrofits in Acton are fossil-fuel free.

2. **Complete retro-commissioning and energy efficiency improvements for all buildings owned by the Town of Acton and Acton-Boxborough Regional School District.**

As a near-term step, the Town will assess all of its municipal and school building stock, providing retro-commissioning services to ensure building equipment is operating at peak efficiency and pursue all cost-effective energy upgrades.

**Action Type:** Capital Improvements  
**Co-benefits**
- Scalable or transferable to other neighborhoods
- Improves local resilience

**Equity Considerations**
- Explore and build into the program design meaningful opportunities for women- and minority-owned businesses to perform this work.

**Partners for Implementation**
- Acton-Boxborough Regional School District, DOER, Eversource, National Grid

**Measures of Success**
- All municipal and school facilities are retrofitted.
STRATEGY B4: Advocate for policy changes and resources at the state and federal levels that will enable the rapid and affordable transition to carbon-free buildings and infrastructure in Acton

Actions to achieve the strategy:

1. Advocate for more incentives for electric heating and cooling from Mass Save.
2. Advocate for financial assistance and low-cost financing options from the state and federal government to support triple building electrification.
3. Advocate for a net zero building code.
4. Expand program to track gas leaks and advocate to the utility for fixes for the most dangerous or major gas leaks.
COST-BENEFIT ANALYSIS

**Scope Analyzed:** Reduce natural gas leakage

**Assumption:**
8,500 MTCO₂e GHG reduction potential

- These reductions will be achieved through a combination of reduced natural gas usage and continued improvements to the natural gas distribution systems in Acton.

*Spikes show elevated levels of methane. Credit: Town of Acton Methane Survey.*
STRATEGY B4: Advocate for policy changes and resources at the state and federal levels that will enable the rapid and affordable transition to carbon-free buildings and infrastructure in Acton

**ACTIONS**

1. **Advocate for more incentives for electric heating and cooling from Mass Save.**

As the state’s ratepayer funded program that provides incentives for energy efficiency, Mass Save is the primary mechanism for funding building energy efficiency improvements in the Commonwealth. Acton will participate in the monthly Energy Efficiency Advisory Council (EEAC) meetings that advise Mass Save Program Administrators and advocate during the Three-Year Planning processes for greater incentives for building electrification and decarbonization, and greater income-based incentives.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td></td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Advocate for income-eligible incentives, approaches that incentivize landlords, and for mechanisms to ensure that higher costs for low- and moderate-income residents do not result from building improvement funded by Mass Save.</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
</tbody>
</table>

**Partners for Implementation**

- Acton Housing Authority, Sustainability Office, Committee for Action on Housing and Climate Change, Landlords Condo associations, Mass Save, All In Energy, Energize Acton

2. **Advocate for financial assistance and low-cost financing options from the state and federal government to support triple building electrification (decarbonization, energy efficiency, and onsite renewables).**

Electrifying all of Acton’s building stock will require greater state and federal incentives. Acton will build relationships with organizations that advocate on behalf of municipalities for building decarbonization, and also use its direct relationships with state and local representatives to advance this priority. This work will include advocating for innovative finance mechanisms, such as a state Green Bank, that can incentivize and/or support residents, business owners, and the Town in making more triple electrification investments – combining energy efficiency, electrification, and onsite renewable energy wherever feasible – with affordable and cash flow-positive financing. These efforts can directly support Strategy B1.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td></td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Advocate for income-eligible incentives to ensure that triple electrification is affordable for all, that landlord-tenant barriers to retrofits can be overcome, and that higher costs for low- and moderate-income residents do not result.</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
</tbody>
</table>

**Partners for Implementation**

- Acton Climate Coalition, Committee for Action on Housing and Climate Change, Energize Acton, Communities in the MAGIC subregion, MAPC

**Measures of Success**

- Available financial assistance and financing options for triple electrification.
STRATEGY B4: Advocate for policy changes and resources at the state and federal levels that will enable the rapid and affordable transition to carbon-free buildings and infrastructure in Acton

**ACTIONS**

3. **Advocate for a net zero building code.**

Acton will become an active participant in the state’s building code process by monitoring and advocating as part of the MA Department of Energy Resources (DOER) and Board of Building Regulations and Standards (BBRS) processes for developing the state’s new net zero stretch energy code approved in the Next Generation Climate Roadmap Bill. Once finalized, Acton will vote to opt into the new stretch code and, if needed, continue to advocate for a stronger net zero stretch code.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• MA DOER, BBRS, Acton Climate Coalition, Communities in the MAGIC subregion, MAPC</td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
</tbody>
</table>

**Equity Considerations**

• Consult and join advocacy coalitions that prioritize environmental justice communities and voices. Advocate for a code that ensures a just and affordable transition for all building types.

**Measures of Success**

• Acton adopts updated net zero stretch code
• Continued advocacy for a stronger code as needed (e.g., letters, meetings with legislators, testimony, etc.)

4. **Expand program to track gas leaks and advocate to the utility for fixes for the most major or dangerous gas leaks.**

The Town will keep an up-to-date catalogue tracking gas leaks in Acton that are Grade 1, 2, or Grade 3 with Significant Environmental Impact (SEI) and larger than 2,000 ft². Key municipal staff will continue to coordinate municipal paving, water, and sewer infrastructure planning to align with needed gas leak repairs. The Town will continue to attend Multi-Town Gas Leaks Initiative meeting with National Grid to review and advocate for needed repairs to dangerous leaks or those of SEI, while avoiding replacing gas infrastructure that is not needed. The Town will also prioritize pursuing strategies in the Buildings and Housing section of this Blueprint to accelerate the transition away from natural gas heating and cooling systems.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• HEET, Mothers Out Front, MassCEC, National Grid</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td></td>
</tr>
<tr>
<td>• Improves air quality</td>
<td></td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
</tbody>
</table>

**Equity Considerations**

• Understand where dangerous or SEI gas leaks disproportionately harm low- and moderate-income households and communities of color in Acton and prioritize advocacy around fixing them

**Measures of Success**

• Dangerous or SEI gas leaks identified and resolved
Solar parking canopy at Discovery Museum. Photo by Resonant Energy.
STRATEGY E1: Provide residents with 100% carbon-free electricity by 2030

Actions to achieve the strategy

1. Make 100% renewable energy default option in Acton Power Choice and include a subsidy or other options to ensure affordability for lower-income households.
COST-BENEFIT ANALYSIS

Scope Analyzed: Make 100% renewable energy the default option in Acton Power Choice by 2030

Social Cost of Carbon: $2.7-$8.2 million per year in 2030

Health Benefits: $270k-$610k per year in 2030

Cost-Effectiveness:
- $58 to $66 cost per MTCO₂e reduced for going from APC Standard to APC Green
- $67 to $104 cost per MTCO₂e reduced for going from APC Basic to APC Green

Net Cost:
- $15-$17 increase per MWh or $110-$130 incremental cost per year per household going APC Standard to Green (approximately $800k-$1 million per year across approximately 7,500 residential accounts)
- $19-$30 increase per MWh or $150-$240 increase per household of going from APC Basic to APC Green (approximately $1.1 - $1.8 million across 7,500 households)

Assumptions
42,000 MTCO₂e by 2030
- Default rate is set to APC GREEN 100% renewable energy by 2030
**STRATEGY E1: Provide residents with 100% carbon-free electricity by 2030**

**ACTION**

1. **Make 100% renewable energy default option in Acton Power Choice and include a subsidy or other options to ensure affordability for lower-income households.**

   Acton Power Choice (APC) is the town’s green municipal aggregation program. Green municipal aggregation allows a town to determine where its electricity comes from and to include more electricity from high-quality renewable sources in New England than is required by state law, Class I Renewable Energy Credits (RECS). Acton will develop a policy for phasing up the amount of renewable energy in APC to 100% by 2030 and include a subsidy or other options to ensure affordability for lower-income households. Acton’s next opportunity to change its APC options comes in September 2022, for the next contract period. The next two opportunities will likely be in 2025 and 2028, for the two subsequent contract periods.

<table>
<thead>
<tr>
<th>Action Type: Policy / Regulations / Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
</tr>
<tr>
<td>• Produces local energy</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
</tr>
<tr>
<td>• Supports “green” workforce development</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Work with Acton’s energy broker to monitor market prices to identify strategic times to scale up renewable energy while keeping prices affordable. Work with the Select Board and Town Manager to identify a funding source to subsidize prices for low-income households.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Energy broker, Green Acton, Resource Force, Acton Climate Coalition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increasing percentage of high-quality renewable energy (MA Class I) renewable energy in the default option</td>
</tr>
<tr>
<td>• Subsidization program enacted that ensures all residents can afford to participate</td>
</tr>
</tbody>
</table>

---

**An electricity supplier selected by Acton buys cleaner electricity for you.**

**Eversource continues to deliver your electricity**

**You!**

---

**Take Action!**

Residents and businesses can opt up to 100% renewable energy via Action Power Choice today! [Update your enrollment option](#) on the Acton Power Choice website today.
STRATEGY E2: Increase local clean energy access and adoption for all Acton residents

Actions to achieve the strategy

1. Partner with solar developers to create community solar program options for Acton residents and provide a participation pathway for low-income residents.

2. Run a Solarize+ campaign to help residents procure solar, storage, air source heat pumps, electric vehicle charging stations, and other clean energy technologies.

3. Create an Energy Advocate position within the sustainability office or develop a program to provide energy advocacy support services for residents.

4. Create a pilot program for solar energy on multifamily buildings that benefits residents.
COST-BENEFIT ANALYSIS

Scope Analyzed: Installation of solar on all viable residential rooftops

**Social Cost of Carbon:**
$2.7-$8.2 million/year in 2030

**Health Benefits:**
$270k-$610k/year in 2030

**Cost-Effectiveness:**
Savings of about $900 to $4,000 per MTCO₂e of going from APC Standard to solar.

**Net Cost:**
- $3 to $15 million total savings based on $17 million of investment if 10% (about 700 residents) opt for solar instead of APC Green.
- For all residents, this would be about $30 - $150 million in total savings over 25 years based on a $170 to $200 million in investment.

**GHG Reduction Potential**
- 16%

**STRATEGY E1:** Provide residents with 100% carbon-free electricity by 2030

**STRATEGY E2:** Increase local clean energy access and adoption for all Acton residents

55
ACTIONS

1. Partner with solar developers to create community solar program options for Acton residents and provide a participation pathway for low-income residents.

Acton residents who rent or do not have rooftops appropriate for solar energy can participate in community solar. Community solar uses virtual net metering to allow multiple energy users to subscribe to an offsite solar project and receive credits for a portion of the energy generated on their bill. The town will evaluate options for hosting community solar on town-owned properties or privately owned sites and create models for participation that require no upfront cost for Acton residents.

**Action Type:** Feasibility assessment / Pilot program

**Co-benefits**
- Centers equity and environmental justice
- Supports “green” workforce development
- Improves local resilience

**Equity Considerations**
- Many organizations have piloted models for ensuring low-income households can participate in community solar programs. Acton will consult and review existing models to identify what will work best to allow for no upfront cost for low-income residents to participate. Typically, this requires cross subsidization or other funding, as well as other program design steps to lower barriers to participation.

**Partners for Implementation**
- Solar developers, MassCEC, Committee for Action on Housing and Climate

**Measures of Success**
- Number of income-eligible and non-income eligible residents enrolled
- Solar power generated
- Electricity bill savings

2. Run a Solarize+ campaign to help residents procure solar, storage, air source heat pumps, electric vehicle charging stations, and other clean energy technologies.

Solarize+ programs identify and vet qualified vendor installers and offer residents and businesses access to bulk purchasing discounts on those technologies. The Town will include an income-tiered pricing model or explore other incentives for lower-income residents to encourage participation.

**Action Type:** Financing

**Co-benefits**
- Produces local energy
- Centers equity and environmental justice
- Improves local resilience

**Equity Considerations**
- The town will create an income-eligible pathway for the program to lower barriers and costs to participation for low- and moderate-income household and renters to participate.

**Partners for Implementation**
- MA DOER, MassCEC, Energize Acton, MAPC

**Measures of Success**
- Number of installations
- Number of income-eligible and non-income eligible households participating
3. **Create an Energy Advocate position within the sustainability office or develop a program to provide energy advocacy support services for residents.**

The Town will create a staff position or program that focuses on providing greater access to clean energy solutions, energy efficiency upgrades, and electric heating and cooling upgrades for residents. The position or program will focus especially on outreach to increase clean energy access via state programs and incentives for those who have faced historic barriers to participation, including renters, low-income residents, English-isolated households, residents of multifamily buildings, small businesses, and historical or aging buildings. The Town will explore options for partnering with a nonprofit organization or with neighboring communities to support this position.

**Action Type:** Advocacy  

**Co-benefits**
- Centers equity and environmental justice
- Improves local resilience
- Improves public health

**Equity Considerations**
- Engage residents who will be served in designing this position and the outreach work to ensure that the position is tailored and responsive to their needs.

**Partners for Implementation**
- Mass Save, MassCEC, Committee for Action on Housing and Climate, Acton Climate Coalition

**Measures of Success**
- Position created or gap filled with a program
- Outreach conducted and clean energy and efficiency programs broadly accessed

4. **Create a pilot program for solar energy on multifamily buildings that benefits residents.**

The Town will research and pursue development of a pilot program to help bring solar energy to more multifamily buildings in Acton. This may include issuing a Request for Information to identify potential developers to pursue these projects and outreach to landlords and multifamily building residents to raise awareness about the opportunity solar provides. The Town will encourage and provide support to projects that share the benefits of solar with renters in multifamily buildings.

**Action Type:** Feasibility assessment / Pilot program  

**Co-benefits**
- Produces local energy
- Centers equity and environmental justice
- Scalable or transferable to other neighborhoods
- Improves local resilience

**Equity Considerations**
- Work with developers and include language in any solicitations that prioritizes program models that benefits residents of multifamily buildings. Engage residents of multifamily buildings in program design. Aim for pilot projects on buildings that include lower-income residents.

**Partners for Implementation**
- Solar developers, Committee for Action on Housing and Climate Change, MassCEC, MAPC

**Measures of Success**
- Solar installed on multifamily buildings
- Benefits shared with residents
- Benefits flowing to lower-income residents
STRATEGY E3: Power municipal buildings with 100% renewable electricity by 2030

Actions to achieve the strategy

1. Maximize the installation of renewable energy and energy storage systems wherever feasible on all municipal buildings and Acton-Boxborough Regional School District buildings.

2. Move the town’s electricity supply to 100% renewable energy.
STRATEGY E3: Power municipal buildings with 100% renewable electricity by 2030

ACTIONS

1. **Maximize the installation of renewable energy and energy storage systems wherever feasible on all municipal buildings and Acton-Boxborough Regional School District buildings.**

As part of its effort to pursue triple electrification of municipal buildings, the Town will review the potential for onsite renewable energy paired with energy storage at all municipal buildings and Acton-Boxborough Regional School District buildings. This work will also include investigating the potential of microgrids. The Town will pursue these installations wherever feasible.

<table>
<thead>
<tr>
<th>Action Type: Capital Improvement</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>MA DOER, MassCEC, Resource Force</td>
</tr>
<tr>
<td>• Produces local energy</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Number of renewable energy and storage systems installed</td>
</tr>
<tr>
<td>• Supports “green” workforce development</td>
<td>• Contracts or portions of work awarded to minority- and women-owned businesses</td>
</tr>
<tr>
<td>Equity Considerations</td>
<td></td>
</tr>
<tr>
<td>• Explore and build into the program design meaningful opportunities for women- and minority-owned businesses to perform this work.</td>
<td></td>
</tr>
</tbody>
</table>

2. **Move the town’s electricity supply to 100% renewable energy.**

The Town will review its competitive energy supply contracts for its municipal buildings and update its energy sourcing to be 100% renewable energy from Class I New England RECs.

<table>
<thead>
<tr>
<th>Action Type: Policy / Regulations / Standards</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>Energy broker, Green Acton</td>
</tr>
<tr>
<td>• Produces local energy</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>Equity Considerations</td>
<td>• Updated energy supply contract</td>
</tr>
<tr>
<td>• Work with energy broker to explore potential opportunities to support renewable energy local projects that employ or provide benefits to environmental justice communities</td>
<td></td>
</tr>
</tbody>
</table>
STRATEGY E4: Advocate for policy changes and infrastructure investments that more rapidly move the state to a 100% clean energy supply

Actions to achieve the strategy

1. Advocate for greater clean energy investments at the state level.

2. Support the development of state or federal incentives to promote investments in renewable energy.

3. Build stronger utility relationships and monitor and advocate for policy changes needed to the Public Utilities Commission (PUC) discussions.
STRATEGY E4: Advocate for policy changes and infrastructure investments that more rapidly move the state to a 100% clean energy supply

ACTIONS

1. **Advocate for greater clean energy investments at the state level.**

Acton will become an active voice advocating for needed state policy change to support the transition to 100% clean energy. This will include supporting a stronger Renewable Portfolio Standard coupled with greater amounts of utility-scale energy storage, increased procurement of offshore wind, and needed upgrades to the regional grid infrastructure to support increased transmission and distribution needs anticipated with the transition to building and transportation electrification. The Town will join relevant coalitions to stay up-to-date on policy opportunities and advocacy and to amplify its voice alongside other aligned municipalities and organizations. Acton will also explore options to exclude electricity supplied from incinerators as part of the RPS.

**Action Type:** Advocacy

**Co-benefits**
- Produces local energy
- Improves local resilience
- Supports “green” workforce development

**Equity Considerations**
- Consult and join advocacy coalitions that prioritize environmental justice communities and voices. Explore and advocate for opportunities for women- and minority-owned businesses and job training as part of this work.

**Partners for Implementation**
- Communities in the MAGIC subregion, MAPC

**Measures of Success**
- Legislative involvement – letters, meetings with legislators, testimony
- Policy changes

---

**Spotlight Corner**

The City of Newton hired an Energy Coach to work with city residents, builders, and contractors to encourage reductions in greenhouse gases in homes and buildings via weatherization and electrification. This position also organizes and supports volunteer Citizen Energy Coaches who assist with this outreach and education: [https://newtonenergycoach.org/meet-the-coaches/](https://newtonenergycoach.org/meet-the-coaches/)
2. Support the development of state or federal incentives to promote investments in renewable energy.

The Town will advocate incentives that support renewable energy development and that make it easier for local governments and residents to access the full benefits of renewable energy. Current incentive programs for renewable energy projects at the state level (e.g., the SMART program) require that Renewable Energy Credits (RECs) generated be retained by the utilities and do not allow project off-takers to retain a project’s RECs if they want to access the program incentives. Federal solar incentives, such as the Investment Tax Credit (ITC), do not encourage direct community investment or ownership of renewable energy and advocating for a change to a direct pay model for the ITC would enable greater investment and project development. The town would join relevant policy advocacy coalitions to encourage state and federal policy change that enables greater renewable energy development, community ownership, and local benefits.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
</tr>
<tr>
<td>• Produce local energy</td>
</tr>
<tr>
<td>• Supports “green” workforce development</td>
</tr>
<tr>
<td>• Improve local resilience</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Consult and join advocacy coalitions that prioritize environmental justice communities and voices. Explore and advocate for program models that prioritize community ownership and an equitable distribution of benefits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Communities in the MAGIC subregion, MAPC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Legislative involvement – letters, meetings with legislators, testimony</td>
</tr>
<tr>
<td>• Policy changes</td>
</tr>
</tbody>
</table>
3. Build stronger utility relationships and monitor and advocate for policy changes needed to the Public Utilities Commission (PUC) discussions.

Advocate for regulatory changes in utility electric rate structures that allow for and incentivize clean energy technologies such as electric vehicles and air source heat pumps and encourage vehicle to grid integration. Work with Eversource to ensure sufficient distribution capacity to fully electrify Acton, and to interconnect all feasible solar, storage, and other clean generation, and approval of microgrid (islanding) projects.

**Action Type:** Advocacy

**Co-benefits**
- Produces local energy
- Improve local resilience

**Equity Considerations**
- Advocate for financial resources and technical assistance to support low- and moderate-income households, and renters with the clean energy transition.

**Partners for Implementation**
- Eversource, Department of Public Utilities, MA DOER

**Measures of Success**
- Increased availability of clean energy incentives
- Increased adoption of these technologies by Acton residents.

**Spotlight Corner**

The Town of Natick is exploring a policy to phase their green municipal aggregation program to 100% renewable energy by 2030 in tandem with state increases to the Renewable Portfolio Standard.

The City of Boulder, CO has developed a community solar project to provide lower cost energy to cost-burdened residents in a manufactured housing community in the city: [https://bouldercolorado.gov/news/solar-garden-reducing-energy-costs-ponderosa-residents](https://bouldercolorado.gov/news/solar-garden-reducing-energy-costs-ponderosa-residents)
MOBILITY

Bruce Freeman Rail Trail. Photo by Bob Travis.
STRATEGY M1: Increase the adoption of electric vehicles

Actions to achieve the strategy

1. Promote electric vehicle adoption.

2. Create an incentive program to help provide increased access to EVs for low-income residents in Acton.

3. Implement an income-tiered EV car sharing program in partnership with community organizations and affordable housing developments.
COST-BENEFIT ANALYSIS

Scope Analyzed: All new vehicles are electric; 50% of passenger and light-duty vehicles are battery electric in 2030.

Net Cost:
BEVs cost more initially on average, but cost savings for BEVs compared to ICEV by year are (at the vehicle level):
• By the 5th year: about $5,000 to $7,000 savings before cost of Level 2 charger.
• By the 10th year: $10,000 to $15,000 savings before cost of Level 2 charger.

Total 10-year savings might be about $75 to $125 million if each household converted approximately one vehicle to electric.

Total cost of Level 2 chargers for every household in Acton would total $26-$73 million.

Social Cost of Carbon:
$2.8 - $8.4 million/year in 2030

Health Benefits:
$303k per year in 2030

Assumptions
43,000 MTCO₂e in 2030
• Assumes 50% of all passenger vehicles and light-duty trucks in Acton will be battery electric by 2030.
• This exceeds the Biden administration goal of 50% of new car sales being electric by 2030.

Cost-Effectiveness:
Between $200 - $400 savings per MTCO₂e reduced (before factoring in cost of Level 2 charging infrastructure at a household).
STRATEGY M1: Increase the adoption of electric vehicles

ACTIONS

1. **Promote electric vehicle adoption.**

Create an outreach campaign to connect residents and businesses to state and federal incentives that make zero emission vehicles more affordable. Combined federal and state tax credits can reduce purchase costs up to $10,000.

<table>
<thead>
<tr>
<th>Action Type: Training /Education/ Outreach</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td></td>
</tr>
<tr>
<td>• Improves air quality</td>
<td>• Local car dealerships, Green Energy Consumers Alliance, Energize Acton, Eversource</td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
<td></td>
</tr>
</tbody>
</table>

**Equity Considerations**

- Ensure equitable distribution of charging stations in various community locations, housing types, etc.
- Create financial resources and/or incentives to help reduce economic barriers to EV adoption and at-home charging station installation.

**Measures of Success**

- Number of EVs registered in Acton

2. **Create an incentive program to help provide increased access to EVs for low-income residents in Acton.**

The Town will explore opportunities to develop an incentive program to make it easier for low-income residents to adopt EVs. As part of this incentive program the Town will seek opportunities to provide financial resources and information to meet the demand for additional charging infrastructure (e.g., at multi-unit buildings). Acton will keep up-to-date on potential changes in federal incentives that may provide greater income-tiered incentives for residents.

<table>
<thead>
<tr>
<th>Action Type: Financing</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td></td>
</tr>
<tr>
<td>• Improves air quality</td>
<td>• Car dealerships, car-sharing services, E4TheFuture</td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
</tbody>
</table>

**Equity Considerations**

- Ensure equitable distribution of public charging stations in various community locations, housing types, etc.
- Create a pre-owned EV trade program

**Measures of Success**

- Number of EVs registered in Acton
- Increased distribution of public EV charging stations in multi-family and affordable housing complexes
3. Implement an income tiered EV car sharing program in partnership with community organizations and affordable housing developments.

The Town will conduct research with nearby towns and cities across the U.S. that have successfully implemented EV car sharing programs to identify the steps to procure a similar service in Acton. There has been success in similar programs in Boston, Sacramento, and Portland, OR. Drivers typically use a smartphone app to book an EV for a time slot and then pick up the car, run their errands, and plug it back into the charging station. Studies show that for one shared vehicle, it can take as many as 7-10 individual cars off the road.

**Action Type:** Financing

**Co-benefits**
- Improves air quality
- Improves public health
- Centers equity and environmental justice
- Scalable or transferable to other neighborhoods

**Equity Considerations**
- Ensure equitable access to the car sharing program, distribution of charging stations in various community locations, housing types, etc.

**Partners for Implementation**
- Car-sharing services, E4TheFuture

**Measures of Success**
- Number of car sharing program availability at multi-family / affordable housing locations
- Increased car sharing program membership
STRA\n
EGY M2: Lead by example: electrify school buses and town vehicles

Actions to achieve the strategy:

1. Adopt electric-first vehicle policy for the Town’s municipal fleet, meaning that electric vehicles, including school buses and micro-transit services like the Minuteman Van and the CAT, shall be prioritized when the Town purchases or leases motor vehicles for its municipal operations.

2. Restart and expand the service region of the Cross-Acton Transit (CAT) by incorporating new fixed routes or providing on-demand services.
COST-BENEFIT ANALYSIS

Scope Analyzed: Electrify police vehicles and light-duty to ½ ton municipal fleet vehicles

Net Cost:
• For police vehicles, approximately $3.5 million to purchase approximately 55 vehicles between now and 2030.
• $550k to $600k upfront costs to electrify 16 vehicles (a mix of sedans, SUVs, and pickup trucks) outside of the police dept, $80,000 more than the ICE fleet.
• Taking into account grants and incentives, such as the Green Communities program, the total cost would be approximately $250k - $300k to convert about 16 sedans and light-duty trucks.

Social Cost of Carbon:
$30k-$90k per year in 2030

Health Benefits:
$19k per year in 2030

Cost-Effectiveness
Between $200 - $400 savings per MTCO₂e reduced; higher if accounting for rebates and grants.

Assumptions
470 MTCO₂e GHG Reduction potential
• Assumes all passenger vehicles, light-duty trucks, and school buses will be battery-electric by 2030.
• Heavier duty trucks are not included in these assumptions.
• The total capital cost does not take into account net savings from maintenance and fuel savings. See Strategy M1 for cost savings.
STRATEGY M2: Lead by example: electrify school buses and town vehicles

ACTIONS

1. **Adopt electric-first vehicle policy for the Town’s municipal fleet, meaning that electric vehicles, including school buses and micro-transit services like the Minuteman Van and the CAT shall be prioritized when the Town purchases or leases motor vehicles for its municipal operations.**

   This includes: The purchase or lease of exclusively battery electric vehicles for all light-duty passenger fleet replacement; pilot, evaluate, and, where feasible, acquire electric vehicles for medium- and heavy-duty vehicle and equipment categories; Minimize vehicle miles travelled and minimize idling.

<table>
<thead>
<tr>
<th>Action Type: Policy /Regulations/ Standards</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Green Advisory Board, Green Communities, MassDEP, Eversource</td>
</tr>
<tr>
<td>• Improves air quality</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Improves public health</td>
<td>• Adoption of electric-first vehicle policy</td>
</tr>
<tr>
<td>Equity Considerations:</td>
<td>• Reduced municipal fleet’s emissions</td>
</tr>
<tr>
<td>• N/A</td>
<td></td>
</tr>
</tbody>
</table>

*Town of Acton electric vehicle cruiser. Photo by Austin Cyganiewicz.*
2. Expand the service region of the Cross-Acton Transit (CAT) by incorporating new fixed routes or providing on-demand services.

The Town will explore options to procure new shuttle services to provide more transit opportunities and improve the ridership experience. This includes electrifying the CAT, either by direct ownership, lease, or via a third-party transit service.

**Action Type:** Feasibility assessment / Pilot program

**Co-benefits**
- Improves air quality
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure robust engagement of vulnerable populations in the planning processes.
- Plan for the provision of equitable access to infrastructure investments.

**Partners for Implementation**
- Transportation Advisory Committee, MassDOT, transportation services

**Measures of Success**
- Increased on-demand transit operations, access, and ridership

---

**Spotlight Corner**

The City of Birmingham, Alabama offers on-demand public mobility to complement public transportation services, enabling residents in the city to book a shared ride for a flat rate fee of $1.50. The program provides accessible vehicles for riders with disabilities and hires local partners to be drivers.

[https://www.birminghamal.gov/via/](https://www.birminghamal.gov/via/)
STRATEGY M3: Expand public and private opportunities for electric vehicle (EV) charging infrastructure

Actions to achieve the strategy:

1. Fill EV charger gaps near major thruways and at key locations that have frequent visitors, including trailheads, garages, parking lots, and other facilities.

2. Adopt EV-ready and/or installation requirements for new residential and commercial buildings or major rehab.

3. Explore policies and incentives to enable multi-family housing residents to expand electric vehicle charging options.
COST-BENEFIT ANALYSIS

Scope Analyzed: Increase public electric vehicle (EV) charging infrastructure to fill demand for 50% EV adoption and 100% EV adoption

Social Cost of Carbon:  
A range of $2.8 - $8.4 million per year in 2030  
Health Benefits:  
$303k per year in 2030

Cost:  
$1 million for 50% adoption; $2 million for 100% adoption.  
This may partially be taken on by the Town of Acton but may also come from businesses, grants, and other funding sources.

Assumptions

• Based on the population of Acton, Massachusetts, and cars per capita  
• Applied the market share of BEVs in Massachusetts to find the number of BEVs in the town.  
• Assumes a steady population in Acton and no price change in the cost or need of chargers.

Celebrating fully-funded DC Fast Charger, April 2022. Left to right: Representative Tami Gouveia, Senator Jamie Eldridge, Representative Danillo Sena, Town Manager John Mangiaratti, MassDEP Commissioner Martin Suuberg. Photo by Andrea Becerra.
STRATEGY M3: Expand public and private opportunities for electric vehicle (EV) charging infrastructure

ACTIONS

1. **Fill EV charger gaps near major thruways and at key locations that have frequent visitors, including trailheads, garages, parking lots, and other facilities.**

Increase the amount of chargers in town annually as EV adoption increases, considering the three levels of EV chargers as options: Level 1, 2, and 3. Evaluate strategies to reduce the cost of adopting EV infrastructure, including the procurement of chargers in large volumes, expediting the permitting process, and identifying sites carefully, considering utility interconnection and the potential to group various chargers and reduce fixed costs. Evaluate pricing structures and benefits to local businesses.

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Improvement</td>
<td>Eversource, MassDEP, charger companies, local businesses</td>
</tr>
</tbody>
</table>

**Co-benefits**
- Scalable or transferable to other neighborhoods

**Equity Considerations**
- Conduct robust stakeholder engagement for feedback on most accessible locations to distribute EV charging stations.

**Measures of Success**
- EV chargers available at all major thruways and key public locations

2. **Adopt EV-ready and/or installation requirements for new residential and commercial buildings or major rehab.**

The Town will coordinate with utilities and relevant stakeholders to identify opportunities where adopting “make-ready” requirements can save future costs. Make-ready hardware includes distribution feeders, transformers, meters, and the service drop. For example, new development or major rehab projects should consider oversizing the transformer and laying additional conduit to support expansion, where the marginal cost of doing so is not prohibitive. Wherever possible, explore opportunities to also make buildings solar ready via this work as well.

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy/Regulations/Standards</td>
<td>Eversource, developers</td>
</tr>
</tbody>
</table>

**Co-benefits**
- Scalable or transferable to other neighborhoods

**Equity Considerations**
- Provide incentives to ensure that a portion of the new developments are allocated to affordable units; ensure the added infrastructure will not result in increased housing costs and displacement.

**Measures of Success**
- All new developments and rehabs are equipped with EV-ready infrastructure
3. Explore policies and incentives to enable multi-family housing residents to expand electric vehicle charging options.

The Town will provide resources and support to pilot an EV charging solution in a multi-family housing complex in an effort to scale these solutions. The Town will coordinate with landlord, property management, and homeowner associations (HOA) to find ways to address network integrations, installations, payment schemes and long-term management and maintenance. One example is enabling Level 1 chargers to operate through existing common outlets, establishing a compensation based on energy use and residential electric rates. This can be achieved through submetering equipment or with a flat monthly fee. Another option for residents who wish to install Level 2 charging is to enable EV drivers in a complex to purchase EV charging equipment for a designated space and pay a third-party network solution to handle the billing.

**Spotlight Corner**

The Affordable EV car sharing program, ‘Good2Go’ is available to drivers in Boston. Low-income members enrolled in a public assistance program pay a $5 per hour reduced rate, half the standard rate. The program also welcomes market-rate members, and the cost of car sharing remains below the cost of car ownership and other car sharing/car rental options in the area. It is aimed at neighbors who do not need or want to own a car or are looking to replace the need for a second car. According to Good2Go “it also introduces clean, quiet EV technology for those wanting to try an electric vehicle, but not yet ready to purchase one.” [https://evgood2go.org/about/](https://evgood2go.org/about/)
STRATEGY M4: Expand zero-emission mobility options

Actions to achieve the strategy:

1. Develop and implement a bicycle and pedestrian plan.

2. Continue implementing, supporting, and evaluating the Complete Streets Policy.

3. Work with local businesses to support public transportation needs and co-fund innovative transportation initiatives (bikeshare programs, shuttle services, electric car share programs, etc.).
COST-BENEFIT ANALYSIS

Scope Analyzed: Improve bicycle and pedestrian infrastructure

<table>
<thead>
<tr>
<th>GHG Reduction Potential</th>
<th>Cost:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3%</td>
<td>This could vary widely. For instance, constructing a bike lane typically costs approximately from $150K to $500K per mile, depending on the complexity of project. Cost for sidewalks is typically between $250 and $400 per linear foot, also depending on the complexity of the project. Overall, about 2 to 10 miles of walking and biking infrastructure could cost approximately $5 to $25 million.</td>
</tr>
</tbody>
</table>

Social Cost of Carbon:
$207k - $629k per year

Health Benefits:
$40,000 per year in 2030 from reduced criteria pollutants; $60,000 per year in personal health benefits for Acton residents

Cost-Effectiveness:
Approximately $40 to $200 per MTCO₂e reduce based on projects that may range from $5 million to $25 million total (which would cover at least 2 to 10 miles of biking/walking paths) over a lifetime of 20 years.

Assumptions

6,100 MTCO₂e GHG Reduction Potential

- Assumes 7% reduction in vehicle miles traveled by 2030 is achieved through a combination of bicycle, pedestrian, and other public transit improvements.
- Overall health benefits based an annual health benefit of $1,100 annually for bicyclists and $1,300 annually for walkers.)
### ACTIONS

#### 1. Develop and implement a bicycle and pedestrian plan.

Incorporate measures to increase bicyclist and pedestrian safety, increase connection to a broader regional bike network and walking trails, and improve ridership to expand and appropriately regulate the deployment of micro-mobility options (e-bikes, scooters, bikeshare programs, etc.). This includes exploring eco-friendly materials for sidewalk creation and a strategy for snow removal.

<table>
<thead>
<tr>
<th>Action Type: Capital Improvement</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• LandLine Coalition, micro-mobility companies (E-bikes, scooters, bikeshare), MassCEC, Transportation Advisory Committee</td>
</tr>
<tr>
<td>• Improves air quality</td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Improves public health</td>
<td>• Increased bike ridership</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Increased length and connectivity of existing and new sidewalks, bike networks, and walking trails</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td><strong>Equity Considerations</strong></td>
<td><strong>Partners for Implementation</strong></td>
</tr>
<tr>
<td>• Consider people with different abilities in the planning and design for micro-mobility options.</td>
<td>• Transportation Advisory Committee, developers, businesses, residents</td>
</tr>
</tbody>
</table>

#### 2. Continue implementing, supporting, and evaluating the Complete Streets Policy.

A Complete Street is one that provides safe and accessible options for all travel modes – walking, biking, transit and vehicles – for people of all ages and abilities. The Town of Acton will continue to make Complete Streets practices a routine part of everyday operations and approach every transportation project and program as an opportunity to improve streets and the transportation network for all users, working in coordination with other departments, agencies, and jurisdictions to achieve Complete Streets.

<table>
<thead>
<tr>
<th>Action Type: Policy /Regulations/ Standards</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Improves air quality</td>
<td>• Increased pedestrian activities, bike ridership</td>
</tr>
<tr>
<td>• Improves public health</td>
<td>• Reduced rates of vehicle accidents, fatality</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Increase on the miles of sidewalks</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td><strong>Partners for Implementation</strong></td>
</tr>
<tr>
<td><strong>Equity Considerations</strong></td>
<td>• Transportation Advisory Committee, developers, businesses, residents</td>
</tr>
<tr>
<td>• Consider people with different abilities in the planning and design phases.</td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Conduct robust stakeholder engagement for feedback on needs, most critical locations or opportunities to achieve Complete Streets.</td>
<td>• Increased pedestrian activities, bike ridership</td>
</tr>
<tr>
<td></td>
<td>• Reduced rates of vehicle accidents, fatality</td>
</tr>
<tr>
<td></td>
<td>• Increase on the miles of sidewalks</td>
</tr>
</tbody>
</table>
3. **Work with local businesses to support public transportation needs and co-fund innovative transportation initiatives (bikeshare programs, EV charger installations, electric car share programs, etc.).**

An example of a business supporting public transportation needs: Before COVID-19, the Town of Acton offered a bikeshare service with locations at the South Acton Commuter rail station and in West Acton Village. The bikeshare program was used primarily by commuters and was sponsored in part by local businesses. The program ended when the bikeshare company went bankrupt due to COVID-19, however, it provided a template and example of a program model that can work to help fill mobility gaps. The Town will explore the possibility of restarting a co-funded bikeshare program, and applying a similar model in other transportation initiatives, such as installing more public EV charging stations, as part of this work.

**Action Type:** Feasibility Assessment/Pilot Program

**Co-benefits**
- Improves air quality
- Improves public health
- Reduces or eliminates financial burden of vehicle ownership

**Equity Considerations**
- Develop pricing structures, technology and equipment options that support accessibility for all income levels, ages, and occupations.

**Partners for Implementation**
- Local businesses, micro-mobility companies, E4TheFuture

**Measures of Success**
- Increased number and access to EV charging stations across town
- Number of neighborhoods with access to share programs, public EV charging stations
STRATEGY M5: Advocate for the electrification of personal and shared transportation

Actions to achieve the strategy:

1. Advocate to electrify the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail and other public transit. Currently, the MBTA operates Commuter Rail entirely with diesel-locomotive hauled trains.

2. Participate in regional discussions on transportation and increase coordination with neighboring towns; support the linkage of north and south commuter rail lines.

3. Advocate for regulatory changes in utility electric rate structures that support time of use rates for electric vehicle charging stations and demand response incentives for vehicle to grid integration.

4. Encourage greater state and federal incentives to support electric vehicles and charging infrastructure adoption, especially for low- and moderate-income households.
COST-BENEFIT ANALYSIS

SCOPE ANALYZED: Electrify transit rail system

GHG Reduction Potential

1.5%

ASSUMPTIONS

3,800 MTCO2e GHG Reduction
• Transit rail system in Acton will convert from diesel to electric by 2030

South Acton MBTA Commuter Rail station. Photo by Austin Cyganiewicz.
**STRATEGY M5: Advocate for the electrification of personal and shared transportation**

**ACTIONS**

1. **Advocate to electrify the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail and other public transit. Currently, the MBTA operates Commuter Rail entirely with diesel-locomotive hauled trains.**

   In its Rail Vision report, the MBTA has laid out the framework to plan for electrification including feasibility, cost, and ridership benefits. In a line level analysis of Commuter Rail lines, the MBTA Rail Report found that electrification of some of the lines resulted in the highest cost savings and the greatest level of travel time savings. The Rail Report found that electrification of the Fitchburg Line, which stops in South Acton, offered the greatest travel time savings and provided the most frequency and connectivity.

   **Action Type:** Advocacy  
   **Co-benefits**  
   • Improves air quality  
   • Improves public health  
   **Equity Considerations**  
   • Provide supporting services in place to increase access to transit without needing a single-occupancy vehicle.  
   • Ensure community transit services remain affordable.  
   **Partners for Implementation**  
   • MBTA, Massachusetts Department of Transportation (MassDOT)  
   **Measures of Success**  
   • Completed electrification of the MBTA Commuter Rail Fitchburg Line  
   • Increased transit operations and ridership

2. **Participate in regional discussions on transportation and increase coordination with neighboring towns; support the linkage of north and south commuter rail lines.**

   The North South Rail Link (NSRL) project would connect the Massachusetts Bay Transportation Authority’s (MBTA) northside and southside commuter rail networks into one regional system through the construction and operation of a rail tunnel through Downtown Boston. According to an assessment by the Massachusetts Department of Transportation (MassDOT), this tunnel would enable through-running of MBTA Commuter Rail and Amtrak trains, increasing system coverage, capacity, and ridership. The Town will advocate for this rail link connection to support greater public transit connectivity between Acton and regional services, jobs and recreation opportunities.

   **Action Type:** Advocacy  
   **Co-benefits**  
   • Improves air quality  
   • Improves public health  
   **Equity Considerations**  
   • Provide supporting services in place to increase access to transit without needing a single occupancy vehicle.  
   • Ensure community transit services remain affordable.  
   **Partners for Implementation**  
   • MAGIC Communities  
   **Measures of Success**  
   • Increased transit operations, access, and ridership
STRATEGY M5: Advocate for the electrification of personal and shared transportation

ACTIONS

3. **Advocate for regulatory changes in utility electric rate structures that support time of use rates for electric vehicle charging stations and demand response incentives for vehicle to grid integration.**

As adoption of EVs increases, it will be important to consider the electricity grid capacity. The Town will work with utility partner(s) and advocate for adjustments to electricity rates that would encourage EV adoption. Changes to electricity rate structure will help incentivize EV charging during the most efficient times of the day (i.e., off-peak periods) by offering lower prices for energy rates during that period, and therefore provide support to ensure grid resiliency in addition to reducing cost impact associated with EV charging.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Eversource, Department of Public Utilities, MassDOER</td>
</tr>
<tr>
<td>• Improves air quality</td>
<td></td>
</tr>
<tr>
<td>Equity Considerations</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Ensure a robust community engagement process to understand the challenges and recommendations for adjustments to electricity rates that would encourage EV adoption and make EV charging affordable for everyone.</td>
<td></td>
</tr>
<tr>
<td>• Number of EVs registered in Acton</td>
<td></td>
</tr>
<tr>
<td>• Increase use of public EV charging</td>
<td></td>
</tr>
</tbody>
</table>

4. **Encourage greater state and federal incentives to support electric vehicles and charging infrastructure adoption, especially for low- and moderate-income households.**

Pairing with a public education program on the benefits of EV adoption, the Town will continue participating in regional discussion to push for more state and federal incentives that will help residents make the transition to EV usage, particularly for low- and moderate-income households. At the local level, the Town will also explore opportunities to partner with local dealerships to provide discounts on EV purchase. Some communities in the region are also exploring the feasibility of offering local incentives, such as offering a discount on first-year excise taxes for EV owners.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Department of Public Utilities, MassDOT</td>
</tr>
<tr>
<td>• Improves air quality</td>
<td></td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td>Equity Considerations</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Ensure a robust community engagement process to understand the challenges and recommendations for adjustments to electricity rates that would encourage EV adoption and make EV charging affordable for everyone.</td>
<td></td>
</tr>
<tr>
<td>• Number of EVs registered in Acton</td>
<td></td>
</tr>
</tbody>
</table>
Tom Tidman, Natural Resources Director, and Mel Anderson, Sustainability Fellow lead residents on a Nature Walk & Talk. Photo by Andrea Becerra.
STRATEGY N1: Increase protection of existing open space and green spaces throughout town in line with the Open Space and Recreation Plan

Actions to achieve the strategy:

1. Prioritize increasing equitable access to green space and prioritize the protection of green spaces near water table recharging areas.

2. Develop a tree planting plan.

3. Explore the opportunity to establish a municipal nursery.

4. Ensure development is paired with nature-based solutions.
COST-BENEFIT ANALYSIS

Scope Analyzed: Cost and benefits of Town’s open space and public land

Net Cost:
• Approximately $835k per year to maintain the Town’s green space and public land.
• Total maintenance cost for 8 years: $6.68 million

Social Cost of Carbon:
• $507k-$1,526k for all trees;
• $184k for conservation land

Cost-Effectiveness:
• $189/MTCO2e reduced to maintain conservation land

Assumptions
9,100 MTCO2e GHG Reduction
• Based on carbon sequestration assessment conducted via i-Tree. This represents a potential reduction given that it was not accounted for on the baseline for the GHG Inventory completed in 2019. While the rate of sequestration is assumed to be constant over time, the potential reduction could increase with the expansion of high-quality green spaces that enhance carbon sequestration.
ACTIONS

1. **Prioritize increasing equitable access to green space and prioritize the protection of green spaces near water table recharging areas.**

   Evaluate and set a goal for proximity to parks and open space in Acton for every resident. Similarly, prioritize the protection or increase of green spaces that recharge into areas tapped by Acton’s public water supply wells that further safeguard the quality and quantity of Acton’s drinking water supply. Pursue changes to local policies and programs to advance this goal.

   **Action Type:** Policy / Regulations/ Standards

   **Co-benefits**
   - Improves local resilience
   - Improves public health
   - Protects or enhances biodiversity
   - Preserves green and open spaces
   - Centers equity and environmental justice

   **Equity Considerations**
   - Conduct robust stakeholder engagement for feedback on community priorities for parks and open space access.

   **Partners for Implementation**
   - Green Acton, The Nature Conservancy, MAPC, Mass Audubon

   **Measures of Success**
   - All residents have access to parks and open space within their neighborhood and range of walking distance.

---

*Jenks Conservation Land. Photo by Bettina Abe.*
2. Develop a tree planting plan.

The Town will develop a plan to identify a target increase in canopy cover based on community needs. Pair the development of the plan with a tree planting campaign to enhance tree care, awareness, and education. Consider trees with high carbon sequestration potential and that are resilient to climate impacts (disease, shorter cold peaks, drought, etc.) and that offer other co-benefits such as wildlife habitat and longevity of the species.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Preserves green and open spaces
- Centers equity and environmental justice
- Reduces urban heat island effect

**Equity Considerations**
- Prioritize tree planting and protection in identified urban heat island areas (or hot spots), or locations currently with the least tree coverage.
- Prioritize Environmental Justice communities

**Partners for Implementation**
- Green Acton, The Nature Conservancy

**Measures of Success**
- A tree planting campaign launched
- Meet the goal for number of trees planted annually.
- Reduce areas identified as urban heat islands or hot spots

3. Explore the opportunity to establish a municipal nursery.

The Town will explore options to establish a nursery to provide low maintenance trees at below wholesale prices. These trees will be used on municipal streets, parks, schools, etc.

**Action Type:** Feasibility assessment/ Pilot program

**Co-benefits**
- Improves local resilience
- Preserves green and open spaces

**Equity Considerations**
- Prioritize tree planting and protection in identified urban heat island areas (or hot spots), or locations currently with the least tree coverage.
- Prioritize Environmental Justice communities

**Partners for Implementation**
- Green Acton, The Nature Conservancy

**Measures of Success**
- A municipal nursery established.
STRATEGY N1: Increase protection of existing open space and green spaces throughout town in line with the Open Space and Recreation Plan

ACTIONS

4. Ensure development is paired with nature-based solutions.

Key Town departments will work with committees and stakeholders to review and assess best development practices from local, regional, state, and federal examples to evaluate existing land use regulations in comparison to these best practices. An example includes adopting a green code that sets minimum requirements for new and existing houses to implement different types of green infrastructure, water-wise landscaping, and native plants within each lot on a points-based system. Another example includes reviewing existing development options such as the Planned Conservation Residential Community (PCRC), which is a type of cluster development, to ensure preservation of open space. Acton’s Zoning Bylaw states that the primary purpose of the PCRC, “is to allow residential development that encourages the preservation of open space and thus allows within it the preservation of significant land, water, historic, archeological and natural resources, in a manner consistent with the goals of the Master Plan and the Open Space and Recreation Plan.”

<table>
<thead>
<tr>
<th>Action Type:</th>
<th>Policy / Regulations/ Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Improves local resilience</td>
</tr>
<tr>
<td></td>
<td>• Improves public health</td>
</tr>
<tr>
<td></td>
<td>• Protects or enhances biodiversity</td>
</tr>
<tr>
<td></td>
<td>• Preserves green and open spaces</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure added infrastructure and amenities will not increase housing costs and result in displacement.</td>
</tr>
<tr>
<td>• Conduct robust stakeholder engagement for feedback on priorities and opportunities for best development practices.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Local developers, Green Acton, Acton Conservation Trust, The Nature Conservancy, Mass Audubon</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number of development projects with green infrastructure and/or nature-based solutions incorporated.</td>
</tr>
</tbody>
</table>

Spotlight Corner

Stormwater runoff in developed locations is easily polluted and increases pathogens in the surrounding waterways. To help reduce this effect, Provincetown, Massachusetts paved several of their main streets in town using porous pavement that allows up to 80% of annual rainfall to infiltrate to the subsoil. The decrease in stormwater runoff greatly improved the water quality of the Provincetown Harbor.

STRATEGY N2: Support sustainable agriculture

Actions to achieve the strategy:

1. Provide resources, including financial assistance, to support Community Supported Agriculture (CSA) memberships for low-income residents.

2. Explore opportunities to encourage agrophotovoltaics.

3. Partner with organizations supporting sustainable agriculture.
COST-BENEFIT ANALYSIS

Scope Analyzed: Cost-benefit assessment of dual-use agriculture and solar system to add value to agriculture land

GHG Emissions Reduction:
- 8-9 MTCO₂e per year per 10,000-watt project
- 28,000 MTCO₂e avoided per year if covering about ¼ of 171 acres of agricultural land

Net Cost:
- $44,000 savings for a 10,000-Watt system with a $30,600 up-front cost (year 10 break-even point)
- $95 million investment to scale to ¼ of Acton’s 171 agricultural acres
- 40 million kWh generated per year

Social Cost of Carbon:
$630 annually per 10,000-watt project (potentially for about 300 projects across 171 acres to cover ¼ of land)

Health Benefits:
$148 annually per 10,000-watt project

Cost-Effectiveness:
$165 savings per MTCO₂e reduced
STRATEGY N2: Support sustainable agriculture

ACTIONS

1. **Provide resources, including financial assistance, to support Community Supported Agriculture (CSA) memberships for low-income residents.**

   A CSA is a partnership between farmers and consumers who want to purchase fresh whole foods that can also support the local economy and sustainable growing practices. Consumers typically pay up-front, so farmers have enough capital to prepare for the season. These up-front payments can be cost prohibitive to low-income residents. Other barriers to CSA participation can include the time and knowledge required to prepare whole foods, and transportation, work schedule, and childcare challenges that get in the way of picking up deliveries. To reduce some of these barriers, experts recommend offering flexible distribution practices including self-selection of fruits and vegetables, outreach about fresh produce seasonality and CSA programs, education and tools to assist with fruit and vegetable preparation, sliding scale pricing or subsidies for low-income families, and Electronic Benefits Transfer (EBT) acceptance for CSA payments.

   **Action Type:** Financing
   **Co-benefits**
   - Improves public health
   - Centers equity and environmental justice
   - Addresses food access and affordability
   **Equity Considerations**
   - Create flexible fee / payment structures to encourage participation from low-income residents
   - Provide assistance and/or flexible delivery services for residents with different abilities.
   **Partners for Implementation**
   - Local farms, Green Acton, Boston Area Gleaners
   **Measures of Success**
   - Percentage of EBT usage for CSA payments
   - Number of CSA program participants
   - Number of CSA programs available in town

2. **Explore opportunities to encourage agrophotovoltaics (APV).**

   Agrivoltaics is a new opportunity for farms to maximize land use efficiency while generating power for farms and potentially as an additional revenue stream. Unlike a typical solar field, APV entails spacing and orienting the arrays to allow for sunlight for the crops and more space for free maneuvering of both equipment and people. The Town will work with key stakeholders to explore and pilot this technology in Acton.

   **Action Type:** Feasibility assessment/ Pilot program
   **Co-benefits**
   - Produce local energy
   - Improves local resilience
   **Equity Considerations**
   - Provide financial and technical assistance for small local farms to pilot this new technology
   **Partners for Implementation**
   - Local farms, Boston Area Gleaners
   **Measures of Success**
   - Local farms have APV installed
3. **Partner with organizations supporting sustainable agriculture.**

Work with local farms in Acton and key regional agricultural partners to promote practices that protect and conserve soil, water, wildlife habitat as well as energy resources that keep these farms in operation. This includes, identifying opportunities to promote and enable small and/or mid-size farms to participate in sustainable and organic production practices. This will also help create a more resilient local food system, and increase Acton residents’ access to healthier, sustainably produced foods.

**Action Type:** Feasibility / Pilot Program

**Co-benefits**
- Improves public health
- Centers equity and environmental justice
- Addresses food access and affordability

**Equity Considerations**
- Create flexible fee / payment structures to encourage participation from low-income residents.
- Provide assistance and/or flexible delivery services for residents with different abilities.

**Partners for Implementation**
- Local farms, Green Acton, Boston Area Gleaners

**Measures of Success**
- Number of farms in Acton engaged in sustainable agriculture

---

*Zinnias bloom at Morrison Farm in the summer. Photo by Bettina Abe.*
STRATEGY N3: Electrify municipal landscaping equipment and support residents to transition to electric landscaping equipment

Action to achieve the strategy:

1. Transition to electric landscaping equipment.
ST strategy: Electrify municipal landscaping equipment and support residents to transition to electric landscaping equipment

COST-BENEFIT ANALYSIS

Scope Analyzed: Transition municipal lawn mowing equipment from diesel-powered to battery-powered

GHG Reduction Potential

0.02%

Total Cost:

Total for all replacements: $263,547 electric vs. $111,935 diesel/gas

Net cost: $151,612

Over an assumed lifetime of 15 years, the cost of diesel fuel is nearly three times that of electrical energy, when comparing mowers with comparable power ratings and driving speeds.

Social Cost of Carbon:

$1,220-$3,701 annually in 2030 (all diesel-powered agricultural equipment)

Health Benefits:

$2,510 annually in 2030 (all agricultural equipment)

Cost-Effectiveness:

$34-$63 savings per MTCO$_2$e reduced

Assumptions

4,300 MTCO$_2$e GHG Reduction Potential

• Replacement of 11 lawn mowers used to maintain: cemeteries, the arboretum, NARA Park, and all other recreation turf grass, along with the town common and all-around town buildings.
STRATEGY N3: Electrify municipal landscaping equipment and support residents to transition to electric landscaping equipment

ACTIONS

1. **Transition to electric landscaping equipment.**

   The Town will develop a phased plan to purchase electric landscaping equipment for all landscaping equipment replacements.

   **Action Type:** Policy / Regulations/ Standards
   **Co-benefits**
   - Improves air quality
   - Improves public health
   **Equity Considerations**
   - Provide financial subsidies for low-income households to reduce economic barriers.

   **Partners for Implementation**
   - Electric lawn mower companies, Residents
   **Measures of Success**
   - Municipal landscaping equipment converted to electric

---

**Spotlight Corner**

The City of South Pasadena, California, became the first AGZA Green Zone® City in the United States. AGZA Green Zone City certification ensures that grounds maintenance on municipal properties — mowing, hedging, edging, trimming, sawing, and blowing — are serviced exclusively with low-noise zero-emission battery-electric machinery and manual hand tools.

[https://agza.net/garfield-park-2/](https://agza.net/garfield-park-2/)
STRATEGY N4: Advocate for policies that support nature-based solutions implementation in Acton

Actions to achieve the strategy:

1. Advocate for sustainable land management and landscaping practices that protect local natural resources.

2. Explore programs that support a no net loss policy for trees in the town.

3. Advocate for the restoration and protection of wetlands by incorporating future climate change projections and impacts into the Massachusetts Wetlands Protection Act and regulations as well as Acton’s local wetland bylaws.
1. **Advocate for sustainable land management and landscaping practices that protect local natural resources.**

The Town will coordinate with key committees and stakeholders to explore options and establish local guidelines, incentives, and policies that encourage sustainable land management and landscaping practices. Examples may include encouraging leaf and grass mulching rather than removal, limiting or eliminating the use of certain pesticides and fertilizers, encouraging smaller lawns, encouraging low water or no irrigation landscaping practices, and establishing pollinator gardens. These actions would be paired with robust education and awareness, such as working with landlords, educators, and volunteers to create pollinator garden projects for children and adults at Acton rental and condo properties.

<table>
<thead>
<tr>
<th>Action Type: Policy / Regulations/ Standards</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• Green Acton, Acton Conservation Trust, The Nature Conservancy, Mass Audubon</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Protects or enhances biodiversity</td>
<td>• New policies or guidelines established</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure that policies and resources benefit low-income residents in Acton and do not introduce undue burdens.</td>
</tr>
</tbody>
</table>

2. **Explore programs that support a no net loss policy and tree canopy health.**

The Town will coordinate with key committees and stakeholders to explore the establishment of a no net loss policy for trees, which could include identifying a formula to determine individual and total tree canopy, a formula for replacement canopy, a formula for replacement shrub and groundcovers with native plans for pollinators, and recommendations for implementing the policy in new construction projects. Exceptions could include tree removal in response to natural disasters, standard wildlife management, or actively managed existing utility easements.

<table>
<thead>
<tr>
<th>Action Type: Policy / Regulations/ Standards</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• Green Acton, Acton Conservation Trust, The Nature Conservancy, Mass Audubon</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Protects or enhances biodiversity</td>
<td>• Percentage and plan for meeting the goal of tree coverage developed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prioritize tree planting and protection in identified urban heat island areas, or locations currently with the least tree coverage.</td>
</tr>
</tbody>
</table>
3. **Advocate for the restoration and protection of wetlands by incorporating future climate change projections and impacts into the Massachusetts Wetlands Protection Act and regulations as well as Acton’s local wetland bylaws.**

The Wetlands Protection Act (WPA) is a statewide mechanism to regulate wetlands. Many municipalities, including Acton, have adopted local regulations to enact even stricter standards than the WPA. The Town will advocate for the incorporation of climate change considerations in the WPA guideline. Currently, the town’s local wetland bylaws do not take potential risks and impacts of climate change into consideration. To increase resilience, Acton will review and revise language directly addressing identified climate risks, protecting existing wetland resources in town to improve climate resilience. Example strategies include establishing climate resilience zones as new a resource area (to protect areas that have high probability of flooding in the near future); expanding buffer zone jurisdictions; requiring design consideration for flooding impacts, and vegetation and restoration of resources areas to compensate and/or improve resilience; limiting or restricting lawn sizes and irrigation to protect and preserve the hydrology of wetlands and water; strengthening stormwater requirements; and limiting tree removal and/or requiring tree replacement in resources areas.

---

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Protects or enhances biodiversity

**Equity Considerations**
- Ensure a balance of much needed affordable housing development in town and the protection of natural resources.

**Partners for Implementation**
- MassDEP, MAPC

**Measures of Success**
- Updated local wetlands bylaws with climate resilience measures
**ACTON RECYCLES**

- **Metal Food & Beverage Cans**
  - Empty and rinse

- **Plastic Bottles, Jars, Jugs & Tubs**
  - Empty and replace cap

- **Glass Bottles & Jars**
  - Empty and rinse

- **Paper & Cardboard**
  - Empty and flatten

**NO TEXTILES IN THE TRASH**
- **NOT IN YOUR CAN**

**NO PLASTIC BAGS IN THE RECYCLING**
- **DO NOT BAG Recyclables**

**NO TANGLERS IN RECYCLING (SUCH AS HOSES OR WIRES)**
- **Tanglers catch in the machinery which is dangerous for workers.**

**NO CARTONS (CARD-BOARD LIKE JUICE AND MILK CONTAINERS)**

**USE DONATION PROGRAMS:**
- Tears and holes in your clothes?
  - No problem! Fabrics are recycled through special programs.

- Collecting recyclables in a bag?
  - Empty the contents into the cart.
  - Return plastic bags to retailers.

**THINK BEYOND THE BIN**

Even if you can't put it in your bin at home...
- someone else can put it to good use

Search the item at Beyond the Bin for more info:
- bit.ly/TABeyondTheBin

**Additional Resources:**
- Search the item you want to recycle:
  - bit.ly/TARecycleSearch

For more recycling details visit the Acton Public Works site:
- bit.ly/TArRecycles

*Acton Recycles flyer.*
STRATEGY SW1: Improve and expand services to reduce waste and increase the waste diversion rate

Actions to achieve the strategy:

1. Promote programs for farms and restaurants to donate extra food to food pantries or shelters.

2. Promote a culture of reuse by promoting the swap shop and local businesses that collect used items.

3. Conduct a waste audit in Acton to explore curbside solid waste and recycling collection to reduce waste, increase composting, improve efficiency and reduce emissions.

4. Ensure recycling options are offered for residents in multi-unit buildings as mandated by the state, and at no cost to low-income residents.
COST-BENEFIT ANALYSIS

Scope Analyzed: Implement Town-wide curbside composting

GHG Reduction Potential

1.7%

Net Cost: $128-$192 per resident for composting

Social Cost of Carbon: Between $150k-$455k annually for all measures

Cost-Effectiveness

$65-$198 per MTCO₂e diverted for composting

Assumptions

4,400 MTCO₂e GHG Reduction Potential
• Assumes a 73% reduction in emissions from solid waste through a combination of waste reduction and diverting waste from landfills for alternative treatment (e.g., composting or anaerobic digestion)

Scope Analyzed: Reduce emissions from wastewater treatment (septic, cluster, and sewer)

GHG Reduction Potential

0.7%

Assumptions

1,800 MTCO₂e GHG Reduction Potential
• Assumes a 73% reduction in emissions from wastewater treatment.
• Aligns with the CECP goal for GHG emissions reduction in the waste and wastewater sectors.
STRATEGY SW1: Improve and expand services to reduce waste and increase the waste diversion rate

ACTIONS

1. Promote programs for farms and restaurants to donate extra food to food pantries or shelters.

The Town will provide information and resources to farms and restaurants interested in donating their food to pantries or shelters. This includes providing an up-to-date list of local food pantries and shelters for restaurants and farms to consider.

<table>
<thead>
<tr>
<th>Action Type: Training /Education/ Outreach</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Local restaurants and farms, Acton Food Pantry, and other food pantries in the region</td>
</tr>
<tr>
<td>‣ Improves local resilience</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>‣ Improves public health</td>
<td>• A tracking system to monitor food waste diversion</td>
</tr>
<tr>
<td>‣ Centers equity and environmental justice</td>
<td>• Increased food waste diversion</td>
</tr>
<tr>
<td>Equity Considerations</td>
<td></td>
</tr>
<tr>
<td>‣ Provide delivery assistance or services for those with different abilities.</td>
<td></td>
</tr>
</tbody>
</table>

2. Promote a culture of reuse by promoting the swap shop and local businesses that collect used items.

The Town of Acton will conduct outreach to inform residents and businesses of options to donate used items, including the promotion of the swap shop located at the Transfer Station. Acton will also explore the possibility of an exchange center for multi-unit dwellings.

<table>
<thead>
<tr>
<th>Action Type: Training /Education/ Outreach</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• Swap Shop, Energize Acton, Green Acton, local donation and reuse centers and businesses</td>
</tr>
<tr>
<td>‣ Centers equity and environmental justice</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>Equity Considerations</td>
<td>• Multiple options established for the donation and reuse of used items</td>
</tr>
<tr>
<td>‣ Solicit feedback from multi-unit dwellers for recommendations of processes and locations that can best accommodate “swap shop” events.</td>
<td></td>
</tr>
</tbody>
</table>
ACTIONS

3. **Conduct a waste audit in Acton to explore curbside solid waste and recycling collection to reduce waste, increase composting, improve efficiency and reduce emissions.**

The Town of Acton will work with the Massachusetts Department of Environmental Protection (MassDEP) to develop a feasibility study for implementing a town-wide curbside solid waste and recycling collection system, which would include options for Pay-As-You-Throw (PAYT). Acton will include multi-unit dwellings in the study. The Town will also investigate setting a standard for haulers to electrify their vehicles.

**Action Type:** Feasibility assessment/ Pilot program  
**Co-benefits**  
- Improves public health  
- Centers equity and environmental justice  
**Equity Considerations**  
- Conduct robust stakeholder engagement for feedback on priorities and needs to support waste diversion at multi-family complexes.

**Partners for Implementation**
- MassDEP, waste haulers, electric garbage truck companies

**Measures of Success**
- Completion of a community-wide waste audit for Acton

4. **Ensure recycling options are offered for residents in multi-unit buildings as mandated by the state, and at no cost to low-income residents.**

The Town will work with property owners and landlords to make sure recycling options are provided and accessible to all tenants.

**Action Type:** Training /Education/ Outreach  
**Co-benefits**  
- Improves local resilience  
- Improves public health  
- Centers equity and environmental justice  
**Equity Considerations**  
- Provide clear information and signage to help tenants understand their options for recycling and to reduce recyclables contamination.

**Partners for Implementation**
- Local restaurants and farms, Acton Food Pantry, and other food pantries

**Measures of Success**
- Recycling offered at every multi-unit building
STRATEGY SW2: Advocate for zero waste initiatives

Actions to achieve the strategy:

1. Advocate for initiatives that increase waste diversion, including state and federal Extended Producer Responsibility programs.
**ACTIONS**

1. **Advocate for initiatives that increase waste diversion, including state and federal Extended Producer Responsibility programs.**

Example initiatives include expanding opportunities for residents to participate in the Town’s pay-as-you-throw (PAYT) program, which charges for the collection of municipal waste, or household trash, based on the amount thrown away. Another example is Extended Producer Responsibility (EPR) policies, which enact product specific and framework legislation to have producers share in the responsibility for product waste management costs, which shift costs from municipalities and give producers the incentive to design products to make them easier to reuse and recycle and are less toxic. In addition, this action calls for municipal and school operations to lead by example by participating in programs that reduce waste, including food composting and avoiding single-use plastics.

<table>
<thead>
<tr>
<th>Action Type: Advocacy</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Co-benefits</strong></td>
<td>• Waste haulers, MassDEP, MassRecycle</td>
</tr>
<tr>
<td>• Improves public health</td>
<td><strong>Measures of Success</strong></td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td>• Established waste diversion program in Acton</td>
</tr>
</tbody>
</table>

**Equity Considerations**

• Ensure multi-family complexes have clear signage and designated on-site locations for waste disposal.

*Jon stands in front of bags of polystyrene (aka styrofoam) gathered on collection day.*

*Photo by Andrea Becerra.*
The Town of Acton River Street Dam poses a flood risk for the Town. Dam removal and park design proposal presented to the Acton Select Board on December 21, 2020.
STRATEGY R1: Pair nature-based solutions with resilience

Actions to achieve the strategy:

1. Explore opportunities to promote and/or pilot projects with natural carbon sinks and sequestration solutions.

2. Explore policies and programs to reduce impervious surfaces in line with the Municipal Separate Storm Sewer System (MS4) permit.

3. Support sustainable and resilient water management.

4. Provide emergency funds to low-income residents to manage climate change related disasters.

5. Explore opportunities to promote green roof installations.
STRATEGY R1: Pair nature-based solutions with resilience

ACTIONS

1. Explore opportunities to promote and/or pilot projects with natural carbon sinks and sequestration solutions.

Natural carbon sinks are the natural resources that extract and absorb carbon dioxide from the atmosphere. Examples of natural carbon sinks are the oceans, forests, mangroves, etc. While they may not have large, significant sources of carbon sinks, the town’s existing green and open spaces still contribute to the collective regional carbon sequestration capacity. The Town will continue to explore nature-based solutions and protection measures of its existing natural resources and open spaces, and also participate in regional conversations and solutions for carbon sequestration.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure the distribution of green spaces are equitable, particularly in EJ neighborhoods.
- Continue robust engagement, especially with members of the Housing and Climate Justice for Acton to make sure protection and preservation of green spaces will not outweigh the needs and priorities of more affordable housing for low- and moderate-income households in town.

**Partners for Implementation**
- Green Acton, MassDEP, Acton Conservation Trust, The Nature Conservancy

**Measures of Success**
- Consideration of carbon sequestration level for every proposed project

2. Explore policies and programs to reduce impervious surfaces in line with the Municipal Separate Storm Sewer System (MS4) permit.

The Town will continue to explore strategies and best practices to reduce impervious surfaces and remain in compliance with the state’s MS4 requirements.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure the benefits of impervious surface reduction are equitable, particularly in EJ neighborhoods.

**Partners for Implementation**
- Green Acton, MassDEP, Water Resources Advisory Committee

**Measures of Success**
- Reduced impervious surfaces
ACTIONS

3. Support sustainable and resilient water management.

The Town will continue to include water management as part of its resilience planning, including the Hazard Mitigation Plan and Municipal Vulnerability Preparedness Plan. The Town will work closely with the Acton Water District (AWD) to continue to explore ways to ensure clean water for current and future generations.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure clean water access comes at an equitable cost.

**Partners for Implementation**
- Acton Water District, Green Acton, Water Resources Advisory Committee

**Measures of Success**
- Established guidance and/or best practices on water management

4. Provide emergency funds to low-income residents to manage climate change-related disasters.

As climate-related hazards, such as flooding, extreme storms, and heatwaves, are projected to intensify and occur more frequently, the Town should prepare to support its residents, particularly those identified as climate-vulnerable populations to prepare for and also recover from their impacts.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Make sure the process and access to the emergency funds are direct and easy to distribute. Make sure information about the funds is widely distributed.
- Prioritize funding support for low- and moderate-income residents.

**Partners for Implementation**
- Green Acton, Executive Office of Energy and Environmental Affairs, FEMA

**Measures of Success**
- A dedicated budget for climate emergency funds included in the Town’s annual budget
STRATEGY R1: Pair nature-based solutions with resilience

ACTIONS

5. Explore opportunities to promote green roof installations.

Green roofs, also known as vegetative or eco-roofs, can help manage stormwater runoff and retention. It is also one solution to increase green spaces and can therefore reduce urban heat island effect and improves air quality. Green roofs also help regulate and reduce the temperature of a roof, as well as the building itself. The Town will explore opportunities to partner with businesses and residents in piloting green roof installations and expanding this multi-benefit approach to sustainability.

Action Type: Policy / Regulations/ Standards

Co-benefits
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

Equity Considerations
- Conduct robust stakeholder engagement for input on prioritization of installation site.
- Ensure potential installation of green roofs does not result in increased cost of living, especially for low-income households and renters.

Partners for Implementation
- Acton Water District, Water Resources Advisory Committee, Green Acton

Measures of Success
- Established guidance and/or best practices on green roof installations.
STRATEGY R2: Prepare the town for the impacts of climate change

Actions to achieve the strategy:

1. Ensure town-wide planning efforts incorporate the latest available climate change data and include resilience-focused strategies.

2. Review and update bylaws and procedures to incorporate climate change and sustainability considerations.
1. Ensure town-wide planning efforts incorporate the latest available climate change data and include resilience-focused strategies.

The Town will continue to incorporate climate considerations and prioritize resilience strategies, including the Hazard Mitigation Plan and Municipal Vulnerability Preparedness Plan.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure a robust stakeholder engagement, particularly with the EJ communities, climate vulnerable populations, etc. to understand their priorities, barriers, and opportunities as the Town evaluates and prioritizes its climate resilience strategies.

**Partners for Implementation**
- Green Acton
- MassDEP

**Measures of Success**
- All town’s plans are updated and include climate change considerations and prioritized strategies to advance climate resilience.

2. Review and update bylaws and procedures to incorporate climate change and sustainability considerations.

The Town will review and identify potential bylaws and procedures that could be updated to incorporate risks and impacts of climate change. For instance: update local policies, codes, and zoning to increase the feasibility of solar installations and streamline the permitting and inspection processes; integrate climate mitigation and preparedness requirements for flood-prone areas.

**Action Type:** Policy / Regulations/ Standards

**Co-benefits**
- Improves local resilience
- Improves public health
- Centers equity and environmental justice

**Equity Considerations**
- Ensure a robust stakeholder engagement, particularly with the EJ communities, climate vulnerable populations, etc. to understand their priorities, barriers, and opportunities as the Town evaluates and prioritizes its climate resilience requirements.

**Partners for Implementation**
- Green Acton
- MassDEP

**Measures of Success**
- All town’s regulations and bylaws incorporate climate change considerations.
Student-led climate action plan workshop, with the leadership of Kate Crosby, Energy Manager at the Acton-Boxborough Regional School District. Photos by Andrea Becerra.
STRATEGY EO1: Provide resources and information to support residents and businesses that want to reduce their greenhouse gas emissions and be more sustainable

Actions to achieve the strategy:

1. Provide resources and information for residents, organizations, and businesses that want to reduce their greenhouse gas (GHG) emissions and be more sustainable.

2. Foster careers in the sustainable and environmental sector.

3. Create an educational program for contractors and real estate agents active in Acton to provide updates on clean energy technologies.
ACTIONS

1. Provide resources and information for residents, organizations, and businesses that want to reduce their greenhouse gas (GHG) emissions and be more sustainable (e.g., information about solar, electric vehicles, heat pumps, composting, and other clean energy technologies).

This includes referring residents and businesses to the website, EnergizeActon.org, which includes a list of actions to reduce GHG emissions. Energize Acton is a collaboration between the Acton Climate Coalition (ACC) and the Town of Acton Sustainability Office. The website includes supporting information on steps to take, FAQ, and tools to mobilize residents through positive reinforcement and competitions between neighborhoods and other teams. Tools include testimonials and an action tracker that captures the amount of GHG emissions reduced by individuals and teams, and an estimate of town-wide emissions. Through this strategy, the Town of Acton will also continue to encourage residents to learn about Scope 3 emissions (e.g., from consumption and air travel) and to voluntarily reduce and offset those emissions as much as possible. The Town will also prioritize information on the site, and related outreach, that is of greatest benefit to renters, low-income households, and Environmental Justice communities, and include translation into multiple languages as needed.

**Action Type:** Training /Education/ Outreach

**Co-benefits**
- Improves local resilience
- Centers equity and environmental justice
- Scalable or transferable to other neighborhoods

**Equity Considerations**
- Translate educational materials and resources into multiple languages as needed.
- Consider dissemination strategies to ensure information reaches those who are not typically involved in sustainability / climate-related activities.

**Partners for Implementation**
- Energize Acton

**Measures of Success**
- Residents in Acton are informed of resources and benefits available to support reducing their GHG emissions and being more sustainable.
- Number of residents creating a profile on EnergizeActon.org and checking “Actions” as “Done”
- Number of Actions taken through the site and resulting Town-wide estimates of GHG reduced.

*Screenshot of the EnergizeActon.org site.*
STRATEGY EO1: Provide resources and information to support residents and businesses that want to reduce their greenhouse gas emissions and be more sustainable

ACTIONS

2. Foster careers in the sustainable and environmental sector.

Engage Acton-Boxborough Regional School District and local independent and vocational technical schools to foster climate literacy for all students and encourage the development of knowledge and skills relevant in the clean energy sector and other environmental careers, including those that intersect with other disciplines such as sociology, history, economics, etc. Identify opportunities to train and support the expansion of local workforce opportunities to meet the demand for Acton installations of heat pumps, EV chargers, battery storage and other clean energy technologies.

<table>
<thead>
<tr>
<th>Action Type: Training /Education/ Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
</tr>
<tr>
<td>• Improves local resilience</td>
</tr>
<tr>
<td>• Supports &quot;green&quot; workforce development</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
</tr>
<tr>
<td>Equity Considerations</td>
</tr>
<tr>
<td>• Provide financial resources for students from low-income households to participate in training programs, etc.</td>
</tr>
<tr>
<td>Partners for Implementation</td>
</tr>
<tr>
<td>• MassCEC, vocational schools in the region, Acton-Boxborough Regional School District</td>
</tr>
<tr>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Established curriculum and/or training programs on environmental and clean energy focus at ABRSD and local vocational schools in the region.</td>
</tr>
<tr>
<td>• Enrollment of students in environmental and clean energy focus courses offered.</td>
</tr>
</tbody>
</table>

3. Create an educational program for contractors and real estate agents active in Acton to provide updates on clean energy technologies.

The Town will coordinate with regional partners to develop and/or promote educational programs to provide heat pump training or education programs for HVAC Contractors to become experienced in system design and installers. These programs and opportunities will also be open to real estate agents who would like to learn how to evaluate a home’s heat pump system.

<table>
<thead>
<tr>
<th>Action Type: Training /Education/ Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
</tr>
<tr>
<td>• Supports &quot;green&quot; workforce development</td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
</tr>
<tr>
<td>Equity Considerations</td>
</tr>
<tr>
<td>• Provide financial subsidies for those with economic barriers (small local businesses, contractors, etc.)</td>
</tr>
<tr>
<td>Partners for Implementation</td>
</tr>
<tr>
<td>• Local energy contractors, Energize Acton</td>
</tr>
<tr>
<td>Measures of Success</td>
</tr>
<tr>
<td>• A training program in clean energy technologies launched</td>
</tr>
</tbody>
</table>
CROSS-CUTTING ACTION: Develop a budget for the implementation of the climate action plan and future budget projects needed to meet the net-zero by 2030 goal

The Town will conduct annual tracking of municipal and community-wide emissions identified in the Town of Acton GHG inventory (and available and accessible data on estimates of EV purchases, heating system used by homes and businesses, energy efficiency upgrades implemented, etc.) via tools like ICLEI - Local Governments for Sustainability. This includes tracking sequestration on an annual basis.

<table>
<thead>
<tr>
<th>Action Type: Municipal planning</th>
<th>Partners for Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-benefits</td>
<td>• All residents, all local organizations</td>
</tr>
<tr>
<td>• Produces local energy</td>
<td>Measures of Success</td>
</tr>
<tr>
<td>• Improves air quality</td>
<td>• Growth and annual accomplishments by the Office of Sustainability</td>
</tr>
<tr>
<td>• Supports &quot;green&quot; workforce developments</td>
<td>• Municipal and community GHG emissions are on track each year to meet 2030 goal, or additional actions are designed, budgeted and implemented to get back on track.</td>
</tr>
<tr>
<td>• Improves local resilience</td>
<td>• Town achieves net zero goal by 2030</td>
</tr>
<tr>
<td>• Improves public health</td>
<td></td>
</tr>
<tr>
<td>• Protect or enhance biodiversity</td>
<td></td>
</tr>
<tr>
<td>• Preserves green and open spaces</td>
<td></td>
</tr>
<tr>
<td>• Centers equity and environmental justice</td>
<td></td>
</tr>
<tr>
<td>• Scalable or transferable to other neighborhoods</td>
<td></td>
</tr>
<tr>
<td>Equity Considerations</td>
<td></td>
</tr>
<tr>
<td>• Provide financial subsidies for those with economic barriers (small local businesses, contractors, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

Declaring a Climate Emergency: A Better Future Starting Now

*Climate Emergency Declaration is passed at a Special Town Meeting in September 2020, calling “to bring net Town-wide carbon emissions to zero as quickly as possible, with a target date of 2030.”*
Questions?
Reach out to the Sustainability Office at sustainability@actonma.gov or dial 978-929-6515