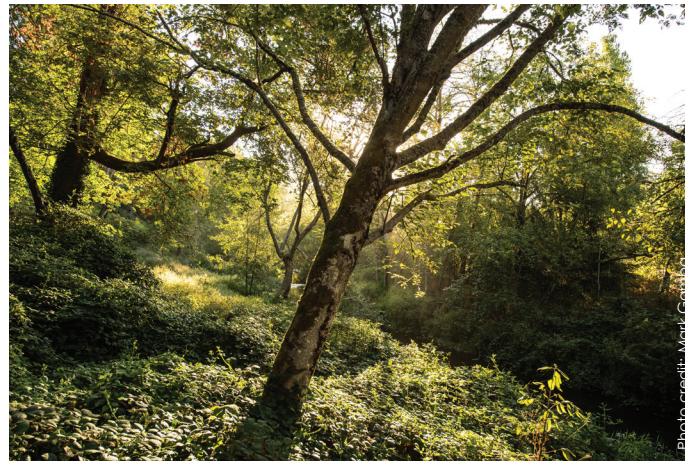




CITY OF MILWAUKIE

# Milwaukie Community Climate Action Plan



## Executive Summary

# Milwaukie has an opportunity to be a leader on climate action

## What is a Climate Action Plan?

Milwaukie's Climate Action Plan is our roadmap to preparing for and reducing the impacts of climate change. Co-created by Milwaukie residents, partners and City staff between 2017-2018, the plan includes opportunities for our government, households, businesses and organizations to join together and address this challenge.

Committing to climate action will allow us to create a stronger local economy, take care of those that might be struggling and preserve what is unique and special about Milwaukie. If we all do our part, we can demonstrate that towns like ours can be climate action leaders.

## Why must we act?

Our climate is changing at an accelerating pace. Climate change is caused by air emissions created from combustion and gases that escape into the atmosphere. These emissions (called greenhouse gases or GHGs) act as a glass greenhouse around the planet, reflecting heat back towards Earth and raising global temperatures.



Our rapidly changing climate impacts our city and the entire planet. We're already witnessing more extreme weather and climate events in our region—hotter summers, more wildfires, increased flooding risk and more. If we do not change, we will face the following:

- **Population growth:** People throughout the United States will likely migrate north, seeking bearable temperatures and available water.
- **Hotter summer temperatures:** By 2100, average summer temperatures will be 10-12°F warmer than today.
- **Increased wildfire impacts:** By 2040, we can expect a 400% to 500% increase in the number of acres burned by wildfire in Oregon—that's around 74 Milwaukies worth of land area! As we've experienced in recent years, this can dramatically reduce our local air quality.
- **Lower water volumes in the summer:** As our mountain ranges experience more rain and less snow, there will be less snowpack to melt and feed our streams and rivers in the spring and summer. By 2040, our waterways will experience about 50% of their current flow in summer, effecting fish, hydroelectric power, and water-based recreation.
- **Higher flooding risk in the winter:** Our waterways, including the Willamette River, will be much more likely to flood due to increased rain volumes and rising sea levels.

Acting together early ensures that we are more empowered and prepared to preserve our health and quality of life for current and future generations.

**Our climate action goal:** By 2040, Milwaukie's buildings will have no net emissions, and by 2050, we will be a fully carbon neutral city.

Our Climate Action Plan sets out an ambitious but achievable goal, providing direction and benchmarks for us to track our progress. This goal is informed by the latest recommendations from the United Nations International Panel on Climate Change (IPCC) and advice from other climate experts. To avoid devastating global outcomes, the IPCC states we must become carbon neutral by 2050, meaning we must reduce or offset the greenhouse gas emissions from our buildings, our vehicles, and production of materials entirely. After 2050, we'll have to keep working to pull greenhouse gases out of the atmosphere and into our soils, our vegetation, our oceans, through mass plantings of trees and new technologies that convert greenhouse gases into minerals.

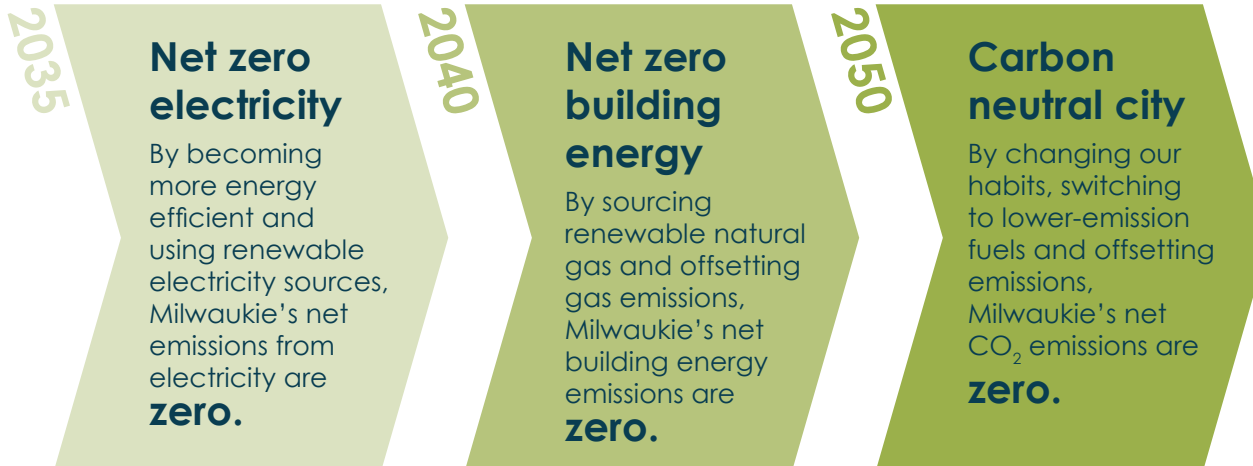
What does this mean for us? We must start now on our journey to carbon neutrality. Along the way, we will meet these key benchmarks:

- By 2035, Milwaukie's buildings will have **no net emissions from electricity**.
- By 2040, Milwaukie's buildings will have **no net emissions from onsite combustion of fuels** (gas, oil and propane).
- By 2050, Milwaukie will be a fully "**carbon neutral**" city.



## CARBON NEUTRAL

Carbon neutral refers to offsetting or sequestering as much carbon as we emit.



# How will we get there? City-led strategies

The City of Milwaukie has committed to taking the following actions across six different climate action areas. These are steps City leadership and staff can take to spearhead efforts, mobilize partners or support regional, collaborative action. Actions fall into three different categories:

- **Mitigation actions** that will reduce the emissions that come from producing energy to make our goods, grow our food, transport us around and keep us warm and cool
- **Adaptation actions** that will prepare us for changing physical conditions
- **Sequestration actions** that capture carbon and pull greenhouse gases out of the atmosphere

## Building Energy and Efficiency

Mitigation	Work with Portland General Electric (PGE) to become “net zero” from electricity by 2035
	Engage NW Natural to develop strategy for becoming “net zero” from natural gas by 2040
	Adopt a commercial and residential building energy score program based on the City of Portland’s program
	Develop micro-grids and energy storage systems in conjunction with purchasing renewable power
	Work with PGE to implement demand-response programs
	Advocate for more energy efficiency State building codes
	Incentivize property owners to encourage multifamily housing energy efficiency upgrades
	Develop a community solar project
Adaptation	Implement solar, battery storage, and micro-grids for resilience in weather events

## Vehicles and fuels

Mitigation	Incentivize workplace electric vehicle charging stations in parking lots
	Support outreach efforts to encourage shift to electric vehicles
	Create a program to install electric vehicle charging infrastructure at multi-family housing complexes
	Convert diesel-powered heavy fleet vehicles to low-carbon fuels
	Optimize the City’s light duty fleet and replace the least efficient vehicles with more efficient vehicles
	Work with Clackamas County, Tri-Met and Metro to develop micro-transit from park-and-ride or light rail station to local destinations
	Work with the school district and waste haulers on fleet transitions
Adaptation	Review the location of the fleet yard and fuel storage to examine flood vulnerability. Look at fuel movement during flood conditions and diversify fuel sources to prepare for climate event-related import challenges.
	Implement intergovernmental agreements or MOUs with other agencies for fleet support in emergencies (e.g. large-scale debris removal)

## Land use and transportation planning

Mitigation	Implement the Safe Access for Everyone (SAFE) street and sidewalk improvement program to expand bike and pedestrian access
	Partner with Metro and TriMet to increase transit service, particularly to underserved employment areas
	Implement a Transportation Management Agency (TMA) with area partners
	Implement “electric vehicle ready” zoning regulations for commercial buildings and multifamily housing
	Incentivize employers to encourage active transportation and transit
	Continue to promote the purchase of sidewalk credits in areas outside of pedestrian corridors and redirect funds to areas needing this infrastructure
	Promote “neighborhood hubs” through Comprehensive Plan policies
	Implement parking pricing in downtown
	Implement variable system development charges to encourage accessory dwelling unit development
Adaptation	Lower parking ratios near high capacity corridors
	Update flood plain maps with local group coordination and funding
	Provide incentives to increase flood storage capacity
	Reclaim riparian areas for flood storage for safety and property protection
Plan for future employment land considering flood risk and natural resources	

## Materials use, purchasing and recovery

Mitigation	Require deconstruction of existing properties or delayed demolition periods
	Promote the repair of equipment and materials and buy used and durable before purchasing new
	Provide education and outreach to avoid edible food waste
	Use less impactful pavement alternatives when paving streets and sidewalks
	Promote existing food waste composting services
	Use mulch and compost in landscaping
	Showcase materials management practices with a demonstration project

## Natural resources

Adaptation	Work with the Tree Board to develop a tree planting program focused on shielding low income neighborhoods from heat
	Review intergovernmental water agreements for supply security
	Identify sewer and waterways vulnerable to flooding
	Adjust code to require on-site stormwater storage and water filtration before release that meets future conditions
	Update stormwater masterplan
	De-pave areas where possible to encourage stormwater filtration
	Introduce more monitoring stations to protect drinking water wells
Develop a potable/drinkable water re-use plan	
Sequestration	Increase tree canopy coverage to 40% by 2040

## Public health and emergency preparedness

Adaptation	Work with the Federal Emergency Management Agency (FEMA) to update flood plain maps
	Work with partners to support community outreach about how to reduce fire and flood risk
	Plan for cooling and air quality relief centers
	Promote more sophisticated home air filtration systems
	Develop public-facing flood and fire risk zone maps and implement signage on streets to raise awareness



## How far do City-led actions get us?

City-led actions in our Climate Action Plan help us reduce our local emissions by 73% compared to our 2016 emissions. As can be seen by the slope of the solid line in the graph to the right, Milwaukee's Climate Action Plan and its actions set us on a course to reduce our local emissions *ahead* of the pace needed to reach carbon neutrality by 2050.

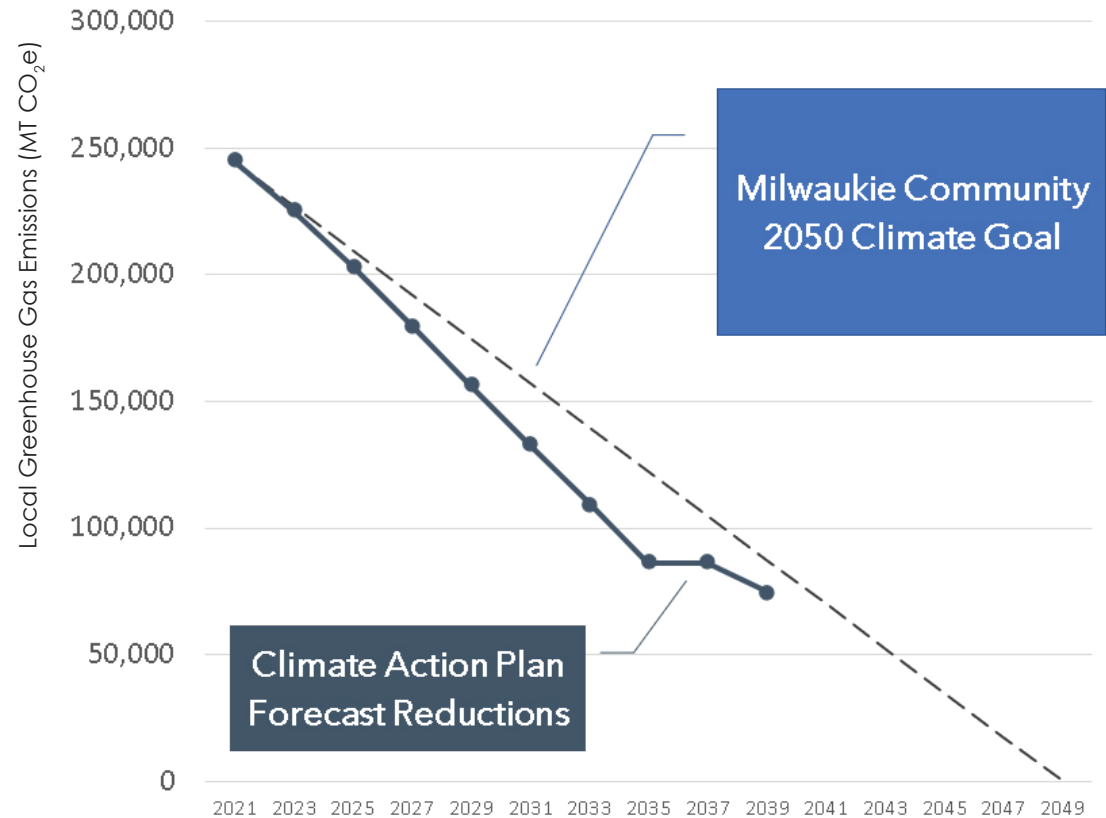
While this is good news, these actions do not get us all the way to our climate action goals. We will need to do more:

- The graph to the right just shows reduction in “local emissions”—in other words, emissions produced here and produced in generating the power we use here. It does not include “imported” emissions—the emissions associated with the goods we buy that are produced elsewhere.

**Changing our consumption habits is a crucial part of taking climate action.**

- This graph oversimplifies when we will see the true benefit of each City-led action. While we've set goals to implement each City-led action in this plan by 2040, the full emissions reduction effect may not be experienced until years after a strategy or policy is put in place. **We need to take urgent action so we don't get farther behind.**
- City-led actions can only get us so far: **Milwaukee households and businesses must also take action** to help us reach our climate action goals and avoid devastating outcomes.

Projected emissions reductions from City-led actions and strategies



# Closing the gap: What can Milwaukie households and organizations do?

Milwaukie's Climate Action Plan contains dozens of strategies for people who live and work in our community to take action. The following figure summarizes some of the most effective steps we can all take to join in the fight against climate change. (For more information on resources for how to take action, see Chapter 4).

## Actions for Milwaukie households and organizations



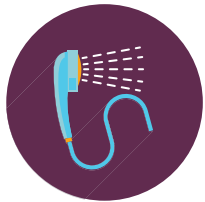
### Buy green electricity from PGE

Switch to renewable and cleaner energy sources to power your home or business



### Start using Smart Energy from NW Natural

If you have natural gas, learn how to reduce your use and offset the rest



### Give your house or business a quick efficiency makeover

Switch to LED light bulbs and put on low flow faucet and shower heads to reduce hot water consumption



### Reduce air travel

Travel less often or consider other, more efficient modes



### Take transit or bike or walk

Choose low-carbon transport; Employers can provide incentives or purchase passes for employees who choose to commute by transit, carpooling, walking or biking



### If you must own a car, buy wisely

If buying or leasing a new vehicle, consider an electric, hybrid or high mileage vehicle and consider the total cost of ownership



### Reduce food waste through meal planning

Shop smart and buy only what you need



### Calculate your household or business carbon footprint

Learn more about where and how you are generating emissions—and get ideas to reduce your impact.





### Offset your impacts

Purchase carbon credits for your household or business impacts to help mitigate emissions elsewhere



### Plant trees in your yard to provide shade and cooling in summer heat

Select climate adapted trees that don't interfere with power lines



### Landscape with drought-resistant, native or well-adapted plants

Consider seeking certified backyard habitat status



### Remove pavement and increase permeable surfaces

De-pave areas wherever possible to encourage stormwater infiltration onsite



### Get involved with the Milwaukie Community Emergency Response Team (CERT)

Join your neighbors and receive training to prepare for potential disasters



### Attend Neighborhood District Association meetings

Learn from and educate others



### Protect and improve your indoor air quality

Consider updating your air filters and taking other steps

# Looking forward: Committing to climate action

Milwaukie's Climate Action Plan is a bold roadmap for making real progress on climate change. Working together to implement this plan, our community can be a leader, demonstrating to other cities the power of collective, coordinated action to address the challenge of our generation and several to follow us.

The City is taking steps to institutionalize climate action, including:

- Hiring a Climate Action and Sustainability Coordinator to oversee implementation of the plan
- Partnering with other local and regional governments to influence local, state and federal climate policy activities
- Integrating the Climate Action Plan into the City's updated Comprehensive Plan
- Looking for opportunities to incorporate climate action within relevant City code
- Committing to updating the Climate Action Plan at least every five years and reviewing our community carbon footprint every two years
- Tracking our progress and making this data accessible to the entire community

We encourage you to come forward with your ideas to strengthen and inform our community's climate action efforts. By acting together, we will make the City of Milwaukie a **flourishing city that is entirely equitable, delightfully livable, and completely sustainable.**

