City of Beacon

2021-2030 Government Operations Climate Action Plan

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Produced by
the City of Beacon
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Credits & Acknowledgements

This report was prepared by staff of the City of Beacon, in partnership with the Climate Action Planning Institute (CAPI), between January 2023 and June 2024.

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Table of Contents

I. Executive Summary

The City of Beacon has established a goal to reduce greenhouse gas (GHG) emissions from municipal operations by 40% from 1990 levels sooner than New York State's target of 2030. This reduction is in line with the State's Climate Law, although in Resolution No. 118 of 2020, Beacon resolved that "the City's Climate Action Plan will plan to achieve the State goals to reduce GHG emissions for the overall community sooner than the current goals outlined by New York State."

The goal expresses the City's responsibility to our community and the planet, and it sets a target for City Council and City staff to make their best efforts within financial, technological, operational, and other constraints.

The City of Beacon has established a plan for reducing greenhouse gas (GHG) emissions associated with municipal operations ("Plan"). It provides a strategy to reduce emissions from 2021 levels to a level aligned with the City's climate targets. The Plan is a non-binding guide to City actions over the next several years and will be updated as needed.

This Plan focuses on the City's activities that create emissions as part of municipal operations. It does not address emissions from the wider community, such as homes, businesses, or schools. Similarly, it does not recommend or focus upon climate-related actions that do not address municipal emissions.

Following the Executive Summary, the Plan begins with an introduction to climate impacts in Beacon, followed by a background section which reviews some of Beacon's previous climate action efforts. It also explains how this Plan was developed, the underlying vision and goals, an acknowledgement of impacts beyond reducing emissions, and a summary of the City's municipal GHG emissions in 2021.

The majority of the Plan is a mitigation strategy consisting of specific reduction actions and their forecasted impacts. The Plan concludes with next steps to implementing the recommended mitigation actions.

Overview of the 2021 Local Government Operations Climate Action Plan (GOCAP): The Plan sets out actions focused on the major sources of GHG emissions in Beacon's infrastructure and operations, as identified in the City's corresponding 2021 Inventory (published in November 2023). It provides objectives and strategies in focus areas through which Beacon can achieve GHG reductions, specifically:

- Buildings;
- Vehicles;
- Solid waste; and
- Water and wastewater treatment.

The Plan creates a framework to document, coordinate, measure, and adapt operational efforts moving forward. In addition to listing actions, the Plan discusses how each action will be implemented via timelines, staffing responsibility, and key performance indicators (KPIs). The Plan also notes co-benefits associated with reducing emissions, including cost savings from energy use reductions.

2021 Emissions: According to Beacon's 2021 Government Operations GHG Emissions Inventory (Inventory), the City's municipal emissions were estimated to be 3,081 metric tons of carbon dioxide equivalent (CO2e) per year. The Inventory found the leading contributors to 2021 municipal operational emissions to be methane from the closed landfill at Dennings Point, the equipment used to treat wastewater, the City's vehicle fleet, and the use of gas and oil for heating and hot water in City buildings.

2030 Targets: In 2020, Beacon's City Council set a series of climate action targets for the government and community. The goals include reducing government operation emissions by 40% compared to the 1990 base year, a benchmark which is in line with the New York State Climate Leadership and Community Protection Act (CLCPA), or Climate Law. Beacon's targets, however, prescribe earlier implementation of the Climate Law's timeline of 2030.

While the City Council targets reference a 1990 base year, the present Plan uses 2021 as the base year in order to improve accuracy based upon availability of benchmark data, aligning with Beacon's latest GHG inventory. The City translated the benchmark as follows: a 40% reduction from the State's 1990 base year is approximately equivalent to a 31% reduction from the City of Beacon's 2021 levels. This captures improvements to the energy grid made by New York State since 1990, including those actions taken in Beacon, such as conversion of public street lights to LED bulbs and the installation of a solar array that offsets a majority of municipal electricity use each year.[1] In sum, this Plan aims to reduce annual emissions to 2,126 metric tons of CO2e by 2030[2].

Strategy for 2023-2030: The Plan shows the estimated emission reductions associated with each strategy we expect to deploy. The estimates serve as a planning tool to help keep the City on track to achieve its climate action goals. The reduction actions in the strategy have been identified based on their emissions impacts, their feasibility, alignment with City policies, and funding opportunities for their implementation.

Implementation Timeline: The City has identified actions in four sectors of municipal operations, as well as actions to monitor progress and update the Plan. Additional reductions will be achieved through changes not modelled for this Plan, or which do not require specific City

[1] Source: 2022 Statewide GHG Emissions Report
[2] Calculated in ClearPath forecasting software

initiatives (such as a natural reduction of landfill emissions, and a projected population-wide uptake of EVs including for City employees).

The timeline for completing each action appears in the table below.

Sector Key:

Vehicles
Buildings
Water and Wastewater
Solid waste
Monitoring/planning

2023	2024	2025	2026	2027	2028	2029	2030
Replace 2016 Chevy Impala with 2023 Ford Mach-E	Replace 2004 Chevy Impala with 2023 Chevy Bolt	Install additional EV chargers	Transition 5% of gas fleet to BEV	Transition 5% of gas fleet to BEV	Transition 5% of gas fleet to BEV	Transition 5% of gas fleet to BEV	Transition 5% of gas fleet to BEV
Conduct GHG inventory	Install geothermal heat pumps at Tompkins firehouse	Install rooftop solar at Highway Garage	Install rooftop solar on new portion of firehouse	Record vehicle mileage	Install additional EV chargers	Record vehicle mileage	Record vehicle mileage
	Decommission former fire facilities	Install rooftop solar at WW office	Install electric heat pumps at water plant	Conduct GHG inventory	Record vehicle mileage	Install biofilters at Dennings landfill	Update CAP
		Convert WW office from oil heat to electric heat pumps	Record vehicle mileage		Update CAP		
		Record vehicle mileage	Update CAP				

Next steps and other recommendations: The Plan highlights the initial steps towards implementing the strategies below. It also includes potential actions that could be considered for future versions of the municipal climate action plan.

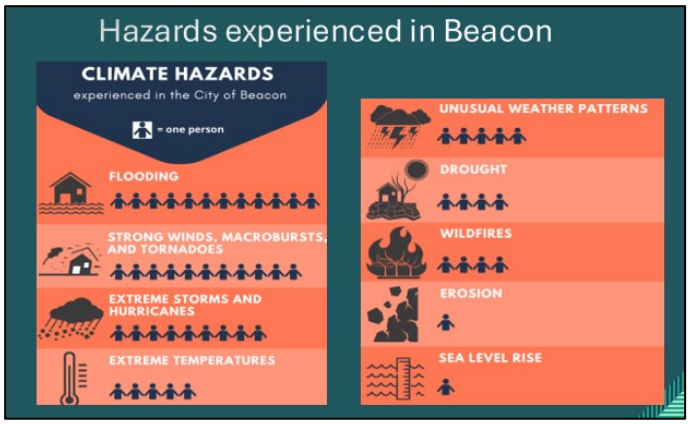
II. Introduction: Why Climate Action Matters in Beacon

Unmitigated climate change poses an existential threat to our society and will exacerbate many other problems already facing our community. No place on earth will be unaffected by climate change, and impacts are already being felt across the planet, including in the Hudson Valley. Extreme weather events have become more frequent and intense in severity, causing issues such as severe flooding and extended periods of drought. Like so many other communities, Beacon has experienced heavier and more frequent downpours, extreme heat days, and poor air quality.

The City of Beacon is also located just a short distance (approximately 90 miles) from the mouth of the Hudson River, and is therefore closely connected to a coastline area experiencing sea-level rise among the greatest in the world.[3] This sea-level rise has resulted in localized flooding on Beacon's waterfront and damaged low-lying railroad infrastructure on which many Beacon residents depend.

To varying degrees, Beacon feels the impacts of these changes to the local climate. Tangible impacts have already included damage to public roadways and infrastructure, adverse impacts on the operations at the Wastewater Treatment Plant from inundation, and interruptions to rail infrastructure used by many residents for their daily commute.

For a more specific local perspective, in 2020, Beacon's Conservation Advisory Committee (CAC) gathered the observations and experiences of residents and visitors to further understand the impacts on daily life of our residents.

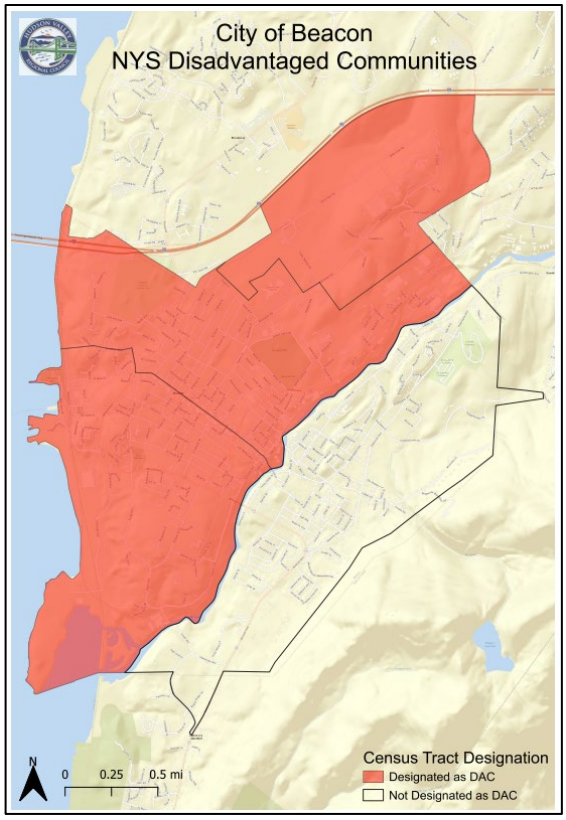


Hazards Reported by Beacon Residents in 2020[4]

[3] NCA 2018: https://nca2018.globalchange.gov/ Refers to the stretch of coastline from the tip of the Delmarva Peninsula in Virginia to the elbow of Cape Cod in Massachusetts. Annual sea level rise is 2 to 3.7 mm per year—more than three times the global average as of 2018 NCA report publication.

[4] Source: Beacon Sustainability and climate resilience vision (beaconny.gov)

These climate change impacts disproportionately affect more vulnerable people in particular ways. For example, as noted in New York State's expanded designation of Beacon as a disadvantaged community in 2023, the nearest hospital is not easily accessible, which makes climate-related health impacts more threatening.[5] Poor air quality further impacts many community members, exacerbating asthma and other health conditions. Similarly disproportionate is the rising cost of energy for cooling as local temperatures increase. Low-income households are thus at a disadvantage to endure higher average temperatures and more extreme heat patterns.



Climate Change Impacts on Public Health[6]

Climate change is globally recognized as a public health emergency[7]. The following climate-related health impacts could occur in New York State, according to the New York Department of Health:

- Increased heat stress and other heat-related morbidity and mortality;
- Exacerbation of respiratory conditions (including pneumonia, asthma, and chronic obstructive pulmonary disease) and cardiovascular disease;
- Increased risk for food- and water-borne diseases due to increasing temperatures and flooding;
- Increased duration and severity of allergy symptoms due to increased duration and intensity of pollen season;
- Increased risk for vector-borne diseases (such as Lyme disease, West Nile virus, and other pathogens); and
- Increased risk of injury and death following extreme precipitation events and flooding

Additional health impacts could include the following, according to the Climate Leadership and Community Protection Act (CLCPA) Scoping Plan: droughts, rising sea levels that

[5] DAC criteria: https://climate.ny.gov/resources/disadvantaged-communities-criteria/
[6] Source: CLCPA Scoping Plan, section 8.2 (December 2022)
[7] Reference at 26th Conference of the Parties to the UN Framework Convention on Climate Change (COP 26), per CLCPA Scoping Plan p. 94

threaten infrastructure, saltwater intrusion of the State's groundwater resources (which may impact drinking water supplies), poor indoor air quality (such as mold and moisture), and deteriorating outdoor air quality, particularly ground-level ozone that increases with rising temperature.

The Scoping Plan also points to a greater risk of death in those who have mental illness due, in part, to medications that interfere with the body's thermoregulation.

Much of Beacon is designated as a disadvantaged community based on environmental and social conditions related to its past, present, and projected future risk. Many impacts of climate change disproportionally affect people in disadvantaged communities, including significant disparities in health outcomes by age, race, ethnicity, and socioeconomic status. For example, disparities exist in New York for heart disease mortality and stroke mortality by race. Rates are highest in Black non-Hispanics among all race and ethnic groups. Asthma is another major health problem nationally and in New York. Its contributing causes include four components of air pollution – ozone, sulfur dioxide (SO2), nitrogen oxides (NOX), and particulate matter. Asthma hospitalization rates in New York are higher in low-income areas than in higher income areas. Asthma surveillance in New York has shown that the age-adjusted asthma emergency department visit, hospital discharge and mortality rates were higher among non-Hispanic Black and Hispanic New Yorkers than non-Hispanic White.

In consideration of these health disparities and environmental burdens, climate change mitigation efforts must prioritize reductions of GHG emissions and co-pollutants in designated disadvantaged communities.

In Beacon, the census tract located on the Hudson River and southern border of the city has a "higher environmental burden than 98% of the state, making it especially susceptible to the effects of climate change," as reported by the Highlands Current in 2022.[8]

The City's role can be to focus its climate mitigation actions on the impacts that affect vulnerable residents the most, and where our impacts are already the most severe. This includes providing reliable and renewable energy sources, limiting air pollution, reducing "heat island" effects, and minimizing municipal contributions to global atmospheric change which, in turn, increases volatile weather conditions.
When communities and local governments reduce emissions, it helps to lower the projections for annual temperature rise over time. When local governments focus on the impacts that most affect vulnerable people, they make the community and its government operations healthier and more resilient.

[8] https://highlandscurrent.org/2022/04/22/is-beacon-a-disadvantaged-community/

III. Background

City of Beacon Historical Efforts

In addition to undertaking the many initiatives outlined through the reduction strategy presented in this Plan, the City has adopted a sustainably-minded approach on both a day-to-day and longer-term basis. While reductions to measurable emissions from City operations are a vital focus, they are only one aspect of what must be done on a local level to do Beacon's part towards mitigation of and resiliency preparation for climate change. This second category includes policy initiatives that impact emissions of the business and residential community, policies and projects that reduce the City's carbon footprint but that are not easily translated into reduction figures for the purposes of this report, and other actions that don't directly lower emissions themselves, but which have other critical environmental impacts.

This section memorializes some of these efforts in recent years, both to inform on recent focus points of the City as well as to acknowledge the myriad ways that climate change must be addressed.

Some particularly noteworthy municipal actions and initiatives during the past several years have been:

- In 2022, the City of Beacon partnered with the Conservation Advisory Committee and the Compost Working Group to pilot a compost program which involved both backyard bins and local, centralized drop-off sites. Since that time, the program has grown in scope and budget, and it has served as a model for many surrounding communities.
- In 2023, Beacon adopted one of the first electrification building code laws in the State of New York, and in doing so, set a more ambitious timeline than the State. The law set requirements for utility electrification for the community more generally, and thereby supports improved health and air quality and reduces local reliance on fossil fuels.

- In 2023, Beacon partnered with Cornell Cooperative Extension to plan for and launch a website landing page for climate-related emergency resources, including notification systems, preparation advice, and other urgent assistance information.
- In 2024, Beacon partnered with a non-profit organization to support residents' transition to renewable energy through a community solar program. This program works with the City's local utility company to reduce bills, while also financing local solar energy infrastructure.
- In the spring of 2024, Beacon piloted a tree program, which resulted in planting 50 well-established and native-species trees. The program allowed residents to purchase trees at a discount and with free delivery, thereby lowering financial and logistical barriers to planting trees throughout the community, while also decentralizing the labor involved with caring for newly planted trees. Over time, the City hopes that this initiative can provide significant benefits to local air quality, temperature resilience, and native wildlife species, while also mitigating local emissions.

On a related note: while Beacon's base year is 2021, it is also important to recognize actions taken prior to that time, which have helped lower emissions and provide a stronger baseline. Some key initiatives which have contributed to this include establishing a 2MW solar array on a closed landfill, converting streetlights to LED city-wide, and connecting residents with a Community Choice Aggregation program for approximately two years. It is actions like these that have made Beacon a leader in climate action and have demonstrated the community and City's ability to make ambitious changes.

Climate Action Plan (CAP) Process

This Climate Action Plan takes advantage of common-sense approaches and cutting-edge policies to recommend emission reduction strategies that Beacon's local government is well positioned to implement.

To identify the recommended strategies for implementation, the City of Beacon's CAP team consulted with government staff, analyzed GHG emissions under a business-as-usual scenario, and analyzed the potential reductions from applying various strategies. Findings and drafts were made available for review and comment from the public and other stakeholders. The revised report is available on the City's website.[9]

CAPI Planning Team

Several individuals within the City of Beacon were involved in creating the CAP, including:

- Faye Leone, Climate Smart Coordinator (drafting)
- Ben Swanson, Secretary to the Mayor (outreach to municipality and CAPI cohort)
- Chris White, City Administrator (oversight and strategy)
- Conservation Advisory Committee (CAC) members (ongoing communication)
- City staff (support and information)

Public Outreach and Engagement

	Stakeholder Group	Outreach Action
January 2023-May 2024	Conservation Advisory Committee (CAC)	Provided monthly updates on CAPI
January 2024	City Council	Presented GHG inventory and overall planning; received feedback (link to agenda and video recording – presentation begins at 1:03)
January 2024	Community/Public	Issued newsletter about GHG inventory results and overall planning
Spring 2024	City department heads and staff	Consulted on departmental priorities and potential emission reduction strategies
May 2024	CAC and Community/Public	Consultation period on draft report
June 30, 2024	City Council	Emailed report to Councilmembers
August 5, 2024 (forthcoming)	City Council	Report presentation and discussion

[9] Studies & Reports — City of Beacon (beaconny.gov)

Vision Statement

The City of Beacon aims to become the greenest community in the Hudson Valley. To help identify what that means to community members, the City of Beacon's Conservation Advisory Committee worked in partnership with Cornell Cooperative Extension to develop a sustainability and climate resilience vision[10] for Beacon.

The resulting vision in 2020 included several elements that the City government can play a strong role in delivering, such as:

- Have an informed and educated populace and municipal staff;
- Mitigate and adapt to climate change;
- Invest in renewable energy; and
- Invest in resilient infrastructure.

More specifically, the City's vision for a resilient and sustainable future includes the following key elements:

1. Serving as a leader in the region in adopting and sourcing clean and local energy that comes from the sun, wind, or other safe and innovative renewable technologies;
2. Transforming public facilities into high-performing and energy efficient places for employees to work in and to serve the community;
3. Leading by example in reducing waste, and practicing recycling and other sustainable behavior throughout all operations;
4. Transitioning to a more sustainable and efficient vehicle fleet; and
5. Carefully understanding potential climate-related risks and mitigating these risks while preparing City of Beacon's infrastructure for chronic and extreme weather events.

Climate Goals

Beacon's City Council has set an emission reduction target of 40% by 2030 from a 1990 base year. The Plan, as outlined here, translates the 1990 State figure to 2021 in order to align with the City's most recent GHG inventory (published in November 2023), and thus improve accuracy by using the latest available data on local emissions. The target from a 2021 base year to 2030 has been determined to be 31%.[11]

[10] Beacon Sustainability and climate resilience vision (beaconny.gov)

[11] A 40% reduction from the State's 1990 base year is approximately equivalent to a 31% reduction from the City of Beacon's 2021 levels. This reflects improvements to the energy grid made by New York State since 1990, according to the 2022 Statewide GHG Emissions Report.

Thus, this Plan aims to reduce annual emissions to 2,126 MTCO2e by 2030. This target encompasses the emissions sources included in the 2021 GHG inventory, which covers the City's Scope 1 emissions, its Scope 2 emissions[12], and two categories of its Scope 3 emissions: employee commute and handling solid waste.

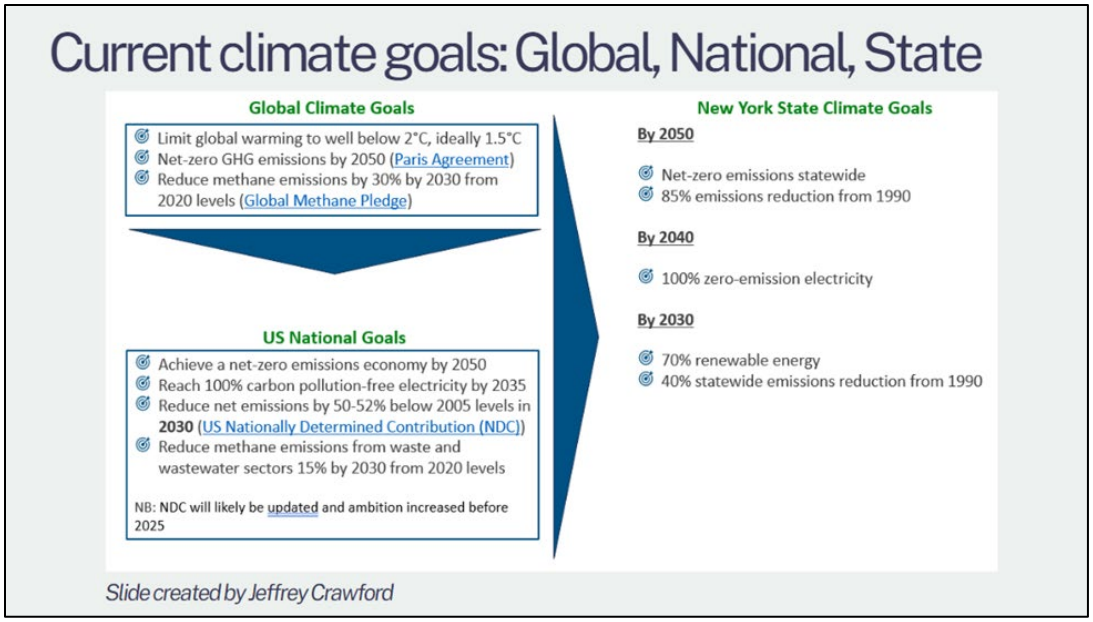
Climate Policy Context

The City of Beacon is pursuing emissions reduction within a context of policies and regulations at global, national, and state levels.

International Agreements: The Paris Agreement is a legally binding international treaty on climate change adopted by national governments in 2015. The U.S. is a Party. Signatories agreed to substantially reduce global GHG emissions in order to hold global temperature increase to well below 2°C above pre-industrial levels. Recognizing that less warming will bring less severe disruptions, signatories agreed to pursue efforts to limit it to 1.5°C above pre-industrial levels. To achieve this, global GHG emissions must reach net zero by 2050 and decrease 50% by 2030.

United States: The U.S. Government is striving for a net-zero emissions economy by 2050. A key milestone is to reduce emissions by 50-52% by 2030 (from a 2005 base year).[13]

New York State: The State's Climate Leadership and Community Protection Act (CLCPA) or Climate Law, signed into law on July 18, 2019, sets goals to reduce emissions to 40% below 1990



[12] Scope 1 refers to GHGs emitted by local sources, like the use of diesel or gas. Scope 2 refers to emissions caused by the energy we purchase, like electricity for municipal buildings and lighting (to the extent that it is not sourced from renewable energy).

[13] U.S. Nationally Determined Contribution: https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf

levels by 2030 and then to 85% below 1990 levels in terms of absolute reduction and net-zero (100% net reduction) by 2050.

City of Beacon: Resolution No. 118 of 2020, adopted August 3, 2020, authorizes the City of Beacon to create a climate action plan in order to reduce GHG emissions. At that time, the City Council resolved Beacon would aim to achieve the State's reduction goals for the overall community sooner than the goals outlined by the State. It resolved that the Plan should also:

- Aim to reach zero-emission electricity for the entire community sooner than 2040;
- Research the feasibility of reducing the City's government operations emissions and community emissions more generally to be net zero;
- Ensure that actions recommended are prioritized by highest impact, and do not put any undue burden on residents and taxpayers, particular upon those of lower economic means; and
- Be created with community input.

Note on science-based targets: The best practice in setting emissions reduction targets is to align with scientific consensus on the changes required to keep global warming below 1.5 degrees Celsius above pre-industrial levels.

A science-based target for reducing emissions likely would be significantly higher than the targets established in New York State's Climate Law.[14] In Beacon's case it could call for a 60% reduction or greater. The present Climate Action Plan takes up the City's legislated level of ambition, which is to align with the Climate Law and achieve it on a faster schedule. The Plan uses the most-to-date emissions analysis possible, applying 2021 utility records despite the calculation challenges with using data from that year.

The purpose of this Plan is to identify where the City can have the greatest impact from its operations and achieve the most important changes within its constraints, striving to fulfil our legislated targets.

[14] Sources include High-Impact Action Plan for Beacon provided by ICLEI in 2018

Co-Benefits of Climate Action

Through this plan, City of Beacon strives not only help secure a stable climate but to also assist in providing the benefits of healthier air, savings on energy costs, improved government services, and many other positive side effects that are associated with reducing the municipal carbon footprint.

Cost Savings: In addition to addressing climate change, measures taken to reduce GHG emissions have other important benefits, such as the potential for significant cost savings. Many of the measures in this plan pay for themselves quickly by reducing direct costs, such as fuel or energy used, as well as through reducing indirect costs such as maintenance. For instance, a fleet of smaller and more efficient vehicles is less expensive to purchase and operate, while also being less costly to maintain.

Improving energy efficiency, installing on-site renewables, and other similar measures will also result in lower energy bills for the City, and, therefore, will reduce costs to taxpayers over time. Acting now will also save on costs for repairing damage and otherwise adapting to climate change, especially in the longer term These savings include, for example, reductions in proactive and reactive costs associated with infrastructure damage from more frequent and intense storms.

Resource Security: Another key benefit of climate change mitigation activities is enhanced energy security through reduction in total demand. This will put less strain on the energy system as a whole as we transition to clean renewable energy.

Many of the actions identified here to mitigate GHG emissions will also help the City of Beacon's government adapt to a changing climate. For example, extreme and prolonged heat waves can put considerable strain on the reliability of energy delivery in peak periods, possibly leading to service disruption during times when cooling is most needed. By increasing efficiency across Beacon facilities, this type of service disruption is less likely. Beacon has already begun work towards the installation of solar panels on municipal properties, which allows the City to use more locally-generated clean energy. Doing so supports future resilience by buffering the City from changes to or strains upon the regional grid, both in terms of clean energy mix and variable costs.

Job Creation: The renewable energy industry has become a leading sector in job growth. The U.S. Bureau of Labor Statistics expects solar installers and wind technicians to be the two fastest-growing jobs through 2026. Energy efficiency jobs are also growing rapidly. These climate protection measures in this plan can spur business and job growth during the design, manufacture, and installation of energy efficient technologies and other green sectors.

Air Quality: Climate change mitigation activities, particularly those related to building heating and the vehicle fleet, help to clean the air and therefore improve public health throughout the community. Given the proximity of our community to the highly-traveled Interstate 84, exposure to air pollution from diesel trucks is one of the highest areas of risk for two of Beacon's four census tracts.[15] Some of the other impacts of climate change on public health, which are discussed in the Introduction to this Plan, could also be alleviated through reducing local emissions.

Equity: Research shows that vulnerable populations, such as the elderly or chronically ill, low-income families, and people of color, have higher risk of experiencing impacts of climate change. Beacon's social indicators contribute to its designation as a Disadvantaged Community within New York State, and, as such, must be considered in planning for future actions to reduce negative impacts to the most affected residents.

It is well-documented that climate change exacerbates existing gaps in access to resources, capital, and services.[16] By ameliorating environmental threats and targeting programs and making changes to services or infrastructure before extreme events happen, the City can mitigate the most devastating impacts to already vulnerable populations. Similarly, inequity correlates with greater vulnerability to physical challenges, making many in City of Beacon disproportionately at risk from natural disasters and the impacts of climate change, and often without gaining the same benefits of clean and sustainable infrastructure and support systems. Policies and projects should also consider ways to simultaneously address effects of and systems that perpetuate climate change and inequity.

The Plan indicates which recommended strategies specifically addresses climate equity.

[15] DAC criteria: https://climate.ny.gov/resources/disadvantaged-communities-criteria/

[16] U.S. Department of Treasury Report on "The Impact of Climate Change on American Household Finances" (2023): https://home.treasury.gov/system/files/136/Climate_Change_Household_Finances.pdf

Government Operations Emissions

Emissions from local government operations represent the total emissions produced by government facilities, vehicle fleet, and other government-owned or operated activities. In this way, the local government operations figures represent emissions for which the local government is responsible. Government operations are a subset of total community emissions.

Inventory Methodology: Since the early 1990s, U.S. cities have developed community-wide and local government operations GHG inventories based on accounting protocols created by ICLEI. Known as the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions and the Local Government Operations Protocol, these standards created a credible and defensible methodology, which has since accelerated the number of inventories created and which provides consistency within and across U.S. communities. In 2014, ICLEI partnered with the World Resources Institute and C40 Climate Leadership Group to create the Global Protocol for Community Scale GHG Emissions, which allows communities around the world to compare their emissions footprint.

The City of Beacon used the Local Government Operations Protocol for the 2021 GHG inventory previously described in this report, and ICLEI's ClearPath digital platform for calculating potential reductions from specific actions. More detail on the inventory methodology is available in the City of Beacon's 2021 GHG emissions inventory report,[17] which is published on the City's website.

Note on alternative methodology: The general protocol for local government inventories is to use location-based emissions factors for calculating the emissions associated with the electricity consumed. In Beacon's case, this is a regional grid for upstate New York (eGrid Upstate New York 2021). However, emissions can also be calculated using market-based emissions factors. In Beacon's case the market-based calculation method could better reflect the mix of energy sources in the electricity purchased from the City's utility provider, Central Hudson.

[17] Studies & Reports — City of Beacon (beaconny.gov)

Future inventories may wish to consider the adoption of market-based factors, which would have two main benefits:

1. Market-based calculations would capture emissions associated with Beacon's electricity use based on the percentage of renewable sources, rather than generalizing across multiple utility companies in the Upstate New York region. As of 2024, Central Hudson's energy mix has a lower percentage of renewables than the location-based average (i.e., the electricity is "dirtier" than the regional average).

2. Market-based methodology allows inventories to demonstrate the impact of locally generated solar energy. Currently, Beacon retires renewable energy certificates (RECs) from the solar array at Dennings Point, but in a location-based methodology they cannot be counted as emission reductions.

It should be noted that with the location-based method, actions in communities throughout the region affect the energy mix of the Upstate New York Grid, including Beacon's generation of solar power at Dennings Point. Upstate New York's grid has a particularly low emissions factor due to a high percentage of renewables, and Beacon's use of solar powered electricity is a contributing factor.

Mitigation Cycle: The 2021 GHG inventory provides key information needed to prioritize the City's climate action. It is the first milestone in a full cycle of climate mitigation, and informs the subsequent steps:

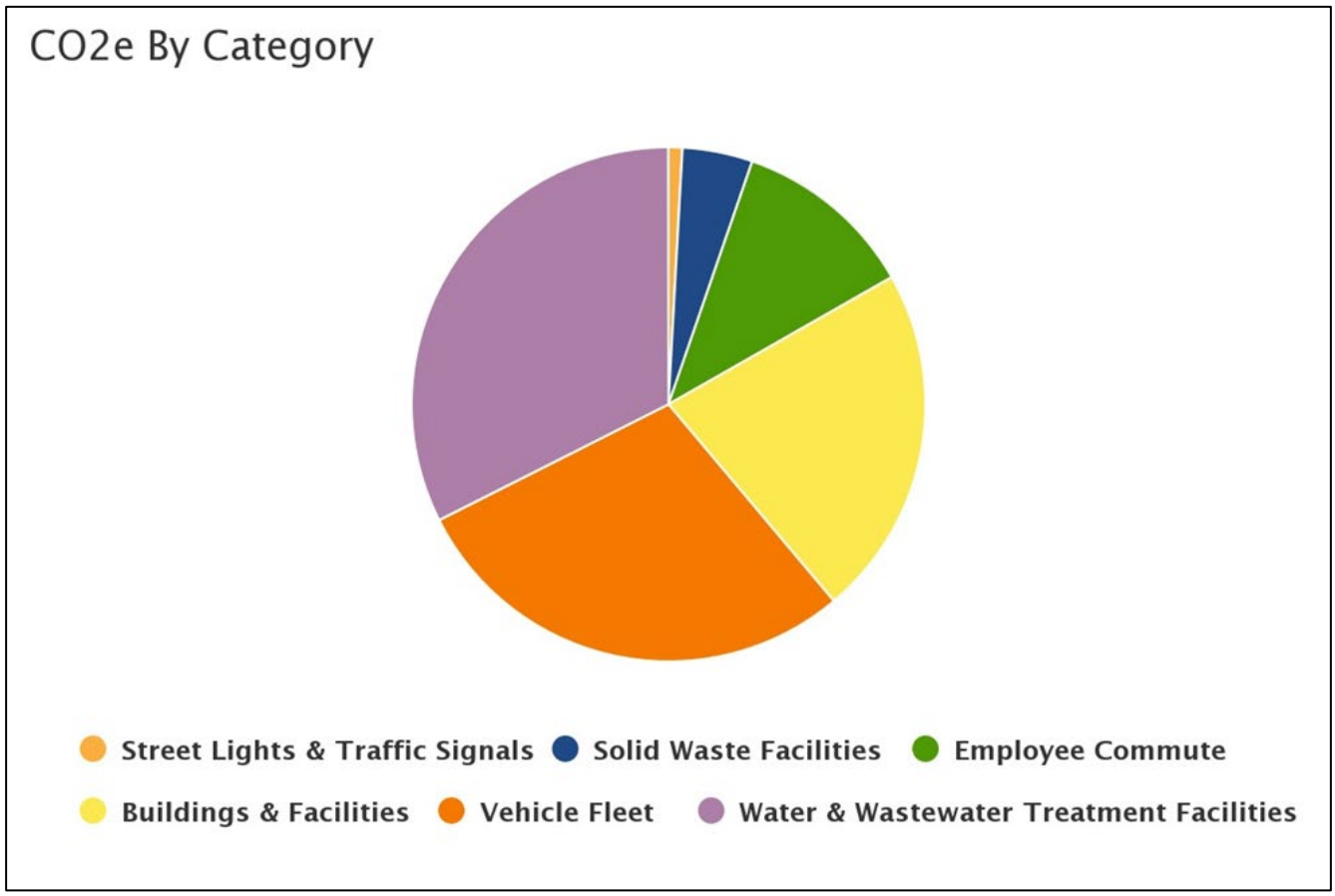
- Forecast emissions based on the same activities and practices;
- Set an emissions-reduction target; and
- Identify specific quantified strategies that can cumulatively meet that target.

The outcomes of the above steps make up the present Climate Action Plan.

Summary of Results: The City of Beacon's 2021 government operations GHG emissions inventory covers its Scope 1 emissions (GHGs emitted by local sources, like the use of diesel or gas), Scope 2 emissions (emissions caused by the energy we purchase, like electricity for municipal buildings and lighting (to the extent that it is not sourced from renewable energy), and two subsets of Scope 3 emissions: employee commutes and solid waste handling.
According to that inventory report, municipal emissions were estimated to be 3,081 metric tons of carbon dioxide equivalent (CO2e) per year. Among the leading contributors to operational emissions in 2021 were methane from the closed landfill at Dennings Point, running the equipment used to treat wastewater, fuel consumed by the City's vehicle fleet, and the use of gas and oil in City buildings.

Actions to reduce emissions from these sectors are therefore a key part of our climate action plan.

Through this inventory, the City determined its overall gross emissions in 2021 equated to **3,081 metric tons of carbon dioxide equivalent ($MTCO_2e$)**. The government operations net emissions, however, were **2,740 ($MTCO_2e$),** due to the Sunlight Beacon solar array at Dennings Point, the energy from which offsets a portion of the emissions from City operations.



Emissions contribution by sector (2021)

- Solid waste: **1,224 MTCO2e** (61% of total emissions);
- Water & wastewater: **630 $MTCO_2e$** (32%);
- Vehicle fleet: **558 $MTCO_2e$** (29%);
- Buildings and facilities: **429 $MTCO_2e$** (22%);
- Employee commute: **223 $MTCO_2e$** (12%); and
- Streetlights and traffic lights: **17 $MTCO_2e$** (1%).

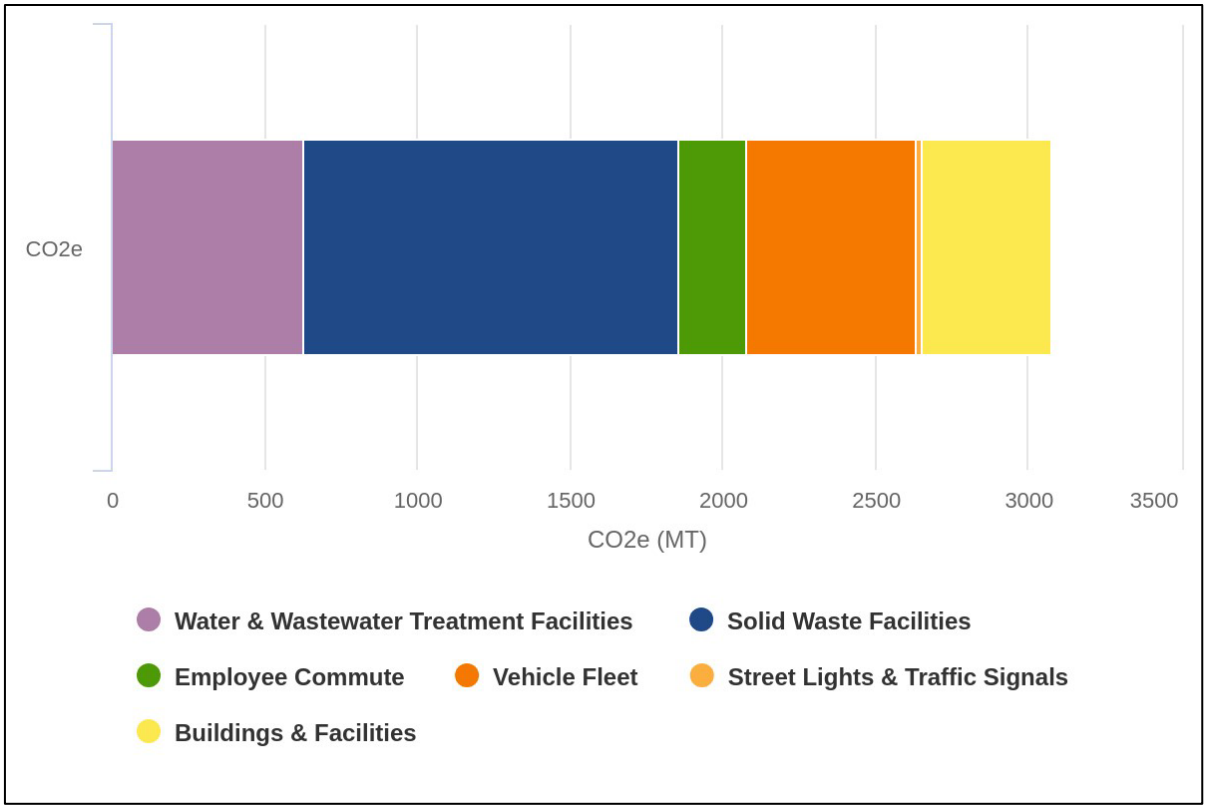


Figure 1: City of Beacon's 2021 Local Government GHG Emissions Inventory

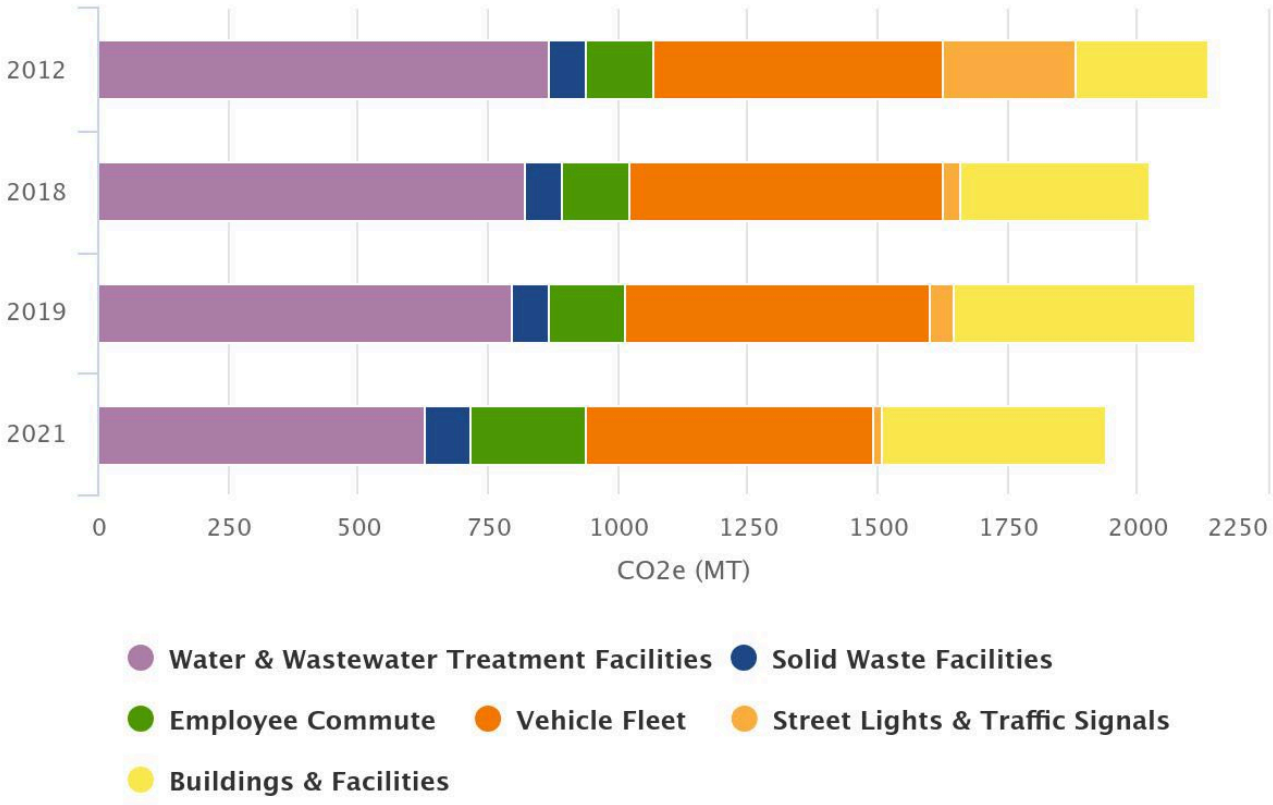
Year-over-year comparison: Excluding one source of municipal emissions in 2021 – the closed landfill at Dennings Point, which was not included in previous inventories – enables us to compare inventory results to those from previous years.

Inventory Comparison By Sector

Comparison of CO2e by sector and year over all official inventories

Year	Buildings & Facilities	Street Lights & Traffic Signals	Vehicle Fleet	Employee Commute	Solid Waste Facilities	Water & Wastewater Treatment Facilities
2012	256	253	558	130	71	868
2018	364	36	602	130	71	821
2019	466	47	585	147	71	797
2021	429	17	556	222	85	630

Without the landfill emissions, the total emissions in 2021 was an estimated 1,943 metric tons CO2e. This is a 9.8% reduction from the 2019 total of 2,115 metric tons CO2.



Business as Usual Scenario: Projected Emissions with No Reduction Action

To provide a basis for comparison as specific reduction actions were considered, the City of Beacon completed an emissions forecast based on projections of current data and expected future trends. The emissions forecast is a "Business-As-Usual" (BAU) forecast, a scenario estimating future emissions levels if no further local action were to take place.

Projected Growth in GHG Emissions

Figure 2 shows the projected growth in GHG emissions in City of Beacon from 2021 to 2030. The emission growth shown in the forecast below is based on population growth, employee count projections, electricity grid decarbonization projections, and changes in automotive fuel efficiency standards. Beacon's Local Government Operations BAU forecast shows that if no action were taken to reduce the emissions trajectory, emissions would still decrease from 3,081 MTCO2e in 2021 to 2,837 MTCO2e by 2030. This would amount to a 7.92% reduction in emissions, as opposed to the target of 31% reduction by 2030.

Figure 2 also compares the reduction target with the business-as-usual forecast.

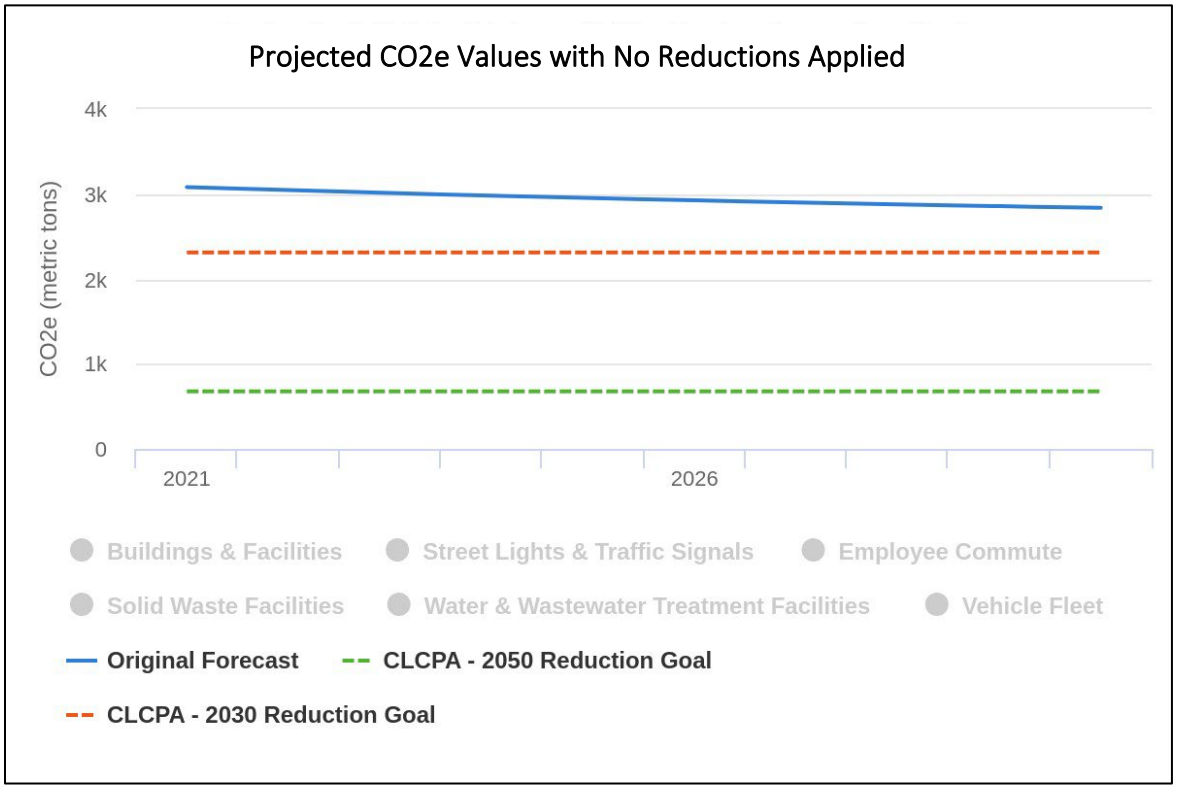
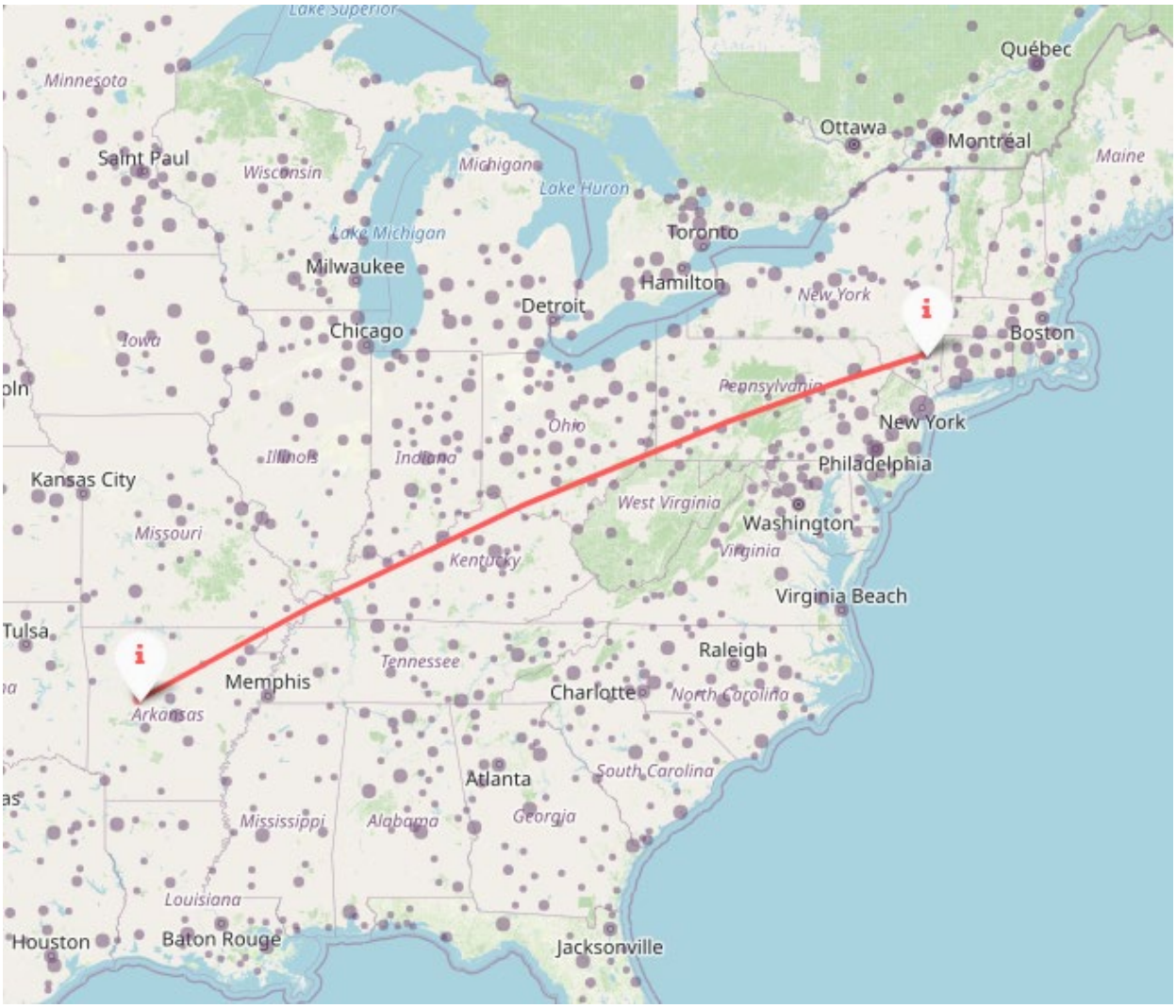


Figure 2: Projected Growth in GHG Emissions from 2021 to 2030

With a high emissions projection, the local climate in Beacon (as part of the area surrounding Poughkeepsie, NY) 60 years from now is anticipated to be most similar to the current climate in Ola, Arkansas.[18] Summers are expected to be 10.2°F (5.7°C) warmer and 2.7% wetter than in Poughkeepsie. Winters are expected to be 10.6°F (5.9°C) warmer and 22.6% wetter.



Projected climate in Poughkeepsie, New York in 60 years[19]

[18] https://fitzlab.shinyapps.io/cityapp/

[19] Source: **Matt Fitzpatrick** at the University of Maryland Center for Environmental Science - Appalachian Lab. https://fitzlab.shinyapps.io/cityapp/

IV. Mitigation Strategy

This section outlines strategies to reduce operational emissions that will collectively allow the City to reach its mitigation targets, as well as the estimated reductions associated with each strategy. The estimates serve as a planning tool to help stay on track to achieving the City's climate action goals, but no given strategy is individually binding.

The City acknowledges the importance of the projects and goals outlined in this Plan, while recognizing that it is not legally committed to any specific actions or targets mentioned in the document. The City retains the discretion to change the anticipated priorities and make decisions based on evolving circumstances and the progress of ongoing efforts. This non-binding Plan allows the City to remain adaptable and responsive to future developments.

Based upon results captured in the 2021 GHG inventory and prioritization consultations with key staff, Beacon's plan focuses on four high-impact areas for climate mitigation: buildings, vehicles, water and wastewater, and solid waste.

In addition to these modelled reduction strategies, the City is also committed to increasing the number and quality of trees in Beacon and to conserving selected parcels of open space, efforts that play an important role in mitigating GHG emissions at the local level and provide many other benefits. While this is not currently feasible to include in modeling, future Inventories and Plans may wish to consider whether or not that has changed in the coming years.

Finally, additional changes are modelled and reflected in the 2030 forecasting but do not depend on specific City initiatives. For example, New York State estimates that EV uptake across the population will reach 16% by 2030. The present Plan includes a reduction measure applying that adoption to the gasoline mileage associated with City of Beacon employees' commute.[20]

Buildings

The City of Beacon's buildings and facilities are powered by a mix of electricity, natural gas, and heating oil. The use of fossil fuels for heat and energy on-site contributes directly to the government's emissions, and the electricity used for lighting, heat, and other operations is partially generated from burning fossil fuels, as well. In 2021, the energy consumed in Beacon-owned and operated buildings and facilities accounted for 22% of the City's total GHG emissions.

Improving the efficiency of buildings and infrastructure will contribute significantly to achieving our GHG reduction targets, while saving government and taxpayer money used on utility costs and by reducing the need for new infrastructure. The City aims to ensure that all future

[20] This reduction measure does not add back in emissions from charging EVs. However, those emissions are expected to be minimal in comparison to gasoline consumption, both due to EVs' efficiency and the low carbon intensity of the New York State grids.

construction projects for municipal facilities are electric and energy-efficient. The City is aware that even fully electric infrastructure relies on fossil fuels (approximately 60% of the energy mix for the NY Upstate region[21]). Increasing the proportion of locally generated solar that powers municipal buildings is a complementary strategy to move closer to net-zero buildings.[22]

The strategies in the table below identify opportunities to update existing facilities to make their management compatible with climate goals.

Installation of Solar Arrays[23]		
Description & benefits	Reduction potential: 4.38% of total 2021 CoB emissions	Co-Benefits: cost savings, resource security
	To meet goals for this category, the City of Beacon could install rooftop solar on three municipal facilities: • Highway Garage; • Administrative building at wastewater treatment facility; and • Lewis Tompkins Hose Firehouse. Solar panels are a clean, renewable source of energy, and would contribute to lower-emissions electricity for municipal operations. Increasing the City's capacity to generate electricity locally is consistent with its policy of using 100% renewable energy for municipal operation electricity each year. Solar panels provide savings on energy costs while reducing the use of fossil fuels. Locally generated solar power also lessens reliance on a larger energy grid, and therefore enhances Beacon's climate resilience.	
KPI	• Solar panels installed on proposed buildings (or alternative buildings with equivalent total generation capacity); and • Successful interconnection with utility.	
Responsible staff	City Administrator	
Proposed timeline	• Highway garage: 2024; • Wastewater administrative building: 2025; and • Firehouse: 2025.	

[21] https://www.epa.gov/egrid/data-explorer

[22] A net-zero building would be all-electric and source the electricity from renewable energy, such as on-site solar.

[23] Per the emissions calculation method used for this Plan (location-based calculations), installing local solar to power municipal buildings and facilities does not appear to have a substantial impact on emissions. (Another calculation method – the market-based method – would reveal greater impact from installing solar, and future GOCAP iterations would benefit from using the market-based calculation method.) Regardless, installing more solar generation supports a cleaner regional grid and more resilience for Beacon's municipal operations.

Electrification of Municipal Buildings		
Description & benefits	Reduction Potential: 3.11% of total 2021 CoB emissions	**Co-Benefits: public health, cost savings, resource security, equity**
	As of May 2024, the City is nearing completion of a project to consolidate three former firehouses into one centralized facility, which has undergone renovations and a 60% expansion to its square footage. The building will now be all-electric (with a mandated exception for a back-up generator) and use a geothermal heat pump system. Heat pumps are a much more efficient way to heat and cool buildings than systems based on burning natural gas or oil. This system will lead to cost savings while using a cleaner source of energy and making improvements to local air quality. These improvements will be especially impactful for residents living near the respective facilities and people who work in the municipal buildings.	
KPI	• Turn on geothermal system; and • Decommission former fire facilities.	
Responsible staff	• City Administrator • Building Inspector • DPW Superintendent	
Proposed timeline	• Lewis Tompkins Hose firehouse conversion: 2024 • Decommission former firehouse facilities: 2024	

Vehicle Fleet

The City of Beacon owns and operates approximately 92 government vehicles, ranging from small passenger cars to heavy trucks and equipment. Besides emitting GHGs, gasoline and diesel also produce air pollutants that, when combusted, reduce local air quality and negatively impact health for employees and residents.

Energy consumed by fleet vehicles accounted for 29% of the City's total GHG emissions in 2021. Transitioning the municipal vehicle fleet to hybrid and electric vehicles (EVs) and other low-carbon fuel sources will contribute significantly to achieving GHG reduction targets, while saving the government money on fuel costs and improving local air quality.

The strategies in the table below focus on opportunities to electrify the vehicle fleet. The strategies for the City's vehicle fleet are informed by a robust fleet assessment conducted for Beacon by ICF in partnership with Central Hudson in 2023-2024.

Conversion of Vehicle Fleet		
Description & benefits	Reduction Potential: 4.25% of total 2021 CoB emissions	Co-Benefits: Public health, cost savings, resource security, and equity
	In recent years, the City of Beacon has made multiple vehicle fleet replacements, including: purchasing of a Ford Mach-E and Chevy Bolt for the Police Department and Wastewater Treatment Plant, respectively. Going forward, the City plans to continue its transition from a gas fleet to battery-electric vehicles at a steady, incremental rate. Hybrid vehicles will be considered if EV versions are not available or practical. Electric vehicles (EVs) are more fuel-efficient and release fewer GHGs than traditional gas vehicles. EVs also save on overall costs in the long run, with electricity being a cheaper "fuel" source than buying gas or diesel, the trend of falling up-front purchase costs of EVs, and continuing sources of government incentives for funding municipal purchases of such. Local air quality is improved with each replacement of a gas vehicle with an EV or hybrid vehicle.	
KPI	• Ensure new vehicle purchases are all-electric or plug-in hybrid, wherever feasible; • Purchase electric vehicles at rate of 5% per year beginning 2026[24]; and • Remove their gas counterparts from the City's fleet.	
Responsible staff	City Administrator	
Proposed timeline	• Mach-E: 2023 (complete); • Chevrolet Bolt EUV: 2024 (complete); • Chevrolet Blazer: 2025; • Peterbilt 220: 2026; • Optimal maintenance of all vehicles; and • 5% fleet-wide transition to BEV per year: 2026-2030.	

[24] 5% surpasses the City's general rate of vehicle replacement. Setting a target for proportion of fleet rather than specific vehicles allows for adapting to changing needs and vehicle condition. A steady rate of gradual conversion also provides time to build up the City's municipal charging infrastructure in a way that keeps pace with electric vehicle adoption, and it allows time for the market to expand for include a selection of electric alternatives for heavier-duty vehicles.

Installation of EV chargers		
Description & benefits	Reduction Potential: N/A	Co-Benefits: Public health, cost savings, and resource security
	While charging stations don't reduce GHG emissions themselves, by increasing EV infrastructure and the number of charging stations in Beacon, using EVs becomes easier, more accessible, and more appealing. These factors combined encourage the purchase and use of EVs by both local governments and residents, and increased usage of EVs in Beacon will reduce local GHG emissions. Moving to electric vehicles will also save costs on gas and increase air quality.	
KPI	EV chargers installed.	
Responsible staff	• City Administrator; and • Head of DPW.	
Proposed timeline	2025, 2028	

Solid Waste

Government-produced waste generates GHGs in a number of ways. Firstly, solid waste from Beacon is hauled to an incinerator in Poughkeepsie – generating emissions in the process – at which point it is burned, thereby releasing GHGs and contributing further to air pollution.

In 2021, the solid waste sector in Beacon accounted for 61% of total operational emissions. The strategy in the table below identifies an opportunity to significantly mitigate methane reductions and make the City's waste management practices more compatible with climate goals.

Capture of Landfill Methane		
Description & benefits	Reduction Potential: 33.98% of total 2021 CoB emissions	Co-Benefits: Public health and equity
	The closed landfill at Dennings Point in Beacon is the City's largest single source of annual emissions, contributing to around 36.9% of emissions in 2021. The City of Beacon hopes to install biofilters, which are expected to mitigate methane emissions by 90% of those emissions each year. Reducing these emissions will lead to better air quality locally. This reduction measure may require outside funding to be secured before implementing, so its implementation is potentially grant-dependent.	
KPI	• Design completed for biofilter system; • Installation of biofilters; and • Commence yearly monitoring to measure emission reduction.	
Responsible staff	City Administrator	
Anticipated timeline	2029	

Water and Wastewater

The City of Beacon owns and operates a Wastewater Treatment Plant (WWTP), located at Dennings Point, and a water treatment plant located at Liberty Street. In 2021, the water and wastewater treatment sector in Beacon accounted for 32% of total operational emissions due to the energy-intensive processes involved in maintaining healthy and clean water for consumption, as well as in complying with environmental standards associated with purification of wastewater.

Wastewater treatment is one of the City's most emission-intensive operations, and the City has identified a short-term opportunity to reduce one source of emissions, the oil-burning heating system.

Electrify WWTP Administrative Building		
Description & benefits	Reduction Potential: 5.49% of total 2021 CoB emissions	Co-Benefits: Public health, cost savings, equity
	The City of Beacon plans to electrify the heating system of its wastewater administrative building by converting to a heat pump. This may involve conducting an energy study beforehand to provide specific recommendations. The new system would reduce the amount of GHG emitted by the building, lessen energy use overall, and therefore save money on energy bills. The replacement will also improve air quality for those who work at the wastewater plant and live nearby.	
KPI	• Conduct energy audit / assessment of administrative building; and • Replace boiler with heat pump.	
Responsible staff	• City Administrator; and • Head of Wastewater Department.	
Proposed timeline	Wastewater Administrative Building: 2025	

The City has identified an opportunity to install heat pumps in one or more of the buildings at the water treatment plant.

Electrify Water Treatment Facility		
Description & benefits	Reduction Potential: 5.49% of total 2021 CoB emissions	Co-Benefits: Public health, cost savings, equity
	The City of Beacon plans to electrify the heating system of its water treatment plant by converting to a heat pump system. This may involve conducting an energy study beforehand to provide specific recommendations. The new system would reduce the amount of GHG emitted by the building, lessen energy use overall, and therefore save money on energy bills. The replacement will also improve air quality for those who work at the water plant and live nearby.	
KPI	• Conduct energy audit / assessment of administrative building; and • Replace current heating and cooling system with heat pump system.	
Responsible staff	• City Administrator; and • Head of Water Department.	
Proposed timeline	Water Treatment Plant: 2026	

Combined Impact of Reduction Strategies

Overall, the Plan includes the following reduction measures:

- Solid waste – natural reduction in landfill methane emissions over time;
- Solid waste – biofiltration system;
- Employee commute – projected EV uptake across New York State;
- Vehicle fleet – optimal vehicle maintenance;
- Vehicle fleet – replace 2016 Chevrolet Impala with 2023 Ford Mach-E, replace 2004 Chevrolet Impala with 2023 Bolt EUV, replace 2016 Chevrolet Impala with 2025 Chevrolet Blazer EV, replace 1990 International dump truck with Peterbilt 220;
- Replace 5% of gas vehicles with EVs each year, beginning in 2025;
- Decommission former firehouse facilities;
- Install geothermal heat pumps at Lewis Tompkins Hose Firehouse, Wastewater Treatment Plant Administrative Building, and water treatment plant; and
- Install solar at: Highway Garage, WWTP Administrative Building, and Lewis Tompkins Hose Firehouse.

Sector	2021 Emissions	2030 Forecasted Emissions
Buildings	429 $MTCO_2e$	252 $MTCO_2e$
Employee commute	223 $MTCO_2e$	207 $MTCO_2e$
Vehicle fleet	558 $MTCO_2e$	426 $MTCO_2e$
Solid waste	1,224 MTCO2e	135 MTCO2e
Water and wastewater	630 $MTCO_2e$	461 $MTCO_2e$
Streetlights and traffic lights	17 $MTCO_2e$	9 $MTCO_2e$
Total	3,081 $MTCO_2e$	1,490 $MTCO_2e$ (represents a 48.36% decrease from 2021 emissions)

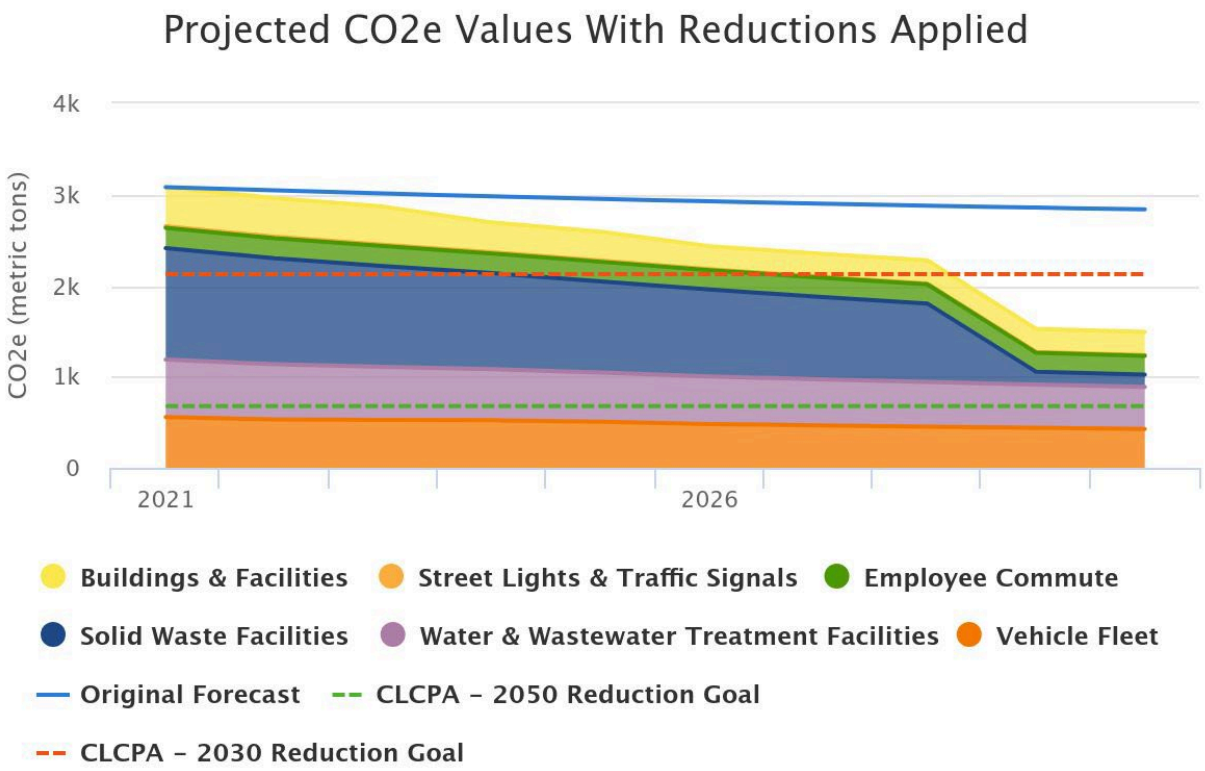


Figure 6: Combined Emissions reductions

V. Monitoring Plan

The City of Beacon intends to monitor progress towards achieving the targets of the Plan. Monitoring enables the City to track the impacts of the actions in the Plan and compare projected reductions in emissions with what is actually realized, help determine whether a given action is meeting expectations, and identify corrective measures, as needed. Monitoring is also an opportunity to understand any barriers to progress and identify best practices or new ways to move forward.

To facilitate ongoing tracking of the City's efforts, the City intends to continue its membership in ICLEI. Beacon has had an annual membership with ICLEI for over five years, which provides for access to technical support and emissions monitoring tools for municipalities. These tools have been essential to the City's ability to complete GHG inventories and to create this Plan.

Increased data collection also will support the City's ability to monitor progress against the Plan. Based on recommendations from ICLEI, the Plan proposes that each City department take an odometer reading for its vehicles on a yearly basis. The records will enable the City to calculate vehicle miles travelled (VMT) each year, improving forecasting of fleetwide emissions. Vehicle-specific VMT will be helpful in making decisions about replacing gas-powered vehicles with EVs.

Monitoring efforts will include periodic updates to the GHG emissions inventory for government operations, and more frequent updates to this Plan that reflect progress on its individual reduction strategies or alternative measures being undertaken. Every two years, the City intends to develop an "action report," which will provide updates on the implementation status of the emissions reduction strategies contained in this Plan. In addition, a "monitoring report" developed every four years will update the inventory of government operations GHG emissions.

Table 8: Monitoring Status

Monitoring Component	Action Reporting	Full Reporting
Overall Strategy: Reporting any changes to initial strategy	Yes	Yes
GHG Emissions Inventories: Provide updated energy consumption and GHG emissions data for the reporting year	No	Yes
Mitigation Action Plans: Report the implementation status (completed, in progress, on hold) of key actions and update their impacts	Yes	Yes

With the approval of this Climate Action Plan in 2024, the first monitoring action report will be due in 2026, and the first full monitoring report with the updated GHG inventory will be due in 2028. Interim updates may be conducted as time and resources allow.

Input from community members will be an important component of the forthcoming action reports and monitoring reports.

VI. Next Steps Implementing the Plan

Some of the actions in the Plan are underway or fully completed (see Implementation Timeline earlier in this document). Specifically, in 2023 the City replaced a gas-powered car with an EV and conducted a 2021 GHG emissions inventory. In 2024, the City replaced a gas-powered car with an EV and installed geothermal heat pumps at the Tomkins Firehouse, as part of a renovation to consolidate three facilities into one.

In the coming months, the City will engage with City staff and other stakeholders to prepare to implement additional reduction strategies, beginning with those scheduled for 2025. Preparations include identifying grants, tax credits, and other funding sources, and gathering bids for services and equipment.

VII. Additional Recommendations

The City received valuable feedback from community members during the comment period on the draft version of the Climate Action Plan, conducted in June 2024. While some suggestions lie outside the scope of the present Plan, they are presented below for consideration in future updates and discussions.

Future updates to GOCAP: The suggestions below could be explored for inclusion in the next iteration of the municipal Climate Action Plan.

1. Add a chapter on adaptation to climate change:

Commenters suggested that the Climate Action Plan should address the City's role in action to adapt to current and forecasted consequences of climate change, such as increased flooding and temperature rise, as well as more severe disaster conditions.

A specific plan for climate adaptation could outline steps to increase the City's resilience, such as information sharing, details on emergency gathering locations, and related resources. The Plan would begin with assessing Beacon's vulnerabilities to climate hazards, and would then create a climate adaptation plan that presents a strategy for protecting local vulnerable assets, improve Beacon's resilience to climate change based on its local physical, economic, and social vulnerabilities.[25] The Plan would ultimately be included as a new chapter in the Government Operations Climate Action Plan.

[25] https://hudsonvalleyregionalcouncil.org/capiadapt/

2. Use second emissions calculation method:

Commenters suggested that future inventories and GOCAPs use a second method of calculating emissions, the market-based method, which would better reflect Beacon's utility company's specific energy mix (percentage of renewable sources in the electricity it provides to Beacon customer accounts), which likely differs from the regional grid average. By using this method, calculations can better indicate the potential reductions from relying on locally generated solar power rather than the mix provided through the utility company.

It would also allow the City's emissions inventories to account for the solar power generated at City facilities and the associated renewable energy credits (RECs) the City retires through the State's trading system. The market-based method allows RECs that we created or purchased to count as absolute emissions reductions.

3. Model emissions reduction from trees and open space:

Conserving natural areas has a high potential for emissions reduction. Commenters noted that trees and green spaces offer powerful ways to draw down carbon from the atmosphere and accelerate our progress towards limiting warming. For this iteration of the GHG inventory and Plan, the City was not able to capture the emissions reduction benefits of its publicly owned trees due to constraints on feasible tools for doing so. However, new tools may make it easier to forecast CO2 absorption from trees in future inventories and Plans.

The City is proud of its historical status as a Tree City USA. The City of Beacon Tree Committee oversees publicly owned trees.

4. Explore battery storage as an emissions reduction strategy:

Storing energy generated through Beacon's solar installations can increase local resiliency by allowing for a more reliable supply of electricity for municipal operations, particularly during grid outages, while also helping to avoid outages. Public funding is becoming more available for battery storage and other technological developments, such as two-way charging for electric vehicles and demand response that will support adoption of renewables and make the electric grid more resilient. The City could consider initiating a study of such tools and potentially reflect findings in future versions of the Climate Action Plan.

5. Extend forecasting to 2050 and create a net-zero target:

To complete the City of Beacon's alignment with New York State's Climate Law and associated milestones, the City will need to plan for ways to align with the target of 85% absolute emissions reduction by 2050 as well as net-zero (100% emissions reductions including offsets if needed beyond 85%) before 2050. Reducing government operations to net zero is an existing legislative commitment by Beacon's City Council.

6. Create management plan for emissions inventory:

A commenter suggested creating a GHG Inventory Management Plan, establishing specific lines of responsibility for maintaining and updating the emissions data in the plan and producing future updates, and formalizing the resources to support inventory management.

Potential community-wide CAP: As one commenter noted, in order for Beacon to become the greenest community in the Hudson Valley, it needs to take action on climate beyond the scope of its own operations. Indeed, as resolved in Beacon City Council resolution 118 of 2020, the City has decided to create a Plan that includes:

- Reducing overall GHG emissions for the overall community in line with the goals set by New York State, on a faster schedule;
- Reaching the State goal of zero emission electricity sooner than 2040;
- Reducing both government operation emissions and community emissions to be net zero;
- Recommendations for action based on highest impact;
- Avoid undue burden on residents/taxpayers of lower income; and
- Input from community members, including assistance from the Conservation Advisory Committee (CAC).

The suggestions below, received from members of the public who reviewed the draft Plan, have potential impacts on community-wide emissions and electricity sources, and they could be explored for inclusion in such a Climate Action Plan.

Increase solar generation	Support installation of solar at each school in the Beacon City School District and continue creating incentives for residential solar
Reduce vehicle miles travelled	Ensure access to reliable transportation via public infrastructure to reduce vehicle emissions
	Improve infrastructure for bike and pedestrian use
Reduce vehicle idling	Set local law on idling[26]
Reduce single-use plastic	Adopt "skip the stuff" policy to prohibit restaurants from providing disposable plastic items in take-out and delivery orders unless requested.[27] "Please consider a bill like this in the climate plan; plastic is a pollutant and emitter, from production to disposal."

[26] Existing NY State regulations: https://afdc.energy.gov/fuels/laws/IR?state=ny

[27] Recent example from New York City: https://www.nyc.gov/content/getstuffdone/pages/single-use-plastic