

Improve public understanding of climate change

INCREASE UNDERSTANDING AND KNOWLEDGE OF CLIMATE CHANGE IMPACTS, PROGRAMS, AND ADVOCACY ACTIONS

Description and purpose of strategy: Municipal education and advocacy can improve community knowledge of climate risks, mitigation, and adaptation solutions. Education can help encourage residents to adopt strategies and other risk-reducing behaviors, while advocacy can help change laws at the local, state or federal level that support climate adaptation and mitigation.

Content of fact sheet: Summary of best practices for municipal climate change education and advocacy; a case study on how Outer Cape Energize conducted successful outreach; and information on the process and resources available for advancing municipal education and advocacy, including recommendations on how to reach out to diverse audiences.

Implementation support: This fact sheet expands upon strategies and actions from the Climate Actions Database, which can be found at: capecodcommission.org/climate.

BENEFITS

- Greenhouse gas (GHG) emissions reductions or sequestration
- Health improvement from reduced pollutants
- Increased recreation
- Lower maintenance/operational costs
- Environmental enhancement/protection
- Less damage to infrastructure
- Higher property values
- Increased resilience
- Job and economic growth

COSTS

- Higher capital costs
- Higher maintenance costs
- Higher operational costs
- Additional time for municipal staff to implement

KEY FINDINGS



Equity: Communicating how climate change is impacting the local environment and economy could empower communities to take actions to be more resilient.



Financial benefits: Education and advocacy efforts are indirect by nature and require significant time and resources, but they can have considerable and wide-ranging benefits.



Non-market benefits: Improvements in health from reduced pollutants are benefits of several climate actions promoted by education and advocacy.



GHG reductions: Education and advocacy is a supporting strategy for emissions reductions and while there are no direct emissions reductions, it can indirectly reduce GHG impacts.



Ease of implementation: A lack of staff and resource capacity is often a barrier for implementing education and advocacy programs. However, partnering with local organizations and working with volunteers can allow municipalities to streamline initiatives, reduce their individual workload, and reach a wider audience.

BENEFIT COST ANALYSIS

Education and advocacy yield several long-term outcomes, but the diversity in types of projects and local contexts makes quantifying the benefits of education and advocacy programs challenging. Many outreach and education campaigns are collaborations between volunteers, nonprofits, and municipal organizations. Some efforts focus on raising awareness of climate impacts and vulnerability, while other efforts are tied to specific programs, such as Solarize Mass. Programs that pair targeted education with outreach have led to progress throughout the Commonwealth. For example, the Arlington and Winchester HeatSmart Mass campaign, which utilized volunteers to conduct outreach on the program's financial savings and environmental benefits, resulted in 224 signed contracts for installation of clean heating systems like air source heat pumps. These installations result in more efficient homes, reduced CO₂ emissions, and long-term financial savings on heating and energy bills.

The potential benefits of education and advocacy efforts are indirect by nature, as these efforts aim to influence the decisions and actions of others. Education and outreach activities are an important component of many of the strategies highlighted throughout these fact sheets, as summarized below.

BENEFITS OF EDUCATION AND OUTREACH ACTIVITIES

STRATEGY	EDUCATION/OUTREACH ACTIVITY	POTENTIAL BENEFITS
Reduce vehicle miles traveled	<ul style="list-style-type: none"> Support local organizations in implementing work from home policies Support local organizations and agencies in switching from in-person to virtual workshops Encourage active transportation 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants Health improvements Increased recreation Job and economic growth
Promote residential adoption of electric vehicles (EVs)	<ul style="list-style-type: none"> EV advocacy 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants Health improvements Lower maintenance/operational costs
Generate and increase the use of safe, reliable and clean electricity	<ul style="list-style-type: none"> Encourage community solar through public outreach 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants
Strive toward net zero energy buildings: New non-municipal buildings	<ul style="list-style-type: none"> Educate the community about benefits of the Specialized Building Code Advertise training resources 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants Health improvements Lower maintenance/operational costs Higher property value Increased resilience Job and economic growth
Strive toward net zero energy buildings: Existing non-municipal buildings	<ul style="list-style-type: none"> Engage the community Provide assistance 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants Health improvements Lower maintenance/operational costs Environmental enhancement/protection Increased resilience Job and economic growth
Promote waste reduction and waste diversion from landfills	<ul style="list-style-type: none"> Promote participation in compost collection Promote community recycling programs 	<ul style="list-style-type: none"> Reduced emissions of GHG and criteria pollutants Health improvements Lower maintenance/operational costs Environmental enhancement/protection Higher property value Job and economic growth
Retrofitting and relocation of vulnerable buildings	<ul style="list-style-type: none"> Community outreach 	<ul style="list-style-type: none"> Reduced damage to infrastructure Higher property value Increased resilience Job and economic growth

EQUITY

Education and advocacy have the potential to empower communities by increasing understanding of how climate change is impacting their environment and economy. This knowledge can encourage people to take actions that reduce their own climate risk and influence decision-making at the local, state, and federal level. Potential equity benefits from education and advocacy include:

- **Increased awareness of ways to reduce climate risk.** Improved understanding of climate risks and adaptation and mitigation solutions could benefit communities by increasing awareness of personal and community strategies that individuals and households can take to reduce risk and decrease vulnerability, resulting in more individual, household, and local community resilience.
- **More sustainable behaviors.** Improved behavior change could lead to more sustainable behaviors (e.g., decreased vehicle usage), which could lead to improved air quality and decreased pollution into the future.

Optimizing Equity During Implementation

When designing an education or outreach program, municipalities should integrate equity considerations throughout the process. Important components of an equitable communications strategy include:

- Using clear and straightforward language to communicate climate change information and impacts
- Utilizing diverse outreach platforms
- Leveraging written and oral translation services for residents whose second language is English or who speak languages other than English.
- Reducing barriers to engagement by ensuring that materials are accessible to individuals with disabilities.

Engagement efforts should consider:

- Providing multiple ways for the audience to provide feedback.
- Scheduling activities with cultural considerations, such as religious holidays, in mind.
- Meeting people where they are physically at within the community in spaces where they are most comfortable. This can be achieved by partnering with trusted community organizations.
- Designing engagements that are centered around communities to empower individuals and build capacity.

Municipalities will need to have a thorough understanding of the demographics and needs of their community to ensure that outreach and engagement is responsive to all populations. For any public meetings, it will also be useful to consider strategies to ensure vulnerable communities are able to attend. For example, this could include transportation vouchers, childcare at the events, having events in a variety of locations and at a variety of times, or providing food at events.

Municipalities should consider integrating outreach with existing community events to meet residents where they are at and collaborating with local groups that have built trusted relationships within the community and who are representative of the community's diverse constituency.

STATE OF PRACTICE

General State of the Practice

Climate change education and advocacy is conducted by most municipalities throughout Massachusetts, though the extent and type of education and advocacy vary. For the 335 municipalities participating in the Municipal Vulnerability Preparedness (MVP) program, each municipality was required to host community resilience building workshops. Education and advocacy take time and resources, which are often limited at the municipal level. In a 2021 survey of Massachusetts

municipalities, a frequently reported barrier to resilience strategies was a lack of resources needed to rally broad community support ([Vicarelli et al., 2021](#)). This lack of resources has resulted in most municipal-level outreach and education taking place through volunteers, partnerships with nonprofits and other institutions, and the utilization of several networks. This type of collaborative education is common throughout the Commonwealth. For example, 85 municipalities in Massachusetts participated in the Solarize Mass program, where municipalities partnered with volunteers to conduct grassroots outreach and education on installing renewable solar energy. Education efforts vary by community, but they included developing a program website, writing articles in local papers, mailings, online raffles with prizes from local businesses, and outreach at town meetings.

There are many environmental groups working to implement climate action and promote climate policies within the Commonwealth. For example, the Massachusetts Climate Action Network (MCAN) supports 49 local chapters working at the municipal level, including the [Cape Cod Climate Action Network](#) (CC CAN). MCAN facilitates municipal-level action while also advocating at the state and regional level for policies that support municipalities in taking climate action. Within the CC CAN, there are five climate action networks formed at the town level by local citizens.

Cape Cod Context

All 15 municipalities within Cape Cod have completed some level of climate vulnerability outreach with their MVP planning grant. Nine of the 15 municipalities have committees dedicated to energy, climate action, or coastal resiliency (or a combination thereof) that are also charged with public education and outreach. Many of these committees focus on increasing alternative energy use, energy conservation, and energy efficiency. Each municipality varies in the level of education and outreach they have conducted so far, but most partner with nonprofits and other organizations in their educational campaigns. Some towns have expanded their work to focus more on climate impacts and vulnerabilities (especially flooding). For example, the Town of Sandwich Energy Committee is currently conducting a survey on coastal resiliency to inform flood management. The Town of Orleans promotes climate change workshops and resources on its website. See the table below for more examples of education and advocacy projects. Several towns are part of organizations or collaborations to further their energy goals. For example, Cape Light Compact represents 20 towns in Barnstable and Dukes counties to promote consumer advocacy and education on energy efficiency and renewable energy supply. Towns on the Outer Cape formed Outer Cape Energize to promote solar installations, as detailed in the case study below.

There are several groups active on Cape Cod that work with municipalities and individuals to further climate education, action, and advocacy. The Cape Cod Climate Change Collaborative works with public and private stakeholders across the Cape and Islands to foster connections, educate, and advocate for decarbonization and climate adaptation actions. Self-Reliance provides education on energy efficiency and renewable energy throughout the Cape to consumers, industry, businesses, and municipalities. These groups provide resources, training, and support for climate and energy education that can be leveraged to support town efforts.

EXAMPLE EDUCATION AND ADVOCACY PROJECTS ON CAPE COD

PROJECT	PARTNERS	DESCRIPTION
Electric Vehicle Expo	Recharge Massachusetts, Cape Cod Commission, Cape Cod Regional Transit Authority, and Cape Cod Climate Change Collaborative	This test drive event is an open and free event designed to increase understanding and adoption of EVs. Individuals can test drive an EV, chat with EV owners, learn from regional organizations about plans for public charging and EV adoption, and learn about the local, state, and federal incentives for purchasing an EV.
Climate Action Workshops	Wellfleet Energy and Climate Action Committee, Wellfleet Public Library	These workshops comprised a three-part program to promote better energy practices through electrifying homes and modes of transportation, converting to renewable electricity, and improving energy conservation.

Climate Ambassadors Program	Cape Cod Commission	This program selects students in grades 9–12 to develop their understanding of climate change, how to best communicate about it, and what actions can be taken to bring about change. Students complete the program with a small demonstration project on how they can have a personal impact on climate change.
Energy Cafe	Cape Light Compact, National Grid, Mass Save, volunteers from the faith community	Energy cafes are discussions run by volunteers and hosted at various faith-based institutions on Cape Cod. These conversations share information about energy efficiency benefits and upgrade opportunities. Participants are invited to sign up for no-cost home energy assessments.
Candidates Climate Forum	Chatham Climate Action Network	This forum covered a range of topics related to climate change with candidates for Chatham’s Select Board.
Take Care Cape Cod	CARE for the Cape & Islands	This campaign educates visitors and year-round residents about the role all of us have in preserving Cape Cod’s unique environment. Other environmental stewardship projects offered by Care for the Cape and Islands include Cape Crusaders and annual Care Days.

CASE STUDY: OUTER CAPE ENERGIZE

Starting in 2018, the energy committees of Provincetown, Truro, Wellfleet, and Eastham formed Outer Cape Energize to increase the use of solar electricity, reduce carbon emissions, and increase energy conservation on the Outer Cape. Under their Solarize Mass program funded by the Massachusetts Clean Energy Center, the group sponsored a series of public outreach meetings and collaborated with volunteers to conduct an educational campaign on how citizens can reduce their environmental impact and save money in the process. Outer Cape Energize partnered with ACE Solar to offer preferred pricing for solar systems installed through the program. By the end of 2018, 120 Outer Cape households purchased solar arrays through Solarize Mass, amounting to over 833 kW of photovoltaic capacity ([Outer Cape Energize, n.d.](#)).



IMPLEMENTATION

The Cape Cod [Climate Action Plan Communications Framework](#) recommends the following steps to implement an effective communication program:

1. **Set goals and objectives.** Define goals based on what the outreach should achieve and set measurable objectives to support reaching those goals. Consider strengths and weaknesses of previous efforts, and opportunities to influence stakeholders.
2. **Identify key audiences and collaborators.** Different groups of people will respond to messages in different ways. Consider who the key audience segments are and identify organizations that could help reach each group.
3. **Develop key messages.** Messages should be tailored to each target audience segment and use simple, clear, and consistent language. Key messages may revolve around increasing climate awareness or focus on individual, local, and regional change.

REQUIRED EXPERTISE

Internal: Communications specialist

External: Nonprofit community organizations

4. **Select outreach strategies.** Determine the best communication channels to achieving the outreach goals and reaching target audiences. Prioritize channels that the target audiences use frequently and make sure core messaging remains consistent across communication platforms.
5. **Determine milestones and timelines.** Set a timeline for implementing each tactic in the outreach plan. Consider your organization's goals and incorporate major milestones into the timeline, such as town meetings, stakeholder engagement events, or target dates for climate action achievements.
6. **Define and measure success.** Using the goals and objectives set in step one, determine what your measure of success will be and how to measure it. Evaluate the success of the outreach periodically and adapt messaging and tactics as needed.

Equity should be considered in each step of the process. Finding collaborators and building partnerships can help municipalities reach a wider audience, increase their capabilities, and be more efficient with available resources. As mentioned in the examples described above, forming partnerships with nonprofits/community organizations and their leadership is instrumental in effective education and advocacy work on Cape Cod.

Resources that may help identify collaborators, and design and implement effective climate change communications are listed below.

TECHNICAL SUPPORT

Climate Action Plan: Cape Cod Communications Framework	Framework and resources to support municipal and regional government, non-governmental organizations, nonprofits, and others to communicate climate impacts and increase engagement and individual actions on reducing climate risk.
Self-Reliance	Nonprofit based on Cape Cod that provides energy education and advocacy resources.
Cape Light Compact	Energy services organization that advocates for clean energy and provides resources, case studies, and examples of education and advocacy work.
Cape Cod Climate Change Collaborative	Nonprofit that builds networks and relationships to support local action on climate change. Provides resource library, a list of their partners, and information on how to get involved with their network.
C40 Cities Climate Action Planning Communications Toolkit	Resources on developing communications campaigns, telling stories to inspire change, using social media, and planning, targeting, and measuring a campaign. Also provides guidance on engaging your audience with graphics.

FINANCIAL SUPPORT

Coastal Resilience Grant Program	Grants for coastal municipality projects that increase coastal resiliency, including public outreach to increase community understanding of climate change impacts, build partnerships, and promote local adaptation efforts.
Urban and Community Forestry Challenge Grants	Grants for municipalities and nonprofits working to improve urban and community tree resources, including programs that build advocacy and action organizations and improve public awareness or support for community tree care and/or urban forestry.
Our Town Grants Program	Grants for partnership between a local government and nonprofit organization to integrate arts, culture, and design into efforts that strengthen communities by improving local economic, physical, or social outcomes, including projects on energy and the environment.