



PHILADELPHIA CLIMATE ACTION PLAYBOOK

EXECUTIVE SUMMARY

Introduction

In 2015, the world's nations came together in Paris to acknowledge the reality of climate change. People were already feeling the impact: hotter summers, increased precipitation, and stronger storms. 196 countries committed to reducing greenhouse gas (GHG) emissions to limit these impacts. These commitments are known as the Paris Climate Agreement (Paris Agreement).

The City of Philadelphia (the City) is committed to meeting the goals of the Paris Agreement. The Philadelphia Climate Action Playbook (the Playbook) outlines actions the City is taking to meet these goals. It also outlines actions the City is taking to respond to the impacts that already have and will occur. Continuing to emit carbon as usual will have devastating impacts on our planet and our city. It will take commitment and collaboration from many stakeholders to meet our climate goals. But, together, we can work to build a more climate resilient Philadelphia.

This summary guide walks through some of the key goals and outlines the high-level actions included in the Playbook. This guide can be used to navigate the full report. Page numbers throughout this guide will direct you to more in-depth analysis in the report.

What the Playbook IS:

The Playbook outlines the actions Philadelphia is taking to respond to climate change through 2050. It brings together actions from existing plans across City departments. This provides a more comprehensive view of how we are working to achieve our climate goals.

The Playbook outlines climate actions in three areas:



Reducing our Contribution to Climate Change

Actions to reduce carbon pollution. These come from three main sources: Buildings and Industry, Transportation, and Waste.



Utilizing Nature as a Solution to Climate Pollution

Actions to remove carbon pollution from the atmosphere.



Adapting to a Changing Climate

Actions to prepare Philadelphia for a hotter, wetter future.



The Playbook also outlines how climate change will impact Philadelphia and where we need to go further to achieve our goals.

What the Playbook IS NOT:

The Playbook is NOT a new plan. The Playbook pulls together proposed actions from existing City plans. There are no new actions provided in the Playbook as of October 15, 2020.

How the Playbook Should Be Used:

The Playbook is a one-stop resource for anyone interested in learning more about climate action in Philadelphia. It is a living document which will be updated as new plans and resources become available.

CARBON POLLUTION AND CLIMATE CHANGE IN PHILADELPHIA: A SNAPSHOT

What is Climate Change?

In the past, the natural carbon cycle kept our planet at a steady temperature. Since the Industrial Revolution, humans have changed this cycle by burning fossil fuels at a rapid rate. Fossil fuels include things like coal, oil, natural gas, and gasoline that we burn for energy and heat. Burning these fuels release gases such as carbon dioxide and methane. These GHGs trap heat in the atmosphere. The rise in GHGs has had major impacts including higher temperatures and more extreme weather patterns.

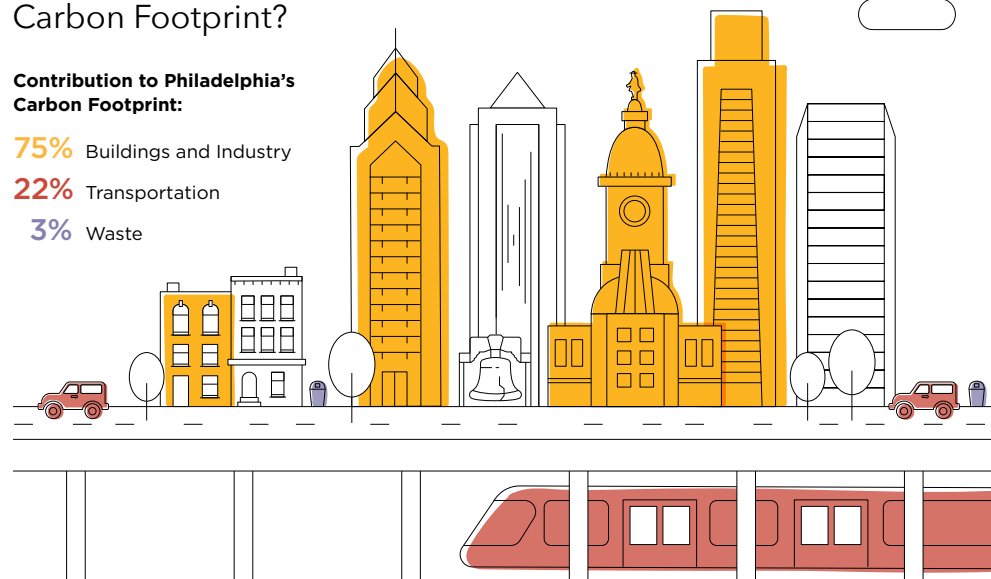
Philadelphia's Sources of Carbon Pollution and Reduction Goals:

The Office of Sustainability measures and tracks Philadelphia's carbon pollution. According to the most recent inventory, Philadelphia's emissions come from three major sources:

What Shapes Philadelphia's Carbon Footprint?

Contribution to Philadelphia's Carbon Footprint:

- 75%** Buildings and Industry
- 22%** Transportation
- 3%** Waste

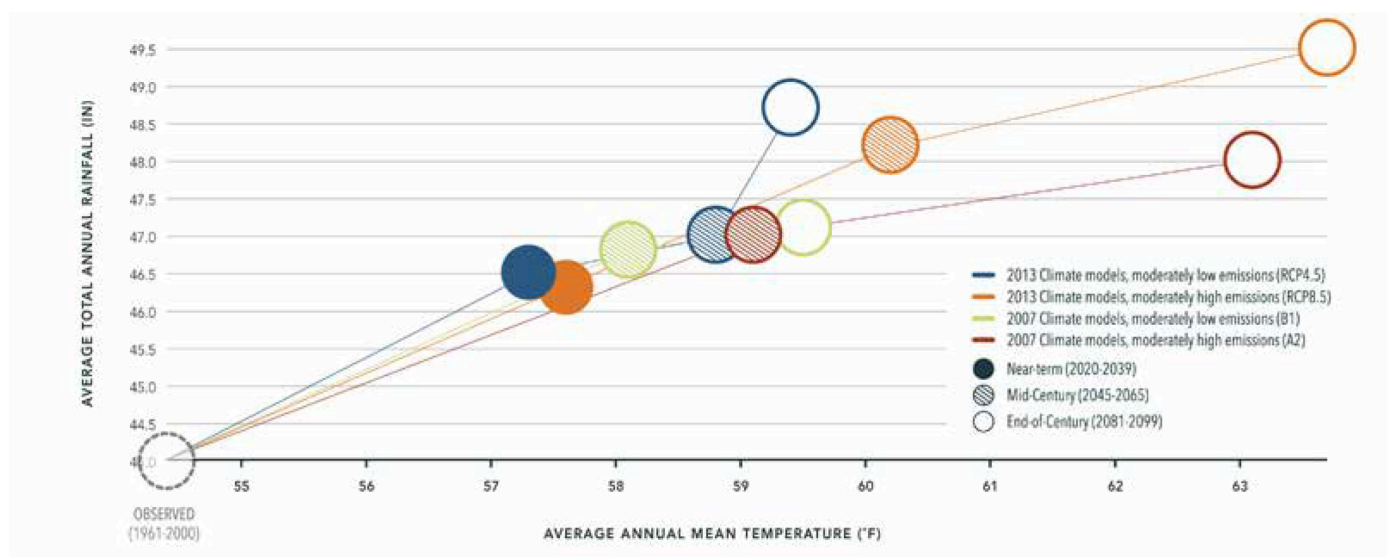




- Buildings and Industry (75% of emissions) – Most buildings are powered by our regional electricity grid. This electricity is produced by a mix of methods, including burning fossil fuels.
- Transportation (22% of emissions) – When vehicles burn diesel or gasoline to power their engines, they release GHGs into the atmosphere.
- Waste (3% of emissions) – Processing waste is energy intensive and releases GHGs and other pollutants into the atmosphere.

Impacts of Climate Change in Philadelphia

PROJECTED CHANGES IN AVERAGE ANNUAL TEMPERATURE AND TOTAL ANNUAL PRECIPITATION IN PHILADELPHIA, UNDER FOUR CARBON EMISSIONS SCENARIOS



Scenarios RCP4.5 and B1 assume relatively low emissions, while RCP8.5 and A2 assume moderately high emissions.⁴

In Philadelphia, climate change is projected to bring:

- Hotter temperatures including prolonged heat waves
- More precipitation such as rainfall and snow
- More frequent storms and flooding.

These changes will have impacts beyond changes to our environment:

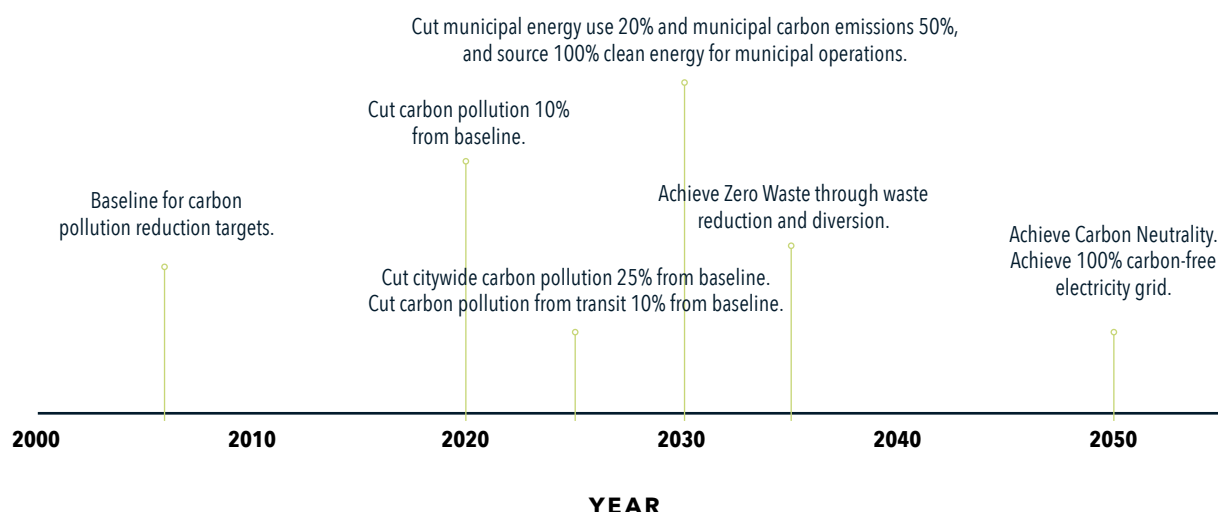
- **EQUITY:** Longstanding challenges of systemic racism have led to differences between neighborhoods. Pollution and industrial areas are most likely to be in Black, Brown, and low-income neighborhoods. The same areas are less likely to have green land cover like parks and gardens. These differences contribute to inequality in health and wellbeing. The impacts of climate change will be felt by these frontline communities first and worst.



- **ASSOCIATED COSTS:** Climate change will increase the costs for the City and residents related to cooling, storm recovery, and health impacts.
- **PUBLIC HEALTH:** Increase the occurrences of heat related illness, asthma, cardiovascular diseases, vector-borne diseases, stress, anxiety, and displacement.
- **LAND LOSS:** Increase the amount of land cover which is permanently inundated (flooded) by sea level rise.

CLIMATE ACTION AREAS

TIMELINE OF GHG REDUCTION GOALS



This Playbook comprises a portfolio of climate actions Philadelphia will pursue in 2020 and beyond. The playbook is divided into three areas:

- **Reducing our Contribution to Climate Change** – Actions to reduce carbon pollution from three main sources: Buildings and Industry, Transportation, and Waste.
- **Utilizing Nature as a Solution to Climate Pollution** – Actions to remove carbon pollution from the atmosphere.
- **Adapting to a Changing Climate** – Actions to prepare Philadelphia for a hotter, wetter future.



HOW TO READ THE PLAYBOOK

REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE	BUILDINGS AND INDUSTRY	SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH			ENVIRONMENT			ECONOMY			Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
							Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings		
			1	Citywide Clean Electricity Supply	Work towards a 100% clean electricity grid through local renewable energy purchasing and generation. Advocate at the State, Regional and Federal level for clean energy production and policies that open markets to clean energy. Explore renewable energy projects in key utilities and infrastructure such as PWD and PHL.	EQ,005	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	n/a

KEY

FULL BENEFIT

PARTIAL BENEFIT

NO BENEFIT

NOT ASSESSED

Refer to the “Key Documents” sections throughout for clickable links to relevant reports.

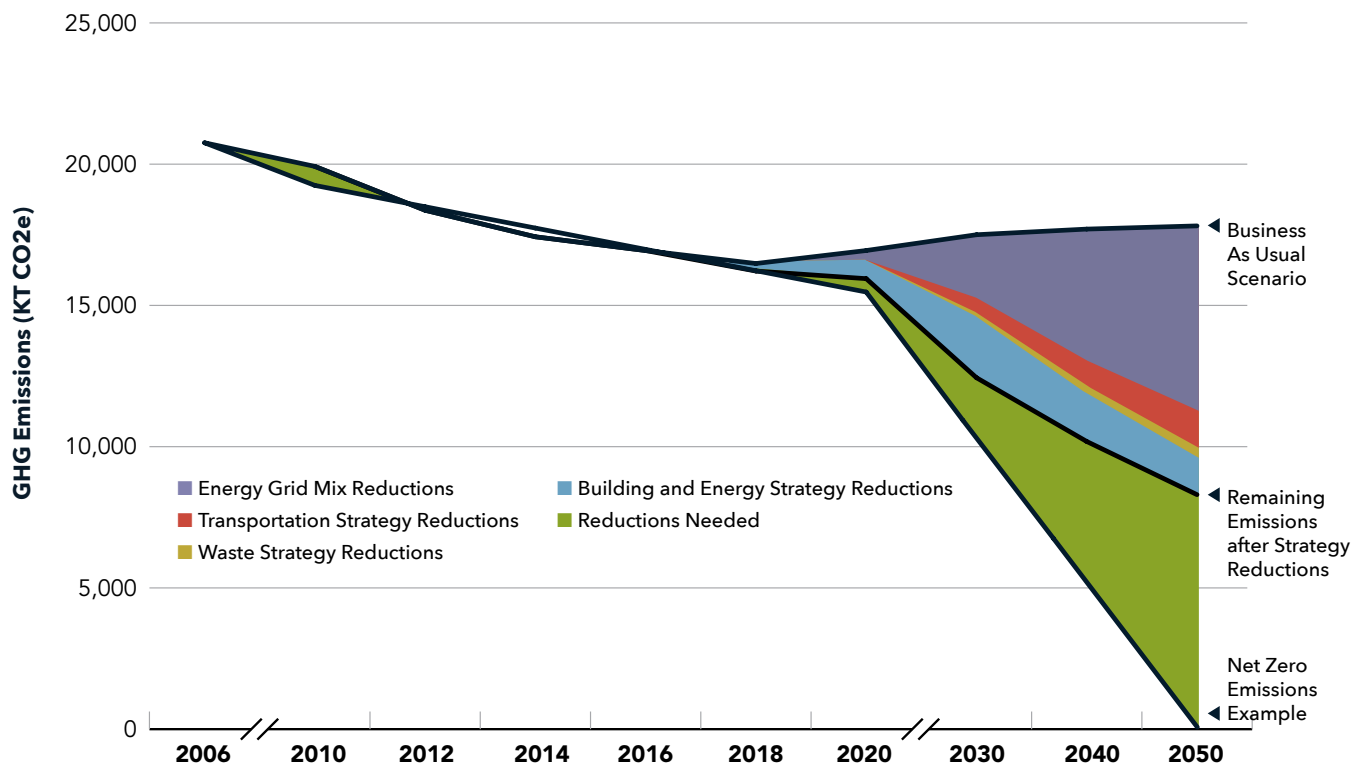
Each chapter contains a matrix of climate actions. For each climate action, the lead and supporting partners are listed. An analysis of each action’s equity, health, environmental, and economic impacts was conducted and the results are shown in the co-benefits matrix to demonstrate how climate actions support the priorities and address the challenges unique to Philadelphia. Below the matrix, further descriptions around co-benefits are included, as well as measurable goals and metrics and what plans they come from. We also outline state and federal actions that can help support or enable Philadelphia’s climate action goals.

Monitoring the Playbook: The OOS conducts a citywide GHG inventory every two years at which time staff will assess the progress of actions included in the Playbook and incorporate new actions that the City is taking to address climate change. These assessments will be published publicly as bi-annual updates.



REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE

The following pages outline actions to reduce our contribution to climate change by eliminating our carbon emissions from three sectors: Buildings and Industry, Transportation, and Waste.



The chart above illustrates the carbon reduction potential from the actions proposed across these sectors. It also shows where the City needs to go further to achieve its goals. Included in each sub-sector heading is an analysis that shows the GHG reduction potential of distinct actions. Assumptions included in this analysis are included in appendix of the full Playbook.

More information on reducing our contribution to climate change can be found in pages 19-31 of the Climate Action Playbook.



Buildings and Industry

Buildings and industry account for 75 percent of Philadelphia's carbon emissions.

	SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH				ENVIRONMENT			ECONOMY				GHG REDUCTION BY 2050 FROM 2006 BASELINE
						Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	
REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE	BUILDINGS AND INDUSTRY	1	Citywide Clean Electricity Supply	Work towards a 100% clean electricity grid through local renewable energy purchasing and generation. Advocate at the State, Regional and Federal level for clean energy production and policies that open markets to clean energy. Explore renewable energy projects in key utilities and infrastructure such as PWD and PHL.	EO, OOS															6491800
		1A	Citywide Solar	Pursue actions to address the barriers to solar installation, including cost and regulations, while promoting rooftop solar and solar in new construction. Continue to advocate on State actions which further enable solar in the city and region.	EO, OOS, PEA															n/a
		1B	Municipal Clean Electricity Supply	Generate or purchase all municipal electricity from renewable sources. Implement rooftop solar photovoltaic installations on City facilities where feasible. Explore opportunities to install geothermal heating, cooling, and hot water systems in City facilities.	EO															n/a

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REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE																			
BUILDINGS AND INDUSTRY																			
SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH			ENVIRONMENT			ECONOMY					
					Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
	2	Energy Efficient Buildings	Increase energy efficiency in the built environment through building tune-up legislation and energy benchmarking. Continue to stay up to date with international building codes. Leverage the Philadelphia Home Repair and Weatherization programs to help low-income residents increase energy efficiency and comfort in their homes. Support the energy efficiency of key utilities and infrastructure.	EO,005, PCPC	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	
	2A	Lower Municipal Energy Use	Reduce municipal energy consumption through implementation of best practices in building management, large scale energy performance contracts, and roll out of LED Street lighting citywide. Continue to ensure energy efficiency is central in Capital and Rebuild projects. Leverage the Energy Efficiency and Sustainability Fund to increase energy efficiency in municipal buildings.	EO	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	
																			1927600
																			n/a

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REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE					BUILDINGS AND INDUSTRY																
SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH			ENVIRONMENT			ECONOMY							
					Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE		
	3	Low Carbon Thermal Energy	Low-carbon thermal energy - Explore and invest in low-carbon alternative energy sources by tracking technological developments, evaluating implementation opportunities, promoting geothermal heating and cooling systems and solar heat systems. Evaluate operations of Philadelphia Gas Works (PGW), the nation's largest municipally owned utility, for potential emissions reductions.	E0, 005															1196900		
	4	Low Carbon Economy	Low Carbon Economy - Hasten the development of a low carbon economy through energy collaboration with large regional businesses and institutions through the Climate Collaborative of Greater Philadelphia. Educate around industrial emissions. Reduce emissions from the port of Philadelphia.	E0, 005, Port															2450000		



Key Goals and Metrics

- Reduce carbon pollution from the City-owned buildings and street lights 50 percent by 2030. (Municipal Energy Master Plan)
- Reduce City operations' energy use 20 percent by 2030. (Municipal Energy Master Plan)
- Generate or purchase 100 percent of all electricity for City operations from renewable resources by 2030. (Municipal Energy Master Plan)
- Provide critical long-term home repair in 25,000 low and moderate income single and multi-family homes by 2026. (PEA)
- Provide energy and building improvements for 2,500 small food and grocery businesses by 2026. (PEA)
- Reduce School District energy use by 30 percent by 2026. (PEA)
- Create 10,000 jobs in energy efficiency and clean energy projects by 2026. (PEA)
- Achieve a clean electricity grid by 2050. (POF)

Timeline and Cost

The Municipal Energy Master Plan (MEMP) outlines strategies with the goal of reducing emissions from the City's built environment 50 percent by 2030. Powering Our Future outlines long-term citywide actions through 2050, and the Clean Energy Vision playbook provides short-term steps to achieve our goals through 2020.

The MEMP also outlines the cost of the actions needed to reach our goal. It estimates that the costs of the actions included will maintain or decrease energy costs for the City. In February 2016, PEA launched its first major initiative, the Philadelphia Energy Campaign, aiming to leverage \$1 billion toward energy efficiency and clean energy in the city over the next ten years.

Key Documents

- [Philadelphia Energy Campaign](#), PEA (2016)
- [Municipal Energy Master Plan](#), EO (2017)
- [Utility Wide Strategic Energy Master Plan](#), PWD (2017)
- [Powering Our Future: A Clean Energy Vision for Philadelphia](#), OOS (2018)
 - [Clean Energy Vision Action Plan](#), OOS (2018)
- [Philadelphia Gas Works Diversification Study](#), PGW (ETD 2020)



Transportation

Transportation accounts for 23 percent of Philadelphia's carbon footprint.

REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE																								
TRANSPORTATION					SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH			ENVIRONMENT			ECONOMY					
										Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
						5	Transit First	Develop a citywide transit plan which expands public and active transit routes and grows regional transit funds. Advocate for development plans and projects which promote public and active transit options.	OTIS, PCPC	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	145800
						5a	High Quality Bus Network	Transform the bus and trolley service through collaboration with SEPTA to increase ridership, reliability, and accessibility. Continue to identify opportunities to improve transit routes such as the Route for Change Roosevelt Boulevard project.	OTIS, OFM	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	n/a
						5b	High Quality Bike Network	Implement the Bicycle Network Plan to increase bike routes in the city to 300 miles. Expand the bike share program IndeGo by exploring opportunities for new stations and routes. Continue to increase the safety of bicycling in the city to raise the number of trips taken by bike by 5%.	OTIS, PCPC	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	n/a

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REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE																							
TRANSPORTATION					SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH			ENVIRONMENT			ECONOMY				
									Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
					6	A Clean Fleet	Continue to transition the municipal fleet to clean and electric vehicles through commitments such as the Climate Mayors Electric Vehicle Purchasing Collaborative and the Clean Fleet Plan. Explore opportunities to reduce idling in the municipal fleet.	OTIS, OFM															1113800
					7	Reduced Emissions from Private Vehicles	Continue to implement recommendations from the Electric Vehicle (EV) Policy Task Force report such as EV charging station installation throughout Philadelphia, including at PHL. Support the safety, accessibility, and reliability of alternative modes of transit to promote a mode shift from vehicles to transit more broadly.	OTIS															11200

Key Goals and Metrics

- Increase the number of residents living within 0.25 miles of frequent transit by 10 percent. (Connect)
- Increase bike share trips by 100 percent and those taken by minority or low-income populations by 120 percent. (Connect)
- Reach goal of zero traffic-related deaths by 2030. (Connect)
- Increase transit ridership in Philadelphia by 10 percent vs. the national trend. (Connect)
- Develop a Municipal Clean Fleet Plan. (Connect)

Timeline and Cost

Connect is Philadelphia's strategic transportation plan that carries through to 2025. OTIS is developing a plan to identify opportunities to expand and support public transit alongside partners in the region.



Key Documents

- [Vision Zero Action Plan](#), OTIS (2017)
- [Connect: Philadelphia's Strategic Transportation Plan](#), OTIS (2018)
- [Energy Action Plan](#), SEPTA (2018)
- [Philadelphia Trail Plan PCPC](#) (2018)
- Municipal Clean Fleet Plan, OOS (Forthcoming)
- Public Transit Plan, OTIS (Forthcoming)

Waste

Waste accounts for only 3 percent of Philadelphia's carbon footprint, yet it is one of the most visible manifestations of carbon consumption and emissions.

REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE					EQUITY			HEALTH			ENVIRONMENT			ECONOMY			GHG REDUCTION BY 2050 FROM 2006 BASELINE				
WASTE		SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	
			8	Reduced Municipal Waste	Identify sustainable procurement opportunities to reduce waste in City government. Monitor and support departmental waste reduction efforts through the Municipal Building Waste Audit Program. Pilot strategies for reducing municipal food waste through the NRDC Food Matters Regional Initiative. Continue to divert organic waste to compost and donation using tools such as the Food Connect app. Work with PADEP and PPR to pilot an urban composting site.	Streets, OOS, Procurement	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	
																					21400

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REDUCING OUR CONTRIBUTION TO CLIMATE CHANGE				EQUITY		HEALTH		ENVIRONMENT		ECONOMY									
SECTOR	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
WASTE	9	Reduced Residential and Business Waste	Continue to work with C40 Cities on the Thriving Cities Initiative to pilot strategies for reducing consumption and expanding circular materials management systems. Engage residents, businesses, and institutions in waste and litter reduction through digital media outreach, grassroots organizing, and education. Promote commercial waste diversion through the Zero Waste Partnership Program. Continue to collect recyclables, and explore the feasibility of citywide compost collection. Launch projects to reduce and divert commercial food waste, prioritizing excess food donation and reuse, as part of the NRDC Food Matters Regional Initiative. Continue to expand the Community Composting Network to support residents' access to composting.	Streets, OOS	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	381300
	10	Reduced Industrial and Utilities Waste	Continue operating the biosolids recycling center through PWD, diverting Aircraft Deicing Fluid from PHL to be used in fertilizer creation. Support PHL in airport composting. Explore further opportunities to reduce waste in key utilities and infrastructure.	PHL, PWD	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	1800



Key Goals and Metrics:

- Continue to implement the Zero Waste and Litter Action Plan, addressing 100 percent of its recommendations.
- Achieve a citywide waste diversion rate of 90 percent, with the remaining 10 percent of waste being processed through waste-to-energy, by 2035.
- Achieve 100 percent compliance in the Municipal Building Waste Audit Program.
- Eliminate food and organic waste from the landfill and waste-to-energy streams.

Timeline and Cost

The City pays an average of \$66 per ton for trash disposal and \$90-110 per ton for recycling. Fluctuations in the price of processing waste and recyclables inform the cost of actions related to GHG emissions reductions from this sector.

The Zero Waste and Litter Action Plan, the City's waste reduction and diversion vision document, outlines the City's Zero Waste strategies and sets the goal of having Philadelphia reach a 90 percent waste diversion rate by 2035, with the remaining 10 percent of waste being processed through waste-to-energy. As this work continues to move forward, new targets that account for current conditions will be set. The City is currently working with the C40 Thriving Cities Initiative to plan for and pilot anti-consumption initiatives and with several other groups to expand circular economy efforts in Philadelphia.

Key Documents

- [The Zero Waste and Litter Action Plan](#), ZWLC (2017)
- [Utility Wide Strategic Energy Master Plan](#), PWD (2017)
- [Municipal Waste Management Plan](#), Streets (2018)
- [Litter Index Report](#), ZWLC (2019)
- [Municipal Building Waste Audit Report](#), ZWLC (2019)



UTILIZING NATURE AS A SOLUTION TO CLIMATE POLLUTION

Land cover like trees and parks helps remove carbon pollution from the atmosphere. Only 20 percent of Philadelphia is tree canopy, while 49 percent of the city could be modified to include more.

UTILIZING NATURE AS A SOLUTION TO CLIMATE POLLUTION					EQUITY			HEALTH		ENVIRONMENT			ECONOMY					
CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
11	Cleaner Public Spaces	Track litter across all neighborhoods through the Litter Index survey and use data to inform waste interventions. Continue to expand the Community Cans public-private partnership program to improve trash can coverage on commercial corridors. Expand residential access to lidded recycling bins, and implement and enforce new regulatory requirements including requirements for Construction and Demolition Waste Plans on all L&I construction, demolition, and alterations permits.	Streets, PWD, OOS, L&I	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	n/a
12	Increased and Preserved Green Space	Continue to increase citywide tree coverage through programs such as TreePhilly and Green City, Clean Waters. Finalize the development of an Urban Forest Strategic Plan to identify opportunities to further incorporate vegetation and tree coverage equitably throughout the city.	OTIS, OOS, PWD, PPR	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	n/a

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	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH				ENVIRONMENT			ECONOMY			Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
					Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness		
UTILIZING NATURE AS A SOLUTION TO CLIMATE POLLUTION	13	City Wide Composting	Continue to explore the feasibility of citywide compost collection. Launch Community Composting Network to expand residents' access to composting, and work with PADEP and PPR to test urban composting site, with potential to create the first urban composting permit for the state of Pennsylvania. Support PHL airport in implementing a composting program. Continue to divert organic waste from PPR facilities to composting. Demonstrate opportunities for food waste diversion to commercial and industrial sectors.	OOS, PHL, PPR															n/a
	14	Carbon Sink Network	Explore the feasibility of further carbon sink options as new technologies and strategies emerge. Advocate for the preservation of current carbon sinks in the region and globally.	OOS															n/a

Key Goals and Metrics

- Develop an Urban Forest Strategic Plan.
- Continue to implement Green City, Clean Waters through 2036.

Timeline and Cost

Green City, Clean Waters is Philadelphia's program to control Combined Sewer Overflow (CSO) primarily using green stormwater infrastructure. The program commitment is more than 1 billion dollars for addressing water quality goals as set by both Pennsylvania and national CSO control policies. These projects will be implemented over a 25-year period, with metrics and milestones developed to measure progress along the way.



Key Documents

- [Green City Clean Waters](#), PWD (2011)
- [Urban Forest Strategic Plan](#) (Forthcoming)
- [Urban Agriculture Master Plan](#) (Forthcoming)
- [Compost Feasibility Study](#) (Forthcoming)

ADAPTING TO A CHANGING CLIMATE

Philadelphia can expect hotter, wetter weather due to climate change, an impact we are already beginning to see. The actions below consider how we will address these changes.

	ADAPTING TO A CHANGING CLIMATE																				
	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY	HEALTH	ENVIRONMENT	ECONOMY													
15	Climate Informed Planning	Create a citywide adaptation roadmap which integrates climate change impacts into future planning. Build upon the municipal adaptation plans in Growing Stronger and PDPH Climate Change and Public Health Plan.	OOS, PCPC, L&I	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>			
16	Climate Prepared Communities	Implement recommendations from the PDPH Climate Change and Health Plan to prepare for public health risks induced by climate change. Explore opportunities to build community resilience to these risks through neighborhood level interventions such as Beat the Heat Hunting Park. Continue to convene the interagency Flood Risk Management Task Force.	OOS, PPR, PDPH	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>			
					Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness	Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE		

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	CODE	CLIMATE ACTION	DESCRIPTION	DEPARTMENT	EQUITY			HEALTH				ENVIRONMENT			ECONOMY			Lead by example	GHG REDUCTION BY 2050 FROM 2006 BASELINE
					Mobility	Community capacity	Poverty Reduction	Wellbeing	Public Safety	Heat Preparedness	Flood Preparedness	Green space	Waste Reduction	Carbon Pollution reduction	Jobs	Cost Savings	Competitiveness		
ADAPTING TO A CHANGING CLIMATE	17	Green Workforce Development	Continue investing in clean energy workforce development through PEA, GreenFutures, and PowerCorpsPHL. Support sustainable business incentives such as the Zero Waste Partnership Program and the sustainable business tax credit.	OOS, PEA, SDP															n/a
	18	Local Food Network	Continue to advocate for and support a local food network where all people have the power to access, own and control our food, land, and labor through FarmPhilly, the Urban Agriculture Master Plan, Get Healthy Philly, and the Food Policy Advisory Council.	FPAC, PPR, PDPH															n/a
	19	Engaged Citizens for Climate Action	Through programs such as Greenworks on the Ground and the Citizens Planning Institute and events such as Philly Spring Cleanup, empower Philadelphia residents to take climate action into their home, work, and community.	OOS, Streets, PCPC, PPR															n/a



Key Goals and Metrics

- Develop Citywide Climate Resiliency Strategy (Forthcoming)
- Complete the Urban Agriculture Strategic Plan (Forthcoming)
- Update the Office of Emergency Management's (OEM) Hazard Mitigation Plan (Forthcoming)

Timeline and Cost

The City has begun its climate adaptation planning process in 2020 and this work will establish further deadlines. Certain adaptation measures are already underway and will continue such as OOS's heat resilience work. The City is currently exploring adaptation pathways and determining the costs of planning and actions related to these pathways.

Key Documents

- [Growing Stronger: Towards a Climate-Ready Philadelphia](#) (2008)
- [Eating Here: Greater Philadelphia's Food System Plan](#) (2011)
- [Good Eats Report](#) (2019)
- Urban Agriculture Strategic Plan (Forthcoming)
- Citywide Climate Change Adaptation Plan (Forthcoming)



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