Eastown Township
Climate Action Plan

Building on the Goals of the Chester County Climate Action Plan

Approved by [Local Authority]

[Date Approved]

[Reference to Public Record]

[Reference to Further Information]

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Executive Summary

With seasonal variations and catastrophic natural disasters becoming more intense and frequent, climate change threatens the health, safety, and overall well-being of communities across the globe. The Commonwealth of Pennsylvania and Easttown Township is no exception. Easttown recognizes a growing need to address its own contribution to climate change, as well as adapt to the impacts that will occur and be exacerbated, absent local greenhouse gas reduction. This Climate Action Plan builds on the results of the 2023 Greenhouse Gas Inventory conducted by the Penn State Local Climate Action Program in 2024 and identifies ways in which GHG reduction actions can further Easttown's ability to adapt to climate change impacts. While this plan is not focused on adaptation, it ensures that GHG measures are not counteractive to Easttown's future resilience and will hopefully be a catalyst for developing a robust strategy towards that end. Easttown's 2023 GHG inventory concluded that the largest emissions contributors in the Township were Transportation and Mobile Sources at 43.05%, Residential Energy at 39.68%, and Commercial Energy at 12.20%. The emissions included were from those generated in the Township and included energy generated outside the Township for use within the Township such as electricity from PECO. Easttown prioritizes reducing their highest emitting sectors of transportation and residential energy use by way of electric vehicles, state/federal carbon reduction funds, residential solar, and residential heat pumps.

Chester County's Climate Action Plan, adopted in October of 2021, serves as a strategic framework for reducing greenhouse gas emissions and promoting environmental resilience across the county. Developed through a collaborative process involving residents, local governments, and sustainability experts, the plan outlines key priorities in energy efficiency, transportation, land use, and community engagement. It provides both guidance and measurable targets to help municipalities like Easttown align their local efforts with broader county-wide climate objectives.

The Chester County Climate Action Plan (CCCAP) goals include:

- ➔ Adopting a plan that takes action to reduce GHG emissions while creating more vibrant, sustainable, and prosperous places to live
- ➔ Reduction Targets (relative to 2005 levels)
  - ◆ 26% by 2025
  - ◆ 80% by 2050
- ➔ Incorporating measures to improve public health that also reduce GHG emissions and increases climate resiliency
- ➔ Adding or improving parks and trails; urban trees and green infrastructure
- ➔ Acting now to reduce runaway costs in the future and provide significant cost savings

Easttown is joining an increasing number of local governments committed to addressing climate change at the local level with particular support to the Chester County Climate Action Plan. Easttown recognizes the risk that climate change poses to its residents and businesses and is acting now to reduce the GHG emissions of both its government operations and the community at-large through the innovative programs laid out in this Climate Action Plan.

Easttown Township has expressed interest in reducing their residential emissions by introducing heat pumps and community solar with prior review from the Environmental Advisory Council, see chapter 6, Climate Adaptation for further details. Easttown also expressed interest in reducing their transportation emissions by investing in/applying for Carbon Reduction Funds through the Pennsylvania Department of Transportation and to introduce electric vehicle charging stations in the Township through state and federal funding such as the National Electric Vehicle Infrastructure (NEVI) formula. This information is attached in chapter 6 for the Township to review and pursue in the coming years to establish themselves as a climate leader in the county.

1. Introduction

Climate change is the greatest environmental challenge of the 21st century, with scientific evidence pointing unequivocally to the role human society plays in causing these changes (cite IPCC). . It poses a serious threat not just to Easttown's natural environment, but also to our jobs and our health. Climate action presents opportunities for creating a healthier, safer, and more equitable low-carbon world. Easttown and other communities can address climate change in ways that create jobs and benefit all residents.

Scientists expect that with the current trends in fossil fuel use, Americans, and more specifically Pennsylvanians, may see more intense heat waves, droughts, rainstorms, floods, wildfires and landslides in the future. These impacts could negatively affect our economy, stress our environment and worsen social, economic, and environmental inequities. Action is required at all levels, and local governments have a unique role to play in building low-carbon communities. In Pennsylvania, temperatures are expected to increase approximately 5.9°F by 2050 from the baseline period (1971-2000).

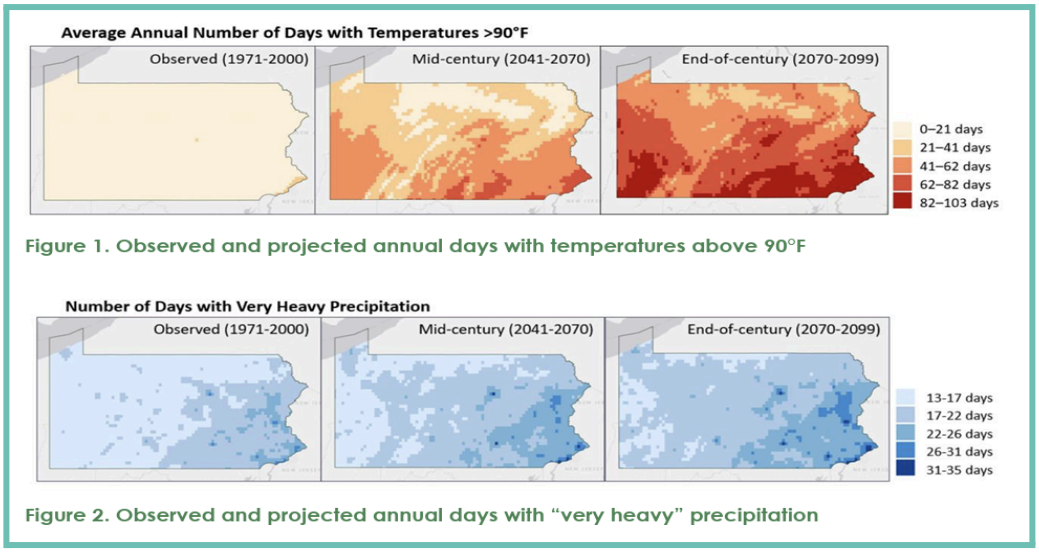

Figure 1. Observed and projected annual days with high temperatures and heavy precipitation.

Similarly, average annual precipitation in Pennsylvania has increased by 8 percent, particularly in winter and spring (PA DEP, 2021). Figure 1 from the CCCAP shows the increase in the difference from average temperature over the past century and Eastern Pennsylvania is no exception.

These impacts are caused by the accumulation of greenhouse gas (GHG) such as carbon dioxide (CO2) and methane (CH_4) in the atmosphere, primarily resulting from burning fossil fuels and land use changes. Although the natural greenhouse effect is needed to keep the earth warm, a human enhanced greenhouse effect with the rapid accumulation of GHG in the atmosphere leads to too much heat and radiation being trapped. Carbon emissions from human activities have continued to rise in recent decades, reaching the highest rates in human history between 2000 and 2010 (Intergovernmental Panel on Climate Change (IPCC), 2014). About half of all carbon dioxide emitted between 1750 and 2010 occurred in the last 40 years. The energy industry and transportation sectors have dominated the rise in emissions. In Pennsylvania, the sectors responsible for the most GHG emissions are industrial at 32%, electricity production at 27%, and transportation at 24% (PA DEP, 2021).

In Easttown, the sectors responsible for the most GHG emissions are:

- ➔ **Transportation and mobile sources** - 43%
- ➔ **Residential Energy consumption** - 40%
- ➔ Commercial energy - 12%

Easttown Township is a largely residential and suburban community, with most residents relying on personal vehicles for daily commuting and errands due to limited access to public transit. This heavy dependence on cars and trucks contributes to the high percentage of transportation-related emissions. Similarly, the substantial share of residential energy use reflects the prevalence of single-family homes with varied heating and cooling needs, many of which rely on fossil fuel-based systems such as natural gas or oil furnaces. The lower emissions from the commercial sector reflect Easttown's relatively small business footprint compared to its residential population.

With the current trajectory of population growth, urbanization, and reliance on personal vehicles, global emissions will only continue to rise. Given the critical impacts of climate change on humanity, the time to act to reduce GHG and our carbon footprint is now. In addition to national and state efforts to make systemic changes that will reduce emissions, local governments can play a powerful role in addressing

climate change. The design of American communities—how we use our land, how we design our buildings, how we get around—greatly impacts the amount of energy we use and the volume of GHG emissions we produce. It is critical that communities like Easttown demonstrate that it is possible to reduce GHG emissions while creating more vibrant and prosperous places to live.

Statewide Climate Action

In 2008, the Pennsylvania Climate Change Act was passed, and requires the Department of Environmental Protection (DEP) to

- ➔ Develop an inventory of GHG emissions and update it annually;
- ➔ Administer a Climate Change Advisory Committee;
- ➔ Set up a voluntary registry of GHG emissions;
- ➔ Prepare a Climate Change Action Plan and Climate Impacts Assessment, both to be updated once every three years.

Pennsylvania Statewide Reduction Targets

(from 2005 levels)

2025: 26%

2050: 80%

The most recent Pennsylvania Climate Impacts Assessment, Greenhouse Gas Inventory, and Climate Action Plan were released in 2021. These documents offer information and guidance for local climate action planning in the Commonwealth. The Climate Impacts Assessment provides a scientific basis for potential statewide impacts of global climate change, which can be used alongside available local data to inform community adaptation efforts. The Climate Action Plan summarizes statewide greenhouse gas emissions, sets an emissions reduction target, and describes potential mitigation and adaptation actions for residents and businesses, as well as local and state governments. These reduction targets are consistent with Executive Order 2019-01 signed by Governor Wolf in 2019 (PA DEP, 2021).

The most recent CCCAP was published in 2021 and includes **Objections and Actions for County Facilities & Operations and Community Engagement.** To ensure consistency with CCCAP, many of the countywide actions were incorporated into this place with respect to Easttown' priorities. Chester County prioritizes **GHG Emissions Reduction**; **Buildings and Energy**; **Agriculture, Food, and Forestry**; **Transportation and**

Land Use; and Waste Management. For purposes of this inaugural CAP, Easttown will prioritize Buildings and Energy and Transportation.

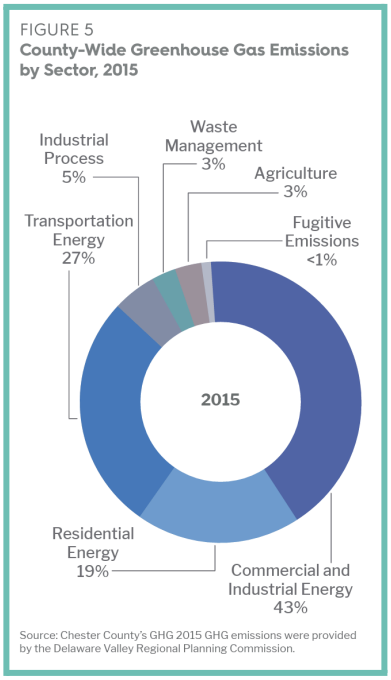

Figure 2: Chester County Total GHG Emissions

Local and Regional Climate Policy

The Chester County Climate Action Plan (CCCAP), adopted in 2021, provides a comprehensive framework for reducing greenhouse gas (GHG) emissions across the county by 80% relative to 2005 levels by the year 2050. This ambitious target aligns with both state and international climate goals and reflects the County's commitment to long-term environmental resilience. To achieve this, the plan identifies four priority action areas—**Buildings & Energy**, **Transportation and Land Use**, **Waste Management**, and **Agriculture, Food, and Forestry**—as the most significant contributors to local emissions. Within each sector, the CCCAP emphasizes community-wide engagement strategies such as increasing access to clean energy options, improving energy efficiency in buildings, expanding low-emission transportation alternatives, reducing organic waste, and promoting sustainable land use practices. The plan underscores the importance of equity, public participation, and inter-municipal collaboration in implementing these solutions, recognizing that meaningful climate action must be inclusive, data-informed, and locally adaptable.

- **Buildings and Energy**
  - Promote sustainable energy, energy efficiency, and communications
  - Establish and support an Environmental and Energy Advisory Board
- **Agriculture, Food, and Forestry**
  - Grow and preserve open spaces
  - Support local food production, the agricultural community, and sustainable agriculture practices
- **Transportation and Land Use**
  - Encourage smart growth balanced with land preservation
  - Promote efficient commuting and transit options
  - Encourage now/low emissions travel and transportation actions

➔ **Waste Management**

- ◆ Increase county waste diversion and other best practices through partnerships and collaboration.

As Easttown aligns with the goals of **Buildings and Energy** and **Transportation,** they can refer to the subsections of the CCCAP above and ensure the goals align with Chester County. As such, the Chester County plan is ambitious but relies on the participation of the Townships within. Figure 2 above shows that in Chester County, **Residential Energy** accounts for **19%** of the total greenhouse gas emissions, and **Transportation** accounts for **27%.** Chester county ranked second lowest out of the counties in the DVRPC region, but the lower population density in Chester County could be a factor, according to the CAP.

Ultimately, the CCCAP aims to reduce the energy footprint in all sectors through increases in energy efficiency and conservation and transitioning to clean, renewable sources of energy. They emphasize that coordination between businesses, organizations, and residents within Chester County are critical, and Easttown will encourage sustainable cooperation and collaboration between stakeholders moving forward.

Purpose and Scope of the Climate Action Plan

Purpose

By creating a clear course of action so that everyone has a role in creating and achieving climate and sustainability goals, our Climate Action Plan drives and coordinates local efforts to reduce emissions through intentional planning and residential actions.

The Climate Action Plan provides a framework for the development and implementation of actions that reduce Easttown's emissions. It does not prioritize specific reduction targets but rather aligns with the goals of the Chester County Climate Action Plan (CCCAP). This provides Easttown with the unique position to engage residents, business leaders, and municipal governments while focusing on the CCCAP sectors of **Buildings and Energy** and **Transportation.**

Scope

This Plan covers objectives and actions for reducing GHG emissions resulting from community-wide sectors within Easttown. It addresses the major sources of emissions and sets forth objectives and actions in the following two sectors that both the Township and community members can implement together to reduce greenhouse gas emissions:

- ➔ **Buildings and Energy**
- ➔ **Transportation**

The Plan creates a framework to document, coordinate, measure, and adapt efforts moving forward. Easttown has already received a list of public speakers who could host workshops tailored to different sustainability opportunities in the community.

Planning Process

Timeline

To develop this Plan, Easttown began by expressing interest in working with the Penn State Local Climate Action Program. Easttown was partnered with students from Penn State Berks and Penn State World Campus and in the Fall 2024 academic semester the students worked with the ICLEI Greenhouse Gas Accounting Software to inventory Easttown's Total 2023 Greenhouse Gas Emissions. A Greenhouse Gas Inventory was compiled and published in the Easttown Township Inventory of Communitywide Greenhouse Gas Emissions - 2023 report. These results were then presented to the Easttown Environmental Advisory Council (EAC) in January 2025. The EAC expressed interest in moving forward with emissions reductions in the **Transportation** and **Buildings and Energy** sectors and with a Climate Action Plan.

Social Equity

Climate equity was a core component of the planning process and will continue to be through implementation. Climate Equity ensures the just distribution of the benefits of climate protection efforts and alleviates unequal burdens created by climate change. Implementation of this concept requires intentional policies and projects that simultaneously address the effects of and the systems that

perpetuate both climate change and inequity. Under the status quo, however, not everyone is given the opportunity to participate and benefit.

Community-Driven Planning Process

In identifying which specific populations should be included in a community driven process, Easttown consulted:

- ➔ The Pennsylvania Department of Environmental Protection's Environmental Justice Viewer
- ➔ Easttown Environmental Advisory Council
- ➔ Easttown's community-driven process included the following steps:
  - ◆ Identifying areas of health disparities, proximity to superfund locations, limited english speaking, and over 64 years old.
  - ◆ Identifying proximity to 100-year floodplain.

Objectives

- ➔ Become a leader in sustainable, smart transportation through innovative partnerships, policies, programs, and technology.
- ➔ Understand potential climate-related risks and mitigate these risks while preparing our community for chronic and extreme weather events.
- ➔ Become a local community leader in electric vehicle charging locations and reduce transportation emissions via state and federal grants and opportunities.
- ➔ Integrate community heat pumps, water heaters, and solar into residential neighborhoods to reduce residential emissions and encourage residents to use clean energy.

The Climate Action Plan offers a robust set of objectives and actions that will address the climate hazard vulnerabilities and build a foundation for Easttown to follow in the coming years to establish the position of a local climate leader. The following targets are suggested to maintain a vibrant, healthy, and safe community for future generations, while improving the quality of life for those who live here today:

→ 2030

- Installation of five additional electric vehicle charging location throughout the Township
- Introduction of an optional residential composting service to reduce organic waste
- Achieve a **20%** reduction in average residential energy costs, driven by improved energy efficiency and utility support

→ 2050

- Achieve smart grid meter participation in **70%** of households and businesses
- Transition **50%** of fossil-based heating system to low-carbon fuels and/or electric heating
- Ensure **100%** of Township-owned light- and heavy-duty vehicles are powered by electricity or carbon-free fuels

2. Co-Benefits of Climate Action

Greenhouse gas reduction and climate resilience are not the only beneficial outcomes of climate action plans. The following outcomes are referred to as “co-benefits,” and they illustrate how taking action on climate change results in a more prosperous community.

Improving Public Health

Climate change mitigation activities, particularly those related to **transportation**, help to clean the air by reducing vehicle emissions and therefore improve public health. Mitigation activities help to engender a greater degree of choice for Easttown residents. This creates more connected and resilient neighborhoods.

Public funds for **transportation** emissions reductions will significantly decrease Easttown’s highest emission sector and reduce air pollution in the area. Easttown has prioritized reducing air pollution and using these funds to reduce hazardous pollutants will benefit the community. Cleaner air days means more people outside and therefore a more active community, increasing public health. The same can be said for adding more electric vehicle charging locations.

Many homes in Pennsylvania run on natural gas or fuel oil and switching to heat pumps and solar would not only reduce the emissions that contribute to air pollution but would also reduce health risks from gas heating and stoves such as irritated airways and exacerbated respiratory problems (Lewis & Visser, 2023). Respiratory exposure to fuel oils can cause nausea, eye irritation, increased blood pressure, headaches, light-headedness and poor coordination - long term exposure may cause kidney damage and reduce the blood’s ability to clot (CDC, 2024).

Saving Money and Reducing Risk

In addition to addressing climate change, measures taken to reduce greenhouse gas emissions have other important co-benefits. The most obvious of these is the potential for significant **cost savings**.

As a largely affluent residential community, Easttown is uniquely poised to invest in energy sources that may be traditionally difficult for lower income communities to afford. The Township is 95% residential and voluntary investments in lower carbon residential energy will provide greater emissions reductions than Township-wide policies that may take several years to draft, pass, and enforce.

These opportunities can include investing in electric vehicles, heat pumps and residential upgrades, rooftop solar, and other opportunities that allow residents to save money in the long term. Initial costs may be high but the ability of residents to invest will allow them to realize a return on investments in the near term and emissions reductions potential.

Enhancing Resource Security

A key strategic side 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. Similarly, demand shifts can help with improving water and food security as well.

Many of the actions identified here to mitigate GHG emissions will also help Easttown's government, businesses, and residents to 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 Eastown, such service disruptions are less likely and Easttown will be able to better cope with those situations. Similarly, climate actions can secure food and water sources and prevent damage and service disruptions to these systems from Easttown.

Easttown's GHG Emissions

The following figure breaks down community-wide emissions in Easttown Township. **Transportation** was calculated via Vehicle Miles Traveled (VMT) from Google EIE Chester County data and downscaled into the proper population data. Residential, commercial, and industrial electricity consumption and natural gas consumption were procured from PECO, the largest electric and natural gas utility provider in southeastern Pennsylvania. Solid waste was procured from the Chester County Municipal Waste

Management Plan and downscaled. Water and wastewater was estimated from PA DEP nitrogen discharge, digester gas combustion, and the energy used in wastewater facilities.

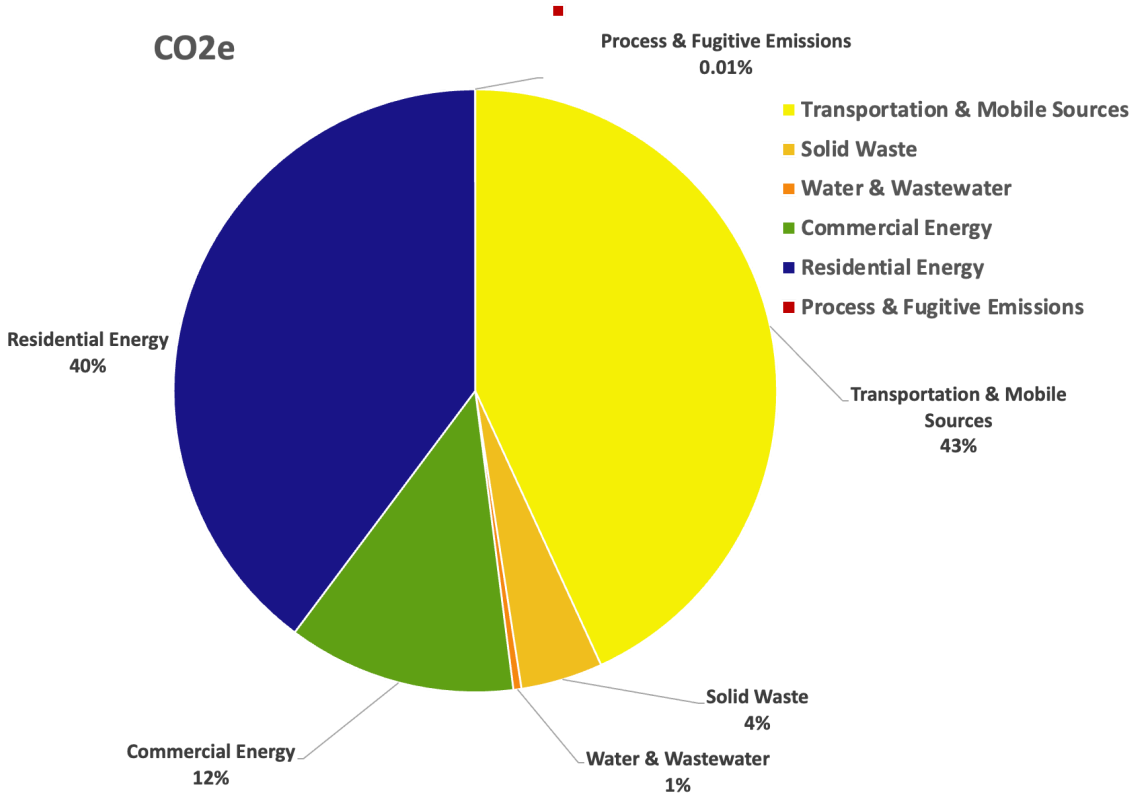

Figure 3: 2023 GHG Inventory for Easttown Township (MTCO2e)

The Easttown Township Climate Action Plan

The summary table in the following chapters identifies the sectors within the Easttown Climate Action Plan, the number of actions within each sector, and the contribution of each sector toward the GHG reduction goal. While the local government cannot address climate change by itself, government policies and practices can dramatically reduce greenhouse gas emissions from a range of sources and help prepare Easttown for the anticipated impacts of climate change. In addition, Easttown will assist residents and businesses in their endeavors to reduce emissions through programs explained in this Plan. By working together, Easttown can not only do its part toward achieving a stable climate - we can reap the benefits of healthier air, lower costs for utilities and services, improved transportation and accessibility, and many other positive side effects of reducing our carbon footprint.

3. Taking Action

In the following chapters, a series of objectives with supporting actions are explored for each emissions sector. An “Objective” is a goal, end result, or target, and an “Action” is a means of realizing the objective. Each sector draws on the actions of the local government, residents, and businesses, although some areas may be largely one or the other.

Emissions Reduction Potential

Calculating expected emissions reductions for each objective and action requires making assumptions about the degree of implementation, technology, and individual behavioral changes several years into the future. The uncertainty associated with these assumptions makes it difficult to assign exact reduction totals to each objective or action. To address this uncertainty and provide a simple but useful reference for reduction potential, a series of symbols and percentage ranges has been devised to represent the emission reductions associated with each objective and its actions:

Symbol	GHG Reduction
	Small Impact
	Moderate Impact
	Significant Impact

Evaluating Co-Benefits

In addition to measuring the GHG reduction potential, each objective and action is also evaluated for its contribution to other benefits such as public health, equity and justice, jobs and prosperity, and environmental conservation. The symbols below will indicate which co-benefits a measure will generate.

Symbol	Co-Benefit
	Supports jobs and economic prosperity
	Improves public health and local environmental quality
	Fosters resource security

Alignment with Chester County Climate Action Plan

The 2021 Chester County Climate Action Plan includes many actions that fall under local government jurisdiction and therefore provide a useful framework for imagining Easttown's next steps in climate action. This Climate Action Plan incorporates as many of those actions as possible and appropriate.

The Township draws on the CCCAP as a guide for implementing their own CAP. Aligning with the goals of the CCCAP will allow the Township to reach their goals while also achieving the goals of the Chester County plan.

The recommendations are outlined by the emissions sector below.

Buildings and Energy

- ➔ Recommended actions to improve residential and commercial energy efficiency to reduce electricity consumption.
  - ◆ Utilize C-PACE (commercial property assessed clean energy) funding from Chester County in conjunction with the PA Sustainable Energy Fund (SEF)
  - ◆ Improve building envelope (e.g., better windows, insulation, and air sealing)
  - ◆ Utilize new and more efficient appliances in residential homes
  - ◆ Complete lighting retrofits (e.g., LED and other advanced technologies)
  - ◆ Upgrade to more efficient heating and cooling systems (e.g., ground-source or air-source heat pumps, variable refrigerant flow, and ductless systems)
  - ◆ Improve residential and commercial energy efficiency (gas)
    - Changes to heating and cooling systems (e.g., enhanced building controls, high-efficiency boilers, and high-efficiency hot water heaters)
    - See Chapter 6, Heat Pumps as a Decarbonization Strategy for more information
  - ◆ Increase distributed on-site solar
    - This strategy includes the installation of on-site distributed solar in both the residential and commercial sectors
    - See Chapter 6, Advancing Solar Solutions and Infrastructure in Easttown Township for more information.
- ➔ Incentivize building electrification
  - ◆ This strategy includes incentivizing building electrification (e.g.,heating and hot water) for the residential and commercial sectors. It also includes a new program focused on beneficial electrification, possibly modeled on the New York Clean Heat program. This includes incentives for converting fuel oil and natural gas use to electricity use in existing buildings and electrification of new buildings when there are large natural gas infrastructure costs or when fuel oil is the alternative.
- ➔ Increase industrial energy efficiency and fuel switching
  - ◆ This strategy includes leveraging DEP programs (e.g., the Energy Efficiency, Environment, and Economics [E4] Initiative) and implementing the types of actions outlined in the Clean Energy Program Plan, which was developed by DEP's Energy Programs Office. This strategy would rely on tools such as virtual training and expanded partnerships to reach smaller and hard-to-reach industries. In addition to energy efficiency measures, industrial opportunities that switch from fuel oil to natural gas and measures to switch from natural gas to electricity are included in this strategy.

Transportation

- ➔ Recommended actions to improve transportation energy efficiency to reduce carbon dioxide emissions
  - ◆ Increase adoption of light-duty electric vehicles
    - This strategy includes increasing the adoption of light-duty electric passenger vehicles, including private and municipal fleet vehicles. Assuming a moderate EV adoption scenario from the Pennsylvania Electric Vehicle Roadmap, the modeling assumes that electric vehicles will represent **20%** of the light-duty market share by 2030, rising to 7**0%** by 2050.
  - ◆ Host Township workshops to educate citizens about electric vehicles
    - Host an EV "meet and greet" in consultation with local car dealerships to expose citizens to electric vehicles
  - ◆ Utilize the connections with the DVRPC to gauge support and additional funding opportunities for the PennDOT carbon reduction funds.
    - See Chapter 6, Electric Vehicles in Easttown Township for more information.
- ➔ Electric Vehicle Charging Locations
  - ◆ Pursue locations in the Township that could have electric vehicle charging locations and determine which are interested in adding chargers.
  - ◆ Utilize NEVI and determine when the next round of funding is available.
- ➔ Building Electric Vehicle Requirements into Building Codes
  - ◆ The addition of new infrastructure in the township could come with electric vehicle charging ports at levels 2 and 3.

4. Residential Buildings

Energy consumed in Residential **Buildings and Energy** accounts for **40%** of Easttown's total GHG emissions. Improving the efficiency of our residential building stock will contribute significantly to achieving Easttown's greenhouse gas reduction target, while saving residents money on utility bills and reducing the need for new infrastructure. This chapter focuses on opportunities to retrofit existing residential **buildings**, increase the quality of new construction, and to ensure that future activities in these sectors are compatible with our community's climate protection goals. The following are some resources to consider aligned with the tables below and the Township could consider hosting workshops or delivering information in newsletters or on social media to residents about the information below.

- ➔ PA Weatherization Assistance Program (WAP)
  - ◆ Increases energy efficiency in homes by reducing energy costs and increasing comfort while safeguarding health and safety
  - ◆ Energy audits conducted to assess conditions in homes and identifies most cost-effective energy saving measures
  - ◆ Low income and higher risks residents given priority
- ➔ Solar Co-Op with Solar United Neighbors
  - ◆ Cost-effective ways to go solar and cooperate with neighbors to integrate solar in the community.
  - ◆ Contact pateam@solarunitedneighbors.org
  - ◆ See Go Solar Guide to understand the essentials for going solar
- ➔ PECO Utility Incentives
  - ◆ PECO offers rebates and discounts to upgrade to modern, energy-efficient ENERGY STAR appliances and heating/cooling equipment
  - ◆ Up to $300 ENERGY STAR Air Source Heat Pump Rebate (electric customers)
  - ◆ Up to $200 ENERGY STAR Central Air Conditioning Rebate (electric customers)
  - ◆ Up to $600 ENERGY STAR Natural Gas Furnace Rebate (natural gas customers)

Objective RB 1 – Existing Residential Buildings

Retrofit existing residential **buildings** and homes to achieve a **10%** reduction in energy use by 2030.

Objective	Chester County Action	Benefits	Reduction Potential
RB-1: Double the number of homes weatherized through existing programs per year	No		
RB-2: Pursue a solar Co-Op to encourage residents to invest in clean energy	No		
RB-3: Increase residential uptake of utility incentives for energy efficiency	Yes		

5. Transportation

Transportation accounts for **43%** of Easttown's total GHG emissions. In addition to greenhouse gases, **transportation** emissions from fossil fuels also produce a host of criteria air pollutants when combusted, reducing local air quality and affecting our health. This chapter focuses on programs and policies to reduce emissions from **transportation** and includes design-oriented approaches as well as active mobility, and expanded electric vehicle charging locations. As with **Residential energy**, the following are resources and suggestions to consider aligned with the tables below and the Township could consider meeting with members of the local leadership to discuss the suggestions and determine how to move forward.

- ➔ Electric Vehicle Charging Locations
  - ◆ Community Buildings Examples
    - Easttown Township Municipal Building
    - Elementary School
    - Library
    - Others as applicable
  - ◆ Installing EV chargers in community locations promotes sustainability, attracts eco-conscious visitors, and supports the local economy, signaling that the community prioritizes a sustainable future. These should include buildings operated by the local government or those that see a frequent gathering of community members, such as coffee shops.
- ➔ Electric Vehicle Accommodations Into Development Requirements
  - ◆ Gauge support for amending the building code to integrate at least three additional EV chargers on new builds in the community.
  - ◆ Building Codes, Parking Ordinances, and Zoning Ordinances for Electric Vehicle Charging Infrastructure from DOE
    - Examples of codes and ordinances that influence EV charging infrastructure.

Objective TR 1 – Electric Vehicles

Retrofit existing residential buildings and homes to achieve a **10%** reduction in **transportation** emissions by 2030.

Objective	Chester County Action	Benefits	Reduction Potential
TR 1 – Install electric vehicle charging locations in three community buildings by 2030.			
TR 2 – Amend Township code to integrate electric vehicle accommodations into development requirements.			

6. Climate Adaptation

This section provides a high-level assessment of potential climate impacts and highlights those greenhouse gas reduction actions that support adaptation for each type of hazard. In the future, Easttown Township should consider completing a comprehensive vulnerability assessment and climate adaptation plan, recognizing that communities experience the impacts of climate change uniquely and plans tailored to a specific place are most effective. This analysis was completed to educate the public on local impacts and inform future efforts.

Anticipated Climate Impacts

Over the last 110 years, according to the Pennsylvania Climate Impacts Assessment Update, the Commonwealth of Pennsylvania has experienced a long-term warming of more than 1.8°F, as well as an increasing amount of precipitation. These temperature and precipitation trends are expected to continue at an accelerated rate, especially if the world continues on its current path of greenhouse gas emissions. The U.S. Climate Explorer , as compared to a 1977-2000 baseline, states that the average annual statewide temperature will likely increase 5.9°F by mid-century and 9.4°F by end-of-century. Compared to the same baseline, average precipitation will likely increase about **8%** by mid-century and **12%** by end-of-century. Furthermore, the Commonwealth is likely to see an increase in the frequency and intensity of extreme heat events and extreme rainfall events. The extent of drought conditions is less predictable at this time, but higher overall temperatures will increase evaporative demand and reduce water availability. These changes will have a variety of ecological, economic, and social impacts on the Commonwealth, particularly related to agriculture, energy, forests, human health, outdoor recreation, water, wetlands and aquatic ecosystems, and coastal resources (PA DEP, 2021). See more details about statewide climate projections and risks in the Pennsylvania Climate Impacts Assessment, updated in 2021.

Rising Temperatures & Heat

The following graph illustrates how average daily temperatures will continue to rise, which could impact agriculture, public health, and other sectors of the community. The CCCAP states that temperatures have increased by more than 1.8F since the early 20th century and are expected to increase by an additional 5.9F by 2050.

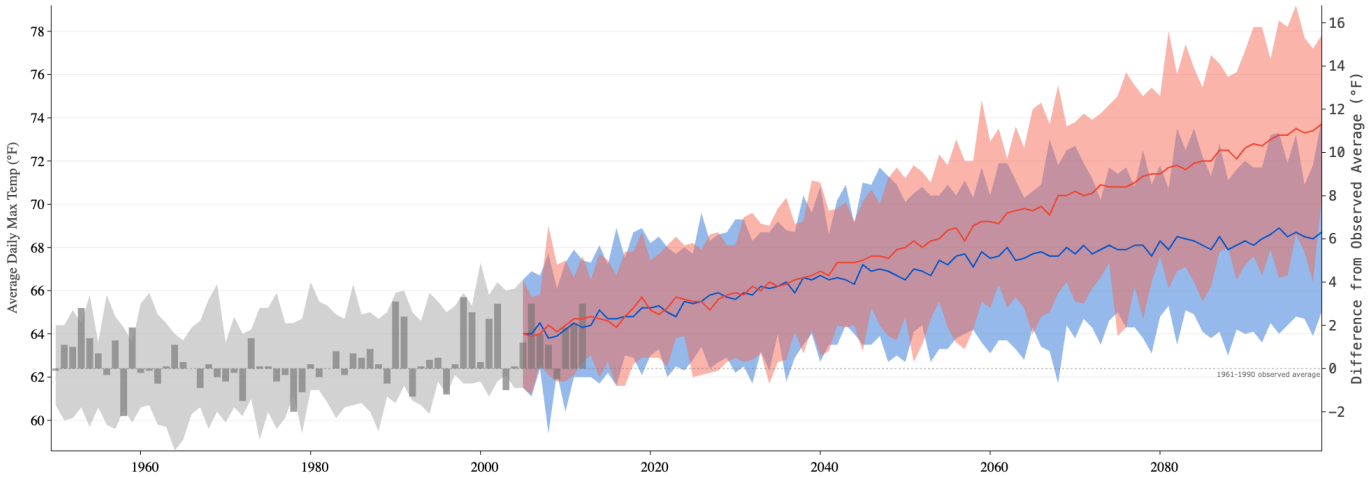

Figure 4: Chester County Average Daily Temperature Between 1950-2090, procured from U.S. Climate Explorer.

Increased Precipitation

The following graph indicates that precipitation will become more variable through 2100. Increased precipitation can lead to devastating floods, increases the risk of landslides, and can overwhelm ill-prepared communities. Easttown should pay particular attention to increased flooding and the danger and damage it can bring to residents. Flash flooding is an ever increasing risk, and during a particularly nasty 2018 the Berwyn Fire Company responded to 39 calls in 24 hours, with 18 of them being water rescues. This storm caused damages to homes in Easttown, required two water rescues and several stranded motorists on Route 30 in Devon. These devastating storms will only continue to increase their power and Easttown must be prepared.

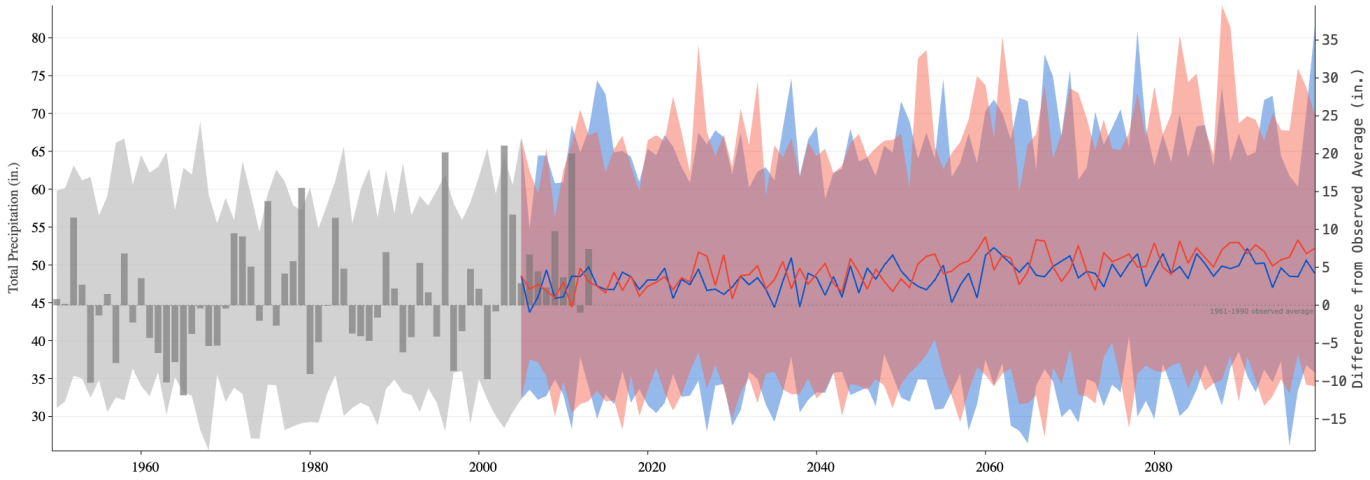

Figure 5: Chester County Total Precipitation Between 1950-2090, procured from U.S. Climate Explorer.

Case Studies in Emissions Reduction

- ➔ PennDOT Carbon Reduction Funds
- ➔ Electric Vehicles in Easttown Township
- ➔ Heat Pumps as a Decarbonization Strategy for Easttown Township
- ➔ Advancing Solar Solutions and Infrastructure in Easttown Township

7. Implementation & Monitoring

Implementing the Climate Action Plan

This Climate Action Plan is intended to focus primarily on the **Transportation** and **Buildings and Energy** emissions sectors of Easttown Township as an opportunity for a starting point in climate action with potentially sizable emissions reductions. This CAP should be considered a living document that is revisited and revised frequently to reflect the evolving nature of Easttown's response to and experience with climate action.

Next Steps in Implementing CAP

Moving forward, there are many opportunities presented and the Township will move forward in a manner that aligns with their specific goals. While the next steps are suggested, they are by no means required and should align to the goals of the Township as fit.

Suggested Next Steps

2025

- ➔ Prepare opinions on the Climate Action Plan, discuss priorities for the Township
  - ◆ What works well?
  - ◆ What needs to be reworked?
  - ◆ What wasn't included but is a priority?

2026

- ➔ Encourage large-scale solar and other residential energy-efficiency measures.
- ➔ Publish progress report on *all* sustainability actions within the Township over the previous year.
  - ◆ This can include: Initiatives passed by the EAC, large scale solar additions, compositing initiatives, library workshops, small reduction opportunities.

2027

- ➔ Consider conducting 2025 Greenhouse Gas Inventory to determine what reduction (if any) is happening in the Township.
- ➔ Continue to publish sustainability actions for the Township.

2028

- ➔ Assess results of 2025 Greenhouse Gas Inventory, begin moving forward based on results of that.
- ➔ Publish progress report.

2029

- ➔ Consider updating the Climate Action Plan based on the results of the 2025 Greenhouse Gas Inventory. Compare results and build a more in-depth and detailed CAP focusing on all sectors of the GHG.
- ➔ Publish progress report.

2030

- ➔ Consider publishing updated GHG inventory and thorough CAP in conjunction with the updated Chester County Climate Action Plan.
    - ◆ Publish previous progress reports with the CAP.

8. Conclusion

Easttown is uniquely poised to take action on climate change and can begin immediately to work with residents, business owners, and other partners around the community to reduce emissions through efficiency improvements while envisioning its role in the transition to a lower carbon economy. . This initial climate action can provide a strong foundation for Easttown to protect the health and wellbeing of its residents while aligning with the goals of the Chester County Climate Action Plan. The suggested case studies in Chapter 6 provide Easttown with concrete opportunities to pursue. Establishing a monitoring process enables Easttown to track the impacts of the actions included in the plan and compare estimated reductions and benefits with those realized. This process is also an opportunity to understand barriers to implementation and identify best practices or new opportunities in moving forward. Taking specific actions and planning ahead for the future provide an opportunity to address the significant challenge of environmental sustainability while ensuring a thriving Easttown.

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