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TOWN OF BAR HARBOR

CLIMATE ACTION PLAN

GOALS AND STRATEGIES
2021 - 2026

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Town of Bar Harbor Climate Emergency Task Force

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Glossary

CAP - Climate Action Plan
CETF - Climate Emergency Task Force
CO₂ - carbon dioxide
EBike - Electric bicycle
EV - Electric vehicle
GHG - greenhouse gas
MDIRSS - Mount Desert Island Regional School System
MW - Megawatt
MWh - Megawatt-hour
LUO - Land Use Ordinance

Key Terms

- Greenhouse gas emissions:** The release of human-caused carbon dioxide, methane, nitrous oxide, and other planet-warming gases as the result of burning fossil fuels (coal, oil, and gas) and land degradation.
- Greenhouse gas inventory:** A list of greenhouse gas emissions sources and quantities of emissions released by the activities of a specific entity, such as a business or town, quantified using standardized methods.
- Net-zero emissions:** A state of balance where the amount of greenhouse gases produced is equal to the amount of greenhouse gases removed from the atmosphere through the natural global carbon cycle.
- Renewable electricity:** Electricity generated from renewable resources such as solar or wind.

Introduction: The Climate Emergency in Maine

Since the Industrial Revolution, humans have released increasing amounts of carbon dioxide (CO₂) and other planet-warming greenhouse gases into the atmosphere, primarily through the burning of fossil fuels such as coal, oil, and gas. Due to the greenhouse effect, higher greenhouse gas concentrations in the atmosphere have resulted in warmer global average temperatures as more solar energy is trapped as heat within the planet's atmosphere.

Climate stability is critical to the health of communities, ecosystems, and the economy across coastal Maine, where fishing, forestry, tourism, and agriculture serve as our economic backbone. Local impacts of climate change and future climate scenarios across the state have been extensively researched by the Climate Change Institute at the University of Maine, and Bar Harbor faces numerous climate threats. Our community has already begun to experience the impacts of increasing frequency and intensity of precipitation events, increase in droughts and drought intensity, and rising winter temperatures leading to decreased snowfall. The temperature of the Gulf of Maine is increasing more rapidly than most water bodies on Earth, with far-reaching consequences for ocean ecosystems, as well as increased risk of flooding and erosion due to sea level rise. Ocean acidification due to increased absorption of CO₂ into our waters is also now a concern for the long-term health and survival of local shellfish species.

Our community is facing a climate emergency. International, national, and state efforts to reduce greenhouse gas emissions and limit climate change are currently insufficient. It is clear that local, community-wide action to reduce greenhouse gas emissions is also necessary to prevent the worst impacts of climate change from harming our community, and to ensure a sustainable, prosperous future for Bar Harbor.

References

- “Maine’s Climate Future.” (2021). Climate Change Institute, University of Maine. Available at: <https://climatechange.umaine.edu/climate-matters/maines-climate-future/>.
- Special Report: Global Warming of 1.5°C, Summary for Policymakers.* (2018). Intergovernmental Panel on Climate Change. Available at: <https://www.ipcc.ch/sr15/chapter/spm/>.
- “The CAT Thermometer.” (2021). Climate Action Tracker. Available at: <https://climateactiontracker.org/global/cat-thermometer/>.
- “The CAT Emissions Gap.” (2021). Climate Action Tracker. Available at: <https://climateactiontracker.org/global/cat-emissions-gaps/>.

Climate Action in Bar Harbor

To date, the Town of Bar Harbor has initiated several projects with the goal of reducing fossil fuel use while increasing local renewable energy generation, including the development of a community solar array on the Public Works building (2016). In November of 2019, the Town of Bar Harbor passed a Climate Emergency Declaration, brought to them by the youth-led Climate Emergency Action Coalition. The Declaration they passed acknowledged that climate change is a crisis that threatens our Town. In January of 2020, the Town created the Climate Emergency Task Force (CETF), tasked with identifying key goals and strategies for reducing the Town's carbon emissions. Responsibilities of the CETF listed in its official bylaws include:

- Educate and engage Bar Harbor residents about the climate emergency and the broader ecological crisis, as well as actions they can take to address the impacts and causes of the climate emergency.
- Explore and identify the most effective and economically beneficial opportunities for emergency-speed greenhouse gas emissions reductions across the community in the following areas:
 - Renewable energy
 - Energy efficiency
 - Housing and buildings
 - Transportation
 - Land use
- Provide significant opportunities for public input into strategic planning, project development for greenhouse gas emissions reductions, and all other investigations and work of the Task Force.
- Develop a comprehensive Bar Harbor “Climate Mobilization Action Plan” addressing climate mitigation, climate adaptation, and community education.
- Identify and pursue outside funding sources to advance the work of the Task Force.
- Assist the Town Manager in hiring a consultant to support these duties and responsibilities.

Since its creation, the CETF has been meeting regularly and has undertaken several projects during the process of developing this Climate Action Plan, including:

- A greenhouse gas audit of municipal buildings and vehicles, with the intention to further investigate indirect emissions from material use and Town employee travel in the future;
- Development of initial climate recommendations for the Town Council;
- Co-hosting two public presentations on sea level rise and the local impacts of climate change with students from Mount Desert Island High School's AP Environmental Science class and A Climate to Thrive;
- Supporting the Town Council contribution of \$2,000 in partial funding to A Climate To Thrive staff to perform a feasibility study of Higgins Pit as a potential site for a future community solar installation on Town property; and,

- Ongoing collaboration with the Parking Solutions Committee regarding the installation of EV charging stations across the community.

Since the passage of the Climate Emergency Declaration, the Bar Harbor Town Council has also integrated key recommendations from the CETF into its strategic goals and planning processes. In April 2021, the Town Council updated its Council Goals and Strategy: FY21 – FY26 to include additional climate and sustainability actions under “Goal 2: Create effective plans for a Sustainable Future Strategy.”

<i>Goal 2: Create effective plans for a Sustainable Future Strategy (April 2021)</i>
<p>2a: Address the climate change emergency with meaningful energy conservation efforts, including:</p> <ul style="list-style-type: none"> ● Develop a strategic education program to improve Town Council’s “climate literacy” in preparation for adopting a Climate Action Plan. (2021) ● Develop a Climate Action Plan reducing greenhouse gas emissions to net zero by 12/31/2030. (Fall 2021) ● Prepare a solar ordinance that will allow free-standing, primary use solar arrays on public and private land. (Town meeting, November 2021) ● Develop a community solar farm on the Higgins Pit lot to power all town facilities and schools and offer low-cost power for nonprofit organizations and low to moderate income households. (2022) ● Replace town vehicles with electric vehicles as vehicle life is reached and suitable vehicles are available. ● Increase electric vehicle charging stations in Bar Harbor. ● Include climate standards for buildings, energy use and transportation in the update of the BH Comprehensive Plan and LUO. ● Develop mitigation strategies for projected impacts of Sea Level Rise to protect municipal infrastructure and public and private property.
<p>2d: Position Bar Harbor as a Green Tourism destination/climate leader through collaboration with the business community, major non-profits, local residents and other stakeholders to develop environmental standards.</p>

Town of Bar Harbor: Municipal Climate Strategies

The Bar Harbor Climate Emergency Task Force has developed the *Town of Bar Harbor Climate Action Plan: Goals and Strategies 2021-2026* in order to build upon and support the Town Council Goals and Strategies and work towards the goal of a net-zero emissions community.

Developed as the result of 18 months of research and engagement with municipal operations staff, the 2021 *Town of Bar Harbor Climate Action Plan (CAP)* identifies five priority strategies, as well as related goals, actions, and suggested timelines, to mitigate greenhouse gas emissions across the Town of Bar Harbor's municipal operations, including greenhouse gas emissions associated with the Mount Desert Island Regional School System (MDIRSS), over the next five years. These strategies also include additional community-wide actions, initiatives, and investments that can be undertaken by the Town of Bar Harbor in order to educate, incentivize, and support residents and local businesses to reduce their own greenhouse gas emissions. All strategies identified within the 2021 *Town of Bar Harbor Climate Action Plan* can be developed and implemented entirely by the Bar Harbor Town Council, Climate Emergency Task Force, and/or Town Staff; however, full implementation of the *Town of Bar Harbor Climate Action Plan* will likely require the creation of a Town Sustainability Coordinator position to coordinate action towards these goals.

The *Town of Bar Harbor Climate Action Plan* is intended to be a “living document” — one that is regularly updated with additional strategies, goals, and actions towards the goal of a net-zero emissions community. Throughout the remainder of FY2022, the Climate Emergency Task Force will continue to develop additional community-wide recommendations for the *Town of Bar Harbor Climate Action Plan* based on an extensive public input and feedback process. As such, the five strategies identified in the 2021 *Town of Bar Harbor Climate Action Plan* do not represent the full extent of action necessary to reach a net-zero emissions community by 2030, but rather the top priorities for climate action for the Town of Bar Harbor over the next five years — those which will rapidly reduce greenhouse gas emissions while providing demonstrable economic, social, and health benefits to our community.

Strategy 1: Renewable Energy

Goals

1. Achieve 100% renewable electricity sourcing, with a preference for locally generated renewable power, for all municipal operations by 2030.¹
2. Support the generation, distribution, and use of 100% renewable energy across Bar Harbor, including the development of 10 MW of local installed solar generation capacity, by 2030.²

Actions

- A. Develop a solar ordinance to allow the construction and use of free-standing, ground-mounted solar arrays on public and private land within the Town.* (FY 2022)
- B. Transition to 100% renewable electricity purchasing and use across municipal and public school operations.
 - a. Switch municipal electricity supply provided through Versant Power to a 100% renewable Competitive Electricity Provider (CEP). (FY 2023)
 - b. Identify and pursue construction of community solar farms on Town property in order to fully power Town facilities and schools with local, renewable electricity, as well as offer low-cost, renewable power to nonprofit organizations and low- and moderate-income households across Bar Harbor.* (FY 2026)
- C. Advocate for state policy and support regional action towards a 100% renewable energy Mount Desert Island, including:
 - a. Grid modernization to support renewable energy integration, demand-side management of resources, and renewable energy access equity for all Mainers.
 - b. The alignment of Versant Power's electricity suppliers and progress towards 100% renewable electricity with State and local goals.
 - c. The development of a local microgrid on Mount Desert Island to improve grid reliability and support efforts towards local energy independence.

¹ Municipal GHG audit data shows that the Town of Bar Harbor used 1,874MWh of electricity in FY2020.

² According to local climate advocacy organization A Climate To Thrive, Mount Desert Island has a peak electricity demand of about 10 MW in winter, and 16 MW in summer.

* Indicates that recommended goal or action corresponds to an existing Town Council goal or project.

Strategy 2: Building Electrification and Energy Efficiency

Goals

1. Electrify municipal building heating and cooling systems by 2030.
2. Maximize energy efficiency across municipal operations by 2030.
3. Promote the adoption of energy efficiency initiatives across the Bar Harbor community.

Strategies and Actions

- A. Conduct energy audits across all municipal and school buildings and services, including water and wastewater treatment, to identify high-energy use buildings and necessary efficiency upgrades. (FY 2024)
- B. Replace #2 Distillate Oil with sustainably sourced biofuels across municipal and school building heating systems, including backup heating systems, where feasible, as an interim measure to reduce GHG emissions from heating oil. (FY 2024)
- C. Develop strengthened building energy efficiency standards for inclusion in the update of the Bar Harbor Comprehensive Plan and LUO.* (FY 2024)
- D. Develop a schedule and begin implementation of fossil-fueled municipal and school building HVAC and water heating system replacement with suitable electric alternatives as existing system lives are reached, to be reflected in the Equipment Replacement Schedule of the Capital Improvement Plan and annual Town budget proposals. (FY 2025)
- E. Establish energy use monitoring systems across municipal and school buildings. (FY 2025)
- F. Establish a “Green Revolving Fund” to direct financial savings from reduced municipal and school energy bills towards future climate projects. (FY 2025)
- G. Complete energy efficiency upgrades for least efficient municipal and school buildings. (FY 2026)
- H. Collaborate with Public Works, Town, and MDIRSS staff in order to identify and implement additional building-use modifications in support of energy conservation.

*Indicates that recommended goal or action corresponds to an existing Town Council goal or project.

Strategy 3: Sustainable Transportation

Goals

1. Replace all municipal and school vehicle fleets, including cars, vans, trucks, buses, and police and fire vehicles, with electric vehicles to the greatest extent possible by 2030.*
2. Support the development of electric, active, and public transportation systems across Mount Desert Island.

Actions

- A. Implement education and incentive programs to support the use of low-emissions, public, and active transit methods among Town employees. (FY 2023)
 - a. Undertake an all-staff transportation survey in order to assess Scope 3 - Employee Commuting greenhouse gas emissions as well as major barriers to adoption of sustainable transit alternatives by Town employees. (FY 2023)
 - b. Continue expansion of Level 2 and Level 3 EV chargers and designated EV-only parking spaces in Town parking lots.* (FY 2023)
 - c. Provide accessible charge points for EBikes and electric scooters at the Bar Harbor Town Office. (FY 2023)
- B. Develop a schedule and begin implementation of municipal and school fleet vehicle replacement with suitable electric or hybrid electric alternatives as existing vehicle lives are reached, to be reflected in the Equipment Replacement Schedule of the Capital Improvement Plan and annual Town budget proposals.* (FY 2023)
 - a. Identify and utilize key sources of state and philanthropic funding to support municipal fleet electrification, including Efficiency Maine incentives.
- C. Collaborate with key community stakeholders including Acadia National Park, Downeast Transportation, Island Explorer, College of the Atlantic, The Jackson Laboratory, Mount Desert Island Hospital, and major hotels to research and develop incentives and resources for sustainable transit for residents and visitors. (FY 2024)
 - a. Identify additional sites for the installation of Level 2 and Level 3 EV charging stations at major destinations,* as well as additional public outlets for EBike and electric scooter charging.
 - b. Identify opportunities to improve the safety of local bicycle travel.
 - c. Investigate the development of a shared EV rental service for use by residents.
- D. Undertake a town-wide comprehensive transportation study to determine top sources of GHG emissions from Bar Harbor's transportation systems, major barriers to adoption of electric, active, and public transit by residents and visitors, and key opportunities to improve electric, public, and active transit infrastructure. (FY 2025)
- E. Enforce the current Idling Ordinance restricting local vehicle idling to 5 minutes.

Strategy 4: Public Education and Engagement

Goals

1. Develop a shared, community-wide understanding of the climate emergency and goals, objectives, and timelines of the Town of Bar Harbor Climate Action Plan.
2. Actively include all Bar Harbor residents and key stakeholders in the development and implementation of the Town of Bar Harbor Climate Action Plan.

Actions

1. Provide assistance, guidance, and educational materials to members of the Town Council and Town staff in order to improve Town-wide understanding of climate change and proposals within the Town of Bar Harbor Climate Action Plan.* (FY 2022)
2. Create a user-friendly, regularly updated “Climate Emergency” webpage on the Town of Bar Harbor website to serve as a centralized location for the Climate Emergency Task Force and Town staff to collect, organize, and disseminate information and resources to the public regarding the Climate Action Plan and related public events.* (FY 2022)
 - a. Develop a series of Public Service Announcements on key climate and sustainability topics for Bar Harbor residents and businesses to educate themselves and take key steps to reduce their own climate impact. (FY 2023)
3. Actively gather and integrate feedback from Bar Harbor residents throughout CAP implementation and future CAP revisions.
 - a. Organize regular community “Climate Town Hall Meetings” to share updates and progress on the Climate Action Plan, as well as provide residents with the opportunity to speak with local experts and vendors regarding energy efficiency, electric vehicles, state incentives programs, and other key topics.
 - b. Utilize the Polco civic participation online platform to solicit information and feedback from the public on town-wide climate and sustainability initiatives.
4. Build partnerships with local schools, post-secondary educational institutions, and scientific institutions to develop and implement climate change educational programs for students, staff, and community members.
 - a. Engage with Town Department heads to develop opportunities for local students to directly engage with Town sustainability initiatives and supplement Town staff capacity to address sustainability issues through work-study positions, internships, independent studies, and volunteer efforts.
5. Actively participate in and promote community activities and events that highlight climate and sustainability issues, including Earth Day, Maine Recycling Week, National Drive Electric Week, and Bike to Work Day.*

* Indicates that recommended goal or action corresponds to an existing Town Council goal or project.

Strategy 5: Governance

Goals

1. Integrate sustainability and climate considerations into all municipal planning and decision-making processes for the Town of Bar Harbor.

Actions

- A. Hire a Town of Bar Harbor Sustainability Coordinator with the remit of overseeing and implementing all Town climate and sustainability efforts, including the development and implementation of the *Town of Bar Harbor Climate Action Plan*.* (FY 2022)
- B. Identify key opportunities to utilize funds from the Parking Fund and Cruise Ship Fund for municipal climate and energy projects, to be reflected in future Town budget proposals. (FY 2022)
- C. Adopt an Electronic Documentation Policy to minimize paper use and printed copy requirements across municipal operations and services, such as Town meetings and licensing and permitting services, as allowed by law. (FY 2023)
- D. Adopt a Sustainable Procurement Policy to ensure that relevant municipal purchasing meets green standards including minimum recycled content requirements and local vendor and provider preferences. (FY 2024).
- E. Modify all town committee bylaws so that each committee maintains a “climate steward” role, whose responsibility is to research, identify, and monitor potential climate and environmental impacts of committee decisions and recommendations. (FY 2024)
- F. Require that all major municipal purchasing proposals, including capital improvement projects, include life cycle costs and estimated greenhouse gas emissions. (FY 2024)
- G. Conduct an annual greenhouse gas emissions audit across all municipal and school operations in order to measure progress towards Town greenhouse gas emissions reduction goals.*
- H. Revise the strategies, goals, and actions within the *Town of Bar Harbor Climate Action Plan* at minimum every two years.*

* Indicates that recommended goal or action corresponds to an existing Town Council goal or project.