



## MEMORANDUM

**TO:** Mayor and Council

**THRU:** Stephanie Hayden-Howard, Assistant City Manager

**FROM:** Lucia Athens, Chief Sustainability Officer  
Zach Baumer, Climate Program Manager

**DATE:** September 7, 2021

**SUBJECT:** **Draft Final Austin Climate Equity Plan**

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### Background

In 2014, Austin City Council adopted [Resolution 20140410-024](#), establishing the goal of net-zero community-wide greenhouse gas emissions by 2050. In response, staff worked with stakeholders to create Austin's first Community Climate Plan, adopted by City Council in 2015 through [Resolution 20150604-048](#). The plan included a timeline for updates to occur every five years. Since the original plan was adopted, the Austin community has taken action, making progress toward greenhouse gas emissions reductions as outlined in the plan.

The Austin City Council declared a climate emergency with [Resolution 20190808-078](#) in August of 2019, which called for immediate mobilization to restore a safe climate, accelerate activity towards the City's net-zero goal, and assess setting a net-zero goal sooner than 2050. Staff initiated a community engagement process in the fall of 2019 to revise the Austin Community Climate Plan, considering all goals through the lens of racial equity.

### Process Overview

The Office of Sustainability staff recruited over 120 community members to work with 30 City staff members from 15 departments to co-create the new community-focused climate plan. The process was led by the Office of Sustainability and a community-led steering committee. Five advisory groups — each focusing on a different climate topic area — worked together to create the goals and strategies that make up the new plan. These groups met every other week from December 2019 through October 2020 to collaborate, create, write, and revise the new plan.

In addition, five open community workshops were held in February 2020. At these workshops, residents provided their ideas and input on climate-related priorities. The first draft of the new Austin Climate Equity Plan was released for public comment in September 2020, and through SpeakUp Austin, we received over 1,500 written comments on the draft plan. Following the public comment period, staff has subsequently created three revisions of the plan based on public feedback and input from Boards & Commissions. The Draft Final Climate Equity Plan is now complete and ready for City Council review.

## Centering Equity in the Climate Plan

We know that the climate change effects of extreme weather do not affect everyone equally and that low-income communities and communities of color disproportionately bear the brunt of the impacts. This is why we cannot solve climate change without addressing equity. We must address climate change solutions in the context of racial and environmental justice and center communities of color in our response. Our team chose to lead the Climate Plan revision process with racial equity and attempt to learn from the lived experience of people in our community while exploring solutions to the climate crisis. The focus on recognizing the intersection of racial equity and climate change happened due to Equity Office leadership, Undoing Racism Trainings, and direction from the Joint Sustainability Committee.

The major components of our equity approach included:

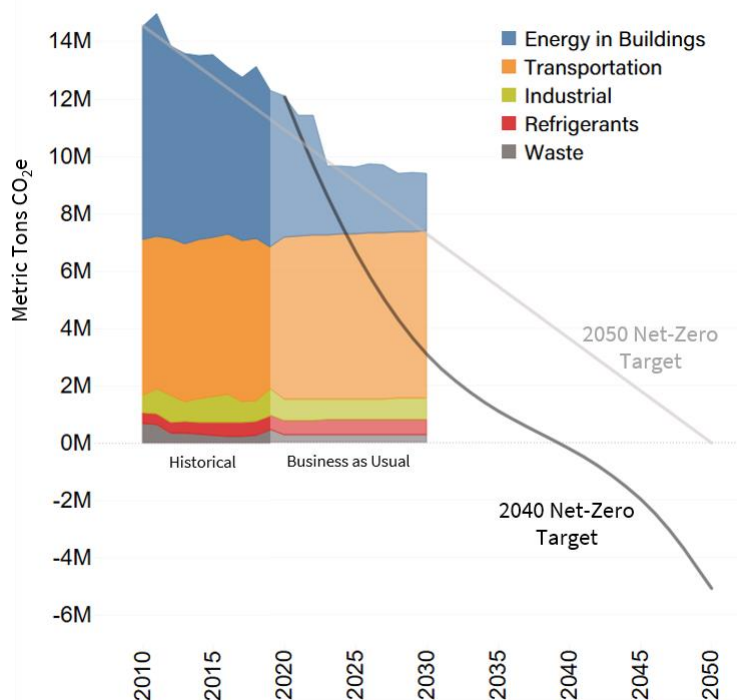
- Framing the narrative using history and data on racial disparities in our City
- Community-ownership approach to Steering Committee
- Creating the first of its kind Community Climate Ambassadors Program
- Recruiting diverse participants
- Equity training workshop for all 150 plan participants
- Equity tool used to screen and review goals and strategies
- Building and maintaining relationships across diverse community groups

## New Proposed Goal

The need for aggressive action is more urgent than ever. Although we have made progress in reducing community-wide greenhouse gas emissions since 2015, Austin is growing rapidly. Along with population and economic growth comes increases in construction activity, energy use, and transportation demand. However, advances in renewable energy and battery technology have lowered costs and improved feasibility, putting more solutions within reach. At the same time, recent science shows that climate change is happening even faster than first thought. Our community is already feeling the impacts today in the form of floods, drought, wildfires, extreme heat, and even severe winter storms.

**Therefore, staff is recommending accelerating the goal of net-zero community-wide greenhouse gas emissions by ten years, to be achieved by 2040 versus the previous goal of 2050. Such a steep decline path towards carbon neutrality means the Austin community would emit zero greenhouse gases into the atmosphere by 2040.** We will most likely reduce direct emissions as much as possible and then employ carbon offsets or carbon dioxide removal to cancel out any remaining emissions. However, this plan recommends that carbon offsets be used as a last resort and not for more than 10% of the goal.

Beyond moving up the net-zero target year from 2050 to 2040, the new target has a more aggressive emissions reduction schedule than a linear or “straight line” target. This steep decline curve was deliberately chosen based on the Austin City Council Climate Emergency declaration and three influential reports: [C40 Cities’ Deadline 2020 report](#), the [Intergovernmental Panel on Climate Change’s \(IPCC\) Global Warming of 1.5°C Special Report](#), and the [UN Environment Programme’s Emissions Gap Report 2019](#).



## Austin Climate Equity Plan Goals and Strategies Overview

There are five sections in the new Climate Equity Plan to address community-wide emissions. Two of these sections are new and were not covered in the first plan. They are:

- Sustainable Buildings
- Transportation and Land Use
- Transportation Electrification
- Food and Product Consumption (new)
- Natural Systems (new)

Collectively, the plan offers 17 goals, which will help us get on the pathway to net-zero emissions by 2040. This includes 74 specific and the following four overarching strategies:

- Green Jobs and Entrepreneurship
- Prioritize Local Community Initiatives
- Regional Collaboration
- Local Carbon Reduction Projects, Carbon Dioxide Removal, and Carbon Offsets

These new goals and strategies — paired with essential community plans like the Austin Energy Resource, Generation and Climate Protection Plan to 2030, Project Connect, Austin Resource Recovery Zero Waste Plan, Austin Strategic Mobility Plan, Austin Strategic Housing Blueprint, and Water Forward — work together as our complete community strategy to address climate change. This proposed plan is designed to dovetail and reinforce these other Plans.



## Previous Draft Versions of the Plan

The first public version of the Draft Austin Climate Equity Plan was published on [SpeakUp Austin](#) in September 2020. We received over 1,500 written comments on the draft plan. These comments covered the full spectrum of public opinions on climate change, from anti-science comments to calls for more aggressive action. Staff provided a survey for residents to complete, with the opportunity to share specific input on sections of the plan. It was reassuring to hear that 79% of respondents were at least somewhat concerned about climate change. In addition, Office of Sustainability Staff presented the plan at 25 different Boards and Commissions from August through October 2020. All comments from these presentations were captured and addressed.

After the first round of comments was addressed, a second version of the plan was created in November 2020. The Steering Committee and Advisory Groups reviewed this version of the plan, and another set of comments was received and addressed.

## Plan Changes resulting from Actions of the Texas Legislature

A third version of the plan was put on hold until the conclusion of the Texas Legislature. Two key bills with the potential to have an impact on the Climate Equity Plan were [HB 17](#) (Deshotel), which aimed at pre-empting cities from discriminating against natural gas infrastructure, and SB 1261 (Birdwell), which sought to pre-empt cities from directly or indirectly regulating greenhouse gas emissions in any way. SB 1261 failed to pass, but HB 17 was signed into law, with a vote in the House of 116 Yeas, 29 Nays, 1 Present, not voting.

HB 17 prohibits the City from:

- Using regulatory actions, such as codes, that limit “utility services,” ban gas, or otherwise require electrification in buildings
- Charging extra fees (e.g., during permitting) on development based on their utility service
- Discouraging the installation of facilities for the delivery or use of a utility based on an energy source

The bill does not prohibit a city or utility from offering incentives, education, encouraging clean energy, or code requirements for all-electric-ready buildings. The Sustainable Buildings Advisory Group met to discuss the new law, and minor changes were made to the plan’s goals and strategies to ensure compliance. The City’s Law Department has also reviewed the revised plan language to confirm that it complies with State law.

### **Next Steps**

The Draft Final Austin Climate Equity Plan, including the changes noted above, is now ready for review and included as an attachment. Staff plans to bring forward an RCA to the September 30, 2021 City Council Meeting to request formal adoption of the Austin Climate Equity Plan.

If you have any questions regarding the information included in this report, please contact Zach Baumer, Climate Program Manager, at [Zach.Baumer@austintexas.gov](mailto:Zach.Baumer@austintexas.gov).

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# AUSTIN CLIMATE EQUITY PLAN





# LAND ACKNOWLEDGEMENT

We wish to recognize and respect Indigenous Peoples as original stewards of the land known as Austin, Texas, and the enduring relationship that exists between Indigenous Peoples and their traditional territories. Recognizing the land is an expression of gratitude and appreciation to those whose territory we reside on and a way of honoring the Indigenous Peoples who have been living and working on the land from time immemorial. Land acknowledgments do not exist in the past tense or historical context. Colonialism is a current and ongoing process, and we need to be mindful that we are participating in it by living on colonized land.

We acknowledge, with respect, that the land known as Texas is the traditional and ancestral homelands of the Tonkawa, the Apache, the Ysleta del Sur Pueblo, the Lipan Apache Tribe, the Texas Band of Yaqui Indians, the Coahuiltecan, and all other tribes not explicitly stated.

Additionally, we acknowledge and pay respects to the Alabama-Coushatta Tribe of Texas, the Kickapoo Tribe of Texas, Carrizo & Comecrudo, Tigua Pueblo, Caddo, Comanche, Kiowa, Wichita, Chickasaw, Waco nations, and all the American Indian and Indigenous Peoples and communities who have been or have become a part of these lands and territories in Texas, here on Turtle Island, the ancestral name for what is now known as North America. Not all Indigenous peoples listed claim Texas as ancestral lands, as many were forcibly relocated to Texas from their ancestral homelands.

Recognizing the land is an expression of gratitude and appreciation to those whose territory we reside on.

It is important to understand the long history that has brought us to reside on the land and to seek to acknowledge our place within that history. The state of Texas is a product of violence carried out by colonial powers of Anglo and Mexican groups. Multiple genocides were committed on the native peoples of Central Texas as natives were hunted, detained, converted, and colonized in successive waves. Many peoples were also assimilated, including most peoples labeled Coahuiltecan and many Lipan-Apache with no treaties or recognition.

Climate change is inextricably linked to humanity's long history of inequality and injustice perpetuated by legacies of colonialism and slavery, based on the exploitation of people, land, and nature. Today, the ongoing displacement of Black, Indigenous, and communities of color on Austin's East Side is connected to legacies of extraction of labor, theft of land, transformation of landscapes, and loss of cultures. In pursuit of resources, countries destroyed many ecosystems, traditional human knowledge, and interactions necessary for preventing climate change. Therefore, we need to be intentional about how we build respect for The Land and her Indigenous Peoples.

*The authors acknowledge that this statement is a living document that can evolve and grow over time based on new learnings or facts. City staff worked with the community on this statement to gather input and utilized [available historical references](#).*

# A LETTER FROM THE STEERING COMMITTEE

To the readers of this plan,

From the outset, we set ourselves up for success by starting this process with a series of climate justice workshops. In those workshops, our facilitator Dr. Tane Ward asked each of us to imagine the world we want to live in. This caught some of us off-guard — how can we take the time to imagine an ideal world when everything is an emergency? And yet, an emergency is precisely the moment to push ourselves to create the socially just world we collectively envision. These workshops were vital to creating a culture of empathy — allowing us to ground ourselves and the entire update process in the practice of centering equity.

This plan, the discussions leading up to its formulation, and hopefully how it gets implemented just *feels* different. Our vision is that this plan translates to a broader shift in Austin City planning to cultivate better collaboration between the City and community and include equity at the core of every City process.

You might ask, “Why is equity a core driver of a climate plan?” With a desire to build on and acknowledge what communities of color in Austin have been saying and working on for years, the Steering Committee’s response is, “How could it not be?” **Currently, race predicts a person's quality of life outcomes in our community, which means communities of color in Austin are disproportionately impacted by the effects of climate change.** We live in a tale of two cities — while Austin is repeatedly listed in popular news articles and magazines as the “best city” to live in, this city is one of the most economically and racially segregated cities in the U.S. because of the forces of white supremacy culture that have driven and maintained this dynamic, and especially since the 1928 Master Plan first violently segregated Austin. Because of this, the Austin City Council declared racism a public health crisis in July 2020, that is, as Council Member Harper-Madison said, “killing Black and brown people.”

Communities of color in Austin have repeatedly tried to communicate to the City that white supremacy is still harming and killing Black and brown people to this day. The following five examples provide tangible evidence of the daily lived experience of communities of color:

1. A joint report published by the City of Austin’s Equity Office, Office of Police Oversight, and Innovation Office documents that despite Black people making up about 8% of the population of Austin, Black people make up 15% of motor vehicle stops and 25% of resultant arrests by police in Austin, and the difference between the disproportionate increase in profiling of Black people in Austin and the disproportionate decrease in profiling of white people in Austin equals 40%<sup>1</sup>.
2. Gentrification and displacement are disproportionately taking place in parts of the city where low-income people and people of color have been forced to live due to historical segregation and present-day de facto segregation. This has led Austin to become the only major city in

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<sup>1</sup> City of Austin Office of Police Oversight, Office of Innovation, and Equity Office. (2020) *Joint Report: Analysis of Racial Profiling Data, 2015-2018*. Retrieved from <https://alpha.austin.gov/police-oversight/joint-report-analysis-of-racial-profiling-data-january-2020/>.

the US that, despite rapid population growth, is actually experiencing a reduction in the number of Black residents overall<sup>2</sup>.

3. AISD was [one of the last school districts in the country to fully desegregate in 1980](#), only doing so after being sued by the federal government in the 1970s. Schools in Travis county remain the most segregated in the state to this day<sup>3</sup>. Modern-day de facto economic and racial segregation and [institutional racism in school discipline](#), known to lead to the “school-to-prison pipeline,” throughout Austin schools have resulted in processes and leadership that continue to fail to understand or address equity issues.
4. While Austin’s population is about 8% Black, the homeless population fluctuates between 30% to 40% Black<sup>4</sup>. Currently, Austin only owns one homeless shelter with 150 beds, despite a population of over 2,000 people experiencing homelessness. Cycles of poverty and racism have kept an inordinately high number of Black people homeless in Austin.
5. Due in part to historical and present white supremacy and racism in the city, the COVID-19 pandemic is [disproportionately infecting and killing Black and brown people in Austin](#).

Because we cannot solve climate change without racial equity, we have identified three specific ideas at the intersection of climate and equity:

1. **UNJUST IMPACTS:** Low-income communities and communities of color are the most impacted by extreme weather and pollution despite having contributed least to the drivers of climate change and pollution. Harmful land use and the refusal to create or enforce real environmental regulations continue to disproportionately expose communities of color to environmental harms, leading to unjust quality of life outcomes both historically and today.
2. **JUST TRANSITION:** Low-income communities and communities of color must be prioritized to receive the disproportionate benefits of the transition to a pollution-free society to remedy disproportionate harm done historically and presently.
3. **NO ONE IS FREE UNTIL WE ARE ALL FREE:** If we design and implement programs to serve low-income communities and communities of color, we will positively impact all residents in the Austin area.

As a wealthy city with high levels of current and past emissions, it is our responsibility to set more aggressive goals than other cities and regions that have fewer resources due to colonization and imperialism. While we may not be in the position to meet these goals currently, we intentionally set them because they are necessary according to the science and to our equity principles. We hope that future iterations of this plan can bridge the gap and possibly even reach negative emissions as a small first step towards long-term, holistic reparations for our historical emissions.

We look to the Mayor, City Council, the City Manager, and the City government as a whole to take a strong stance in tying these strategies to real opportunities for funding and implementation. To offer formal funding and implementation support for the plan, we recommend that City Council form an Environmental Justice Committee so that these actions receive proper attention and care. Given

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<sup>2</sup> The Institute for Urban Policy Research & Analysis, University of Texas at Austin. (2014) *Outlier: The Case of Austin’s Declining African-American Population*. Retrieved from [https://liberalarts.utexas.edu/iupra/\\_files/pdf/Austin%20AA%20pop%20policy%20brief\\_FINAL.pdf](https://liberalarts.utexas.edu/iupra/_files/pdf/Austin%20AA%20pop%20policy%20brief_FINAL.pdf).

<sup>3</sup> The Institute for Urban Policy Research & Analysis, University of Texas at Austin. (2020) *Elementary School Poverty Disparities in Texas*. Retrieved from <https://utexas.app.box.com/v/school-poverty-disparities>.

<sup>4</sup> Ending Community Homeless Coalition (ECHO). (2020) *2020 Point-in-Time Count Results*. Retrieved from <https://1zdndu3n3nla353ymc1h6x58-wpengine.netdna-ssl.com/wp-content/uploads/2020/07/PIT-2020-Three-One-Pagers.Revised-7.9.2020.pdf>

that the Joint Sustainability Committee was initially formed to push City climate change initiatives, we also recommend reimagining how this committee can help flesh out the implementation of this plan and realize our equity values.

At this moment in history, we are experiencing the COVID-19 pandemic, the deepest economic downturn in recent U.S. history and resulting City budget deficit, and worldwide civil rights protests in support of Black lives. At the same time, a de facto budget cap imposed by the State of Texas and the enormous burden “public safety” through policing has on City finances further illuminates the need to examine how City investments are made and to reimagine public safety.

In August 2020, City Council voted to reallocate about \$20 million out of the Austin Police Department, as well as to [make other structural changes](#). There is a real possibility here to fund climate equity initiatives as defined by communities of color in Austin. Investments toward implementing this plan can contribute to both meeting climate goals and to improving equity and justice in the city.

Above all, this is a *community* plan, and we pulled from both community and City voices to make it forward-thinking and equity-driven. And, though this plan is complete, we need to carry forward the kind of relationship building that has occurred over the past year of the plan’s development to implement our strategies in a way that expands the number of people and organizations involved, engaged, and ready to take action. In every minute, action, and word, we must continue to further our commitment to justice through implementation by continually centering low-income communities and communities of color. Our work is not over — it is just beginning.

Katie Coyne, Shane Johnson, and Mayuri Raja  
*Co-Chairs, Austin Climate Equity Plan Steering Committee*

*Steering Committee Members:*

Susana Almanza	Alberta Phillips	Joep Meijer	Jim Walker
Rocio Villalobos	Drew Nelson	Rodrigo Leal	Rene Renteria
Kaiba White	Shawanda Stewart	Kenneth Thompson	Suzanne Russo
Pooja Sethi	Darien Clary	Brandi Clark Burton	Karen Magid

# EXECUTIVE SUMMARY

We know that climate change does not affect everyone equally and that low-income communities and communities of color disproportionately bear the brunt of the impacts. The effects of extreme weather, air pollution, water pollution, and exploitation of natural resources amplify the inequities and injustices that these communities are experiencing. This is why we cannot solve climate change without addressing equity, and we cannot talk about climate change solutions without talking about racial and environmental justice and centering communities of color in our response.

When this plan was written, we were experiencing the COVID-19 global pandemic, the deepest economic downturn in recent U.S. history, and worldwide protests against police brutality in support of Black lives, marking the largest civil rights movement in history. In Austin, climate hazards that threaten our community include flooding, extreme heat, wildfire, and drought. All these issues have serious health and quality of life implications, particularly for low-income communities and communities of color. In this global moment of change, it is clear that the systemic solutions needed to combat racism, promote health and safety for all and stop the exploitation of the environment are inextricably linked and needed more than ever. The time for real change is now.

We know that human activities have already caused approximately 1.8 degrees Fahrenheit (1°Celsius) of average global warming above pre-industrial levels. Recent climate science tells us that a target of 2.7 degrees Fahrenheit (1.5°Celsius) is necessary to avoid the worst impacts of climate change and preserve a livable climate. In response, the United Nations has called for urgent and impactful action, which would require profound structural transformation for societies, economies, infrastructure, and governance institutions while bringing co-benefits for humans and the planet.

In 2014, when the Austin City Council adopted the goal of net-zero community-wide emissions by 2050, it was considered bold and aggressive. Austin's first Community Climate Plan, adopted by City Council in 2015, was a robust set of strategies and actions to get us moving in the right direction. Over the past five years, our community has taken action on climate change, but the focus was not on equity and social justice. Now is the time to adjust our focus.

Because the climate crisis can only be addressed fully when we also address racial inequality, we set out to create a plan that would include everyone in the Austin community to make our city cleaner, healthier, more affordable, and accessible for all. The Austin City Council has declared a Climate Emergency, and the Climate Equity Plan's Steering Committee has challenged us to accelerate our climate goals, endorsing the new goal of **equitably reaching net-zero community-wide greenhouse gas emissions by 2040, utilizing a steep decline path, followed by negative emissions.**

In addition, the Steering Committee helped create an Equity Tool that was used to create the plan's goals and strategies. This helped us center communities of color by 1) identifying opportunities for engagement, incentives, targeted communications, and activities that support anti-displacement, 2) focusing on a just transition of our economy through training and jobs for people of color, and 3) prioritizing health benefits for low-income communities and communities of color.

There are five sections in this plan to address community-wide emissions: Sustainable Buildings, Transportation and Land Use, Transportation Electrification, Food and Product Consumption, and Natural Systems. Collectively, the plan offers 17 goals to be met by 2030 that will help get us on the pathway for net-zero emissions by 2040. This includes 74 specific and four overarching strategies to be implemented by 2025. These new goals and strategies — paired with essential community plans like the Austin Energy Resource, Generation and Climate Protection Plan to 2030, Project Connect, Austin Resource Recovery Zero Waste Plan, Austin Strategic Mobility Plan, Austin Strategic Housing Blueprint, and Water Forward — can get us on the pathway to a safe climate and a more equitable Austin.

Implementation is the key to the success of this plan. The City of Austin is well-positioned to provide leadership in creating effective partnerships with private businesses, the community, and nonprofit leaders to drive change and fully implement this plan. At the same time, there are many opportunities for external partners and organizations to provide leadership. We must ensure that the City government and everyone in our community does their part to reduce emissions in a way that eliminates disparities defined by race. Adopting this plan must be followed with creative funding proposals, inclusive engagement, and focused implementation to meet our carbon goals while benefiting those in our community who need assistance most.



# NEW EMISSIONS GOAL FOR AUSTIN

Austin will achieve net-zero community-wide greenhouse gas emissions by 2040.

## OVERARCHING STRATEGIES

### **Green Jobs and Entrepreneurship**

- Create green jobs and entrepreneurship opportunities that advance the goals of this plan, expand economic opportunity and inclusion, and build agency and decision-making power in low-income communities and communities of color.

### **Prioritize Local Community Initiatives**

- Recognize and support existing community-led organizations, businesses, and programs that can help achieve the goals in this plan while building a green and just economy and culture.

### **Regional Collaboration**

- Create a Texas Climate Collaborative linking elected officials, City staff, and utility staff working to implement recently adopted climate plans in San Antonio, Houston, Dallas, and Austin. Work with cities across the state and neighboring cities, such as Round Rock, Cedar Park, Buda, Pflugerville, San Marcos, and Kyle, and the five-county governments: Travis, Williamson, Hays, Bastrop, and Caldwell.

### **Local Carbon Reduction Projects, Carbon Dioxide Removal, and Carbon Offsets**

- Establish clear support and prioritization for local greenhouse gas reduction and carbon removal projects, carbon dioxide removal, and carbon offsets when necessary.

# NEW 2030 CLIMATE EQUITY GOALS FOR AUSTIN

## Sustainable Buildings

- Achieve net-zero carbon for all new buildings and reduce emissions by 25% for existing buildings while lowering all natural gas-related emissions by 30%.
- Reduce community-wide greenhouse gas emissions from refrigerant leakage by 25%.
- Reduce the embodied carbon footprint of building materials used in local construction by 40%.
- Equitably achieve a community-wide water demand of approximately 152,000 acre-feet per year.

## Transportation and Land Use

- 80% of new non-residential development is located within the city's activity centers and corridors.
- By 2027, preserve and produce 135,000 housing units, including 60,000 affordable housing units, with 75% of new housing located within ½ mile of activity centers and corridors.
- 50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home.

## Transportation Electrification

- 40% of total vehicle miles traveled in Austin are electrified, and electric vehicle ownership is culturally, geographically, and economically diverse.
- Austin has a compelling and equitably distributed mix of level 1, 2, and DC fast-charging stations to accommodate 40% of total vehicle miles traveled in the city.
- The Austin-Round Rock-San Marcos area is a leader in transportation electrification by adopting policies and technologies that maximize economic and health benefits while supporting the growth of this emerging industry.

## Food and Product Consumption

- Ensure all Austinites can access a food system that is community-driven, addresses food insecurity, prioritizes regenerative agriculture, supports dietary and health agency, promotes plant-based foods, and minimizes food waste.
- Reduce greenhouse gas emissions from institutional, commercial, and government purchasing by at least 50%.
- Aggressively pursue waste reduction, organics composting, and recycling to achieve a new zero-waste goal when the new Austin Resource Recovery Zero Waste Plan is adopted.

## Natural Systems

- Legally protect an additional 20,000 acres of carbon pools on natural lands and manage all new and existing natural areas (approx. 70,000 acres total), focusing on resilience.
- Protect 500,000 acres of farmland from development in the five-county region through legal protections and regenerative agriculture programs.
- Achieve at least 50% citywide tree canopy cover by 2050, focusing on increasing canopy cover equitably.
- Include all City-owned lands under a management plan that results in neutral or negative carbon emissions and maximizes community benefits.

# TABLE OF CONTENTS

<b>THE CLIMATE CHALLENGE .....</b>	<b>11</b>
I. Global Climate Goals, Actions, and Urgency .....	11
II. Austin City Council Directives .....	13
III. Climate and Our Community.....	14
IV. Environmental Justice .....	18
<b>GROUNDING CLIMATE ACTION IN EQUITY.....</b>	<b>20</b>
I. Understanding Our History .....	20
II. Today's Injustices and Climate Impacts.....	22
III. Shared Vision: An Equity-focused Approach .....	22
IV. Advancing Equity through our Goals and Strategies .....	24
V. Community Climate Ambassador Program.....	26
<b>AUSTIN'S CARBON FOOTPRINT AND CLIMATE GOALS .....</b>	<b>30</b>
I. Carbon Accounting Framework .....	30
II. Austin's Historical and Projected Emissions .....	32
III. Austin's Climate Goals.....	35
IV. Meeting our 2030 Targets .....	38
<b>2030 GOALS AND STRATEGIES .....</b>	<b>40</b>
I. Climate Action is a Shared Responsibility .....	40
II. Collaborative Plan Development.....	42
III. Overarching Strategies .....	43
IV. Sustainable Buildings.....	46
V. Transportation and Land Use .....	57
VI. Transportation Electrification .....	64
VII. Food and Product Consumption .....	71
VIII. Natural Systems.....	78
<b>NEXT STEPS .....</b>	<b>94</b>
I. Implementation Planning .....	94
II. Funding .....	95
III. Measurement and Reporting .....	96
<b>REFERENCES .....</b>	<b>97</b>
<b>APPENDIX .....</b>	<b>101</b>
I. Goals and Strategies List.....	101

II. Glossary of Terms.....	105
III. Community Engagement .....	115
IV. History and Equity Resources.....	151
V. Equity Screening Questions.....	153
VI. Alignment with Strategic Direction 2023 .....	155
VII. Quantification Metrics and Methods.....	158

# THE CLIMATE CHALLENGE

## I. GLOBAL CLIMATE GOALS, ACTIONS, AND URGENCY

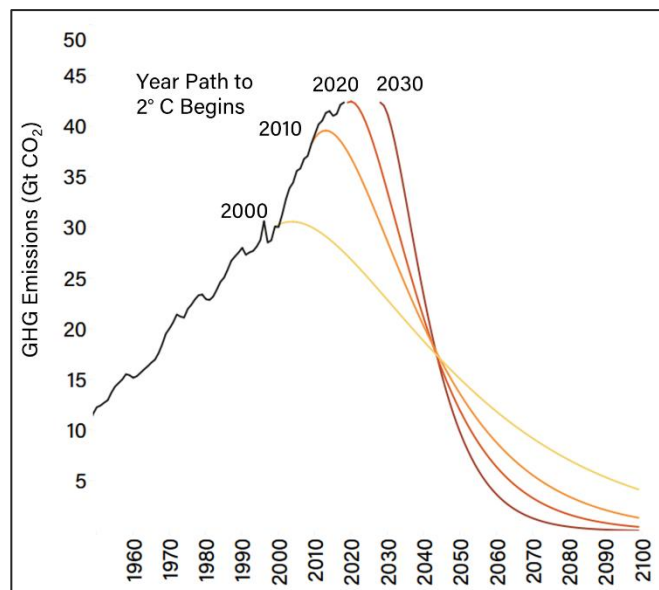
It is estimated that human activities have already caused approximately 1.8 degrees Fahrenheit (°F) (1.0 degree Celsius [°C]) of global warming above pre-industrial levels. While the Paris Climate Agreement established the target of limiting global warming to 3.6°F (2.0°C) with a goal of limiting warming to 2.7°F (1.5°C), the Intergovernmental Panel on Climate Change (IPCC) warns that the lower target is necessary to avoid catastrophic climate change. The report demonstrates that there would be considerable differences in the severity of impacts with just a half-degree difference and that at 2.7°F (1.5°C), the adaptation needs would be more manageable, and a wider range of solutions would be viable. With warming of 3.6°F (2.0°C), climate effects that societies cannot adapt to, including ecosystem collapse, are very likely.<sup>1</sup>

If global warming continues to increase at the current rate, it is likely that we will reach global warming of 2.7°F (1.5°C) between 2030 and 2052.<sup>1</sup> The United Nations Environment Program's 2019 Emissions Gap Report says that if we rely only on the current commitments outlined in the Paris Agreement, we can expect a rise in global warming of over 5.4°F (3.0°C) this century. The report calls for nations to take urgent and impactful actions if we are to meet a 2.7°F (1.5°C) target (or even the 3.6°F [2.0°C] target).<sup>2</sup>

This will require profound structural transformation for societies, economies, infrastructure, and governance institutions and bring co-benefits to humans and the planet. The 2.7°F (1.5°C) target is still possible, but each day we delay makes the path to achieving it increasingly difficult and costly.

Though the United States' participation in the Paris Agreement has varied across presidential administrations, and despite environmental rollbacks such as the repeal of the Clean Power Plan, U.S. mayors are rising to the challenge. Mayors representing 466 cities (including Austin) and 71 million Americans have stepped up to state their continued commitment to much of the Paris Agreement and its actions.<sup>3</sup>

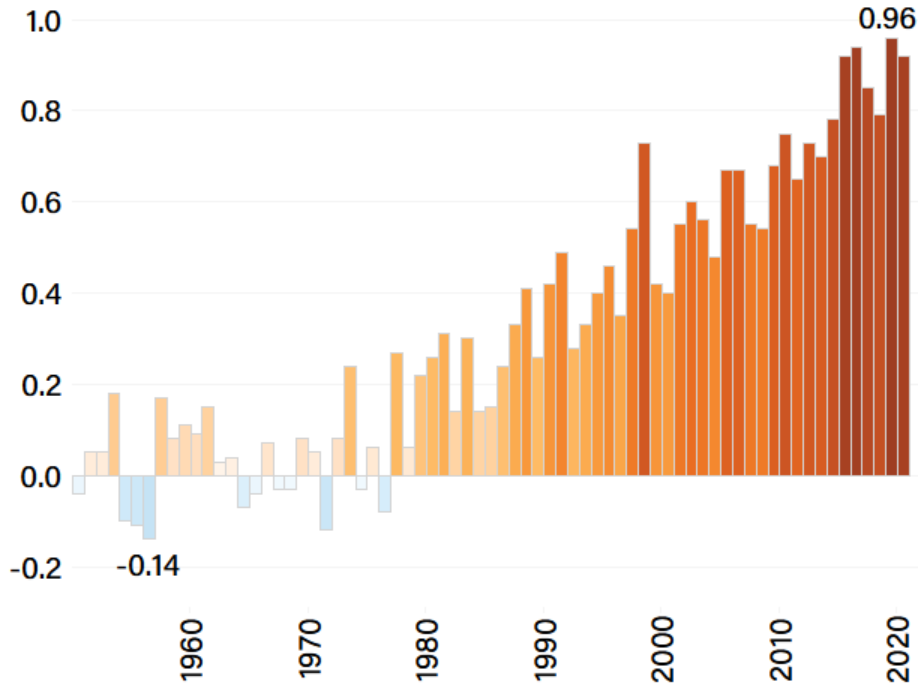
**Global Greenhouse Gas Emission Paths to Limit Warming to 3.6°F (2°C)**



The longer we wait to reduce greenhouse gas emissions, the more immediate and drastic the reductions must be to stay below 3.6°F (2°C).

Source: Center for International Climate Research

## Global Land and Water Temperature Anomaly, 1950 to Present (°C)



This chart compares each year's average temperature to the average temperature of the 20th century.

The last 30 years have all been hotter than the 20th century average and the difference is increasing steadily.

Source: [National Oceanic and Atmospheric Administration](#)

On a global scale, cities account for two-thirds of the world's energy consumption and 70% of carbon emissions.<sup>4</sup> As major contributors to climate change, cities have the power and opportunity to produce effective solutions, regardless of national leadership. Additionally, cities often have established relationships with local businesses, residents, and institutions. This allows for quick, decisive, and

more context-sensitive decisions, actions, and solutions. Research shows that more than half of the emissions reductions needed to uphold the Paris Agreement can be delivered through "city action" where municipal governments have control.<sup>5</sup>

*"For centuries, cities have helped foster some of mankind's greatest ideas. It is no stretch of the imagination to believe that cities will now take the lead in addressing climate change."*

*-C40 Cities Climate Leadership Group*

Climate change exacerbates existing vulnerabilities and thus has a disproportionately negative effect on developing countries. In countries where access to necessary resources — such as food, water, and medical services — is lacking, where governments are unstable, and where violence drives displacement, people will suffer more significant harm from physical climate stressors. These global populations will continue to experience greater physical, emotional and economic hardship and loss

of life from acute and chronic climate change shocks and stressors, including floods, tropical storms, droughts, sea-level rise, and the spread of vector-borne diseases. Thus, addressing climate change at the local and global level is inherently necessary to build a more equitable world.

## II. AUSTIN CITY COUNCIL DIRECTIVES

### **2007 – Original Climate Protection Plan, [Resolution 20070215-023](#)**

In February 2007, the Austin City Council adopted the first resolution in Austin's history that was focused on climate change. The resolution directed the City Manager to make City of Austin facilities, fleets, and operations carbon neutral by 2020, make Austin Energy the leading utility in the nation for greenhouse gas reduction through renewable energy and energy efficiency, implement the most energy-efficient building codes in the nation, establish an interdepartmental City Climate Action Team, and work with community members, businesses and regional entities on reducing emissions.

### **2014 – Net-zero by 2050, [Resolution 20140410-024](#)**

In April 2014, the Austin City Council adopted the goal of net-zero community-wide greenhouse gas emissions with the preference to achieve it as soon as feasible. The resolution also directed the City Manager to review the goals from the 2007 plan and create a stakeholder process to develop a new community-wide plan focused on energy, transportation, and waste/industrial emissions sources.

### **2015 – Adopt the 2015 Austin Community Climate Plan, [Resolution 20150604-048](#)**

In June 2015, the Austin City Council adopted the 2015 Austin Community Climate Plan, supporting the trajectory to net-zero greenhouse gas emissions by 2050 with interim targets. The resolution also directed the City Manager to identify and prioritize resources to implement the plan and create the Joint Sustainability Committee to oversee its implementation.

### **2019 – Climate Resilience, [Resolution 20190509-019](#)**

In May 2019, the Austin City Council recommended creating a comprehensive, community-wide climate resilience plan that is fair, just, and equitable. The Council recognized that we are already experiencing the adverse consequences of climate change and communicated the urgency for creating a blueprint to prepare for and respond to the shocks and stressors of catastrophic climate events. They also expressed support for the general tenets of the Green New Deal.

### **2019 – Transportation Electrification Plan, [Resolution 20190509-020](#)**

In May 2019, the Austin City Council declared transportation electrification to be included in the Austin Community Climate Plan revision. The resolution directs the City Manager to analyze electric vehicle adoption scenarios and associated emission reductions, establish interim targets and identify partnerships.

### **2019 – Climate Emergency, [Resolution 20190808-078](#)**

In August 2019, the Austin City Council declared a climate emergency and called for immediate emergency mobilization to restore a safe climate. The resolution directs the City Manager to reconsider accountability structures, increase external engagement and accelerate activity towards the City's net-zero goal.

### **2020 – Renewable Natural Gas, [Resolution 20200220-047](#)**

In February 2020, the Austin City Council adopted a resolution focused on Renewable Natural Gas directing Texas Gas Service to develop a feasibility assessment of renewable natural gas in support of the 2020 update to the Austin Community Climate Plan.



### III. CLIMATE AND OUR COMMUNITY

The impacts of extreme weather from flooding, heat, wildfire, and drought have already had adverse consequences on the Austin community. Due to climate change, these impacts will increase in severity and frequency and will continue to threaten the health and safety of residents.<sup>6</sup> The legacy of redlining in Austin continues to this day, with the Austin-Round Rock metro area ranking as the #1 large metro with the highest level of overall economic segregation.<sup>7</sup> This legacy is important to acknowledge as planning efforts aim to address disparities in climate preparedness and physical infrastructure. Along with the potential for physical damage and major costs related to infrastructure, climate threats have serious quality of life implications — especially in the areas of health and housing, and particularly for low-income communities and communities of color.

The Climate Equity Plan focuses on climate change mitigation. While this plan alone cannot provide all of the actions necessary to solve issues surrounding health and housing entirely, it does have a role to play in identifying how climate actions are connected to them.

While lifestyle and preventative healthcare play an essential part in health outcomes, socioeconomic factors are primary predictors of health disparities. These factors, known as social determinants of health, include racial discrimination and lack of access to housing, food, and economic opportunities. Physical determinants of health consider the built environment and may include access to green spaces, exposure to industrial sites, and air and water pollution exposure.<sup>8</sup> Acknowledging social determinants of health alongside physical determinants of health allows this plan to have a more nuanced, historical perspective and leads to more holistic recommendations for solutions.

Housing and climate are inherently and inextricably linked — how we live affects the climate, and the climate affects how we live. These links are particularly important to address in a city that has ranked as one of the top ten most rapidly gentrifying cities in the United States.<sup>9</sup> Affordability, homelessness, displacement, and gentrification are not just climate issues, and the solutions that address them must be holistic and widespread beyond this plan. However, the impacts that housing and climate have on each other must be recognized. An increase in extreme weather and climate hazards puts an additional burden on people who are already facing the crises of housing affordability and homelessness. People who are displaced due to increased housing costs are forced further away from jobs and services, increasing their car dependency. Additionally, the displacement of communities breaks social ties and disrupts the connective tissue that is critical to the community's ability to respond to and recover from disaster events.

The COVID-19 pandemic has highlighted health disparities in Austin. According to Austin Public Health, cases of COVID-19, hospitalization, and mortality rates are disproportionately affecting Latinx and Black communities. While there are many factors associated with these disparities, it's clear that the repercussions are rooted in historical neglect.

## Health and Housing Concerns Addressed in the Climate Equity Plan

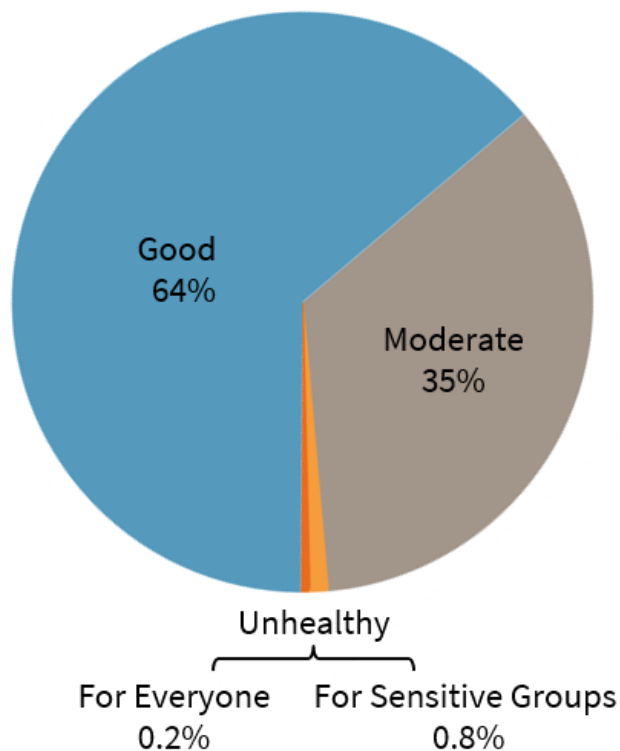
ISSUE		CLIMATE CONNECTION	PLAN RESPONSE
 <b>HEALTH</b>	CLEAN AIR AND WATER	Climate change will impact the ability of trees and natural areas to deliver these ecosystem services.	Support more robust tree canopy and natural areas combined with resilient management.
	AIR POLLUTION	Cars are one of Austin's main contributors to air pollution and greenhouse gas emissions.	Integrate more transit, improved human-powered transportation networks, and more electric vehicles.
	INDOOR AIR POLLUTANTS	On-site fossil fuel use, toxic materials, and extreme heat can worsen indoor air quality.	Improve indoor air quality through green materials, electric appliances, and improved building codes.
	HEALTHY FOOD CHOICES	Food choices can impact upstream greenhouse gas emissions and may negatively impact health.	Ensure 100% equitable access to pro-health, pro-climate plant-based food.
	LOCAL AND FRESH FOOD CHOICES	Climate change may affect agricultural productivity and food costs.	Protect farmland, promote regenerative farming practices, and provide farmer assistance.
	SAFETY	Car-centric design decreases pedestrian and bicycle safety, which can limit the use and adoption of these modes.	Prioritize bicycle, sidewalk, urban trail networks, and infrastructure focused on safe crossings and accessibility.
 <b>HOUSING &amp; AFFORDABILITY</b>	OUTDOOR SPACE FOR RECREATION	Climate change can affect the availability of healthy green spaces.	Provide more accessible, high-quality green spaces that are managed for resilience and carbon neutrality.
	AFFORDABLE HOUSING	Increasing the number and intensity of climate hazards will amplify and compound affordable housing crises.	Increase availability of affordable housing that is safe, healthy, and efficient.
	HOMELESSNESS	People experiencing homelessness are more vulnerable to extreme weather and climate hazards.	Promote environmental justice and safe, healthy, and efficient housing for everyone.
	DISPLACEMENT	Suburbanizing poverty increases sprawl, car dependency, transportation costs, and emissions.	Conduct robust citywide planning with investment in affordable housing and displacement mitigation.
	GENTRIFICATION	Many climate mitigation solutions lead to investment in communities that can cause gentrification.	Center community-based decision making and co-creation of solutions that respect community needs and values.
	TRANSPORTATION COSTS	Cars are one of Austin's main sources of emissions and a major contributor to household spending.	Support alternatives to car ownership and promote "complete communities" with services, amenities, and jobs near housing.
	UTILITY COSTS	More extreme heat means higher water and energy use, which increases utility costs.	Lower utility use and cost through highly efficient buildings and use of on-site solar energy.
	FOOD COSTS	Climate change affects agricultural productivity, causing food shortages and increased food costs.	Support local food production and address food insecurity along with pro-health, pro-climate food policies.

## A Commitment to Clean Air

Greenhouse gases are considered air pollutants, but they're typically not what we mean when we talk about polluted or dirty air that can hurt our lungs and have long-term health impacts like cancer and asthma. The direct health impacts caused by dirty air are attributed to air pollutants, such as ground-level ozone (O<sub>3</sub>) and fine particulate matter (PM<sub>2.5</sub>), which are prevalent in Central Texas.<sup>10</sup> In addition, unlike particulate matter (PM), ground-level ozone is also a greenhouse gas.<sup>11</sup> The World Health Organization estimates that 4.2 million people per year die from diseases linked to air pollution.<sup>12</sup> These include stroke, heart disease, lung cancer, and chronic respiratory disease.

Even though air quality in Central Texas is “good” 64% of the time based on the U.S. Environmental Protection Agency’s (EPA) air quality standards, local air pollution “hot spots,” such as near busy roads, can still be harmful. Despite these standards, the EPA has also found that there is no safe exposure level to particulate matter<sup>14</sup>. Sensitive populations to consider include children, older adults, outdoor workers, and those with lung or heart disease.<sup>13</sup> Additionally, strong evidence indicates that Black and Latinx communities have higher rates of particle exposure, making prioritizing clean air a racial equity issue.<sup>14</sup>

### 2020 Austin-Area Air Quality Index by percentage



Air quality in our region was considered good for 64% of days in 2020. It was moderate for 35% of days, and unhealthy for 1% of days.

Source: Air Central Texas

As part of the City of Austin’s goal to continue improving air quality in the Central Texas region, we signed on to the [2019-2023 Austin-Round Rock-Georgetown MSA Regional Air Quality Plan](#). As part of this commitment, Austin is working to ensure that we not only meet but exceed air quality guidelines outlined by the World Health Organization and the EPA’s National Ambient Air Quality Standards.



Additionally, Austin has joined cities worldwide as a signatory of the [C40 Clean Air Cities Declaration](#) to support unprecedented collective action to remove the pollution that is harming our health and warming our planet.

A few examples of linked impacts between climate and air quality in this plan include:

- Reducing the reliance on people driving alone in gas-powered vehicles lowers greenhouse gas emissions and the pollutants that cause smog.
- Increasing energy efficiency and shifting to clean energy sources also decreases greenhouse gas emissions, particulate matter, and the pollutants that cause smog.
- More trees and natural spaces can help pull carbon out of the atmosphere and filter particulate matter, mitigating harmful climate and air quality impacts.
- Reducing consumption of goods reduces air and water pollution associated with manufacturing and water pollution from improper disposal of products.



## IV. ENVIRONMENTAL JUSTICE

Climate change is often referred to as the “great equalizer,” but we know that climate change does not affect everyone equally and that low-income communities and communities of color disproportionately bear the brunt of the impacts. The effects of extreme weather — an increasing number and severity of natural disasters, worsening levels of air pollution, depleting water supplies, diminishing crop yields, and the general exhaustion of natural resources — exacerbate the inequities and injustices that these communities are experiencing. This is why we will not solve climate change without addressing equity and why we cannot talk about climate change solutions without talking about racial and environmental justice.

Black, Indigenous, and people of color, disproportionately affected by our global climate crisis, have long led efforts that center race, class, and environmental justice. But, in the mainstream green movement and the media, they are often forgotten or shut out. The legacy of traditional environmentalism includes a troubling history of colonialism, racism, and exclusion. For example:

- The early conservation movement was founded by Anglo-American conservationists who worked to set aside land in the form of national parks. These lands had only begun to need protection after white settlers violently displaced the Indigenous peoples who had lived on and nurtured the land for thousands of years.
- Leaders such as John Muir, founder of the Sierra Club, inspired generations of people to see the sacredness of nature. However, he also [held racist views and maintained friendships](#) with people who helped advance white supremacy and eugenics. Sierra Club membership remained exclusive until at least the 1960s, where applicants of color were screened out.
- There is a lack of racial diversity in major U.S. environmental organizations and government agencies. Dorceta Taylor, a professor of Environmental Sociology at the University of Michigan, [authored a report documenting the divide](#) and later [published a study](#) that found fewer organizations are now voluntarily reporting their diversity statistics. Of those that are, the percentage of people of color on their staff and boards remains low. After commissioning this initial study, [Green 2.0](#) has continued research and reporting on diversity in environmental organizations.

The environmental justice movement seeks to remedy the impacts of climate change, institutional racism, and systemic inequality on people and communities. It aims to address the fact that people of color disproportionately live and work in areas that are the most affected by climate change. Environmental justice advocates have demonstrated that this link is more than coincidental and that low-income communities and communities of color are routinely targeted to place facilities that cause environmental and health injustices, like landfills and industrial facilities.

Though the topic is not new, the importance of acknowledging the history of environmental injustices and creating equitable environmental and climate policies has only recently reached mainstream politics and public awareness. Several historical examples of past injustices include:

- In 1982, the Warren County PCB Landfill protests in North Carolina involved a hazardous waste landfill site in a predominantly Black community. A review found that Black people made up most of the population in three out of four communities where the U.S. Environmental Protection Agency located hazardous waste sites. All four had poverty levels of at least 26%.<sup>15</sup>

- United Church of Christ reported that the racial makeup of communities was the single most influential factor in predicting the location of hazardous waste facilities in the US.<sup>16</sup> A report released two decades later showed that communities of color continued to be disproportionately impacted and did not enjoy equal protection under environmental laws.<sup>17</sup>
- A report by the NAACP illustrated that over the past few decades, Black people are more likely to live near power plants than any other demographic group in the U.S. As a result, Black people are more likely to suffer health problems attributed to facility pollution.<sup>18</sup>
- Latinx communities experience heightened exposure to environmental pollution in the U.S. Nearly 2 in 5 Latinxs live within 30 miles of a power plant, and nearly half live in counties that frequently violate ground-level ozone standards. Additionally, Latinx children are 40% more likely to die from asthma than non-Latinx whites.<sup>19</sup>
- Racial disparities in pollutant exposure are clear in Texas. In Houston, the only landfill was placed in the historically Black neighborhood of Sunnyside.<sup>20</sup> Toxic creosote contamination from railroad operations in the historically Black communities of Fifth Ward and Kashmere Gardens has led to health problems and cancer<sup>21</sup>. And nineteen industrial facilities are located within the neighborhood of Manchester, a predominantly Latinx neighborhood in Houston.<sup>22</sup>
- Racial segregation in New Orleans led African-American communities to live in more flood-prone areas of the city. Over a week after 2005's Hurricane Katrina, 60% of African-American homes remained flooded compared to 24% of white residences.<sup>23</sup> Women made up 80% of people unable to evacuate New Orleans due to a lack of means,<sup>24</sup> leading to long-term mental health effects in the form of chronic stress, depression, anxiety, and post-traumatic stress disorder.<sup>25</sup>
- The 2014 Flint Water Crisis highlighted systematic neglect of infrastructure, leading to life-threatening consequences in a predominantly Black community in Michigan. Nationally, Black children are three times more likely than white children to have elevated blood lead levels.<sup>26</sup>
- Dakota Access Pipeline protests at Standing Rock highlighted continued struggles for Indigenous communities to protect their lands from capitalist intent. As stated in a letter to the Obama administration in 2016, "The destruction of sacred sites during the construction of the oil pipeline through North Dakota adds yet another injury to the Lakota, Dakota and other Indigenous Peoples who bear the impacts of fossil fuel extraction and transportation."<sup>27</sup>
- Latinx communities are highly represented in outdoor work, such as agricultural farming and construction. This work carries the risk of environmental exposure to extreme heat, wildfire, and air pollution — conditions worsened by climate change.<sup>28 29 30</sup> In the 1960s, Cesar Chavez organized with Mexican farmworkers to improve working conditions, including fighting for protection against toxic pesticide exposure, which showcases a history of environmental justice activism within this community.<sup>31</sup> According to the National Agricultural Worker's Survey, approximately 75% of farmworkers are immigrants, most of which are from Mexico, and nearly half lack work authorization.<sup>32</sup> Additionally, young, immigrant Latinx construction workers employed by small firms were identified as the "most vulnerable" workers in the U.S. by the American Society of Safety Engineers and the National Institute for Occupational Safety and Health due to their disproportionate representation in workplace fatalities.<sup>33</sup> Organizations like the [Workers Defense Project](#) continue to advocate for better conditions for the construction industry through their Better Builder® Program and beyond. As we push for a just transition, these communities and their priorities must be front and center in shaping policy.



The legacy of these historical and present inequities has led to higher rates of chronic diseases, such as respiratory and cardiovascular disease, in low-income communities and communities of color. Lack of access to social services, affordable healthcare, and healthy foods are compounding effects that become most visible during climate disasters and health crises, such as the recent COVID-19 pandemic.

The disparate impacts highlighted during the COVID-19 crisis have many parallels to what we see during climate disasters. For example, as highlighted above, communities of color are more likely to work in low-wage jobs deemed “essential” — like food production and distribution, construction, and healthcare. These jobs expose them to harm without providing benefits like health coverage and paid sick time. These realities make it harder for communities of color to “bounce back” after a climate-related event or a global pandemic. We must ensure that lessons learned from the recent crisis help us be more prepared for future climate action.

# GROUNDING CLIMATE ACTION IN EQUITY

## I. UNDERSTANDING OUR HISTORY

Historically, the City of Austin has supported policies and created structures that perpetuate racial and economic inequities. It is the responsibility of the City government to drive systemic change to eliminate these inequities. By examining our city's history, we can understand how systemic inequality causes some communities to carry more of the burden of climate change than others.

### History of Racism in Austin City Planning

Austin has a long history of systemic racism and racial injustice that continues today. Since the city was founded, Black communities and other communities of color have been excluded, marginalized, and discriminated against due to City policies and practices.

One of the most damaging chapters of Austin's history is the 1928 Master Plan, which divided the city along racial lines using a practice called redlining. Redlining forcibly displaced and sectioned off primarily Black and Hispanic/Latinx residents into specific, undesirable areas and was achieved by a combination of cutting off or denying services and white supremacist violence inflicted on any person of color who tried to live elsewhere in the city.



*Austin's 1928 Master Plan divided the city on racial lines using a practice called redlining.*



Redlined districts were used by financial institutions to decide which neighborhoods they would or would not invest in, making it harder for communities in these areas to get loans. Additionally, deed restrictions and City ordinances often prohibited people of color from buying or renting homes outside of East Austin.

Under the 1957 Industrial Development Plan, property in East Austin was zoned as “industrial,” including existing single-family residential areas. This allowed residential homes and schools to be built on industrial-zoned land alongside hazardous and polluting facilities. These burdens were not shared equally among all Austin residents, as this same zoning was not allowed in the western parts of the city. Subsequent planning documents, including the 1984 Land Development Code, perpetuated systemic racism and racial injustice.

## **Local Environmental Justice and Community Organizing**

Community-based organizations such as PODER (People Organized in Defense of Earth and her Resources), the National Association for the Advancement of Colored People (NAACP), and other Eastside community groups have examined the impact of the City of Austin’s historical land use and planning policies and how they have harmed residents in East Austin. The siting of infrastructure like the Tank Farm fuel storage facility, BFI Recycling Plant, and City of Austin’s Holly Power Plant alarmed communities of color, exposed them to toxic pollution, and threatened the natural environment and vibrant culture in East Austin neighborhoods. Community members and activists have since worked to redefine environmental issues as social and economic justice issues and collectively aim to frame these concerns as basic human rights issues.

## **Gentrification and Inequality: Austin’s Changing Demographics**

Steady growth in jobs within the technology, transportation, and warehousing sectors has made Austin a desirable migration destination. This has resulted in population growth and an influx of higher-wage earners that strain housing availability and affordability. 2010 census data shows a significant shift in the demographics of East Austin and surrounding communities. In particular, the African-American share of the Austin population declined over two decades from approximately 12% in 1990 to 7.7% in 2010, with 2019 estimates showing this population at 7.8%.<sup>34 35</sup> Austin’s demographics indicate a growing share of Hispanic/Latinx residents, estimated at 34.3% of the population, up from 23% in 1990.

Additionally, there is an increase in the Asian population, more than doubling from 3.3% in 1990 to around 7.3% today. These trends indicate the need to ensure a diverse engagement and implementation process that is culturally inclusive and accessible to these populations. This includes ensuring linguistic accessibility and targeted outreach to immigrant and refugee populations.<sup>36 37</sup> While Austin has received much recognition as one of the “best places to live in the U.S.,” it is also consistently noted as a city with severe racial disparities persisting from legacies of lack of access to opportunity for people of color.

Low-income communities and communities of color are particularly at risk of being displaced by wealthy white people due to historical and current racism manifesting as inequities in housing, health care, education, criminal justice, jobs, and other quality-of-life outcomes that stem from decades of harmful City practices and policies. For example, based on 2015 American Community Survey Data, while 52% of white Austin residents were homeowners, only 27% of African-American and 32% of Hispanic/Latinx residents were.<sup>38</sup> According to 2017 data, the difference between the median income of white households and Black/African-American households was over \$40,000 and just under \$38,000 for Hispanic/Latinx households.<sup>39</sup> Community members have repeatedly called for the City to recognize and acknowledge this systemic racism.

## II. TODAY'S INJUSTICES AND CLIMATE IMPACTS

Climate change affects everyone, but across the world and right here in Austin, the impacts are not felt equally among all communities. Due to systemic racism, Black, Indigenous and people of color (BIPOC) are particularly vulnerable. Other marginalized groups include, but are not limited to:

- Low-income communities
- Youth
- LGBTQIA+ communities
- Immigrant, migrant, and/or refugee communities
- People with disabilities
- People experiencing homelessness
- People with criminal records
- Seniors
- Women

These marginalized groups often experience heightened risk and increased sensitivity to climate change and have fewer resources to help them cope with, adapt to and recover from climate disasters. In the coming decades, we expect the changes in Austin's climate to negatively impact all residents — especially those living in heat-prone and flood-prone areas of the city and those who work outside.

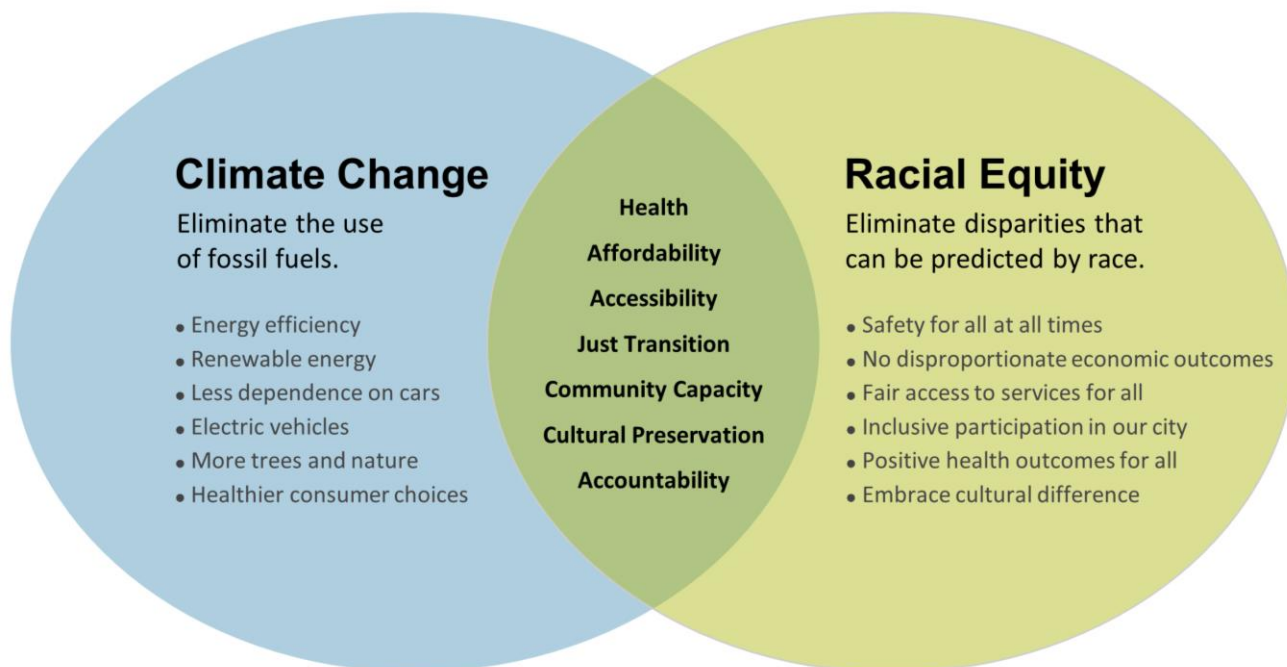
Marginalized communities face:

- Increased exposure to heat-related illnesses, respiratory illnesses, and vector-borne diseases
- Displacement and reduced mobility due to flooding, extreme weather, and extreme heat-related impacts
- More exposure to emissions and environmental pollution
- Less participation in local government
- Fewer financial resources to respond to environmental and economic stresses

## III. SHARED VISION: AN EQUITY-FOCUSED APPROACH

Austin's Climate Equity Plan is part of a bigger shift toward normalizing and institutionalizing equity within the City government. The City's Equity Office is working across departments to identify opportunities to increase equity in City services, programs, and policies. This plan is a roadmap intended to guide the City's consideration of equity in its climate policies and programs to achieve more environmentally and economically just outcomes for the greater Austin community.

## The Values at the Intersection of Solving Climate Change and Racial Equity



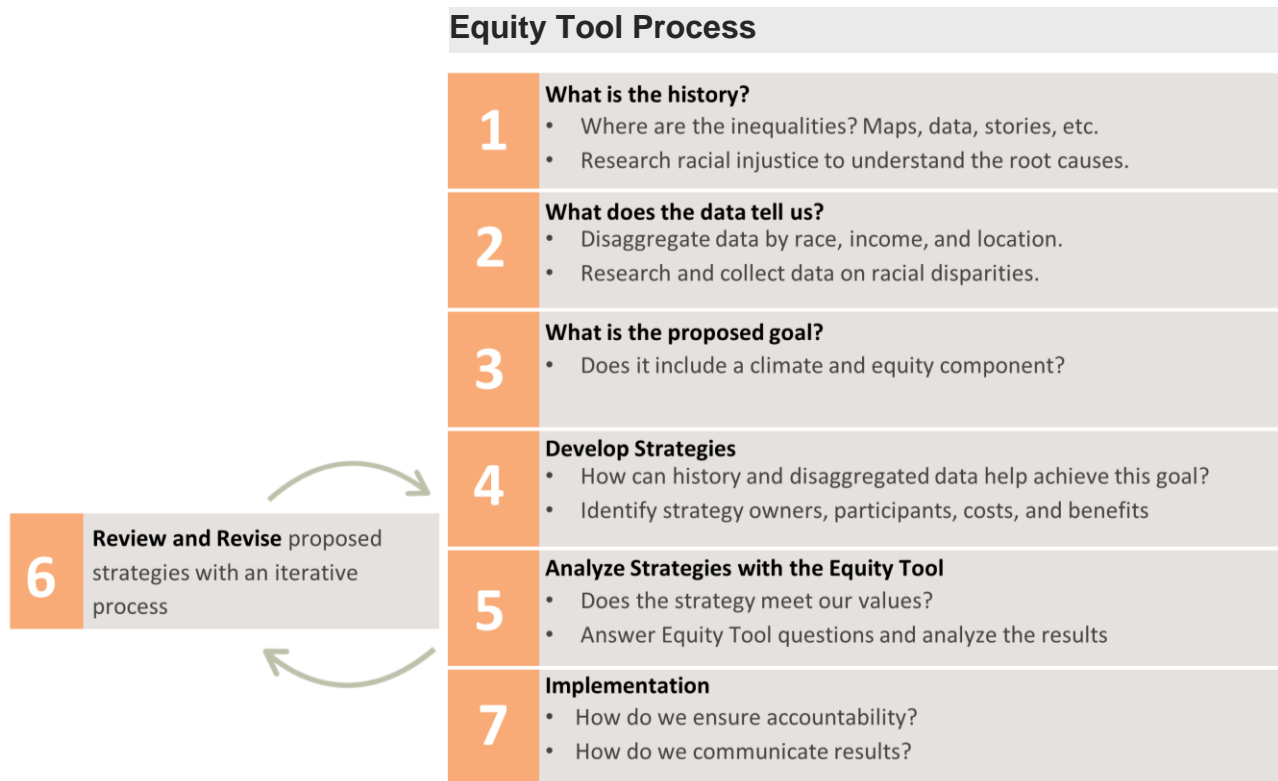
**Racial equity is the condition when race no longer predicts a person's quality of life outcomes in our community.** We recognize that racial injustice is wrong, and solving climate change is impossible without racial equity. In Austin, this means our plan will only succeed if we center racial equity in the plan's goals and strategies. We realize that City of Austin infrastructure, policies, and investment have historically and systemically neglected and even harmed low-income communities and communities of color. The City acknowledges these injustices and the need to right these wrongs by creating a culture of equity within its institutions.

We recognize that:

- Low-income communities and communities of color are the most impacted by extreme weather, and climate change will worsen existing harms and challenges.
- Low-income communities and communities of color must be prioritized to receive the disproportionate benefits of the transition to a pollution-free society.
- If we design and implement programs for low-income communities and communities of color, we will positively impact all residents in the Austin area.

## IV. ADVANCING EQUITY THROUGH OUR GOALS AND STRATEGIES

If we're not proactively addressing equity, we're perpetuating injustice. To ensure our climate plan will increase racial equity, we followed a specific process adapted from the [Government Alliance on Race and Equity](#).



We also created an Equity Tool that includes screening questions organized around the following themes:

- 1) **Health** - Strategy improves mental and physical health outcomes for low-income communities and communities of color. It upholds the fundamental human right to clean, healthy, and adequate air quality, water, land, food, education, transportation, safety, and housing.
- 2) **Affordability** - Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.
- 3) **Accessibility** - Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. It removes barriers through City infrastructure, policy, and investments.
- 4) **Just Transition** - Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.

- 5) **Community Capacity** - Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt and thrive.
- 6) **Cultural Preservation** - Strategy deliberately and respectfully honors cultural relevance and history to preserve the cultural heritage of the past and present to benefit all generations.
- 7) **Accountability** - Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.

Our Advisory Groups used the Equity Tool to identify potential burdens or harms to low-income communities and communities of color. The tool allowed our Advisory Groups to build their goals and strategies in a way that reduces and eliminates these burdens and works to improve the quality of life for these communities.

We recognize that the tool is subjective and that the answers provided by the Advisory Groups may differ from the perspectives of those most impacted. In the end, the Equity Tool was most helpful in providing a process and discussion that could ground each Advisory Group in mindful, long-term thinking. Some highlights of climate action include benefits to health and opportunities in education, outreach, and workforce development. Some challenges include mitigating displacement, disproportionate costs, and developing streamlined ways to collect quantitative and qualitative data to track goal progress.

An example of the Equity Tool screening questions and template can be found below. For a complete list of questions, see Appendix IV.

<b>Theme 1: Health</b> Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.	Impact		
	Harm -1	Neutral or N/A	Benefit +1
Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?			
Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?			
Does the proposed action reduce stress, anxiety, and depression, i.e., improve mental health?			
Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?			
Overall response to these questions with justification:			

## Equity Icons

Throughout this plan, three icons have been placed next to each goal to indicate the equity themes that are most applicable to that goal. The icons are meant to communicate the goal's ability to make the strongest positive impacts in the theme areas indicated. They are not meant to imply that the goal "fixes" these issues or does not relate to other equity themes. The intent is to show readers how the goals in this plan relate to our equity work. Additional detail can be found in the Equity Evaluations section of the appendix.



## V. COMMUNITY CLIMATE AMBASSADOR PROGRAM

An essential part of creating and ultimately implementing this plan has been reaching out to groups that have systemically been left out of the climate conversation. We created a Community Climate Ambassador Program to connect with historically underrepresented groups in conversations around energy, transportation, food, consumerism, and access to nature in building the plan. The primary role of our ambassadors was to gather and share information about climate issues with their community and social circles.



## Ambassador Recruitment and Process

As part of this new engagement model, we put out a citywide call for applicants who could engage with communities that have been systematically excluded on climate-related issues. Twelve ambassadors were selected and were offered modest financial compensation to facilitate discussions around challenges, barriers, and opportunities facing these groups. Each ambassador hosted a minimum of three gatherings to produce at least five interview reports. This allowed us to elevate the voices of people in our community who have been under-represented in previous plans.

This approach was designed to use City resources to build relationships and trust with communities of color. This does not mean that other parts of our community will be left out or ignored, merely that additional resources were devoted up-front to ensure equitable outreach. The ambassador interviews were conducted without City staff present because we recognize that the presence of government officials can impair authentic, open conversations.



*Austin's first Community Climate Ambassadors.*

***In back, left to right:*** Kiounis Williams, Lourdes Kaman, Lynn Huynh, KB, AJ Gomez, Chelsea Gomez.

***In front, left to right:*** Deborah Beresky, Nakyshia Fralin, Sheridan Ray, Andrea Casares, Sayuri Yamanaka, and Celine Rendon (Office of Sustainability Staff). ***Not pictured:*** Taylor Huntley and Dianna Dean

## Findings from Ambassador-led Discussions

In traditional planning efforts, community members are often not invited into the process early enough. We wanted to start by listening first to understand the needs of our community. Our Climate Ambassadors held meetings to hear community concerns and submitted over 50 reports to City staff based on those conversations. The major takeaways from ambassador-led discussions were:



**Healthy Environment:** Concerns about pollution, cleanliness, and green space

- Center health and wellness in climate planning, conduct holistic planning
- Protect natural resources (water, land, air) from pollution
- Invest and promote clean energy, water conservation, and sustainable materials
- Focus on local, affordable, and healthy food
- Acknowledge disproportionate impacts of extreme weather on low-income communities and communities of color
- Protect, develop and maintain clean, pollution-free green spaces
- Conserve resources, reuse and recycle

**Affordability:** Affordable housing, living, food, gentrification, and displacement concerns

- Compensate and fund organizations and businesses focused on climate justice and led by people of color
- Prioritize and target incentives for low-income communities and communities of color
- Make green solutions or programs less expensive so everyone can participate
- Consider how gentrification and displacement affects the affordability of services
- Seek solutions that address household affordability in Austin, including displacement and homelessness

*"Doing the work of a community climate ambassador was very rewarding and very interesting. Learning the history and future plans for Austin was worth the research and time while working on this project."*

*-Kiounis Williams, Community Climate Ambassador*

**Economic Opportunity and Empowerment:** The need for better education, stronger partnerships, and workforce development

- Help BIPOC-owned businesses include participation efforts targeted toward these groups
- Fund local renewable energy businesses
- Ensure low-income communities and communities of color have the same access to economic opportunity, education, and healthcare

**Accessibility:** Accessible and culturally relevant education and awareness

- Lack of awareness and education materials prevents us from meeting sustainability goals
- Consider financial barriers to participation
- Consider the inequities of how people are excluded in economic opportunity because of disabilities, income, education, and healthcare
- Consider inequitable access to transportation options for communities who live in areas outside of Austin, such as Pflugerville, Round Rock, Cedar Park, Buda, and Kyle

**Cultural Preservation:** Loss of community history and/or culture, and preserving the existing culture

- Acknowledge that Austin is not a diverse city that respects, honors, and acknowledges the history of BIPOC
- Preserve, uplift, and support the vibrant culture and history of BIPOC

- Invest in maintaining cleanliness and upgrades in areas while mitigating or preventing displacement

**Community Capacity:** Community resiliency, safety, and better education

- Sustainability connects with a sense of place where people work, play, go to church and spend money in one community
- Improve education materials for community members so people understand why climate change issues are important, especially for parents who would like to teach children to understand these issues
- Emphasize intersectionality of climate issues
- Actively address safety concerns and community priorities and communicate with the community through meaningful connections to these concerns
- Build community resilience to long-term climate change impacts by focusing on social and economic stressors for people living in Austin
- Prepare for long-term climate change impacts, concerns that the infrastructure won't be able to keep up with growth

**Accountability:** City government responsibilities for assistance and support

- Include representative leaders from BIPOC communities that are impacted by decision-making
- Ensure equitable distribution of responsibilities in climate action
- Equitably design programs for low-income communities
- Address community-based concerns around systemic racism

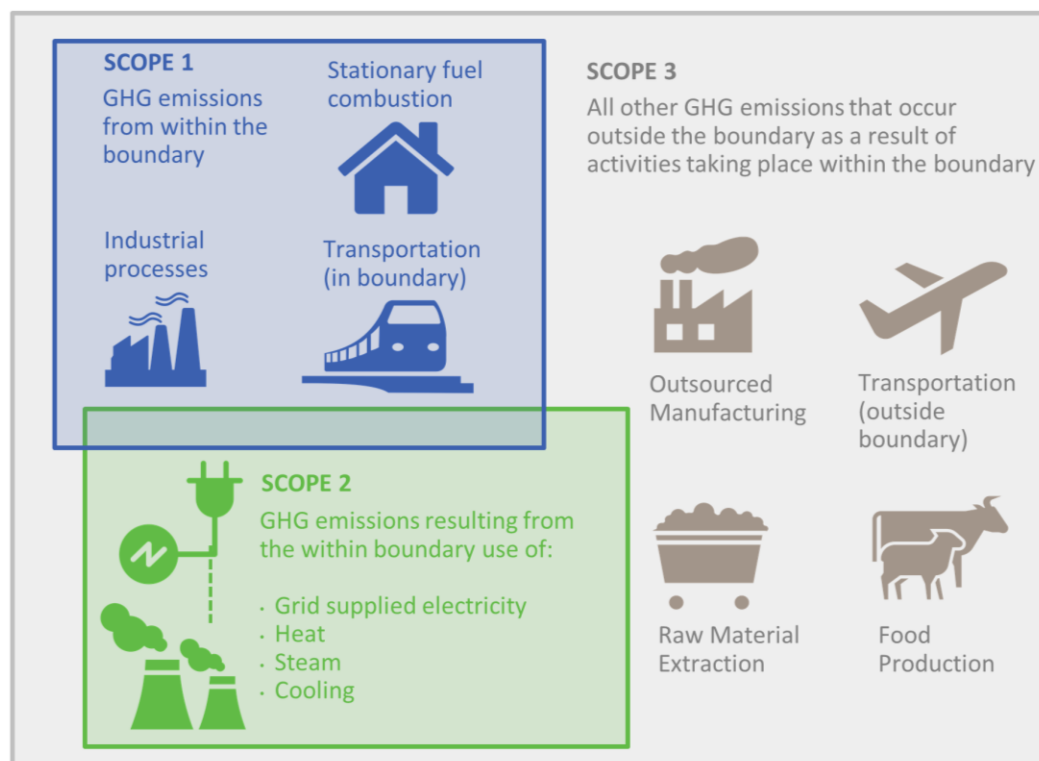
While the Climate Equity Plan will not solve all of Austin's equity challenges, the goal of the Climate Ambassadors program was to bring to light community members' concerns and find opportunities to begin the process of recovery and healing. Community concerns and feedback informed the plan's goals and strategies and are referenced in applicable sections throughout the plan. You can learn more about the ambassador program, including the selection process, tasks, and more in Appendix II.

# AUSTIN'S CARBON FOOTPRINT AND CLIMATE GOALS

## I. CARBON ACCOUNTING FRAMEWORK

Citywide emissions are measured using an accounting framework called the [Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories](#), or GPC. This protocol categorizes emissions into three scopes depending on where emissions occur geographically. The GPC was developed by a group of international non-governmental organizations and is widely used by cities and communities worldwide. The international popularity of the GPC allows for global comparisons and insights into greenhouse gas emissions accounting.

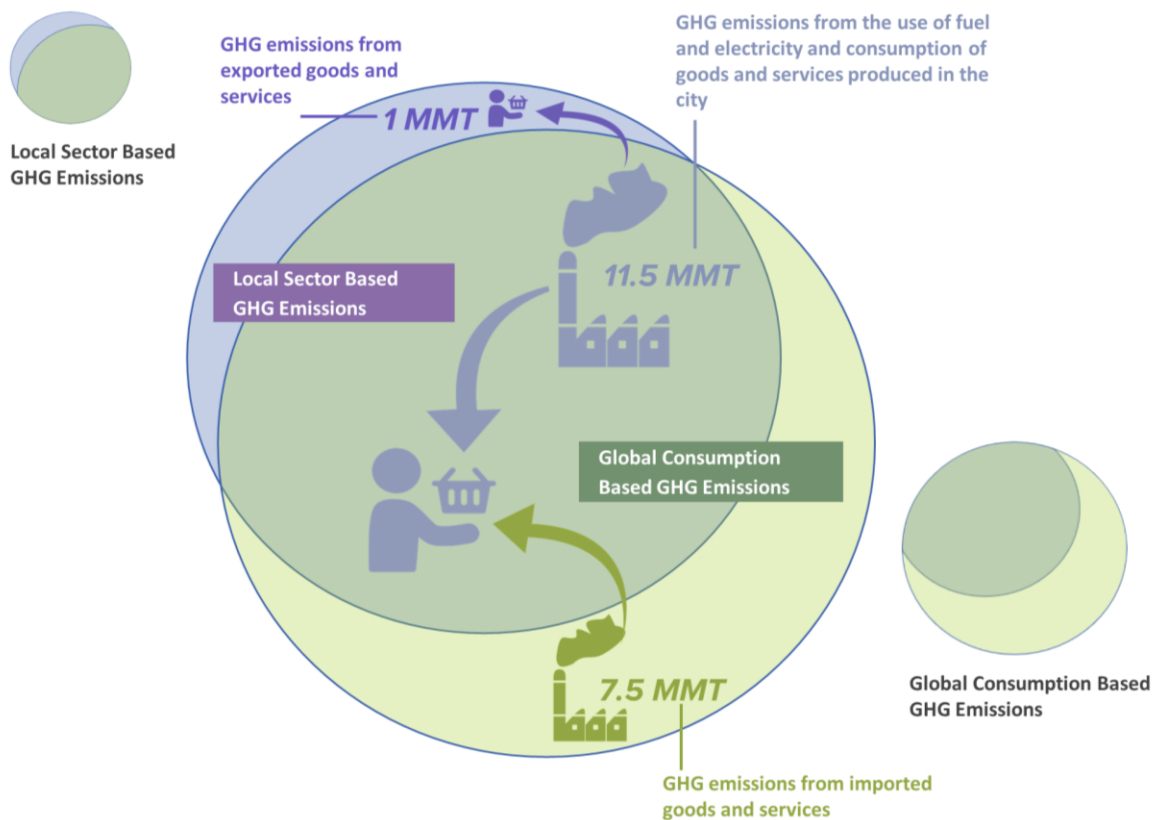
### Scopes of Greenhouse Gas Emissions Accounting



Only Scope 1 (emissions released within the City) and Scope 2 (emissions from electricity consumed within the City) emissions are currently included in the Austin Community Greenhouse Gas Inventory, which is considered a production-based emissions inventory. Scope 3 emissions occur outside of Austin because of activities inside Austin and are commonly accounted for in a consumption-based emissions inventory. These consumption-based Scope 3 emissions measure lifecycle emissions impacts, including all emissions associated with the extraction, manufacturing,

transport, consumption, and ultimate disposal or reuse of food, products, and services. Scope 3 emissions provide a more complete picture of our global contribution to climate change from the things we consume in Austin, but they are difficult to calculate accurately and reliably. For this reason, they are not included in Austin’s current emissions inventory and are not yet widely used globally. A rough order-of-magnitude illustration of Austin’s production versus estimated consumption emissions is provided below for comparison purposes. Scope 3 emissions were considered by the Natural Systems, Food and Product Consumption, and Sustainable Buildings Advisory Groups during the climate planning process, despite not currently being accounted for in our Greenhouse Gas Inventory. Scope 3 emissions will be incorporated into our Greenhouse Gas Inventory when an acceptable accounting protocol is established.

## Local Production-based vs. Global Consumption-based Greenhouse Gas Emissions Comparison



Currently, the Austin Community Greenhouse Gas Inventory, illustrated by the blue and dark green circles, accounts for emissions that are created primarily from activities occurring within Austin. Measurements are shown in million metric tons (MMT) of carbon dioxide (CO<sub>2</sub>).

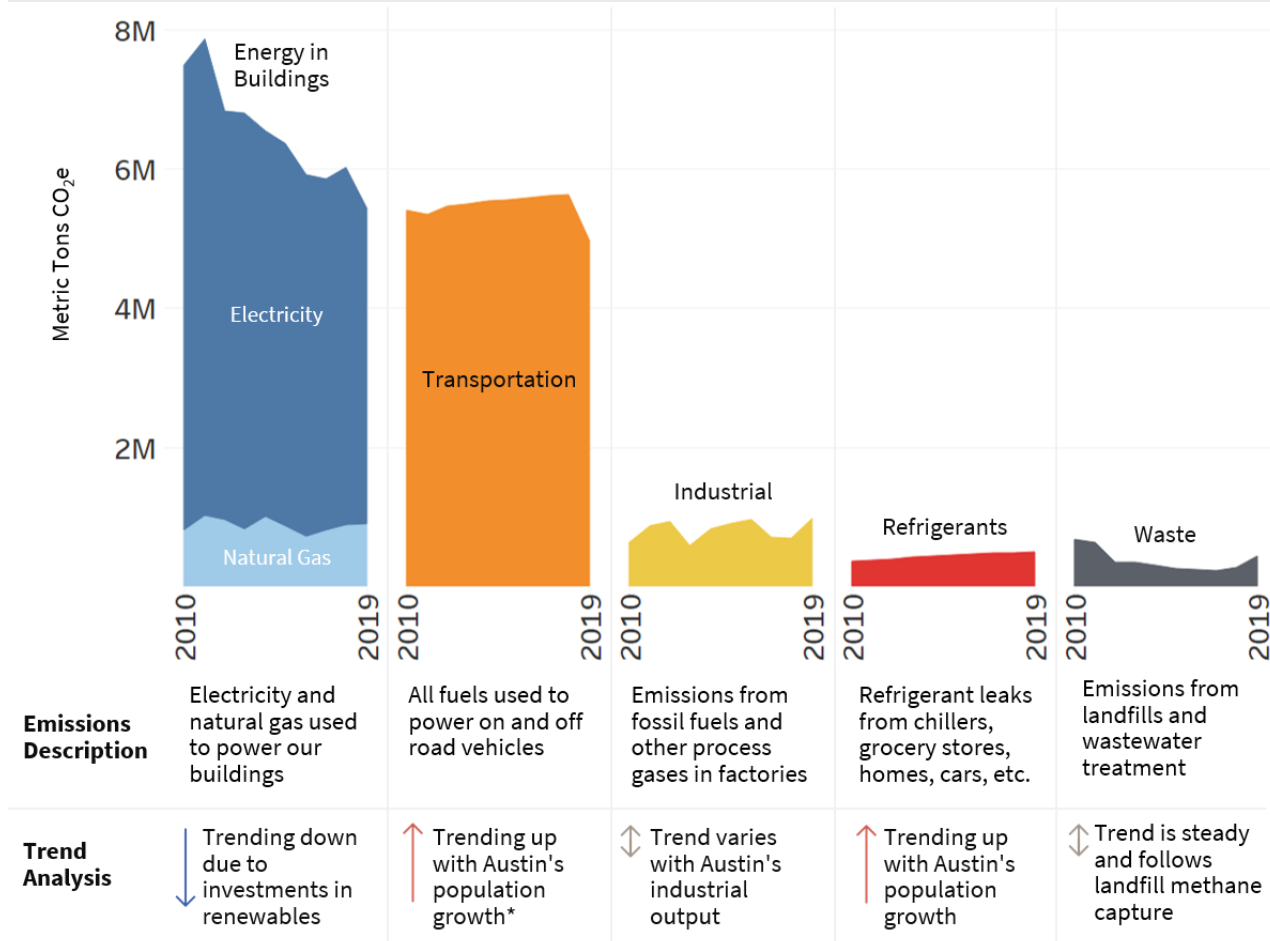
This plan starts to consider the global emissions impact of all the food and products consumed locally — represented by the light and dark green circles. This larger estimation of our carbon footprint magnifies our emissions contribution by about 1.5 times the current level.



## II. AUSTIN'S HISTORICAL AND PROJECTED EMISSIONS

The current production-based Austin Community Greenhouse Gas Inventory is broken into the five sectors shown below.

**Austin's Greenhouse Gas Emission Trends by Sector from 2010-2019**



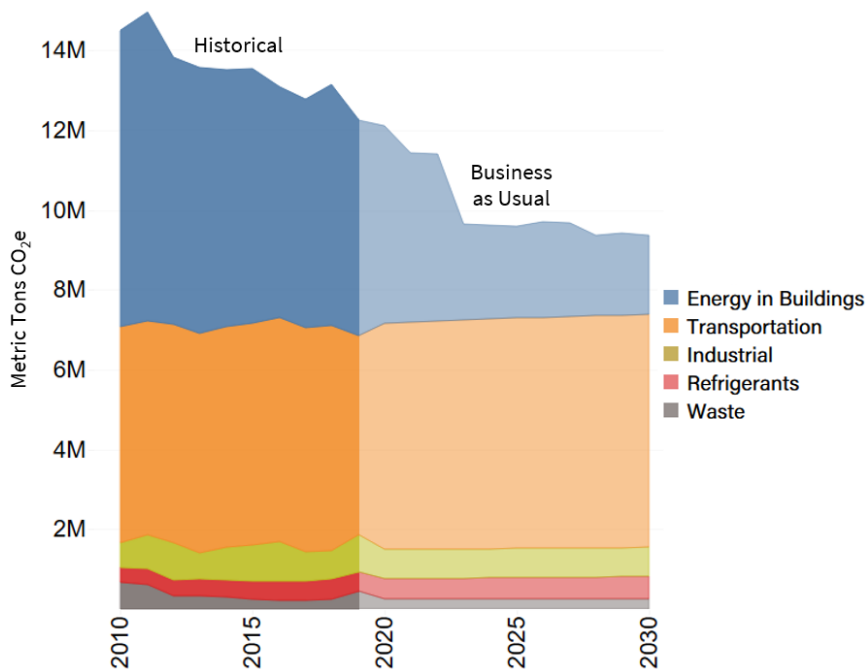
*\*2019 transportation emissions reflect a new and improved calculation methodology, which shows a decrease in emissions while vehicle miles traveled increased and are projected to continue increasing in future years.*

The majority of Austin's current emissions come from on-road transportation and energy used in buildings. In the last eight years, the greenhouse gas emissions from energy in buildings have fallen nearly 20%, despite a corresponding 20% growth in Austin's population in the same period. This reduction is predominantly due to Austin Energy's increasing electricity generation through renewable sources like wind and solar. Austin Energy has laid out additional plans for significant decarbonization of its power supply in its [Resource, Generation, and Climate Protection Plan to 2030](#). However, these reductions have been partially offset by rising emissions from on-road transportation.

Vehicle miles traveled (VMT), and vehicle fuel efficiency are the two main factors that affect on-road transportation emissions. In Austin, VMT has been steadily increasing for decades, mirroring population growth as more residents are driving further. Meanwhile, vehicle fuel efficiency has been increasing each year since 2005, meaning vehicles can travel further on less fuel due to technology improvements. However, since VMT is increasing at a higher rate than fuel efficiency is improving, there has been an overall net increase in transportation emissions over the last eight years.

Extrapolating current trends shows a continuation of Austin’s current predicament — falling emissions in electricity generation offset by rising emissions from on-road vehicles. The graph below shows past and projected community greenhouse gas emissions for Austin, assuming there is no electricity-related action beyond Austin Energy’s 2030 Resource Plan. If we were to fully account for our global greenhouse gas contribution using a consumption-based emissions inventory, our emissions would be an estimated 1.5 times larger than current levels.

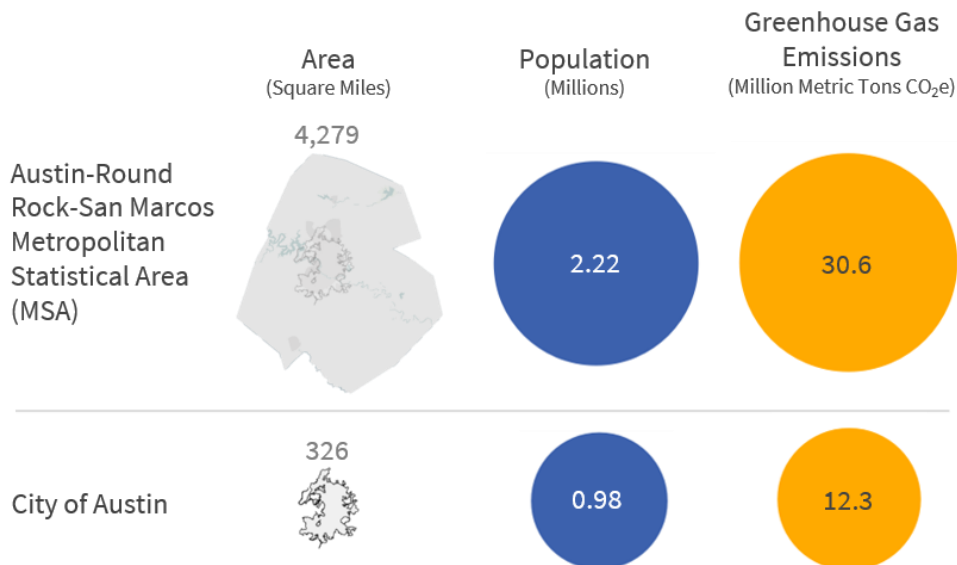
### Austin’s Past and Future “Business as Usual” Community Emissions



In 2011, Austin’s greenhouse gas emissions peaked and have since decreased by 18.4%. Despite this improvement, more action than ever is needed to continue this trend.

Another important consideration when estimating Austin’s greenhouse gas emissions is the interconnectedness of our region. The Austin city boundary is a logical but arbitrary geographic boundary for our emissions. For instance, transportation is often a regional phenomenon that is more effectively assessed across multiple connected counties or a metropolitan statistical area (MSA) rather than within a city boundary. Austin is part of the Austin-Round Rock-San Marcos MSA, encompassing five counties: Travis, Williamson, Bastrop, Hays, and Caldwell. To provide perspective on Austin’s emissions, we estimated the greenhouse gas emissions of the Austin-Round Rock-San Marcos MSA.

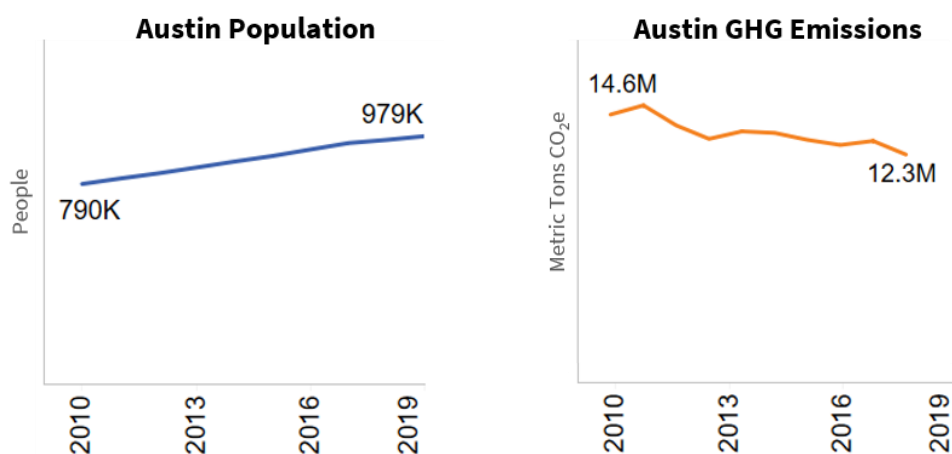
## City of Austin vs. Austin-Round Rock-San Marcos MSA



Austin makes up only 8% of the land area in the MSA but includes almost half the population and greenhouse gas emissions.

As shown, the emissions for the MSA are more than double those of just the city of Austin alone. This is due to increased housing density and shorter daily travel distances within the city limits, both of which lead to lower carbon footprints. An important note is that the Austin-Round Rock-San Marcos emissions estimate is not an official GPC inventory, but it was derived using similar methods. Looking forward, the more we capture growth in the city of Austin, the lower per capita emissions will be. Despite rapid population growth in the last decade, the city of Austin has reduced overall greenhouse gas emissions. As our region grows, this decoupling of population and greenhouse gas emissions must continue to achieve our climate goals.

## Austin Population and Emission Trends



*Austin's population has increased while greenhouse gas emissions have decreased.*

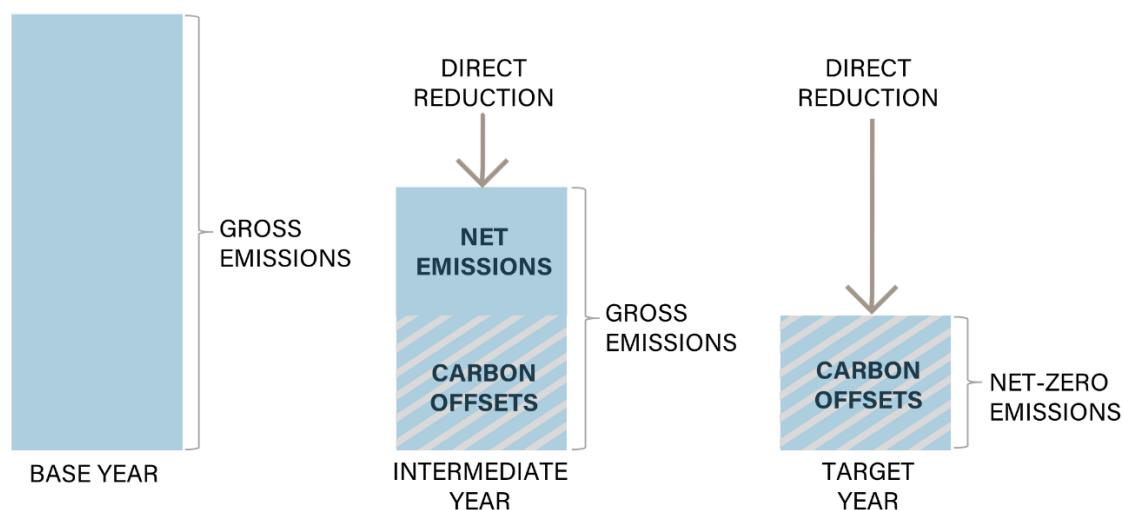
### III. AUSTIN'S CLIMATE GOALS

The [Austin Climate Protection Plan resolution](#) was adopted in 2007 and laid the groundwork for a community-level effort to address greenhouse gas emissions. This vision was focused in 2015 when the Austin Community Climate Plan set a net-zero target for community-wide greenhouse gas emissions by 2050. Since the goal was adopted, progress has been made. However, Austin is growing rapidly, and along with population and economic growth comes increases in construction activity and regional travel. The need for particularly aggressive action is more urgent than ever.

In August 2019, Austin City Council declared a Climate Emergency, which called for immediate mobilization to restore a safe climate. Additionally, there have been advances in renewable energy and sustainable technology that continue to decrease costs and improve feasibility. Given this, a new goal is being recommended for **net-zero community-wide greenhouse gas emissions by 2040, utilizing a steep decline path followed by negative emissions**.

Net-zero community-wide greenhouse gas emissions — or achieving carbon neutrality — means the Austin community will emit zero greenhouse gases into the atmosphere by 2040, or more likely, we will reduce direct emissions as much as possible and then employ carbon offsets or carbon dioxide removal to cancel out any remaining emissions. Carbon offsets should be used as a last resort and not be used to achieve more than 10% of the goal. See *Overarching Strategy 4: Local carbon reduction projects, carbon dioxide removal, and carbon offsets* to learn more about these strategies.

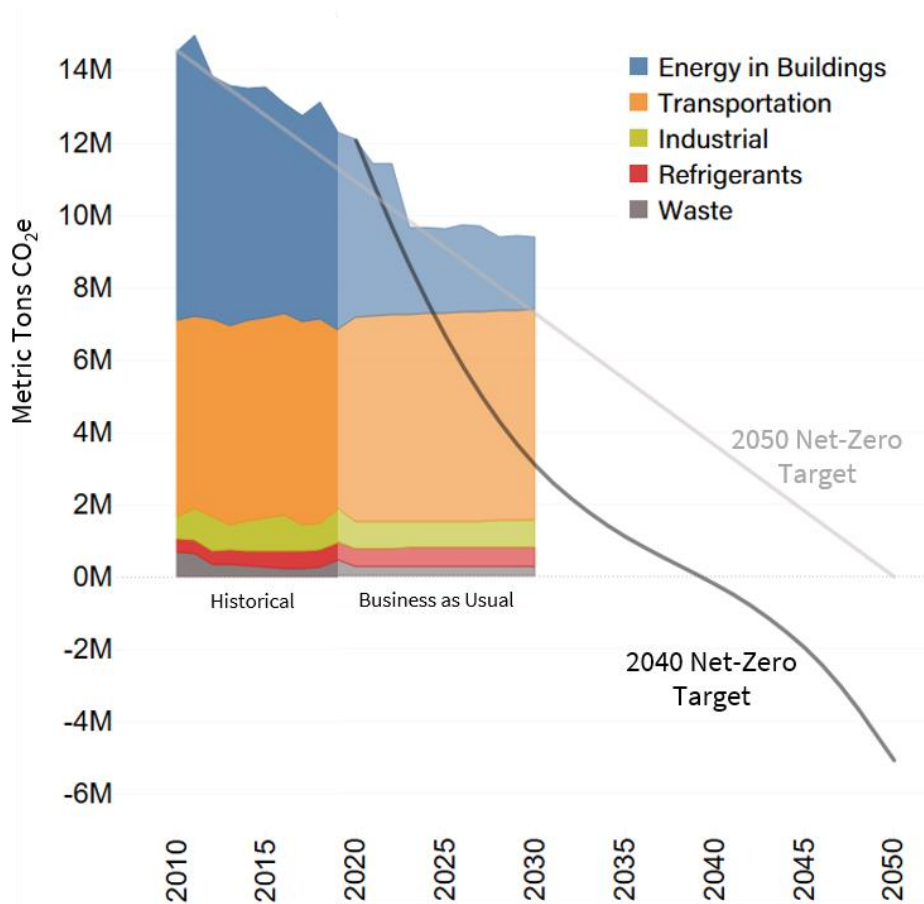
#### Achieving Net-Zero Greenhouse Gas Emissions



*Reaching net-zero greenhouse gas emissions means the Austin community will implement the strategies in this plan to reduce our direct emissions as much as possible. We will use carbon offsets or carbon dioxide removal to cancel out any remaining emissions by 2040.*



## Previous 2050 Net-zero Target vs. New 2040 Net-zero Target



*The new 2040 net-zero target has a steeper decline than the 2050 'straight line' target.*

Beyond moving up the net-zero target year from 2050 to 2040, the new target has a more aggressive emissions reduction schedule than a linear or “straight line” target. This steep decline curve was deliberately chosen based on the Austin City Council Climate Emergency declaration and three influential reports: C40 Cities’ [Deadline 2020 report](#), the Intergovernmental Panel on Climate Change’s (IPCC) [Global Warming of 1.5°C Special Report](#), and the UN Environment Programme’s [Emissions Gap Report 2019](#).

The Deadline 2020 report presented a pathway for global cities to meet the commitments made in the Paris Agreement. It sorted cities into one of four typologies based on current greenhouse gas emission levels, gross domestic product (GDP), and population. These typologies characterize the emissions reduction timelines necessary for meeting global targets to limit global warming to 2.7°F (1.5°C). Because Austin has a high GDP per capita and a high current emissions rate, it was sorted into the typology with the most rapid decline in emissions. According to C40 Cities’ logic, since Austin is a wealthy city with high greenhouse gas emissions per capita, it should be able and duty-bound to reduce emissions quickly compared to other global cities.<sup>40</sup>

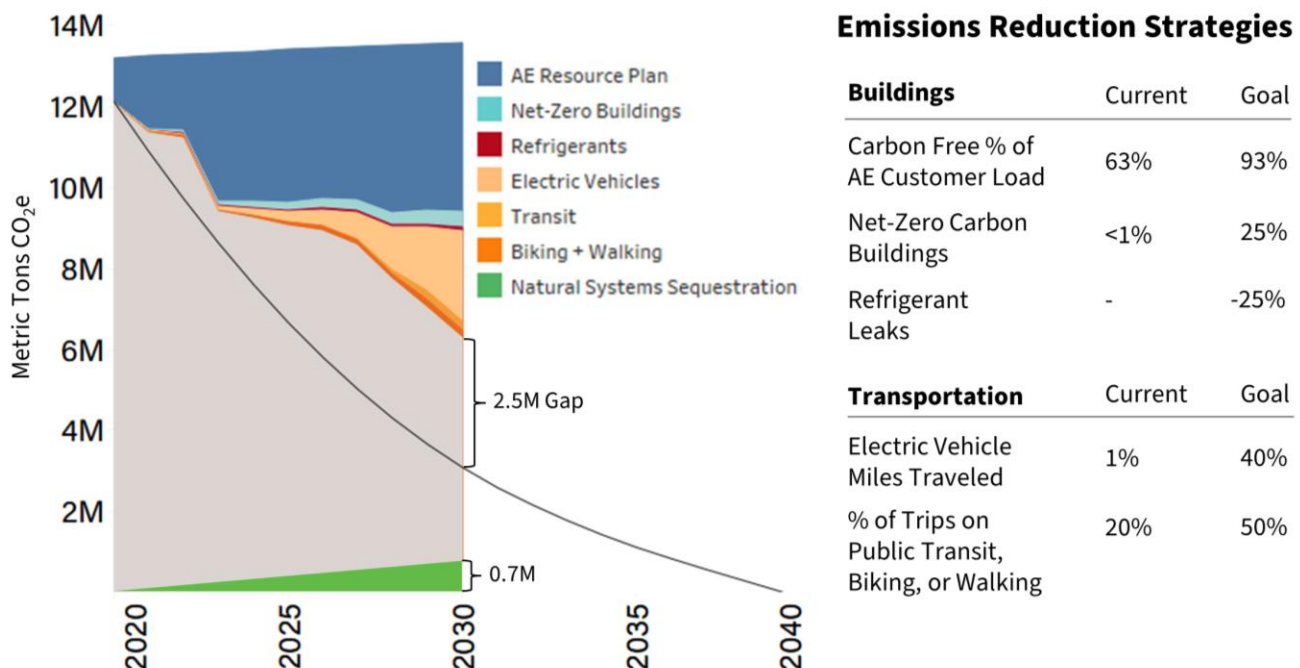
The UN Environmental Programme Gap Report painted a dire picture for limiting global emissions to 2.7°F (1.5°C) or even 3.6°F (2.0°C). This report examined global emission rates to show that reductions since 2016 have not been remotely close to meeting the goals outlined in the Paris Climate Agreement.<sup>41</sup> It serves as a sobering reminder of the monumental transition that still needs to take place to avert the worst impacts of global climate change. This was in addition to the IPCC's 2018 Global Warming of 1.5°C Report, which emphasized the importance of carbon dioxide (CO<sub>2</sub>) removal from the atmosphere to limit global warming to 2.7°F (1.5°C).<sup>42</sup>

In light of this information, we have adopted a target trajectory that follows a steep decline advised for cities like Austin in the Deadline 2020 report, but with a steeper reduction curve that emphasizes the urgency of massive global emissions cuts and ultimately negative emissions outlined in the UN reports.

## IV. MEETING OUR 2030 TARGETS

After the plan’s 2030 goals were established, staff modeled the impact of reaching those goals on future emissions over the next ten years. The modeling includes aggressive but likely estimates on how reaching our targets would reduce fossil fuel usage and greenhouse gas emissions. The chart below shows the potential cumulative impact of meeting all 2030 goals proposed in this plan compared to the new net-zero by 2040 goal.

### Greenhouse Gas Emissions Reduction from Baseline Projections vs. 2040 Net-zero Trajectory



Current projections show that if all the strategies in the Climate Equity Plan are adopted, greenhouse gas emissions will still remain above the emissions target line.

The graph uses a “business as usual” baseline, which assumes future electricity demand being met with the current Austin Energy resource mix. The largest reduction from this baseline will come from Austin Energy’s 2030 Resource Plan. This will create a projected 34% annual reduction in greenhouse gas emissions by 2030 as the carbon intensity of Austin Energy’s electricity generation decreases. Other notable decreases come from building decarbonization strategies and refrigerant leakage reduction in our community.

In the transportation sector, the long-term priority for reducing emissions is to increase transit and people-powered transportation. These strategies provide reductions in carbon emissions and have co-benefits of increased safety and reduced traffic congestion. However, the most scalable short-

term solution is to electrify single-occupancy vehicles, which are currently necessary to get around our city. The goal of 40% of all vehicle miles traveled by EVs in 2030 will require a transformation of the auto industry and exponential growth in EV sales over the next decade. This EV strategy capitalizes on Austin Energy's decarbonization of electricity, can provide future grid services, improves air quality, and saves residents money.

We believe the goals put forth in this plan are aggressive but achievable. However, even if we reach all the goals in our individual strategies, we don't project that we will meet our 2030 emissions target. Additional solutions to reduce and offset emissions will be needed.

One way to help meet this emissions gap is to look at negative emissions, including carbon sequestration and carbon dioxide removal. Carbon sequestration uses vegetation, soils, rock formations, and bodies of water to capture and store carbon that would otherwise contribute to climate change. The carbon sequestration performed by natural systems across the globe is enormous. However, local carbon sequestration alone will not be enough to offset the continued burning of fossil fuels at current or future levels. Its vastness also makes it difficult to calculate and track from year to year, and therefore it has not been traditionally accounted for in the greenhouse gas emissions inventory methodologies.

Natural systems sequestration and co-benefits are becoming increasingly important in burgeoning global carbon offset markets. As these markets mature and natural systems accounting becomes more standardized, we hope that these two sectors can provide the flexibility to meet our emissions targets over the next decade. We have estimated that if all the natural systems goals and strategies outlined in this plan were implemented, the natural systems in and around Austin could sequester over 680,000 metric tons of CO<sub>2</sub> per year.



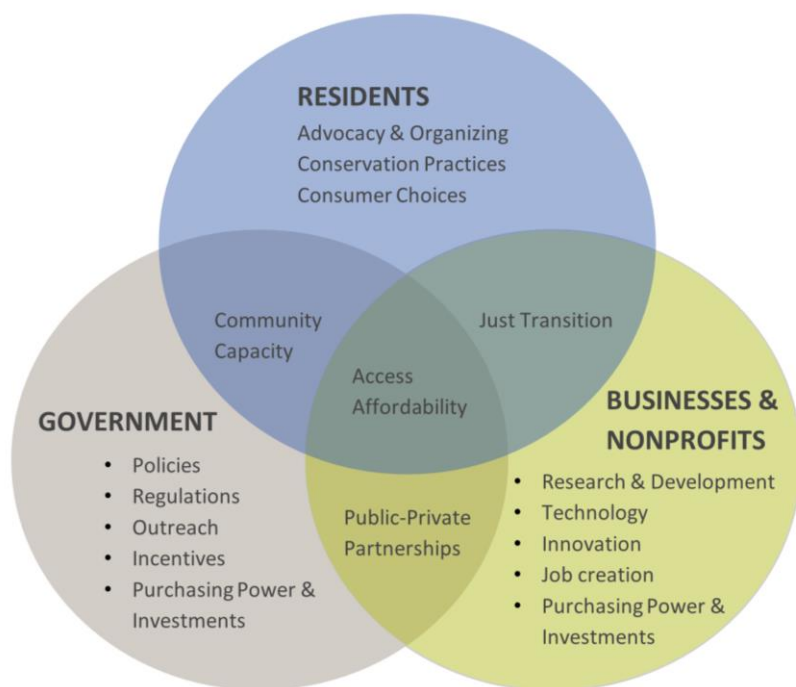
# 2030 GOALS AND STRATEGIES

## I. CLIMATE ACTION IS A SHARED RESPONSIBILITY

While climate action requires shared responsibility, it must be acknowledged that we all have common but differentiated responsibilities. This concept is a principle of the 1992 United Nations Framework Convention on Climate Change, which noted that wealthier, industrialized nations have a particular responsibility to mitigate emissions and more resources to do so.<sup>43</sup> When this concept is applied on a microscale to the Austin community, it is important to acknowledge the barriers to action for many community members and the critical role of large institutions with the resources to lead by example.

The City has taken a climate leadership role with the climate policies and City Council Directives referenced in the Climate Challenge section. The City's many coordinated plans and strategies are highlighted on the next page.

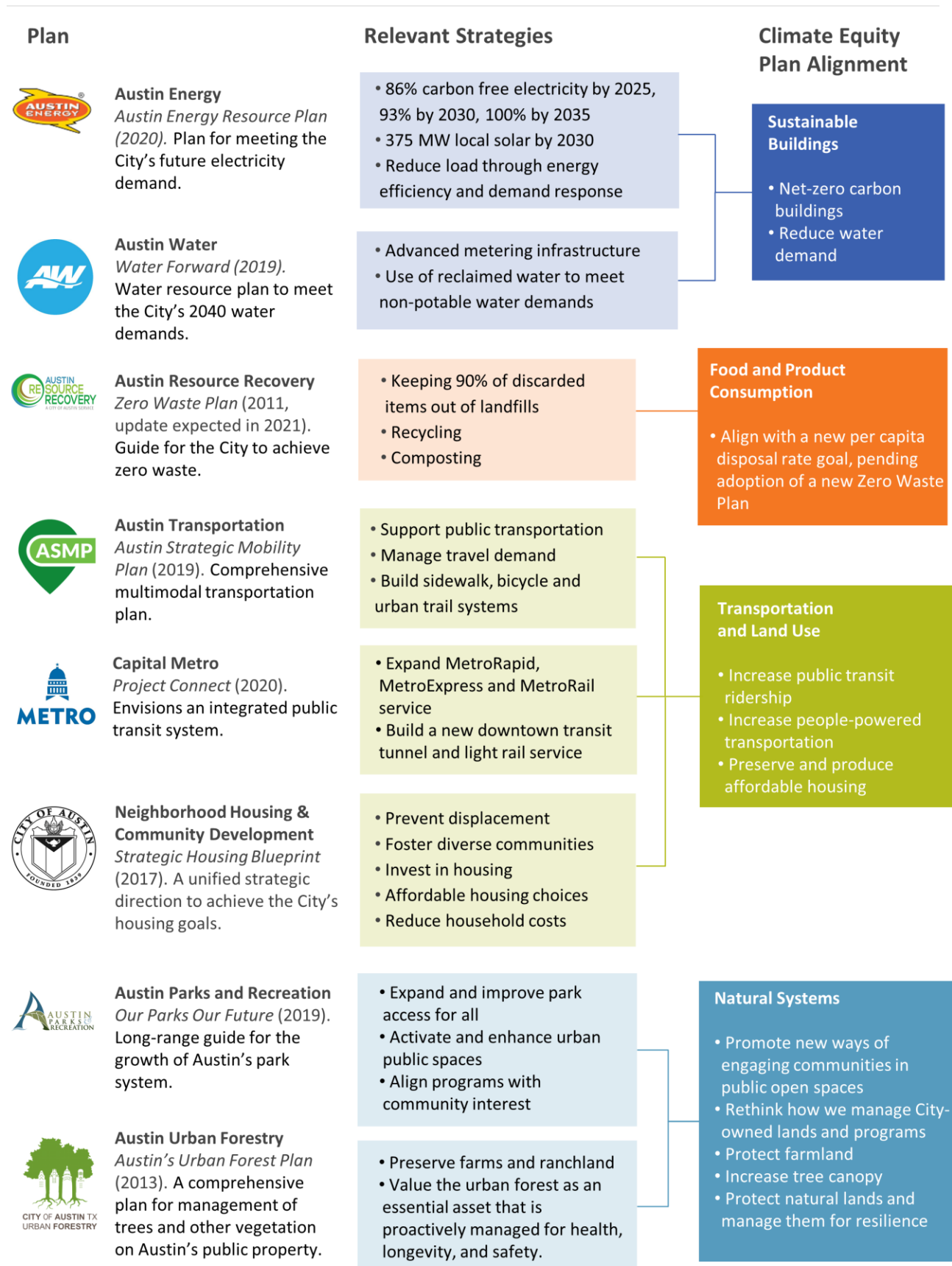
### Climate Action Responsibility



While the City can create policies, incentives, and regulations to push this work forward, the private sector's flexibility can create market disruption and acceleration through innovative technology and business models. Consumers can shift market demand to favor more sustainable practices and products. Still, the private and public sectors must collaborate to ensure these become accessible and affordable to all income levels.

In this way, our collaboration is key to the transformative change we need, and only together can we turn our visions into reality.

## Other Plans that Complement the Climate Equity Plan



## II. COLLABORATIVE PLAN DEVELOPMENT

To honor this shared responsibility vision, City staff, local experts, and Austin residents came together over ten months to recommend 17 goals and four overarching strategies supported by 74 specific strategies to curb emissions and achieve equity through climate action. In all, nearly 200 Austin residents participated in the process. A Steering Committee provided direction and accountability. Five Advisory Groups crafted the goals and strategies informed by input from the Community Climate Ambassadors program, community workshops, and individuals. To ensure that equity was properly considered, it was important for these groups to explore the historical and structural disparities that exist in Austin and recognize that race is the primary determinant of social equity.

The Advisory Groups were divided by topics, including **Sustainable Buildings, Transportation and Land Use, Transportation Electrification, Food and Product Consumption, and Natural Systems**. Throughout the process, the Advisory Group members and staff participants were required to attend an equity training, host community workshops on their topic, invite topic experts to present, and hold facilitated discussions to craft their goals and strategies.



### III. OVERARCHING STRATEGIES

While creating the Climate Equity Plan, a few issues arose across Advisory Groups that didn't fit in one category but are essential to the plan's success. Climate change and equity are massive challenges, and to meaningfully reduce our emissions while creating benefits for those who need it most, we need to think creatively. The following overarching strategies touch all areas of this plan.

#### Strategy 1: Green jobs and entrepreneurship



Create green jobs and entrepreneurship opportunities that advance the goals of this plan, expand economic opportunity and inclusion, and build agency and decision-making power in low-income communities and communities of color.

##### *How we'll get there:*

- Ensure an adequately educated workforce to perform installation and maintenance of new and existing green technologies and solutions through a skill-up training program specifically focused on low-income communities and communities of color. This may include green infrastructure, solar installation, renewable natural gas and hydrogen processing, water reuse or innovative mechanical systems, EV charging station installation, design and repair to reduce waste, urban agriculture, beautification, placemaking, etc.
- Ensure permanent career pathways that pay a living wage rather than temporary jobs. Include considerations for people who were formerly incarcerated and childcare services to ensure accessibility for working parents.
- Develop new workforce skills and job readiness to provide a ladder of opportunities and entry into a skilled workforce pipeline.
- Recruit from local communities of color to ensure diverse and equitable participation in all levels of green jobs sectors.
- Invest in local green businesses and target financial support for small businesses owned by people of color.
- Develop initiatives and programs to support and grow a network of entrepreneurs and executives of color.



*Photo: Green Union Jobs*



- Build upon the recent Austin Civilian Conservation Corps initiative to foster partnerships with nonprofit organizations to recruit and train economically disadvantaged community members.



## Strategy 2: Prioritize local community initiatives

Recognize and support existing community-led organizations, businesses, and programs that can help achieve the goals in this plan while building a green and just economy and culture. Lift up these initiatives as models and support new efforts that prioritize local investment, design out waste and pollution, promote the local exchange of ideas, goods, and services, and restore our people, land, water, and air to full health.

This strategy supports the concept of a circular economy that designs out waste and keeps materials and products circulating in productive use for as long as possible.



## Strategy 3: Regional collaboration

Create a Texas Climate Collaborative linking elected officials, City staff, and utility staff working to implement recently adopted climate plans in San Antonio, Houston, Dallas, and Austin. Work with cities across the state and neighboring cities, such as Round Rock, Cedar Park, Buda, Pflugerville, San Marcos, and Kyle, and the five-county governments: Travis, Williamson, Hays, Bastrop, and Caldwell. The group should focus on lessons learned from specific implementation and big picture issues like aggregating demand for new technology and statewide policy changes.

Leverage existing networks, such as C40 Cities, Climate Mayors, Urban Sustainability Directors Network, or the SPEER City Efficiency Leadership Council. Work through existing regional organizations such as the Capital Area Council of Governments and the Capital Area Metropolitan Planning Organization to consider and address climate change in their plans and programs.



## Strategy 4: Local carbon reduction projects, carbon dioxide removal, and carbon offsets

Reducing all fossil fuel usage and direct greenhouse gas emissions to zero will be difficult in the foreseeable future and may be considered prohibitively expensive. Purchasing lower-cost carbon offsets — sometimes called “carbon credits” — may be an option to cancel out direct emissions to achieve the net-zero greenhouse gas emissions target by 2040. For the use of carbon offsets in local climate action efforts, we have created the following definitions and guidance:

- **Local carbon reduction projects** – We want to stimulate collaboration within the community through local projects. A local carbon reduction project is an activity that occurs within Austin that avoids or sequesters greenhouse gas emissions but may not follow an accounting protocol or be third-party verified and registered. These projects should strive to be additional, measurable, permanent, and not create any adverse environmental or social impacts.

- **Carbon dioxide removal** – Carbon dioxide removal (CDR), carbon sequestration, or “negative emissions,” is the process of capturing carbon dioxide from the atmosphere and storing it permanently in the earth. This can be done via natural systems as well as using new green technology. Greenhouse gas emissions can linger in the atmosphere for decades and even centuries. To fully address the historical carbon pollution emitted in Austin that remains in the atmosphere today, we would need to remove an estimate of 288 million metric tons of carbon dioxide (CO<sub>2</sub>) from the atmosphere and safely store it away for at least 100 years. Removing CO<sub>2</sub> from the atmosphere will become increasingly necessary to avoid catastrophic climate change. To begin addressing this enormous task, we will explore how Austin can support more local CDR strategies and use these to meet the annual goals in this plan. We will start by researching and creating guidelines for natural and green technology CDR strategies, ensuring that equity and permanence are considered.
- **Carbon offsets** – A carbon offset or credit represents one metric ton of carbon dioxide-equivalent (CO<sub>2</sub>e) that is kept out of the atmosphere by either preventing the creation of the emissions (“avoided emissions”) or sequestering carbon in vegetation, soils, rock, or water (“negative emissions”). The avoided or negative emissions occur outside of Austin and compensate for an equivalent amount of greenhouse gas emissions occurring within Austin. Credits must adhere to an approved accounting protocol that ensures the carbon offsets are additional, measurable and permanent, and do not create negative environmental or social impacts. The credits must also be third-party verified and registered.

### **Prioritizing local projects, removal, and carbon offsets:**

The following criteria were developed to help guide decisions related to carbon reductions, local projects, removal, and carbon offsets and should be pursued in order.

1. Reduce local emissions following the goals set in this plan by investing in local carbon reduction projects in Austin that avoid direct emissions, focusing on creating local equity benefits and a vibrant collaboration between the community and the City.
2. Support carbon dioxide removal projects in the Austin-Round Rock-San Marcos area to sequester as much CO<sub>2</sub> as possible.
3. If annual community-wide emissions minus carbon dioxide removal is greater than the stated goal, carbon offsets can be applied to reach a goal. For any given year, carbon offsets should constitute no more than 10% of the baseline. This 10% should be reserved for sectors where emission reductions are cost-prohibitive or impossible to reduce with existing technology. When carbon offsets are used:
  - a. They should be purchased from projects as close to the Austin area as possible.
  - b. They should be purchased from projects that create additional environmental and equity benefits.
  - c. Carbon offsets from negative emissions should be prioritized over avoided emissions, and the use of avoided emissions should be phased out by 2040.



# SUSTAINABLE BUILDINGS

Buildings in Austin are responsible for about 50% of our emissions. Currently, the majority of those emissions come from electricity consumption in buildings. Since our electricity is becoming increasingly cleaner through Austin Energy's transition to renewables, additional strides can be made by reducing emissions associated with the natural gas sector, addressing refrigerants, and more sustainably managing construction materials. Additionally, energy efficiency incentives and easy access to utility data continue to be powerful tools in reducing energy burden — the percentage of household income that goes toward energy costs — making them key to achieving equity.<sup>44</sup>

A key area of addressing climate change is how we manage refrigerants. Globally, and especially in warm climates like Austin, refrigerants have played a critical role in modern life by enabling the comforts of air conditioning and refrigeration. Unfortunately, they are a significant part of our carbon footprint and have between 1,000 and 9,000 times the global warming potential of CO<sub>2</sub>. According to Project Drawdown, refrigerant management and alternative refrigerants are among the top strategies we can use to reverse global warming successfully.<sup>45</sup> This is an area that Austin has yet to address.

Globally, when operational and embodied carbon from building materials and construction are taken into account, buildings are responsible for nearly 40% of global emissions. While operational emissions have been the largest area of focus in climate planning, embodied carbon accounts for about 11% of global emissions from buildings. As operational carbon decreases, the relative impact of embodied carbon will become larger.<sup>46</sup> For perspective, the embodied carbon in a home can be equivalent to up to 15 years of operating the home, and for commercial buildings, it can be upwards of 30 years.<sup>47, 48, 49</sup> Using lower carbon materials can often come at lower or no additional cost, making this an important and accessible strategy — particularly when evaluated through a lifecycle lens.<sup>50</sup>

Improving our buildings isn't just about reducing greenhouse gas emissions. Since Americans spend nearly 90% of their time indoors, it's important to consider the public health impacts of our interior surroundings.<sup>51</sup> The materials we use to paint, furnish, and clean our homes and the appliances we use, such as natural gas stoves, can negatively impact indoor air quality.<sup>52, 53, 54, 55, 56, 57, 58</sup> Additionally, because of efforts to seal building envelopes for energy savings, indoor air is often two to five times more polluted than outdoor air.<sup>59</sup> The COVID-19 pandemic has made us very aware that ensuring safe and healthy indoor air quality in buildings is an important part of public health. As we advocate for selecting low-carbon materials and more efficient appliances, we should also consider their impacts on human health.

It's also important to consider reducing energy and water costs in our community. In Austin and across the nation, income disparities are largely tied to race, illustrating the need to address racial equity by focusing on lowering energy costs. In Texas, low-income customers spend an average of 10% of their income on energy, compared to 3% for non-low-income households.<sup>60</sup> In addition to making recommendations to reduce energy use and burden, this plan also collaborated with water stakeholders to evaluate ways to further embed equity into water conservation strategies and

evaluate water's role in reducing emissions. We also want to ensure that we expand building improvement jobs to low-income communities and communities of color to strengthen opportunities for our local workforce. We recognize that buildings are part of a larger urban ecosystem and that alignment and collaboration with transportation, land use, and natural systems will ensure sustainable development.

## Community Feedback

In ambassador-led conversations, participants referred to buildings as the homes, cultural spaces, and centers that make up neighborhoods and communities. Concerns noted the loss of culture because of the changes in neighborhood demographics. Specifically, the loss of Black-owned businesses, neglect of community spaces previously frequented and celebrated by the Black community and the ongoing threat of continued loss were discussed.

Participants noted that sustainable buildings present an opportunity to reduce utility costs and create a healthier environment through clean, renewable energy. However, these spaces should remain inclusive and accessible to all, and particular attention should be placed on ensuring that communities of color see themselves represented in them. Climate and buildings discussions can often veer into technical detail, but on a fundamental level, buildings are the spaces that people live, learn and congregate in, and they should represent community needs and perspectives.

## Winter Storm Uri

In February 2021, the Austin community experienced the devastating effects of Winter Storm Uri. Across the state of Texas, this storm led to approximately 4.5 million electricity customers losing power, 12 million customers receiving a “boil water” notice, and as many as 700 deaths<sup>61</sup>. While this storm highlighted the vulnerability of the electricity grid to extreme weather and the importance of weatherization of generation facilities, it also highlighted the deep inequities that exist at the building level. Neighborhoods that were not located near critical facilities were more likely to lose power, and homes with poor insulation became uninhabitable more quickly. This event served as yet another reminder that constructing and renovating homes and buildings to be more climate-resilient is vital to addressing equity.

## Austin Energy Resource, Generation, and Climate Protection Plan to 2030

The [Austin Energy Resource Plan](#) commits the utility to provide affordable, dependable, and safe electricity service to residents and businesses while pursuing the City's climate change and sustainability goals, including the Austin Climate Emergency Resolution. Austin Energy will maintain an energy supply portfolio sufficient to meet customer demand while eliminating emissions from its electric generation facilities as rapidly as feasible within the limitations set by the Austin City Council.

Austin Energy commits to providing access to the benefits of this 2030 Plan for low-income communities and communities of color.

When the goals and strategies outlined in the Austin Energy Resource Plan are implemented, we will reduce our current community-wide greenhouse gas emissions 29%, or 3.7 million metric tons by 2030.

The plan calls for:

- 93% carbon-free generation by 2030, 100% by 2035
- 1,200 megawatts (MW) of conservation, including 225 MW of peak capacity
- 1% of retail sales per year in energy efficiency savings, at least 25,000 customer participants annually, 25% limited-income
- 375 MW of local solar, 200 MW of customer-sited solar
  - Expand shared solar
  - Provide moderate and limited-income customers preferential access to community solar
- 40 MW of local thermal storage
- Commitment to equity evaluation for programs



## GOAL 1:

**By 2030, achieve net-zero carbon\* for all new buildings and reduce emissions by 25% for existing buildings while lowering all natural gas-related emissions by 30%.**

*\*For this goal, net-zero carbon implies operational carbon, which refers to the CO<sub>2</sub> emitted from operations, such as lighting and heating, during the in-use phase of a building. A net-zero operational carbon building is highly efficient and entirely powered by on- or off-site renewable energy.*

### **Strategy 1: Ensure benefits flow to low-income communities and communities of color**

Pursue a comprehensive energy poverty mitigation strategy by partnering with trusted community organizations, affordable housing developers, and schools in equitable outreach and program development. Programs should focus on energy burden reduction, improved air quality, neighborhood resilience during extreme weather, and increased passive survivability of buildings. This will ensure that the benefits of repair, energy conservation, and renewable energy incentives and programs flow to low-income communities and communities of color.

#### **What is passive survivability?**

Passive survivability refers to a building's ability to maintain critical life-support conditions in the event of extended loss of power, heating fuel, or water.

*How we'll get there:*

- Create partnerships and work with any future Community Climate Ambassador cohorts to gain feedback and insights on improving program accessibility. Support and expand upon existing low-income weatherization programs.
- Support and collaborate on initiatives to advance neighborhood preparedness efforts and share resources on repair and recovery programs. Educate property managers and tenants on the benefits of weatherization and how to maintain building operations during disaster events.



- Ensure a City cross-departmental approach that also emphasizes partnerships with green infrastructure stakeholders to ensure trees and greenery are utilized and placed strategically to shade buildings and help further conservation.
- Encourage reducing impervious cover and shading for infrastructure such as benches, public transportation facilities, public water fountains, and charging stations to ease the urban heat island effect and reduce heat impacts on residents.
- Mitigate increased utility costs to households and small businesses to ensure that decarbonization does not disproportionately affect low-income communities. Prioritize low-income communities and communities of color while distributing incentives to address energy burden.
- Collaborate with resilience planning processes to focus on neighborhoods that disproportionately experience extreme heat, flooding, blackouts, and other climate-related emergencies.

## **Strategy 2: Enhance understanding of energy consumption**

Enhance resident and building owner understanding of energy savings opportunities, benefits, and climate impacts of energy consumption. This will be done through direct outreach, culturally relevant communications, expanding benchmarking requirements for all existing buildings, and better access to energy and water data.

*How we'll get there:*

- Expand information access for utility consumption through billing systems, mobile and web applications, and reporting requirements. Create streamlined processes for building owners to access whole-building utility data to support energy and water reduction goals.
- Focus on opportunities to partner with affordable housing and multi-family properties and better expand information access to low-income customers.
- Create workforce development and training opportunities for students of color in schools and universities.
- Collaborate with schools, youth-serving, and youth-led organizations to integrate energy education within the curriculum and planned activities.
- Evaluate ways in which automated communications systems can help facilitate data sharing and communication during disasters.

## **Strategy 3: Achieve energy-efficient, net-zero carbon buildings**

Achieve goal milestones for net-zero carbon buildings through new building energy codes, amendments, and other methods. Engage owners and operators of existing buildings to decarbonize through incentives and education for contractors and occupants. Collaborate with local utilities to implement equitable emission reduction strategies.

#### *How we'll get there:*

- For new construction and major building renovations, incentives, education, or code amendments will enable a high level of energy efficiency, building systems and appliance electrification, peak-load shifting, microgrids, and distributed generation.
- Energy efficiency will be a primary strategy for existing buildings to help reduce energy burden and greenhouse gas emissions, complemented by grid stabilization and equitable rate structures. On-site renewable energy, reducing energy demand, smart building technologies, gas-to-electric equipment replacement, and other natural gas emissions reduction measures will further decarbonize existing buildings.
- Equitable natural gas emission reduction strategies may include but are not limited to renewable natural gas, expanded energy efficiency programs, system leak detection and reduction, and other new technologies and programs.
- Offer incentives to HVAC and water heater distributors and retailers that make lower-carbon options like heat pumps and heat pump water heaters the cheapest options without additional paperwork burden on consumers and business owners.
- Ensure all new programs are created with equity principles, are guided by community input, and value cultural differences. Collaborate with affordable housing developers, public-serving entities, and small businesses to prioritize net-zero carbon buildings in low-income communities and communities of color. Pursue ways to expand energy services, such as weatherization, to best serve all multi-family residents.

#### **Strategy 4: Ensure equitable workforce development for emerging technologies**

Prioritize investment in local emissions reduction and create equitable workforce development and training opportunities for emerging technologies by partnering with local unions, education, and advocacy organizations that serve low-income communities and communities of color. Increasing these opportunities can positively impact families, aid in relationship building, and support community capacity to drive decision-making in future projects and programs.

#### *How we'll get there:*

- Develop workforce opportunities by partnering with local universities and schools, such as Huston-Tillotson University, Austin Community College, Texas State Technical College, and the Career and Technical Education Program at Austin Independent School District, as well as local unions and advocacy organizations.
- Pursue partnerships and support from local clean technology companies to help create internship, apprenticeship, training, and employment opportunities for individuals.
- Expand repair programs that serve residents most in need, such as the elderly and those with disabilities, by increasing workforce and organizational capacity. Programs should ensure the health, habitability, and compliance of affordable housing and multi-family units.
- Consider scholarships to help with training for low-income communities.

- For affordable housing and other properties that are City-owned, operated, or funded, create or participate in a local or state bulk purchasing program. This will help secure volume price discounts on lower-carbon technologies, such as heat pumps, heat pump water heaters, solar photovoltaic and solar thermal systems, battery storage systems, etc. Explore opportunities with suppliers to pass on discounted pricing to area residents and businesses.



## GOAL 2:

**By 2030, reduce community-wide greenhouse gas emissions from refrigerant leakage by 25%.**

### Strategy 1: Capture and destroy old refrigerants

Develop a refrigerant destruction program that places a price on older high ozone-depleting substances and global warming potential (GWP) refrigerants. The program could be run by the City or a contractor and would increase the capture of old refrigerants and safely destroy harmful gases.

*How we'll get there:*

- Examine the feasibility of designing and deploying the program.
- Explore similar programs in other cities and determine potential funding opportunities.

*"[We should] implement special programs for Black, Indigenous and people of color-owned businesses that may want to renovate to make their buildings more sustainable."*

*– Austin community member*

### Strategy 2: Improve building codes to encourage cleaner refrigerants

Closely follow developments in revised building codes that allow the use of low and no GWP refrigerants, such as California's state building code changes and U.S. Green Building Council® policies, and move forward with code amendments and other local action as soon as feasible.

*How we'll get there:*

- In the meantime, partner with organizations that are innovators in low to no GWP refrigerants and highlight successes in marketing efforts.
- Leverage any market trends to stimulate voluntary action.

### Strategy 3: Create incentives for leak detection and repair

Partner with grocery stores, convenience stores, restaurants, restaurant supply companies, refrigerated warehouses, and HVAC tune-up and repair companies to create an incentive for

designing and tracking refrigerant leak detection, prevention, and repair. Regularly maintaining units and repairing leaks can help prevent leakage during disasters such as flooding and windstorms.

*How we'll get there:*

- Ensure incentives can engage a diversity of sectors and business sizes in participation.
- Prioritize outreach and program development to support local, small businesses owned by people of color.

#### **Strategy 4: Awareness and training for HVAC service providers**

Create an awareness, education, and training campaign for local HVAC service providers, building owners, operators, inspectors, and maintenance leads on the importance of refrigerant management and strategies for leak detection, prevention, and repair.

*How we'll get there:*

- Ensure training and education are provided in multiple languages and are accessible to workers of color in this industry.
- Approach stakeholders with empathy and emphasize the importance and benefits of this work.
- Lead by example by implementing a refrigerant leak detection, prevention, and repair program at City-owned facilities.

#### **Strategy 5: Reduce the volume of refrigerants**

Emphasize the link between design and refrigerant use by reducing and preventing the use of refrigerants to the extent possible, particularly those with high GWP.

*How we'll get there:*

- Ensure codes and incentives that favor passive design, reduction, and efficiency are expanded and prioritized.
- Educate stakeholders on best practices for and highlight examples in culturally inclusive marketing and communications.



### **GOAL 3:**

**By 2030, reduce the embodied carbon footprint of building materials used in local construction by 40% from a 2020 baseline\*.**

*\*The embodied carbon associated with the construction and materials must not exceed 500 kg CO<sub>2</sub>e/m<sup>2</sup> (~100 lbs CO<sub>2</sub>e/sf) per project.*

## Strategy 1: Lead by example through design and construction standards

In partnership with other cities and states, develop City of Austin design and construction specifications and purchasing agreements to result in healthy, low-carbon buildings.

*How we'll get there:*

- For example, encourage lower-carbon building materials, whole-building lifecycle analysis, healthy building certifications, and building reuse and deconstruction in City-funded projects. Purchasing policies should be structured to promote building product transparency and preferred outcomes.
- Ensure healthy building strategies and certifications are prioritized in community centers, libraries, and other community facilities serving low-income communities and communities of color first.
- Employ circular design strategies to ensure building and building material longevity, such as designing for a building's durability, deconstruction and potential future uses.

### What is embodied carbon?

The embodied carbon of a building represents all the emissions associated with its lifecycle, including extraction, manufacturing, transport, construction and maintenance, demolition and disposal or reuse of materials.

## Strategy 2: Incentivize lower-carbon materials

Enhance and integrate lower-carbon building materials and deconstruction practices into City incentive programs, like the expedited permitting process and Austin Energy's Green Building program, to transition voluntary design guidance into planning and development agreements over time.

*How we'll get there:*

- Develop an embodied carbon baseline to measure success effectively. Since this is a new initiative, education and actionable information about the embodied carbon of local building materials are under development. A push for transparency and gathering more information is the important first step.
- Consider feasibility and cost to determine the most effective pathways to stimulate voluntary action.
- In addition to low-carbon materials, consider ways to incentivize design for durability and plans that include material capture for recycling and reuse. Consider the health impacts of toxic and hazardous materials, particularly during natural disasters.
- Invest in culturally relevant marketing to highlight success cases and drive participation.

## Strategy 3: Educate stakeholders on materials best practices

Create a performance framework and educational programming for industry professionals and the general public, focusing on low-income communities and communities of color, to reduce the lifecycle and negative health impacts of building materials and construction practices.



*How we'll get there:*

Provide resources that address and help mitigate the health impact of materials from the point of extraction to operation, including the availability of environmental and health product declarations. Environmental Product Declarations can help ensure the health of people exposed to material extraction, manufacturing, and lifecycle processes. Health Product Declarations focus on the transparency and reporting of harmful ingredients used in building products. Both declarations work to protect communities at different potential points of exposure and empower decision-makers to select better products proven to push the industry to cleaner and more transparent processes and products.

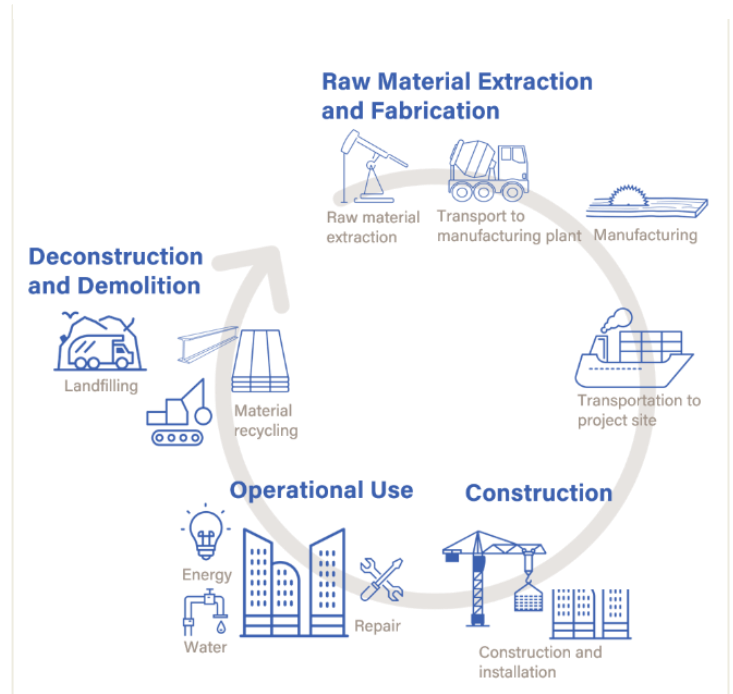
#### Strategy 4: Stimulate decarbonization with local producers

Prioritize partnerships within local materials markets to decarbonize high-impact materials, specifically: glass, steel, aluminum, concrete, drywall, insulation, and carpet.

*How we'll get there:*

- Leverage and align with existing local and national efforts to create equitable outcomes in materials decarbonization and look for opportunities for coworking and collaboration among businesses.
- Encourage the growth of local businesses that can create building materials from current construction, manufacturing, and municipal sources.

#### The Lifecycle of a Building



## GOAL 4:

**By 2030, equitably achieve a community-wide water demand of approximately 152,000 acre-feet per year by implementing strategies in the Water Forward Plan.**



#### Water Forward

Water Forward, Austin Water's Council-approved 100-Year Integrated Water Resource Plan, contains near- and long-term strategies to increase water conservation and reuse, provide drought resiliency and protect our core Colorado River supplies. The 2030 goal listed above is based on

Water Forward's 2020 and 2040 water demand goals. The Climate Equity Plan's water strategies support the equitable implementation of the Water Forward Plan.

Austin Water also has existing programs that address water conservation in residential areas, specifically around high water users. These include conservation-oriented tiered water rates, proactive outreach to high water use neighborhoods, free irrigation audits, and information about wastewater averaging season.

One acre-foot equals about 326,000 gallons, or enough water to cover an acre of land, about the size of a football field, one foot deep.

### **Strategy 1: Engage residents in water efficiency technological transitions, and conservation programs**

Enhance community engagement strategies and create partnerships with community organizations to advance equity through Water Forward strategies, including [My ATX Water](#) (Advanced Metering Infrastructure), incentives, and ordinances.

#### *How we'll get there:*

- Collect, analyze and respond to demographic data on incentive program participation.
- Gather input on program experience, including low-income residents' experience with My ATX Water.
- Discuss the benefits of automated tracking systems in helping with leak awareness and insurance claims during disaster events.
- Develop and implement targeted outreach efforts to enhance water conservation program participation, collect input, and better engage residents in decision-making processes.

### **Strategy 2: Evaluate water conservation, customer assistance, and workforce development program participation criteria**

Evaluate program criteria to identify opportunities to address structural barriers that prevent program participation. Collaborate with City departments and community organizations to explore strategies to expand enrollment in the Customer Assistance Program and increase participation in other programs serving low-income customers.

#### *How we'll get there:*

- Undertake equity assessments of program design to identify and recommend strategies to extend eligibility to multi-family properties, modify existing leak repair programs, streamline application processes and increase outreach to qualified customers not currently enrolled in these programs.

- Create partnerships across City departments and with community organizations to enhance workforce development opportunities in water and green jobs.

### **Strategy 3: Reduce emissions at the water-energy nexus**

Assess how water demand reduction is associated with energy consumption in residential and commercial buildings and Austin Water facilities. Identify and pursue synergistic water conservation and energy management optimization efforts through programs and partnerships.

*How we'll get there:*

- Complete an evaluation of energy usage across Austin Water facilities and develop a plan to reduce usage spikes and decrease demand.
- Develop methodologies to quantify how customer reduction in water demand also reduces the City's energy usage and related emissions.



*At the Mueller HEB, an innovative propane refrigeration system with zero ozone depletion potential and very low global warming potential allows for 95% less refrigerant than conventional systems. (AEGB 4-Star Rating and LEED® Gold Certification) Photo: Ray Briggs*



# TRANSPORTATION AND LAND USE

Transportation will soon become the largest contributor to our community's greenhouse gas emissions, and therefore the most critical factor to reaching our climate plan goals. Where our residents live, work and play and how they move around our city greatly impacts our community-wide emissions. Coordinated transportation and land use strategies can improve access to different types of transportation, create more affordable housing, support diverse communities and reduce greenhouse gas emissions. The vision of this section is to cultivate a person-centered network of complete communities that meets the needs of low-income communities and communities of color of all ages and abilities.

Transportation and land use are broad topics that significantly impact our community's quality of life and greenhouse gas emissions. The [Imagine Austin Comprehensive Plan](#), neighborhood and corridor plans, and the land development code shape the look of our city and how residents and visitors navigate it as we grow. Transportation plans like the [Austin Strategic Mobility Plan](#) and Capital Metro's [Project Connect](#) transit plan further influence how we get around and reduce our dependence on cars. The [Austin Strategic Housing Blueprint](#) and related affordable housing initiatives aim to increase affordable housing units.

In November of 2020, Austin voters approved \$7.1 billion for Proposition A, also known as Project Connect. In addition to reducing greenhouse gas emissions, Project Connect has broad goals to address traffic congestion, expand service for essential workers, decrease traffic fatalities, create jobs, and provide access to schools, health care, jobs, and the airport. To achieve these goals, Capital Metro plans to add two light rail lines, one bus rapid transit line, and one commuter rail line to the already existing Red Line, which will also undergo major improvements. The proposal also calls for investments for all routes, a transit tunnel through the downtown area, a fully electric bus and train fleet, and new park and ride areas throughout the service area. Project Connect forecasts daily ridership of 61,600 to 73,600. These estimates translate into thousands of daily commuters out of cars, reducing transportation emissions by thousands of tons per year.

While these plans provide direction on how the Central Texas region might grow, the equity and climate discussion is somewhat new to this topic. Low-income communities, communities of color, and people with disabilities have felt the brunt of publicly supported racist and ableist policies and dwindling resources. As a result, they are often forced to make difficult decisions under the weight of this oppression.

In addition, the influx of people moving to Austin over the last 30 years — many with high-paying jobs — has dramatically increased property values and the price of goods and services in Central Texas, which has displaced low-income communities, communities of color, and people with disabilities. This displacement forces low-income residents to the outskirts of Austin and surrounding jurisdictions and further away from jobs centers and amenities. This, in turn, increases the dependency on carbon-intensive automobiles to fulfill daily needs.

If all the Transportation and Land Use goals and strategies were put in place, including Capital Metro's Project Connect, we could reduce community-wide greenhouse gas emissions 3% or 400,000 metric tons by 2030.



This pattern highlights the need to preserve and expand the amount of affordable housing in Austin and work regionally to address the interwoven nature of transportation and land use.

Updating the land use code can foster complete communities that meet the basic needs of all residents through integrated land use planning, transportation planning, and community design. While creating complete communities through the code and related tools is vital to reducing greenhouse gas emissions, the Transportation & Land Use Advisory Group chose not to tackle specific code questions due to ongoing City Council discussions. Instead, the group focused on strategies aligned with Imagine Austin and the City Council's direction on more sustainable development and travel patterns.

## Community Feedback

Transportation and land use were recurring themes in the Community Climate Ambassadors' feedback. For some, public transit is a lifeline to jobs, healthy food, health care centers, daycare, and other essential services. Population growth has made housing and services more expensive, displacing communities of color and rapidly changing the local culture. The Ambassadors stressed the need to enact policies that make transportation and housing safe and affordable.

## GOAL 1:



**By 2030, 80% of new non-residential development is located within the city's Imagine Austin activity centers and corridors.**

### Strategy 1: Plan for complete communities

Adopt Complete Communities plans that reverse historical and racist impacts on areas experiencing displacement and preserve neighborhoods in communities of color. Some examples include neighborhood, village, corridor, and station area plans. Complete Communities is a planning concept that aims to meet the basic needs of all residents in a community through integrated land use planning, transportation planning, and community design.

*How we'll get there:*

- Align future development with regional planning efforts like the Imagine Austin Growth Concept Map, CAMPO 2045 Plan, and other regional planning efforts in surrounding cities like Bastrop and Manor.

### Strategy 2: Work with employers on location and amenities

Work with medium and large employers to locate their places of business in growth centers and along corridors.



*"Tenderly" by Connie Arismendi was created in honor of big band orchestra leader Nash Hernandez Sr. The piece was commissioned by City of Austin Art in Public Places.*



*How we'll get there:*

- Work with local corporations to fund anti-displacement measures, including supporting systematically excluded businesses and advancing workforce development programs.
- Work with local corporations to include community amenities, such as parks, transit stops, healthy food locations, childcare options, health centers, community centers, and facilities for seniors in future development projects.

### **Strategy 3: Create mobility hubs**

Create community mobility hubs, including park-and-rides, that offer various first- and last-mile mobility options adjacent to transit stops to offer a complete trip experience.

*How we'll get there:*

- Improve the physical access to and through the transit stop/station area to be accessible to all.
- Identify necessary resources to carry out and maintain placemaking and beautification opportunities. Hire low-income individuals, people of color, people with disabilities, artists, creators, and makers to design and create beautification projects.
- Provide diverse amenities and family-friendly spaces adjacent to mobility hubs.

### **Strategy 4: Phase out free parking**

Phase out the practice of providing free parking spaces to employees at City of Austin facilities and other large employers located within 1/2 mile of the Austin Strategic Mobility Plan's transit priority network. Instead, offer a parking cash-out, carpool and vanpool options, flex schedules, transit passes, support for teleworking, or other commuter benefits program.

*How we'll get there:*

- Focus parking reduction strategies on large employers to lessen the potential negative impacts on communities of color, particularly those displaced to parts of the city where transit service is less frequent or unavailable. Providing free or subsidized parking for higher-income, predominantly white employees who have other options incentivizes them to drive. This reduces funding and support for other modes like public transit that are disproportionately used by low-income communities and communities of color.
- Conduct an inclusive engagement process to provide affordable parking and other multimodal access options for essential services. These could include transit stops, healthy food locations, health centers, community centers, multi-family residences, facilities for seniors, and construction sites.

## GOAL 2:



**By 2027, preserve and produce 135,000 housing units, including 60,000 affordable housing units\*, with 75% of new housing located within ½ mile of Imagine Austin activity centers and corridors.**

*\*This goal is based on the Council-adopted Austin Strategic Housing Blueprint.*

### Strategy 1: Offer immediate affordable housing assistance

Engage directly with communities that are vulnerable to displacement and connect them with services. Proactively monitor affordable housing properties at risk of losing their affordability status to extend the period of affordability.

*How we'll get there:*

- Increase fair housing enforcement and education.
- Incorporate robust tenant protections for all rental properties receiving City support, including streamlining the application process for affordable units.
- Support tenant organizing and engagement and provide legal and other assistance to tenants facing eviction or displacement.
- Provide tenant relocation assistance and emergency rental assistance.

*"I'm concerned that the low-income and marginalized communities in Austin are being pushed out and reducing the vibrancy and diversity of our city."*

*– Austin community member*

### Strategy 2: Fund affordable housing

Increase funding for the City's current Housing Trust Fund and support capacity building for community development corporations.

*How we'll get there:*

- The City may purchase properties in gentrifying areas to preserve or develop new affordable housing units with a range of housing types, such as single-family, duplex, townhomes, etc.
- Recalibrate, streamline and expand density bonus programs to serve renters at or below 60% Median Family Income (MFI). Support the creation of deeply affordable units within the growth centers, corridors, and transit-rich areas at 20% and 30% MFI and below.
- Implement a preference policy to prioritize new City-subsidized affordable units for income-qualified households.
- Make the application process for deeply affordable housing easier, more transparent, and more efficient.

### Strategy 3: Enhance community engagement for affordable housing and anti-displacement programs

Include low-income communities, communities of color, and people with disabilities directly affected by systemic inequalities in the City's Housing Investment Review Committee activities and when creating anti-displacement programs. Enhance direct outreach of Housing and Planning Department-subsidized affordable units in gentrifying areas with culturally relevant communication strategies.

## GOAL 3:



**By 2030, 50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home\*.**

*\*Based on City of Austin and Capital Metro data, includes all trips, and was approximately 20% in 2019.*

### Strategy 1: Expand and improve public transportation

Work with the Austin Transit Partnership to implement Project Connect and expand and improve public transportation services.

*How we'll get there:*

- Hire residents from communities negatively impacted by racist transportation-related municipal policies to review past decisions and make recommendations to improve the lives of low-income communities, communities of color, and people with disabilities.
- Conduct a community needs assessment to identify gaps in services based on greatest mobility needs and ensure projects are integrated and coordinated across City departments and other institutions.
- Expand paratransit, defined as flexibly scheduled and routed services available to any community member in the coverage area regardless of distance from bus routes, including those with professional medical and psychiatric diagnoses, guidance, and documentation.
- Ensure that transit improvement projects do not accelerate displacement and gentrification.

### Strategy 2: Promote free transportation options

Create comprehensive, user-friendly resources connecting community members with free transportation options.

*How we'll get there:*

- Expand free transit options, including through Capital Metro, to provide increased transportation access for low-income communities, communities of color, and people with disabilities.

- In partnership with community-based organizations, promote awareness of existing free transportation resources in a culturally competent way.

### **Strategy 3: Enhance transit stations and stops**

Partner with Capital Metro, developers, and community organizers to engage low-income communities, communities of color, and people with disabilities to improve transit stops, stations, and access to these facilities.

*How we'll get there:*

- Enforce the Americans with Disabilities Act (ADA) and Public Rights-of-Way Accessibility Guidelines regulations to ensure that transit and public spaces in and around transit stops are accessible to all and connect to critical services like healthy food locations, health centers, community centers, multi-family residences and facilities for seniors.

### **Strategy 4: Prioritize bicycle networks**

Implement the 2020 Proposition B voter-approved general obligation bonds for transportation infrastructure, including sidewalks, transportation-related bikeways, urban trails, transportation safety projects, safe routes to school, and substandard streets in low-income communities and communities of color through a meaningful community engagement process.

*How we'll get there:*

- Utilize historic investment pattern analysis to ensure systematically excluded areas are prioritized when receiving new bicycle infrastructure.
- Properly maintain roads and sidewalks by keeping pavement, physical barriers, markings, signage, and signal detection in good condition and free of debris and other impediments.
- Make intersections safer for bicycles, pedestrians, and communities with impaired mobility.
- Support locally initiated community events that are car-free and expand "Slow Streets" programs through enhanced community engagement.

### **Strategy 5: Enhance bicycle education and training**

Provide access to free or reduced-priced bicycles and basic bicycle training for communities of color and train police officers on bicycle laws and racial profiling to improve the comfort and safety of people of color riding bicycles.

*How we'll get there:*

- Invest in community-based alternatives to police while providing more legal protections for bicycle riders.
- Hire low-income communities, communities of color, and people with disabilities to manage and provide bicycle training.



## Strategy 6: Improve sidewalks, urban trails, and crossings

Update the City's Sidewalk Plan and Urban Trails Plan, emphasizing equity and meaningful community engagement.

*How we'll get there:*

- Build all high and very-high priority sidewalk and trail segments and address ADA barriers and gaps in the sidewalk and trail systems according to the Sidewalk Plan/ADA Transition Plan and Public Rights-Of-Way Accessibility Guidelines regulations. These guidelines ensure that sidewalks, pedestrian street crossings, pedestrian signals, and other facilities for pedestrians are readily accessible to and usable by pedestrians with disabilities.
- For new sidewalk and trail construction, improve access to transit stops, healthy food locations, health centers, community centers, multi-family residences, and facilities for seniors. Prioritize areas that have been systematically excluded and zip codes with higher rates of chronic illness or disability status using lived experience and ground-truthed City data. Include provisions for shade and ambient lighting in the design and construction of new sidewalks and trails.
- Prioritize low-cost pedestrian crossing improvements for communities of color in areas with poor quality or a lack of pedestrian infrastructure.







# TRANSPORTATION ELECTRIFICATION

In Austin, our transportation system is already the primary source of local air pollution and will soon become the largest emitter of greenhouse gases. As of 2018, our community-wide emissions were down by 7.2%, while our transportation emissions have increased by 13.5% since 2010. The vast majority of these transportation-related emissions are caused by private cars and trucks. This means that to meet our emissions reduction targets, we will need to have fewer people driving alone. The remaining vehicles on the road need to be electrified and powered by renewable energy.

The good news is that there have been two technical breakthroughs that could help rapidly accelerate the transition to electric vehicles (EVs). First, EVs now have a more extended range and are more affordable. Second, the electricity used to charge EVs is getting cleaner through Austin Energy's transition to renewable energy. EVs also offer the additional benefits of lower ownership costs for customers, improved local air quality, and potential grid services for Austin Energy.

There has been a lot of progress made to electrify transportation in Austin. There are now more than 10,000 EVs in the greater Austin area, and public entities like Capital Metro and the City of Austin are committed to transitioning their fleets to electric. Austin Energy also manages the Plug-In EVerywhere network, consisting of over 1,000 level 2 charging ports and 30 DC fast-charging stations throughout the city.

Despite the progress made in EV adoption, EVs have only been widely accessible for homeowners and people who are primarily high-income and white. To make EV ownership truly accessible, we need to adjust our strategies on pricing, information, and where charging stations are located. We want EV ownership to be racially, geographically, and economically diverse, which means we need to build out the charging network in areas that have been systematically excluded and structure our incentives to be accessible for all.

## Community Feedback

Community Climate Ambassadors found that residents are concerned with air pollution, which comes from cars and trucks on the road. Overall, the focus of their feedback on transportation was to get people out of cars and into fast, cheap, and reliable public transportation. Currently, there is interest in low-cost cars, but the perception and reality is that new electric vehicles are expensive and not accessible.

**If all the transportation electrification goals and strategies were implemented, we could reduce our current community-wide greenhouse gas emissions 18% or 2.3 million metric tons by 2030.**

## Austin City Council EV Resolution:

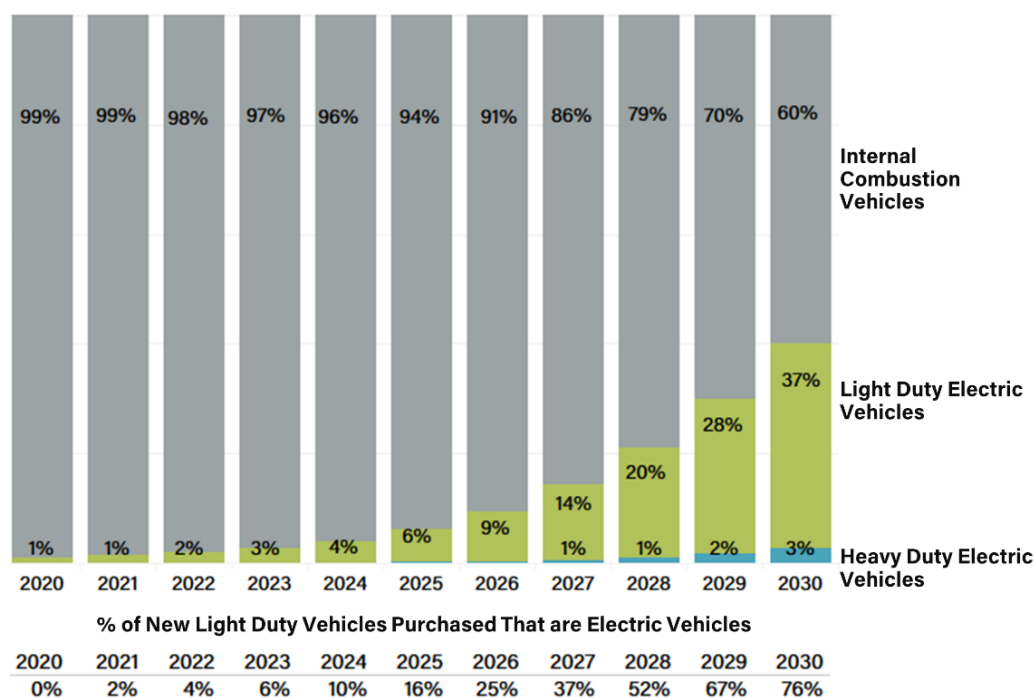
In May 2019, The Austin City Council passed [Resolution 20190509-020](#) directing the City Manager to include an analysis of transportation electrification into the Austin Community Climate Plan revision. Specific requests were made to analyze scenarios, goals, and a plan to address charging infrastructure, vehicle adoption, partnerships, and grid integration.

## GOAL 1:



**By 2030, 40% of total vehicle miles traveled in Austin are electrified, and electric vehicle ownership is culturally, geographically, and economically diverse. This translates to approximately 460,000 electric vehicles on the road.**

## Austin On-road Vehicle Target



*To reach our EV target, light duty electric vehicles must drastically increase over the next decade. Data Source: Texas Transportation Institute*

## Strategy 1: Conduct an EV Community Needs Assessment

Complete an Electric Vehicle Community Needs Assessment to identify the intersections of mobility challenges, transportation electrification, and racial and economic justice. The assessment will inform an EV adoption growth plan that will be supported by enhanced communications efforts and incentives.

*How we'll get there:*

- Work with local community partners, grassroots organizations, and connection points like the Austin Energy Customer Assistance Program and the City's affordable housing programs.
- Hire residents in the communities we aim to serve to help conduct the needs assessment.
- Host community input sessions to build ongoing inclusive relationships that will inform focused outreach to low-income communities and communities of color.

## **Strategy 2: Create equitable incentives for buying and leasing EVs**

Collaborate with community partners to create inclusive and easily accessible incentives for buying or leasing electric vehicles. This strategy would supplement existing state and federal programs, prioritize low-income communities and communities of color and focus on geographic areas with limited or no access to transit.

## **Strategy 3: Reduce tolls for EVs in the Eastern Crescent**

Partner with highway and regional mobility authorities to offer a reduced or eliminated toll rate for low-income communities and communities of color who drive EVs on toll roads from the Eastern Crescent to central Austin.

## **Strategy 4: Launch an e-bike and electric car-sharing program**

Create an electric bike and car-sharing program centered on low-income communities and communities of color to support functional, low-cost zero-emissions mobility.

*How we'll get there:*

- Be intentional and equity-focused when considering where to install car sharing locations, what types of vehicles to include, and how to accept payment.
- Create an income threshold to ensure that low-income residents can access the program and plan specific actions to address displacement.

## **Strategy 5: Electrify public sector fleet vehicles**

Encourage vehicle fleets from public sector agencies in the Austin-Round Rock-San Marcos MSA such as cities, counties, Capital Metro, and school districts to commit to buying 100% electric vehicles when they are available, cost-competitive, and meet operational needs.

*How we'll get there:*

- Partner with Austin-area public fleets to participate in the [Climate Mayors Electric Vehicle Purchasing Collaborative](#) to lower the up-front costs of new EVs.
- Consider early retirement of older fleet vehicles where new EV alternatives are economical and offer retired vehicles for sale locally.

- Prioritize fleets that operate in the Eastern Crescent. Work on AISD and Travis County commitments first, then replicate at surrounding cities, counties, and school districts.



### Strategy 6: Electrify private sector fleet vehicles

By 2030, transition 100% of the gig, rideshare, public health, and delivery vehicle fleets to electric. Starting with private fleets in the Eastern Crescent, establish pilots, technical support, regulation, incentives, and education to support rapid electrification.

*How we'll get there:*

- Study how the transition to electrified delivery is already happening to determine which policies, incentives, and infrastructure are needed to accelerate the transition.
- Prioritize working with local rideshare cooperatives and nonprofits serving low-income communities and communities of color.

## GOAL 2:



By 2030, Austin has a compelling and equitably distributed mix of level 1, 2, and DC fast charging infrastructure to accommodate 40% of total vehicle miles traveled in the city. This translates to 226 megawatts of electrical load and could mean more than 37,000 charging ports.

## Strategy 1: Create a network with more low-cost, accessible charging stations

Continue to incentivize the installation of EV charging infrastructure by the City, businesses, auto manufacturers, and third-party charging companies to create a compelling (convenient, reliable, and low-cost) network accessible to all.

*How we'll get there:*

- Prioritize areas that have been systematically excluded, such as existing multi-family properties, parks, community centers, libraries, geographically under-represented areas, and low-income communities and communities of color while mitigating displacement. Work with diverse and representative community partners to continuously improve plans.
- Fill in gaps by installing EV charging on publicly owned land in systematically excluded areas, and address maintenance and ongoing support for charging stations.

## Strategy 2: Incentivize internet-connected smart charging

By 2030, the City will have a network of intelligent charging that supports grid reliability and resilience, maximized efficiency, reduced emissions, accessibility for all, and lower costs for all residents. Incentivize internet-connected charging infrastructure with the ability to manage the start and end time and charge rate across 24 hours while still meeting the driver's needs.

*How we'll get there:*

- Ensure charging stations are internet-connected as this is essential to ensure the availability, reliability, and timely repairs for charging stations.
- Use internet connectivity to advance real-time pricing information to customers and intelligent charging for longer charge sessions.

*"Three years of electric car ownership has convinced me that we are entering an exciting new era."*

*–Nhat Ho, local EV driver*

## Strategy 3: Adopt new energy and building codes

Adopt new energy and building codes that address future EV charging needs and enable a more equitable approach by simplifying the charging network and lowering barriers to entry for installing EV charging.

*How we'll get there:*

- Consider streamlining the permitting and electrical plan review process, upsizing the electrical requirements for future EV growth, requiring EV chargers at commercial and multi-family properties, and requiring single-family homes to be EV charger ready.
- Create mechanisms to address the additional costs that drive displacement, such as offsetting costs in areas that have been systematically excluded.



## Strategy 4: Expand outreach to systematically excluded groups

Expand outreach to community groups, professional organizations, unions, and property managers using culturally competent information about EV charging incentives and installation. Collaborate with and learn from existing community and City partnerships.

*How we'll get there:*

- Focus on clarifying the EV charging process, raise awareness about available incentives and increase community involvement.
- Engage EV industry groups in this strategy to expand the impact beyond our local area.

## GOAL 3:



**The Austin-Round Rock-San Marcos area is a leader in transportation electrification by adopting policies and technologies that maximize economic and health benefits while supporting the growth of this emerging industry.**

## Strategy 1: Create a regional coalition to support EVs

The City will take the lead in creating a regional coalition to support EV adoption within the five-county MSA. The coalition will consist of an inclusive group of government, business, and community stakeholders.

*How we'll get there:*

- Policies will include strategies that utilize EVs to provide ancillary services for the grid, support community resilience, maximize air quality benefits and support clean and green economic growth.
- Potentially tie into bulk purchasing power to support more rapid adoption.

## Strategy 2: Pilot and adopt new technology

Austin will continue to pilot and be an early adopter of emerging technologies for transportation electrification and ensure that low-income communities and communities of color can access the benefits first.

*How we'll get there:*

- Pursue grant funding opportunities to test new technologies and take successful pilots into more widespread applications.
- Increase engagement with governmental agencies, research institutions, etc.

### Strategy 3: Prioritize a just transition

Austin will be a leader in the just transition to an electrified regional transportation system by collaborating with community and workforce leadership groups like labor unions, grassroots organizations, and businesses. We will ensure that low-income communities and communities of color are positioned to benefit from the switch to electric transportation.

*How we'll get there:*

- Facilitate training and support for our local workforce, focusing on contractors, electricians, first responders, mechanics, gig workers, rideshare drivers, delivery drivers, and battery recyclers.
- Focus job training on systematically excluded groups like women, people of color, people with disabilities, and small businesses.

### Strategy 4: Expand the EV-related business ecosystem

Create a robust electric transportation economic cluster in Central Texas by supporting economic development for new and existing local companies focused on the EV supply chain, including battery technology, vehicle manufacturing, and software.

*How we'll get there:*

- Focus on policies that enable diverse local business ownership, access to capital, and investment.
- Prioritize high-paying jobs for low-income communities and communities of color.





# FOOD AND PRODUCT CONSUMPTION

In modern American society, the way we consume and dispose of products and food has negatively affected people and our planet. Each year, Austinites throw away 58,000 tons of recyclables that end up in the landfill rather than being put back into reuse. That's enough to fill the UT Tower 29 times annually!<sup>62</sup>

To fully account for the entire emissions lifecycle of the food and products we consume (shown right), we need to shift the focus upstream. This means accounting for the raw material extraction, consumption, eventual disposal or reuse of a product, and all the steps in between — regardless of where the activities occur. When viewed through this lens, the emissions produced outside of Austin for the food and products we consume inside Austin can be many times greater than locally created emissions.

## Typical Product Lifecycle



While overconsumption is the primary concern for non-food products, levels of food access and consumption vary. In Travis County, 15% of our population is food insecure, and less than 1% of our food supply is produced locally.<sup>63</sup> At the same time, few residents are eating recommended amounts of fruits and vegetables while overconsuming meat, fat, and sugar, leading to elevated rates of disease and emissions.

While many people lack access to sufficient food, our community also wastes far too much. This food waste often ends up in landfills, where it creates potent climate change causing methane gas as it decomposes, which accounts for about 2% of our community's emissions.

## Community Feedback

Through the community conversations hosted by the Community Climate Ambassadors and online feedback from SpeakUp Austin, we heard that a sustainable Austin is more connected and mindful of our impact. This supports the vision in this section to focus on shifting from a more linear “take-make-waste” society, where products frequently have short lifespans, to a more circular and equitable economy using life-honoring processes that improve quality of life and restore planetary health. We can do this through sharing and renting products instead of owning them, promoting and shopping at local businesses that offer products and services that reduce waste and pollution, and improving agency and the opportunity to choose culturally relevant foods that are good for people

and the planet. And, all of this can be done while enhancing workforce development opportunities for low-income communities and communities of color.

When considering new food and product consumption strategies, extra caution should be taken to ensure that we do not perpetuate historical inequities that benefit white and more affluent Austinites. Our programs and activities must be accessible to — and preferably initiated, led, and evaluated by — people of color and those with limited economic power.

## What are pro-climate, pro-health foods?

A pro-climate, pro-health diet maximizes health benefits while minimizing greenhouse gas emissions. Eating more fruits, vegetables, and whole grains, and less meat and dairy reduces the risk of chronic diseases, such as type 2 diabetes, heart disease, and certain types of cancer, while also protecting against climate change. Think beans, not beef, to reduce climate impacts and improve health.



## GOAL 1:

**By 2030, ensure all Austinites can access a food system that is community-driven, addresses food insecurity, prioritizes regenerative agriculture, supports dietary and health agency, promotes plant-based foods, and minimizes food waste.**

### Strategy 1: Support institutional food purchasing

Apply a purchasing framework, support supply-chain infrastructure, and build a regional food system network to bolster institutional and corporate food procurement of pro-climate, pro-health options.

*How we'll get there:*

- Develop a counterpart to the Good Food Purchasing Program for non-public sector organizations that purchase large quantities of food, such as hospitals and corporations offering in-house employee dining options.
- Offer a certification program to recognize institutional and corporate pro-climate, pro-health menus.
- Support a regional food system network to facilitate and coordinate large-scale pro-climate, pro-health food purchasing, and distribution from regenerative agricultural producers.

*"[A sustainable Austin looks like] food being grown locally in neighborhoods. It looks like most people adopting a majority plant-based diet. I imagine more up-cycling stores, less plastic bags and single use items in restaurants [and] stores."*

*– Austin Community Member*



## Strategy 2: Promote and fund community-driven food retail programs

Implement community-driven programs to incentivize and promote more affordable and culturally relevant pro-climate, pro-health choices in prepared and retail food options, focusing on minimizing displacement.

*How we'll get there:*

- Offer economic incentives for local food establishments that offer an increasing minimum percentage of plant-based menu choices.
- Join or develop a program similar to [Zero Foodprint](#) to generate funding to support local food organizations and producers who contribute to a pro-climate, pro-health food system.
- Create a subsidized community-supported agriculture model for local regenerative food producers who employ low-income communities and communities of color.



## Strategy 3: Incentivize pro-climate, pro-health food choices

Develop a variety of community-driven programs and tools to equitably engage and empower the full spectrum of Austin's communities to make affordable and culturally relevant pro-climate, pro-health food choices.

*How we'll get there:*

- Promote tools, such as a menu labeling scheme or a digital application that provide lifecycle analysis of food items, enhance product transparency and empower consumer choice of pro-climate, pro-health foods.
- Support school education on the benefits of pro-climate, pro-health foods.
- Enhance incentives to make pro-climate, pro-health food choices more affordable, for example, at farmers' markets.

*The City of Austin, Foodshed Investors, and Sustainable Food Center partnered with local restaurants to provide affordable pro-climate, pro-health foods for customers and much-needed income for restaurants during the pandemic.*

## Strategy 4: Conduct a food waste root cause analysis

Conduct a food waste root cause analysis and implement changes informed by the analysis to increase food waste reduction practices by 50%. These practices should support the [U.S. EPA Food Recovery Hierarchy's](#) highest and best use model and include single-family, multi-family, and commercial properties.



## GOAL 2:



**By 2030, reduce greenhouse gas emissions from institutional, commercial, and government purchasing by at least 50%.**

### **Strategy 1: Measure institutional lifecycle emissions**

Develop a methodology to measure lifecycle greenhouse gas emissions and other environmental and social impacts from non-residential purchasing and identify a baseline for tracking progress.

### **Strategy 2: Strengthen the City's sustainable purchasing program**

Strengthen the City of Austin's Sustainable Procurement Program to serve as a model for others locally and nationally.

*How we'll get there:*

- Adopt or develop sustainability guidelines for products with the greatest potential for improved environmental and equity outcomes based on criteria such as:

- Locally produced and sourced
- Labor standards
- Market influence
- Lifecycle greenhouse gas emissions reduction
- Reduced toxicity
- Product circularity such as increased recyclability, reusability, durability and repairability
- Increased recycled and reused content
- Energy and water reduction

*"[A sustainable Austin looks like] respecting something bigger than myself and acknowledging we are all pieces of the puzzle."*

*– Austin Community Member*

- Provide resources for the City of Austin's vendor pool to educate them on how the City plans to meet its sustainability goals through contracting.
- Identify intersections between City sustainability initiatives and the City's procurement process, including shared workflow and reporting opportunities.
- Engage with departmental purchasing staff on sustainable purchasing initiatives and consumption reduction strategies.

### **Strategy 3: Strengthen non-City institutional purchasing programs**

Recruit at least 50% of local large institutional purchasers (2,500+ employees) and at least 2,500 local organizations of all sizes to collaboratively adopt a set of environmental and social sustainability procurement standards and/or guidelines. Prioritize participation of historically underutilized businesses and organizations that employ and are led by people of color.

## Strategy 4: Expand the City's Circular Economy Program

Expand the City of Austin's Circular Economy Program to:

- Support City departments in reducing consumption, for example, by:
  - Reducing barriers to internal reuse of products and materials.
  - Creating a system for sharing infrequently used items among departments.
  - Educating departments about circular procurement models such as product-as-a-service, leasing, and product take-back options.
- Use available City-owned space and/or leverage partnerships to create rent-subsidized incubation spaces, grants, loans, and technical assistance for qualifying circular organizations.
- Engage Austin youth in real-life problem-solving opportunities that:
  - Offer hands-on student internships and apprenticeships with local circular businesses and organizations.
  - Expand opportunities for teachers and students to participate in City entrepreneurship development projects, like the [\[RE\]verse Pitch](#) competition.
  - Modify sustainability education grant programs, such as the [Bright Green Future Grant program](#), to fund procurement reduction, product sharing, and circularity innovation.

*"[A sustainable Austin looks like] being able to recognize when you can use your resources without having to buy new stuff. Not joining the whole culture of buying new things constantly... it is joyful to have this knowledge in reusing and recognizing when you don't have to buy new."*

*– Austin Community Member*

### What is a “circular” organization?

A circular organization, business, or economy designs out waste and pollution, keeps products and materials in use, and restores natural systems.

## GOAL 3:

**Aggressively pursue waste reduction, organics composting, and recycling to achieve a new zero-waste goal following adoption of the new Austin Resource Recovery Zero Waste Plan\*.**



*\*The new community-wide per capita disposal rate goal will be added as an amendment to this plan when available.*

## **Strategy 1: Promote waste reduction and reuse**

Implement consumer awareness campaigns, such as community reuse challenges, promotion and expansion of Fix-It clinics and the [Austin Reuse Directory](#), and educational campaigns that promote the community benefits of reuse and repair. Encourage campaigns that promote the waste management hierarchy, which places recycling as a last resort before disposal.

*How we'll get there:*

- Target campaigns to and prioritize the needs of low-income communities, youth, and communities of color.
- Distribute campaigns across multiple platforms and in many languages.

## **Strategy 2: Create Eco-hubs**

Create “Eco-hubs” that provide equitably distributed in-person neighborhood centers for borrowing, reuse, and repair services.

*How we'll get there:*

- Distribute Eco-hubs around the city in appropriate locations with community input, prioritizing guidance from low-income communities and communities of color. Co-locate Eco-hubs with existing community centers, such as libraries, recreation centers, and culturally relevant retailers.
- Collect and publish demographic data on Eco-hub users to ensure equitable accessibility and use.

## **Strategy 3: Create a workforce development program for the circular economy**

Offer a workforce development program that includes training for repair and reuse skills, job placement, and entrepreneurship in local circular businesses, such as those found in the [Austin Circular Economy Storymap](#). Prioritize the needs and strengths of low-income communities, youth, and communities of color.

*How we'll get there:*

- Coordinate training opportunities with revamped bulk pick-up programming and promote skills that preserve cultural traditions and craftsmanship.
- Collect and publish demographic data on program participants to ensure equitable accessibility and use.

## **Strategy 4: Offer incentives for products that have lower negative environmental and social impact**

Offer financial incentives, such as point-of-sale rebates or a sales tax holiday, to encourage consumers to choose products, repair services, and rentals with lower negative environmental and social impact, including alternatives to single-use plastics.

*How we'll get there:*

- Develop incentives in collaboration with low-income communities and communities of color.
- Collect and publish demographic data on incentive recipients to ensure equitable accessibility and use.

### **Strategy 5: Retool the bulk pick-up collection program**

Review and modify policies and programs for the collection of bulky items that result in viable items being resold, repaired, or recycled.

*How we'll get there:*

- Create supportive programs to help with reuse. For example, replicating [MoveOutATX](#) in other neighborhoods and assisting private sector partners, including those currently engaged in the informal recycling economy.
- Evaluate policy and program opportunities for additional bulk collection and reuse opportunities.
- Consider the interests of undocumented individuals who may participate in existing informal recycling and reuse activities and may not want to be part of formal City programs.



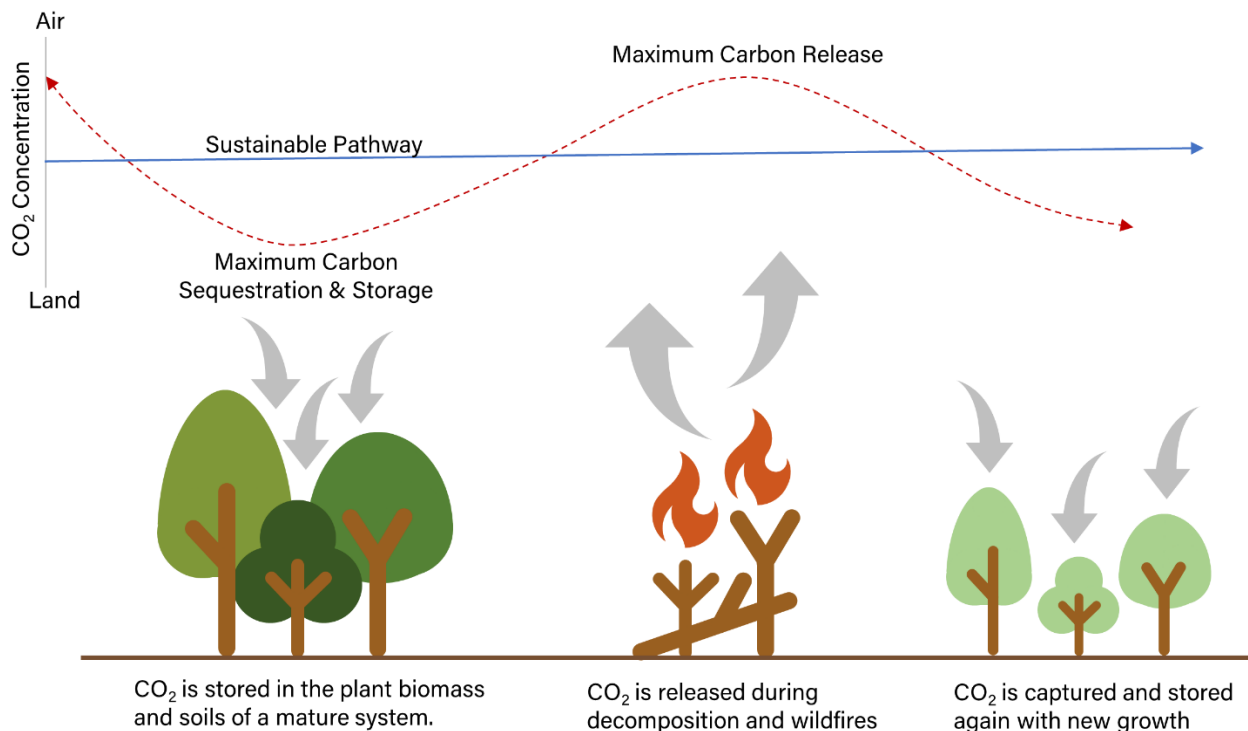


# NATURAL SYSTEMS

Natural systems are all around us. They consist of the plants, animals, soils, hydrology, geology, and weather patterns that are linked to form functioning natural communities. Natural systems perform many critical services to human health and well-being, including removing carbon from the atmosphere known as carbon sequestration. While natural systems may not have the largest impact on our city's total emissions, they are one of the few ways to achieve negative emissions.

Our natural systems are critically important because they provide various benefits to our communities beyond carbon sequestration. These “ecosystem services” include health and wellness, ecological health, and climate resilience. However, due to the climate changes we’re already experiencing, many of our natural systems and the services they provide have already started to degrade. With further changes to the climate, the loss of benefits and services will continue, and the chance to significantly restore and recover our natural systems will be limited.

## The Natural Carbon Cycle



*Natural systems are naturally carbon neutral but asking them to also sequester human-made emissions goes above and beyond their natural ability. Additionally, interferences such as deforestation, soil disturbance, wildfires, or large die-offs due to climate change can make natural systems release more carbon than they absorb, turning carbon sinks into carbon sources.*

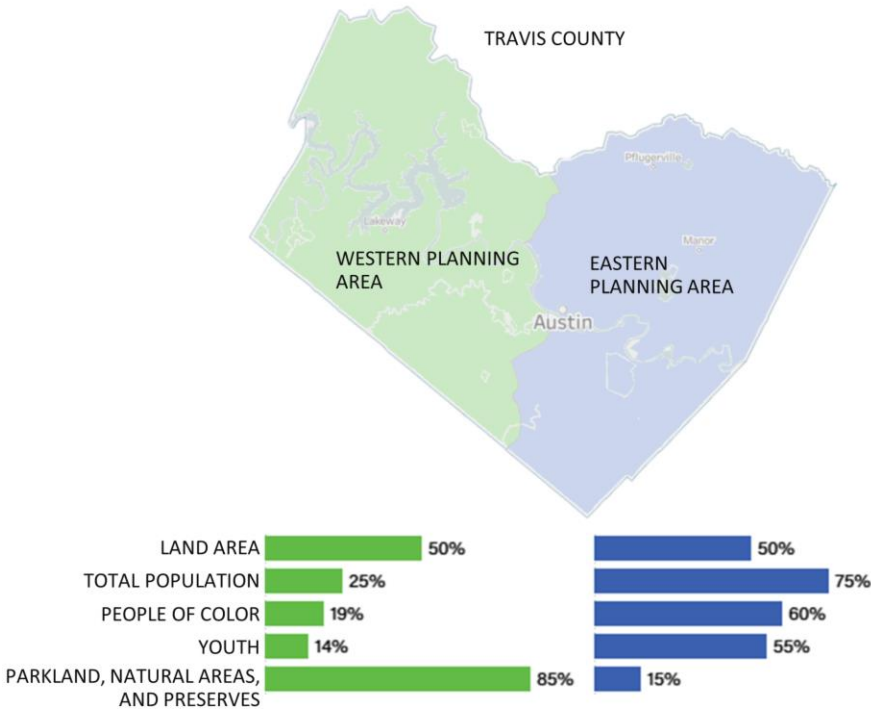
Most of Austin's protected natural areas — such as preserves and conservation lands — are in the west, while East Austin has taken on much of the burden of the city's growth and development. Tree cover also varies significantly between the two sides of town.



While the city’s existing total tree canopy cover is approximately 36%, East Austin sees considerably lower rates of tree canopy coverage than other parts of the city. Historically, these issues could have been attributed to geological and ecological differences, but that should no longer be a reason to neglect investments in natural systems in East Austin. However, care and consideration should be taken to ensure that new and renewed natural areas in East Austin reflect the context in which they sit, both social and ecological.

Even though protected natural spaces are unequally distributed in the east and west, parkland is distributed relatively evenly across the city. However, there is room for improvement in ensuring equity in our parks’ function, quality, and management. Given that some types of parkland and higher maintenance levels can have gentrifying effects on nearby communities, special care should be taken to help mitigate displacement that may follow any investment in green spaces. Currently, the City is prioritizing parkland acquisition and development projects in systematically excluded areas with low-income communities, youth, and communities of color. In pairing these indicators with data on existing conditions, we can ensure parks remain valuable assets to all residents throughout the city.

**Distribution of Green Spaces in Travis County**



The western half of Travis county contains 25% of the population, but 85% of parkland, natural areas, and preserves. This data was originally presented in the [Travis County Greenprint for Growth](#) document published in 2006, and we are still working to rectify these inequities.

Most of the agricultural lands in Austin are concentrated within or near low-income communities and communities of color. Conventional practices on some farms can be detrimental to environmental, climate, and community health. There is an extensive history of Black farmers in Austin, but the number of Black farmers has declined drastically after 1930. This was partly due to the Great Migration when many Black families moved out of the rural South and an effect of cities, including Austin, using master plans to force Black and Hispanic families to move into specific parts of the city, sometimes forcing them from their farmland.






Business owners of color, both in rural and urban areas, also face discrimination in gaining access to land and capital. Additionally, prime farmlands are also prime development parcels, and the people who work these lands are often and easily exploited. All of this points to the need to support the preservation of land, farmers, and farm workers. Protection of farmland and the use of regenerative agricultural practices are key to ensuring that agricultural lands provide a suite of vital ecosystem services — contributing positively to, rather than degrading, our natural systems.

The issues outlined above have left communities — particularly low-income communities and communities of color in the eastern portions of the city — feeling sacrificed and neglected and contribute to our city’s growing health inequities. The COVID-19 pandemic has also highlighted the value of our outdoor spaces, amenities, and resources while demonstrating how open spaces can address community needs and concerns.

This plan calls for a new approach to public land investments that prioritizes community value and focuses on providing environmental benefits and services to neighborhoods in the Eastern Crescent. Protecting, expanding, and restoring the natural areas, sustainable agricultural lands, tree canopy cover, and parks in Austin is an investment in our community's health, livelihood, and culture.

If all the natural systems goals and strategies were implemented, the natural systems in and around Austin could sequester about 5.25% of the city’s total carbon emissions, or 682,738 tons of CO<sub>2</sub>.

### Community Benefits of Natural Systems

 Health & Wellness	 Quality of Life	 Ecological Health	 Climate Change	 Safety & Resilience
<ul style="list-style-type: none"> <li>Physical activity</li> <li>Mental health</li> <li>Social relations</li> <li>Air quality</li> <li>Food production</li> </ul>	<ul style="list-style-type: none"> <li>Recreation</li> <li>Aesthetics</li> <li>Job creation</li> <li>Education opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Protection of green spaces</li> <li>Support natural function and processes</li> <li>Habitat</li> <li>Biodiversity</li> <li>Water quality</li> </ul>	<ul style="list-style-type: none"> <li>Heat island reduction</li> <li>Carbon sequestration</li> <li>Energy and water use reduction</li> </ul>	<ul style="list-style-type: none"> <li>Flood control</li> <li>Heat respite</li> <li>Soil moisture</li> </ul>

### Community Feedback

We heard natural systems-related comments and concerns in community conversations through community workshop participants, the Community Climate Ambassadors’ work, and online survey responses through SpeakUp Austin. Community members were overall in support of more trees, access, and open spaces. They also expressed the need to shift Austinites’ relationship with the environment in a way that expands and respects our connection to nature and enhances our understanding of the important things nature does for humans.

Concerns noted the overcrowding and general maintenance and cleanliness of green spaces, along with fear around the potential loss of trees (both from development and climate change) and the need for more functional green spaces that address flood protection and wildlife habitat.

Additionally, making green spaces more physically accessible and better reflecting the community’s values and cultural needs was a clear desire.

There were also concerns around the implications that these recommendations could have for development, density, and affordability. We hope to move in a direction that changes the discourse from one of competition to one of alliance, cooperation, mutual benefits, and shared values for items like conservation, tree protection, parkland provision, and affordable housing. An example of this is the City of Los Angeles’ [Pathway to Parks and Affordable Development Report](#).

Many comments touched on the importance of local food production — both people growing their own food and supporting local farmers using sustainable practices — and recognizing that climate change will have a major impact in this area. There was also discussion around other climate impacts, such as the potential for droughts affecting local water quality and availability and the effects of extreme heat on our water supply, vegetation, and agriculture.

People also expressed wanting to be engaged and part of the solution related to community stewardship but not knowing how. As a result, they recommended more awareness, education, and resources for community members. More interest was generally indicated for partnerships with local organizations rather than City-led programs and outreach. Additionally, many expressed support for youth education and programs.

**Natural Systems Principles**



The Natural Systems Advisory Group established five principles that guided the creation of these recommendations.

These principles focus on ensuring healthy lands — which sequester more carbon than unhealthy or underperforming lands — and promoting the many other community benefits provided by healthy lands.

**GOAL 1:**

**By 2030, legally protect an additional 20,000 acres of carbon pools on natural lands and manage all new and existing natural areas (approximately 70,000 acres total), focusing on resilience.**



## Strategy 1: Protect natural lands

Identify additional woodland, grassland, and wetland systems for protection, focusing on new conservation lands in the Travis County Eastern Planning Areas while prioritizing benefits for low-income communities and communities of color. Legally protect lands through mechanisms such as fee simple acquisition and conservation easements.

*How we'll get there:*

- Create and update a matrix for land conservation decisions across departments that prioritizes multiple benefits — especially for low-income communities and communities of color — to include recreational access, carbon sequestration, restoration and conservation of biodiversity, habitat connectivity, water quality, and air quality.
- Continue to aggressively recruit and incorporate community input in developing the criteria used for land acquisition.
- Identify and pursue innovative financial methods to purchase or protect lands such as:
  - Use sales tax revenue, development fees, or bonds, especially when linked to multi-benefits and resilience for low-income communities and communities of color.
  - Consider local carbon credit markets or offset programs that include natural lands, sustainable working lands, and the potential for stormwater credit trading. As an example, reference the [Seattle Carbon Plus Program](#).
  - Explore the use of economic development funds for land protection and promotion through ecotourism activities. Considerations may include Hotel Occupancy Tax revenues, and Tax Increment Finance districts generated by development or roadway expansion.
  - Enable, encourage and incentivize low-impact development and conservation developments — an approach to housing development design that balances protection of natural resources with the provision of housing, economic development, and social benefits for people.<sup>64</sup> This may require the City to update codes to allow for this type of development and work with and define new roles and relationships with private developers. To the greatest extent possible, special consideration should be given to preventing soil disturbance.
  - Continue to require parkland dedication or fee-in-lieu of dedication for new residential and hotel or motel developments.
  - Expand parkland dedication to include commercial developments. New commercial development directly impacts the City's parks with additional employees, clients, and consumers that use City parks, thereby establishing an essential nexus between parkland dedication requirements and commercial development.
- Focus acquisition of new conservation lands in the Travis County Eastern Planning Areas in alignment with the [Healthy Parks Plan](#), regional population growth projections, and Travis County acquisition goals for managed natural areas and parkland.

## Strategy 2: Manage natural lands for resilience

Prepare natural lands for climate change and avoid catastrophic loss of carbon pools through active, intentional, and holistic management.

*How we'll get there:*

- Create, update and implement restoration and management guides for all protected lands under City and County jurisdiction. Consider restoration or mimicry of natural processes, increasing native species and structural diversity, improving soil health, and facilitating plant community shifts to more resilient states.
- Leverage the [traditional ecological knowledge](#) of local Indigenous people and other people of color and compensate them appropriately for their time, expertise, and contributions. Plans, policies, and programs should clearly state how Indigenous people will be involved in and benefit from stewardship of lands that have historically been in their care.
- Support local research on increasing the resiliency of Central Texas ecosystems to the stressors and disturbances that models predict will become more common with climate change, such as extended drought, extreme heat, and more frequent extreme weather events. Assist in the dissemination of that information to local landowners and land managers.
- Encourage youth participation and learning opportunities by partnering with or supporting school and youth programs around natural lands management and restoration efforts.
- Encourage resilient grasslands and woodlands on private property by creating land management guides and landowner education, assistance, and incentive programs for private landowners. Develop programs in partnership with community members and community groups and connect landowners with existing assistance programs.

*"People want to do their part and would like to teach others to take better care of the environment, but there is still much to learn."*

*– Austin Community Member*

## Strategy 3: Increase community access and positive perceptions of public land

Ensure that natural lands are accessible to and perceived positively by the community. When more people use and feel a connection to natural areas, they provide more community value. In return, communities are more likely to support conservation and stewardship.

*How we'll get there:*

- Help people to enjoy and be comfortable in nature by:
  - Addressing the accessibility of trails and spaces for all ages and abilities.
  - Ensuring both physical and perceived safety for users.
  - Recruiting members of nearby communities to serve as ambassadors or hosts in natural spaces to create a bridge between these spaces and the surrounding residents. Compensate these community members appropriately for their time and contributions, similar to the [Park Ranger Cadet program](#).



- Implementing programs, such as exploration programs designed for youth, that provide guided, safe experiences for people who may not be comfortable in natural spaces by themselves.
- Providing programming and signage that is inclusive, welcoming, in multiple languages, and highlights BIPOC histories and experiences on local lands, such as the 2019 Austin Design Week session on Reviving Lost Histories and Ecologies.
- Implement solutions to provide community access to natural lands without causing ecological degradation.
- Ensure all Austinites are within walking distance of a park.

## Strategy 4: Protect water sources

Protect quantity and quality of source water for municipal supply and regional environmental flows — especially in the face of climate change-driven threats like heat, drought, flood, and wildfire. Ecosystems cannot function properly and sequester carbon if they don't have the adequate water supply to survive and thrive.

*How we'll get there:*

- Recognize that permanently protecting natural lands directly helps ensure the natural function of waterways and water quality.
- Work with regional agencies and organizations, such as the Capital Area Council of Governments, to form partnerships with organizations working on these issues that are run by low-income communities and communities of color.
- Improve groundwater recharge through expanding green infrastructure and riparian restoration programs and incentives on public and private lands in Austin and upstream.
- Prioritize City projects and programs that provide multiple benefits related to improving water quality and sequestration rates — especially when they most directly benefit low-income communities and communities of color.

## GOAL 2:



**By 2030, protect 500,000 acres of farmland from development in the five-county region\* through legal protections or regenerative agriculture programs.**

*\*Food systems are large and complex, requiring solutions that invest both within and beyond the City limits, hence addressing these recommendations at the regional or 5-county scale. This is similar to the many initiatives that the City invests in “outside” the City but for the benefits of City residents, such as watershed and water quality protection, power generation, and public health.*

## Strategy 1: Protect working lands

Identify lands with prime farmland soils and farmlands of unique and local significance as defined by the [Sustainable SITES Initiative](#) in the 5-county region and protect them from development. This can be done through land conservation bonds, agricultural land trusts such as the [American Farmland Trust](#), Natural Resource Conservation Service and Trust for Public Lands programs, Travis County Conservation Easements, and similar methods.

*How we'll get there:*

- Counties and/or County extension offices in the 5-county region should jointly fund a staff position to work across the entire region. This position could focus on the conservation easement program, provide technical expertise and advice for farmers and landowners and create or manage regenerative agriculture education and certification programs.
- Work with developers to encourage new communities being built on prime farmland soils to be designed as “agrihoods” — communities that integrate agriculture and working farms into housing developments.<sup>65</sup>

## Strategy 2: Reform agricultural tax appraisals

Address issues with local and federal agricultural tax appraisals and exemptions that contribute to desertification and soil loss.

*How we'll get there:*

- Work with Travis County to reevaluate and update the requirements for the Agricultural Tax Exemption to encourage regenerative practices and make more ecologically desirable exemptions, like the wildlife exemption, more appealing and easier to obtain.
- Host a summit of tax appraisers within the 5-county area to start creating buy-in beyond Travis County.
- Provide an additional City incentive to landowners who receive the county tax exemption to use regenerative agriculture or similar practices that promote carbon sequestration, limit compaction, prevent erosion, conserve water and reduce nutrient runoff.
- Promote programs that allow scientists to conduct climate-related or similar research on private lands in exchange for landowner tax breaks, such as the [Texas Ecology Laboratory](#).

## Strategy 3: Support farmers through financial assistance

Support farmers in the 5-county region who want to implement carbon-related soil programs or regenerative agricultural practices by providing direct financial assistance, specifically for farmers of color.

*How we'll get there:*

- Explore partnerships and incentives for installing solar panels on farms between crops and pay farmers for allowing renewable energy equipment on their land.
- Provide City-funded micro-grants to help cover startup costs for regenerative agriculture or conservation irrigation equipment for small-scale and local farmers.

- Create a down payment support program for small-scale and local farmers and consider potential requirements for loan forgiveness. The [Michigan Good Food Fund](#) could serve as an example.
- Study and consider tying City-provided financial assistance to requirements, such as importing and selling products locally, ensuring fair labor requirements, carrying liability insurance, and other recommendations outlined by the [Equitable Food Initiative](#).

#### **Strategy 4: Provide farmers with resources**

Support farmers who want to start regenerative agricultural practices by providing access to land and other necessary resources, specifically prioritizing farmers of color.

*How we'll get there:*

- Facilitate creating a merchants association for small-scale and local farmers to help find, access, and pool resources, collaborate on distribution networks, and advocate for the industry. Explore local organizations currently working on this and see if there are ways to support them first. Ensure inclusive participation and representation through deliberate outreach to farmers of color. Leverage the model and lessons learned from local groups already doing similar work, such as the [Sustainable Food Center](#).
- Create a program that facilitates or mediates partnerships between private and public landowners who may not be actively working their lands and farmers using regenerative agriculture practices.
- Make City and County lands available for agricultural incubators that provide communal resources, such as equipment, storage facilities, and distribution for small-scale regenerative and sustainable farming operations. The [Intervale Center](#) could serve as a case study.
- Explore leasing public lands to for-profit farms in exchange for using sustainable practices and contributing to the public good in some way, such as through workforce development or increasing the supply and donation of local food.

#### **Strategy 5: Expand composting**

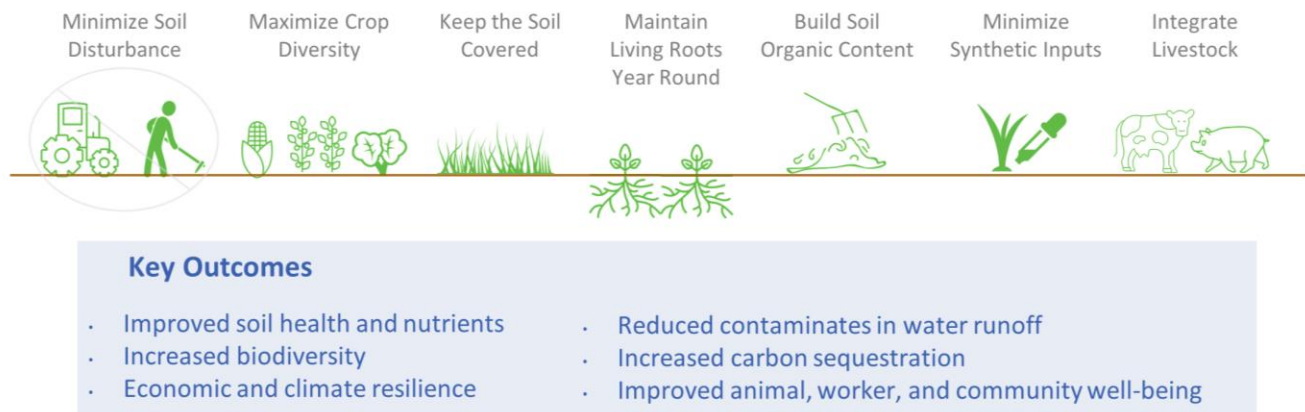
Expand the use of compost generated by local composting programs.

*How we'll get there:*

- Explore ways to utilize more local waste streams in local compost.
- Work in partnership with local farmers to understand how locally made compost is being used and what is required for the compost to better meet their needs.
- Provide free compost to farmers participating in carbon-related soil programs or regenerative agricultural practices. The [Marin Carbon Project](#) could serve as an example.
- Create educational materials and demonstration projects to raise awareness about the value and environmental benefits of using compost at home and on private projects.
- Work with City departments that operate with a heavy capital improvement planning workload to require the use of local compost on project sites.

- Clarify land use and zoning language to identify areas of the city where composting operations are allowed, both as an accessory use and separate from agricultural or urban farmland uses.

## Principles of Regenerative Agriculture



*Regenerative agriculture is one approach to sustainable farming and agriculture that seeks to improve and work in harmony with natural systems. Many specific practices can fall under the umbrella of regenerative agriculture, often focusing on soil health, biodiversity, water quality, and resilience to climate change impacts.*

## Strategy 6: Strengthen workforce development for farmers

Encourage a fundamental change in the next generation of farmers by creating and supporting agriculture-specific jobs creation programs and working lands-specific youth programs — especially for aspiring farmers of color.

*How we'll get there:*

- Utilize the regional position recommended in Strategy 1 and the merchants association recommended in Strategy 4 to connect participants to the industry and create a pipeline to real jobs in regenerative agriculture. Leverage the experience and expertise of local groups that are already doing similar work, such as [Farm Share Austin's Farmer Starter Program](#). The [U.S. Department of Agriculture's Center of Community Prosperity](#) may be one opportunity for funding.
- Integrate sustainable agriculture into secondary and high school programs, including a track for the Austin Independent School District's Career and Technical Education program and Austin Community College's Sustainable Agriculture program.

## GOAL 3:

**Achieve at least 50% citywide tree canopy cover by 2050, focusing on increasing canopy cover equitably.**



## Strategy 1: Protect canopy cover on City lands

Adopt a “no net loss” policy for tree canopy on public lands.

*How we'll get there:*

- Using the 50% citywide goal as an average, create canopy cover target goals for different public land types, such as active use, corridor, cultural/historic, mixed-use, natural area, passive use, special use, etc.
- Require tree canopy replacement for any necessary tree removal on public lands. Allow for on- or off-site canopy mitigation.
- Regularly collect and analyze citywide tree canopy cover data.
- Ensure the species of newly planted trees are native or adapted, appropriate for the location, function, habitat, etc., and consider potential future changes to the climate.

## Strategy 2: Promote tree protections and landscape regulations

Promote no net loss of tree canopy on private developments by increasing tree protections and landscape regulation or working with developers and homeowner's associations to create incentives.

*How we'll get there:*

- Expand existing tree protections and landscape regulations for private development to all of the city's extraterritorial jurisdiction.
- Require new developments to document tree canopy cover in the City's geographic information system database for subdivisions and site plans.
- Ensure that developers or property managers are required to ensure the health of new trees that are planted. They should meet requirements that ensure the long-term health of trees planted, saved, or preserved for up to five years after construction.
- Create a way to enforce tree canopy and health requirements on private developments. An example is the Watershed Protection Department's impervious cover requirement that is tied to the Drainage Utility Fund.
- Require decompaction and other healthy soils practices, such as high organic content, for any areas with permeable surfaces in new subdivisions and site plans. Additionally, review and edit the impervious ground cover requirement as necessary to consider impervious cover within a watershed-level context rather than at the lot level.
- Address barriers to additional tree plantings in subdivisions, developed lots, City rights-of-way, parkland dedications, detention pond basins, etc.
- Require or incentivize new developments to participate in reforestation projects if there are Critical Water Quality Zones or floodplains in a subdivision or site plan, or if the overall canopy cover for a project is expected to be less than 50%.

*"I'd like for all people in Austin to have access to tree-shade corridors, shaded paths for human-powered transportation and public thriving green spaces."*

*– Austin Community Member*



- Ensure the species of newly planted trees are native or adapted and appropriate for the location, function, habitat, and future changes in the climate.
- Work with other jurisdictional entities and surrounding communities to harmonize policies around tree protection, promotion, health, and resilience. This will help ensure that we aren't unintentionally pushing development outside the city limits to avoid tree protections.

### Strategy 3: Increase community tree planting

Increase City funding for community tree-planting programs focused on low-income communities and communities of color.

*How we'll get there:*

- Prioritize programs that allow communities to have real decision-making power and input on where new tree plantings will provide the most benefit.
- Provide additional funding and grants for community-led, neighborhood-scale tree planting, tree care, water quality, and soil health programs.
- Grow City-led reforestation projects within drainage easements, floodplains, and stream buffers in Eastern Crescent neighborhoods.
- Work with the Austin Transportation Department, Capital Metro, Corridor Planning Office, and Forestry Division to increase tree canopy in road rights-of-way, especially along transit routes and stops, to provide residents with increased resilience to extreme heat. Consider ridership numbers, urban space quality, heat levels, and expected wait times when prioritizing tree planting at transit stops.



*A young volunteer holds a tree sapling for his parents at a tree planting event. Photo: Valerie Tamburri*

### Strategy 4: Promote tree health and resilience on private and non-City public lands

Create a tree, water and soil management, and resilience guide for various types of private property. Provide City technical and financial assistance for tree planting and care for residents and small businesses in low-income communities and communities of color to ensure long-term health and tree canopy benefits in Austin neighborhoods.

*How we'll get there:*

- Provide a City “tree concierge” service and partner with community members to provide easily accessible information about keeping trees healthy and choosing the right species of trees for their locations and needs.
- Add tree maintenance and care to the City's Minor Home Repair Grants Program.

- Provide City-funded grants to homeowner’s associations, neighborhood groups, residents, and small businesses in low-income communities and communities of color to help cover expenses related to tree care.
- Foster partnerships with Austin-based green jobs training programs to ensure that tree health and resilience are incorporated into the curriculum. Complete the pipeline by incentivizing and encouraging the use of graduates from local green jobs training programs to complete the work that comes out of recommendations outlined in this strategy.



## GOAL 4:

**By 2030, include all City-owned lands under a management plan that results in neutral or negative carbon emissions and maximizes community co-benefits.**

### Strategy 1: Prioritize carbon neutrality for public lands

Prioritize carbon neutrality and community benefits in land acquisition and management practices for public lands.

*How we’ll get there:*

- Complete the City land ownership and management plan database.
- Prioritize new parkland acquisitions based on multiple environmental and community benefits, especially for low-income communities and communities of color.
- Evaluate potential land management practices based in part on carbon lifecycle analyses, specifically including landscape water usage.
- Use carbon-negative or low-carbon management practices, such as soil protection, limited mowing, no-mow, and conversion of high water use landscapes into native plantings.
- Utilize the Sustainable SITES certification for Parks and Recreation Department projects when feasible or align with the City’s Green Building Policy.
- Encourage private residents and other public entities, such as the Austin Independent School District, the University of Texas at Austin, the State Capitol, and the Texas Department of Transportation, to implement similar land management practices through education and incentives.

### Strategy 2: Reclaim public space and prioritize green infrastructure

Identify and reclaim mono-use, underused, and unconventional public spaces to increase community access and ecological function — such as utility easements, road rights-of-way, stormwater wet ponds, and cemeteries — with a focus on green infrastructure.

#### *How we'll get there:*

- Ensure that these reclaimed spaces are done thoughtfully and are contextually sensitive. For example, utility easements may be more suited for prairie plantings than trees. For cemeteries, the intent should not be to change them into something different. Still, with a bit of extra care and thoughtfulness, these spaces could provide appropriate opportunities for increased use or ecological function while also enhancing respect, reverence, and remembrance. This work should be done in partnership with the communities connected to the cemeteries physically, emotionally, and historically.
- Engage communities in identifying, re-imagining, and leading implementation on activating these spaces by funding and expanding the Community Activated Parks Program.
- Support the implementation of green infrastructure throughout the city by prioritizing funding for projects that maximize multi-benefits for human and ecological health.
- Focus on creating connectivity via continuous green corridors or transects that allow species habitat and migration and support an overall increase in ecosystem health. Look to use urban creeks and waterways as the natural basis for these linkages by naturalizing engineered waterways, especially in East Austin, as appropriate.
- Convert non-functional or unnecessary impervious cover to green infrastructure, green spaces, or natural vegetation that provides open space access or ecosystem functions. This should especially be done on City lands, such as parks with underutilized parking areas. A study should be conducted to look at the use of surface-level parking lots on City property to develop a plan to convert an ambitious percentage of these to functional green uses when feasible.
- Retrofit conventionally landscaped areas to create green infrastructure or landscapes that restore or regenerate ecosystem function. Explore how more functional green space can be incorporated into rights-of-way via the City's Complete Streets program and the Green Streets concept.
- Link this action with the City's efforts to relocate residents out of floodplains, which provide opportunities for reclaiming areas as natural or working lands currently being used for residential development.
- Include programming and signage in public spaces to clarify the intent and benefits of natural areas to improve community understanding.

### **Strategy 3: Promote community stewardship**

Promote community stewardship and management of neighborhood public lands to ensure higher levels of care and maintenance.

#### *How we'll get there:*

- Establish Neighborhood Stewardship Councils or Ambassadors. These could be created with existing or new neighborhood associations, nonprofit organizations, community groups, and Indigenous communities that coordinate volunteers to implement projects that improve the health, biodiversity, and resilience of public lands.

- The City should provide paid training and opportunities for community members or groups to serve as Stewardship Ambassadors. These Ambassadors could provide quality assurance at neighborhood parks and community gardens, conduct training and education for community members, and act as primary contacts for coordination of volunteers and City resources. An example is the [Austin Water Wildlands Volunteer Land Steward](#) program. These ambassadors should be compensated for their time.
- Reference the Urban Sustainability Directors Network's [Case Studies for Community Driven Environmental and Racial Equity Committees](#).
- Create and implement simple, transparent, and consistent processes for community members to voice and help solve issues related to parks. This should include hearing from residents on what they value about the parks and green spaces in their neighborhoods, how they are currently using them, and how they would like to use them in the future. This can help identify the assets to focus on and build on.
- Create a Parks and Recreation Department Grant Assistance Program to eliminate private funding barriers to parks improvement projects in systematically excluded communities. Seek initial annual funding of at least \$500,000.
- Create new staff positions to proactively connect with systematically excluded communities and help individuals navigate processes and programs such as the Community Activated Parks Program, Community "Park"nerships, Adopt-a-Park, the Neighborhood Partnering Program, and others related to natural areas acquisition, stewardship, and restoration.
- In collaboration with community groups, develop land stewardship plans to help prioritize and align the natural areas management activities of volunteers, organizations, and City staff.
- Facilitate parks as spaces of celebration for neighborhoods by reviewing and potentially loosening restrictions on vendors and prioritizing allowance for local vendors.
- Community fears or concerns around the effects of parks and green spaces on crime or gentrification in their neighborhoods are real and valid. The City should focus on partnerships, outreach, and stewardship to improve the relationships between communities, nature, and the City.
- Continue to strengthen relationships with the Austin Independent School District and support the expansion of land stewardship and education in their curriculum using resources such as the [Cities Connecting Children to Nature program](#).

#### **Strategy 4: Promote carbon farming**

Explore the ability of food forests and community gardens on public lands to use low-carbon and carbon farming practices. This agricultural practice can improve carbon sequestration rates in agricultural systems and aid in plant growth, reduce fertilizer use and improve soil water retention.

*How we'll get there:*

- Support local research on carbon farming practices, especially in partnership with local higher education institutions or organizations that work with individuals from low-income communities and communities of color.



- To reduce any burden this imposes on community members, the City should provide basic oversight, technical assistance, startup resources, and ongoing maintenance at these gardens. This could be done through City staff or by funding outside groups, community-based organizations, or Stewardship Councils/Ambassadors to provide these services.
- Encourage private residents to implement similar food production and carbon farming practices in their yards through education and incentives.





# NEXT STEPS

## I. IMPLEMENTATION PLANNING

In developing the plan, we realized that “how” projects, policies, and programs are implemented is critically important to determine whether benefits will flow to low-income communities and communities of color. We will continue to build authentic, inclusive relationships with community members and involve them in the decision-making process when designing projects and programs that address climate change. Seeing our implementation plan through a racial equity lens is critical to ensuring that low-income communities and communities of color are prioritized. Our ongoing partnership with the City of Austin’s Equity Office will be vital to ensuring our focus remains on equity as we carry out the plan’s goals and strategies.

Successful implementation of the Climate Equity Plan will require collective awareness, action, and participation from all members of the Austin community. The specific strategies described in this plan have been selected based on City and stakeholder analysis of equity benefit and greenhouse gas reduction potential. However, the plan only serves as a framework for climate action and equity, and as such, additional analysis is required for strategies before implementation. For each strategy, the following criteria will be analyzed based on applicability, strategy type, and data availability:

- **Costs:** Assessing potential costs by sector, co-benefits, cost avoidance, cost per ton of CO<sub>2</sub>e reduction, and funding mechanisms.
- **Technological Feasibility:** Considering technological constraints, the carbon footprint or lifecycle emissions of specific technologies compared to other options, and the reliability of the proposed technology’s expected performance.
- **Timeline:** Assessing the timeframe for both implementation and resulting emissions reductions.
- **Equity:** Determining potential impacts on low-income communities and communities of color.

Implementation success requires creating a system of accountability. The Office of Sustainability is accountable for leading the co-creation of the plan with many partners and tracking the plan’s progress. However, they cannot be solely responsible for the plan’s implementation. The Climate Equity Plan can be thought of as the “big tent,” creating an overarching vision that ties back to many other organizational goals and plans. The first step for implementation will be identifying where alignment shows up with other existing City departmental plans and strategic goals, along with the goals of external organizations, such as private businesses, nonprofits, neighboring cities and counties, and state and federal government.

A review of all goals and strategies will then be conducted to map these alignments and synergies. Once this review is complete, staff will lead a collaboration process to determine whether new Climate Equity Plan goals and strategies can be adopted as amendments to other plans, creating a

distributed accountability system. Some goals and strategies will likely not find such an alignment, and those remaining will be grouped into one or more subject areas.

Next, implementation leaders will be identified to form new partnerships. The implementation leader will form implementation teams around their assigned group(s) of strategies. These teams are anticipated to be a collaboration among City staff and external partners. Low-income communities and communities of color must be included and centered in implementation to learn from their lived experience and design solutions in a way that works for them.

The Implementation teams will evaluate and prioritize the proposed strategies to consider ease of implementation, the scale of benefits created, potential ownership, and current status. Teams will then determine which specific strategies need new implementation plans, which will include:

- A focus on racial equity
- What data is available, and what is needed
- A model or mechanism for change
- Defined tasks and a schedule
- Owners and actors
- Existing and potential budget and funding sources, including grants
- Cost/benefit and savings potential
- Metrics and performance measurement

The goal will be to complete the implementation planning process to coincide with the City's fiscal year 2022-23 budget process.

## II. FUNDING

Funding the strategies in this plan is key to reaching our climate goals. A lesson learned from the 2015 Austin Community Climate Plan implementation is that new dedicated funding sources that aren't dependent on the City's General Fund are needed for full successful implementation. The City should engage the private and nonprofit sectors to access creative funding strategies and ensure that investment is prioritized for low-income communities and communities of color.

For individual strategies, topic-specific implementation teams will prepare cost estimates and any expected cost savings. For strategies funded by the City, budget needs will be projected by year and by capital versus through operating budgets. Once detailed cost estimates exist, funding opportunities can be pursued.

The Steering Committee has identified the potential revenue sources listed below. Each source is new, complex, and will require further research, analysis, and pursuit.

**City Revenue Collection** - These options would involve the City using its billing, fee structure, and bonding abilities to generate new revenue that would be created explicitly for funding initiatives in this plan. Options include:

- Enabling voluntary on-bill contributions

- Equitably expanding existing City fees, such as impact fees, on-bill user fees, and permit fees
- Pursuing a green bond election

**Economic Agreements** - The City has entered into numerous economic development agreements with large businesses in the Austin area. It has the authority to create requirements in these agreements in exchange for modified taxes and fees. Options include:

- Ensuring that new requirements for future economic development agreements include commitments that require the beneficiary to reduce their emissions
- Exploring opportunities for future economic development agreements to fund reductions elsewhere in the Austin area, including through strategies identified in this plan

**Ongoing Outside Opportunities** - Numerous philanthropic organizations fund climate action, and future federal funding may also be available. The key with these two options is to have “shovel-ready” projects with tasks, schedules, and budget identified before funding solicitations are released.

**Statewide Municipal Collaboration** - In Texas, major cities like Dallas, Houston, and San Antonio have recently adopted climate plans. Building a broader coalition of support among Texas cities can help amplify state and federal funding requests through shared legislative agendas related to climate change.

### III. MEASUREMENT AND REPORTING

In collaboration with City departments and other organizations, the Office of Sustainability will create the following reporting mechanisms to keep stakeholders updated on progress:

- An annual report summarizing the implementation status of the Climate Equity Plan’s strategies
- Annual calculation of the Austin Community Greenhouse Gas Inventory
- Progress reports from Implementation Teams to City Boards and Commissions, where appropriate

Reports will be posted publicly and delivered to the Austin City Council. Update presentations will be provided to relevant boards and commissions, including the Joint Sustainability Committee, Environmental Board, Resource Management Commission, and Quality of Life Commissions.

# REFERENCES

- <sup>1</sup> UN Intergovernmental Panel on Climate Change (IPCC). (2018). Summary for Policymakers: Global Warming of 1.5°C. *World Meteorological Organization, Geneva, Switzerland*, 32 pp. Retrieved from <https://www.ipcc.ch/sr15/>
- <sup>2</sup> UN Environment Programme (UNEP). (2019). *Emissions Gap Report 2019*. Retrieved from <https://www.unenvironment.org/interactive/emissions-gap-report/2019/>
- <sup>3</sup> Climate Mayors. (2017). *Statement from the Climate Mayors in response to President Trump's withdrawal from the Paris Climate Agreement*. Retrieved from <http://climatemayors.org/actions/paris-climate-agreement/>
- <sup>4</sup> C40 Cities. (2012). *Why Cities? Ending Climate Change begins in the City*. Retrieved from <https://www.c40.org/ending-climate-change-begins-in-the-city>
- <sup>5</sup> C40 Cities. (2016). *Deadline 2020*. Retrieved from <https://www.c40.org/researches/deadline-2020>
- <sup>6</sup> City of Austin Office of Sustainability. (2018). *Climate Resilience Action Plan for City Assets and Operations*. Retrieved from [https://austintexas.gov/sites/default/files/files/Sustainability/Climate\\_Resilience\\_Action\\_Plan.compressed.pdf](https://austintexas.gov/sites/default/files/files/Sustainability/Climate_Resilience_Action_Plan.compressed.pdf)
- <sup>7</sup> Florida, R. and Mellander, C. (2015). *Segregated City: The Geography of Economic Segregation in America's Metros*. Martin Prosperity Institute, Rotman School of Management, University of Toronto. Retrieved from <http://www-2.rotman.utoronto.ca/mpi/wp-content/uploads/2015/02/Segregated-City.pdf>
- <sup>8</sup> HealthyPeople.gov. (2020). *Social Determinants of Health*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>
- <sup>9</sup> Pan, Yuqing. (2017). *The U.S. Cities That Are Gentrifying the Fastest—You'll Never Guess No. 1*. Realtor.com. Retrieved from [https://www.realtor.com/news/trends/10-surprising-cities-that-are-gentrifying-the-fastest/?aid=11921783&pid=7597981&cid=aff\\_cj\\_rdcandrental\\_allaffiliates\\_cj](https://www.realtor.com/news/trends/10-surprising-cities-that-are-gentrifying-the-fastest/?aid=11921783&pid=7597981&cid=aff_cj_rdcandrental_allaffiliates_cj)
- <sup>10</sup> Air Central Texas. (2020). *Central Texas Air Pollution Levels Compared to National Standards*. Retrieved from <https://aircentraltexas.org/en/regional-air-quality/how-is-the-air-in-central-texas>.
- <sup>11</sup> U.S. Energy Information Administration (2020). *Is ozone a greenhouse gas?* Retrieved from <https://www.eia.gov/tools/faqs/faq.php?id=84&t=11>
- <sup>12</sup> World Health Organization. (2020). Air pollution. Retrieved from [https://www.who.int/health-topics/air-pollution#tab=tab\\_2](https://www.who.int/health-topics/air-pollution#tab=tab_2)
- <sup>13</sup> U.S. Environmental Protection Agency. (2014). *Air Quality Index A Guide to Air Quality and Your Health*. Retrieved from: [https://www3.epa.gov/airnow/aqi\\_brochure\\_02\\_14.pdf](https://www3.epa.gov/airnow/aqi_brochure_02_14.pdf)
- <sup>14</sup> U.S. Environmental Protection Agency. (2019). *Integrated Science Assessment (ISA) for Particulate Matter*.
- <sup>15</sup> US Department of Energy (DOE), Office of Legacy Management. (2020). *Environmental Justice History*. Retrieved from <https://www.energy.gov/lm/services/environmental-justice/environmental-justice-history>
- <sup>16</sup> United Church of Christ Commission for Racial Justice. (1987). *Toxic Wastes and Race In the United States*. Retrieved from <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>
- <sup>17</sup> Bullard, Mohai, Saha, and Wright. (2007). *Toxic Wastes and Race at Twenty, 1987-2007*. United Church of Christ. Retrieved from [https://www.ucc.org/environmental-ministries\\_toxic-waste-20](https://www.ucc.org/environmental-ministries_toxic-waste-20)

- <sup>18</sup> National Association for the Advancement of Colored People. (2020). *Just Energy Policies and Practices*. Retrieved from <https://www.naacp.org/climate-justice-resources/just-energy/>
- <sup>19</sup> Hennelly, Lucia Olivia. (2014, April 22). Why Latinos are disproportionately affected by asthma, and what we can do. Environmental Defense Fund. Retrieved from: <https://www.edf.org/blog/2014/04/22/why-latinos-are-disproportionately-affected-asthma-and-what-we-can-do>
- <sup>20</sup> Dulberg, Sophie. (2019, March 21). *Black and Latino residents live in more pollution than they cause. This is clearer in Houston more than anywhere else*. Texas Housers. Retrieved from <https://texashousers.org/2019/03/21/study-black-latino-pollution-consumption-exposure/>
- <sup>21</sup> Douglas, Erin. (2019, December 5). *Cancer cluster identified in Houston neighborhood near Union Pacific railyard's creosote contamination*. Houston Chronicle. Retrieved from <https://www.houstonchronicle.com/business/article/Cancer-cluster-identified-in-Houston-neighborhood-14885972.php>
- <sup>22</sup> Union of Concerned Scientists. (2016). *Air Toxics and Health in the Houston Community of Manchester*. Texas Environmental Justice Advocacy Series. Retrieved from <https://www.ucsusa.org/sites/default/files/attach/2016/06/ucs-manchester-air-toxics-and-health-factsheet-2016.pdf>
- <sup>23</sup> Morse, Reilly. (2008). Environmental Justice Through the Eye of Hurricane Katrina. Joint Center for Political and Economic Studies, Health Policy Institute. Retrieved from: [https://inequality.stanford.edu/sites/default/files/media/\\_media/pdf/key\\_issues/Environment\\_policy.pdf](https://inequality.stanford.edu/sites/default/files/media/_media/pdf/key_issues/Environment_policy.pdf)
- <sup>24</sup> Butterbaugh, Laura. (2005, September/October). Why Did Hurricane Katrina Hit Women So Hard? *Off Our Backs*, 35(9/10), 17. Retrieved from <http://archives.evergreen.edu/webpages/curricular/2005-2006/nola/Katrina%20Women%202.pdf>
- <sup>25</sup> Fussell E. and Lowe, S.R. (2014, July). The impact of housing displacement on the mental health of low-income parents after Hurricane Katrina. *Social Science and Medicine*, 113, 137-144. DOI: [10.1016/j.socscimed.2014.05.025](https://doi.org/10.1016/j.socscimed.2014.05.025)
- <sup>26</sup> Bernard, S. and McGeehin M. (2003, December). Prevalence of Blood Lead Levels  $\geq 5$   $\mu\text{g/dL}$  Among US Children 1 to 5 Years of Age and Socioeconomic and Demographic Factors Associated With Blood of Lead Levels 5 to 10  $\mu\text{g/dL}$ , Third National Health and Nutrition Examination Survey, 1988–1994. *Pediatrics*, 112 (6), 1308-1313. Retrieved from <https://pediatrics.aappublications.org/content/112/6/1308>
- <sup>27</sup> Milman, Oliver. (2016, September 22). *Archeologists denounce Dakota Access pipeline for destroying artifacts*. The Guardian. Retrieved from <https://www.theguardian.com/us-news/2016/sep/22/archeologists-denounce-dakota-access-pipeline-artifacts>
- <sup>28</sup> GreenLatinos and Environmental Defense Fund. (2020) *Latino Communities and the Climate Crisis*.
- <sup>29</sup> US Global Change Research Program. (2016). *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. Retrieved from: <https://health2016.globalchange.gov/>
- <sup>30</sup> Holsopple, Kara. (2020, August 28). *Climate Change, COVID and Wildfires are Making Farmworkers' Jobs More Dangerous*. Retrieved from: <https://www.alleghefront.org/climate-change-and-covid-are-making-farmworkers-jobs-more-dangerous/>
- <sup>31</sup> Dyer, Tiffany. (2004). *Pesticides and the United Farm Workers: An Extension of Struggle for Social Justice*. Retrieved from: <https://www.pugetsound.edu/faculty-pages/dsackman/senior-theses/tiffany-dyer/>
- <sup>32</sup> Farmworker Justice. (2019) *Selected Statistics on Farmworkers (2015-16 Data)*. Retrieved from: <http://www.farmworkerjustice.org/wp-content/uploads/2019/05/NAWS-Data-FactSheet-05-13-2019-final.pdf>



- <sup>33</sup> ASSE and NIOSH (2015) *Overlapping vulnerabilities: the occupational safety and health of young workers in small construction firms*. Retrieved from: <http://www.elcosh.org/document/3932/d001367/overlapping-vulnerabilities-the-occupational-health-and-safety-of-young-immigrant-workers-in-small-construction-firms.html>
- <sup>34</sup> U.S. Census Bureau, *Decennial Census Total Population*, 2018 American Community Survey Population Estimate as cited in Tedford, Sam. (2019, October). *Austin Today, A Dynamic City*. City of Austin, Austin Energy Corporate Learning Week, slide 26. Retrieved from [https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/AustinToday\\_AEcorporatelearningweek.pdf](https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/AustinToday_AEcorporatelearningweek.pdf)
- <sup>35</sup> U.S. Census Bureau. QuickFacts: Austin city, Texas. (2019). Retrieved from: <https://www.census.gov/quickfacts/fact/table/austincitytexas/AGE295219>
- <sup>36</sup> Robinson, Ryan. Top Ten Demographics in Austin, Texas. (2016, March). City of Austin Retrieved from: <https://www.austintexas.gov/page/top-ten-demographic-trends-austin-texas>
- <sup>37</sup> U.S. Census Bureau. QuickFacts: Austin city, Texas. (2019). Retrieved from: <https://www.census.gov/quickfacts/fact/table/austincitytexas/AGE295219>
- <sup>38</sup> U.S. Census Bureau. (2015). *American Community Survey 1-Year Data, Table B25032*. Retrieved from: [https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/Race\\_and\\_Ethnicity\\_CoA\\_2015\\_Housing\\_Type.pdf](https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/Race_and_Ethnicity_CoA_2015_Housing_Type.pdf)
- <sup>39</sup> Tedford, Sam. (2019, October). *Austin Today, A Dynamic City*. City of Austin, Austin Energy Corporate Learning Week, slide 51. Retrieved from [https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/AustinToday\\_AEcorporatelearningweek.pdf](https://www.austintexas.gov/sites/default/files/files/Planning/Demographics/AustinToday_AEcorporatelearningweek.pdf)
- <sup>40</sup> C40 Cities, *Deadline 2020*
- <sup>41</sup> UNEP, *Emissions Gap Report 2019*
- <sup>42</sup> IPCC, Summary for Policymakers
- <sup>43</sup> United Nations. (1992). *United Nations Framework Convention on Climate Change*. Retrieved from: [http://unfccc.int/files/essential\\_background/convention/background/application/pdf/convention\\_text\\_with\\_annexes\\_english\\_for\\_posting.pdf](http://unfccc.int/files/essential_background/convention/background/application/pdf/convention_text_with_annexes_english_for_posting.pdf)
- <sup>44</sup> Drehbol, A. and Ross, L. (2016) *Lifting the High Energy Burden in America's Largest Cities*. Retrieved from: <https://www.aceee.org/sites/default/files/publications/researchreports/u1602.pdf>
- <sup>45</sup> Hawken, Paul. (2017) *Project Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. New York, New York: Penguin Books.
- <sup>46</sup> Abergel et al. (2019) *UN Environment Programme and International Energy Agency: 2019 Global Status Report for Buildings and Construction Sector*. Retrieved from <http://wedocs.unep.org/bitstream/handle/20.500.11822/30950/2019GSR.pdf?sequence=1&isAllowed=y>
- <sup>47</sup> Milne, Geoff. (2013) *Embodied Energy*. YourHome. Retrieved from <https://www.yourhome.gov.au/materials/embodied-energy>
- <sup>48</sup> National Trust for Historic Preservation. (2016). *The Greenest Building: Quantifying the Environmental Value of Building Reuse*. Retrieved from [https://living-future.org/wp-content/uploads/2016/11/The\\_Greenest\\_Building.pdf](https://living-future.org/wp-content/uploads/2016/11/The_Greenest_Building.pdf)
- <sup>49</sup> Siegel, H. and Strain, L. (2020) *Embodied Carbon: What you Can Do Right Now*. AIA California. Retrieved from <https://aiacalifornia.org/embodied-carbon-definitions-and-facts/>

- <sup>50</sup> Gieseckam et al. (2016) Construction sector views on low carbon building materials, *Building Research & Information* (44)4, 423-444. DOI:10.1080/09613218.2016.1086872
- <sup>51</sup> U.S. Environmental Protection Agency. (1989). *Report to Congress on indoor air quality: Volume 2*. EPA/400/1-89/001C. Washington, DC.
- <sup>52</sup> American Lung Association (2020, March) *Indoor Air Pollutants and Health*. Retrieved from <https://www.lung.org/clean-air/at-home/indoor-air-pollutants>
- <sup>53</sup> U.S. Environmental Protection Agency. (n.d.) *The Inside Story: A Guide to Indoor Air Quality*. Retrieved from <https://www.epa.gov/indoor-air-quality-iaq/inside-story-guide-indoor-air-quality%23concerns>
- <sup>54</sup> Lin, W., Brunekreef, B., Gehring, U. (2013, December) Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children, *International Journal of Epidemiology*, 42(6), 1724–1737, <https://doi.org/10.1093/ije/dyt150>
- <sup>55</sup> Nicole, Wendee. (2014, January 1). Cooking Up Indoor Air Pollution: Emissions from Natural Gas Stoves, *Environmental Health Perspectives*, (122)1. <https://doi.org/10.1289/ehp.122-A27>
- <sup>56</sup> Hu, T., Singer, B.C., & Logue, J.M. (2012, August 1). *Compilation of Published PM2.5 Emission Rates for Cooking, Candles and Incense for Use in Modeling of Exposures in Residences* (Report No. LBNL-5890E). Lawrence Berkeley National Lab. DOI:10.2172/1172959
- <sup>57</sup> Seals, B. and Krasner, A. (2020). *Gas Stoves: Health Effects from Gas Stove Pollution*. Rocky Mountain Institute, Physicians for Social Responsibility, Mothers Out Front, Sierra Club. Retrieved from <https://rmi.org/insight/gas-stoves-pollution-health>
- <sup>58</sup> Zhu, Y., Connolly, R., Lin, Y., Mathews, T., Wang, Z. (2020). *Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California*. UCLA Fielding School of Public Health. Retrieved from <https://ucla.app.box.com/s/xyzt8jc1ixnetiv0269qe704wu0ihif7>
- <sup>59</sup> Wallace, L. (1987, June). *Total exposure assessment methodology (TEAM) study: Summary and analysis* (Report No. EPA/600/6-87/002a). U.S. Environmental Protection Agency, Office of Research and Development. Retrieved from <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=2000UC5T.TXT>
- <sup>60</sup> Texas Energy Poverty Research Institute. (June 2019). *Low-Income Community Profile Series*. Retrieved from [http://www.txenergy-poverty.org/wp-content/uploads/2019/06/TEPRI\\_LICPTexasOverview\\_August2019\\_REVISION\\_v3.pdf](http://www.txenergy-poverty.org/wp-content/uploads/2019/06/TEPRI_LICPTexasOverview_August2019_REVISION_v3.pdf)
- <sup>61</sup> BuzzFeed News. (2021, May). *Texas Winter Storm Excess Deaths Analysis*. Retrieved from <https://buzzfeednews.github.io/2021-05-tx-winter-storm-deaths/>
- <sup>62</sup> Austin Resource Recovery. (2015, March). *City-Serviced Residential Waste Characterization Study*. Retrieved from [https://www.austintexas.gov/sites/default/files/files/Final\\_Report\\_-\\_Austin\\_City-Serviced\\_Waste\\_Characterization\\_Study\\_2015-04-14.pdf](https://www.austintexas.gov/sites/default/files/files/Final_Report_-_Austin_City-Serviced_Waste_Characterization_Study_2015-04-14.pdf)
- <sup>63</sup> City of Austin Office of Sustainability. (2018). *State of the Food System Report*. Retrieved from [https://austintexas.gov/sites/default/files/files/Sustainability/COAOS-0106\\_FoodReport\\_ForWeb\\_1\\_.pdf](https://austintexas.gov/sites/default/files/files/Sustainability/COAOS-0106_FoodReport_ForWeb_1_.pdf)
- <sup>64</sup> Colorado State University. (2018). *What is Conservation Development?* Retrieved from <http://cd.colostate.edu/conservation-development-overview>
- <sup>65</sup> Birkby, Jeff. (2016). *Agrihoods: Development-Supported Agriculture*. Retrieved from <https://attra.ncat.org/product/agrihoods-development-supported-agriculture/>

# APPENDIX

## I. GOALS AND STRATEGIES LIST

**Overall Goal:** Austin will achieve net-zero community-wide greenhouse gas emissions by 2040

### Overarching Strategies (OS)

**OS.1:** Green Jobs and Entrepreneurship

**OS.2:** Prioritize Local Community Initiatives

**OS.3:** Regional Collaboration

**OS.4:** Local Carbon Reduction Projects, Carbon Dioxide Removal, and Carbon Offsets

### Sustainable Buildings (SB)

**SB, Goal 1 (SB.G1):** Achieve net-zero carbon for all new buildings and reduce emissions by 25% for existing buildings while lowering all natural gas-related emissions by 30%.

- **SB.G1-S1:** Ensure benefits flow to low-income communities and communities of color
- **SB.G1-S2:** Enhance understanding of energy consumption
- **SB.G1-S3:** Achieve energy-efficient, net-zero carbon buildings
- **SB.G1-S4:** Ensure equitable workforce development for emerging technologies

**SB, Goal 2 (SB.G2):** Reduce community-wide greenhouse gas emissions from refrigerant leakage by 25%.

- **SB.G2-S1:** Capture and destroy old refrigerants
- **SB.G2-S2:** Improve building codes to encourage cleaner refrigerants
- **SB.G2-S3:** Create incentives for leak detection and repair
- **SB.G2-S4:** Awareness and training for HVAC service providers
- **SB.G2-S5:** Reduce the volume of refrigerants

**SB, Goal 3 (SB.G3):** Reduce the embodied carbon footprint of building materials used in local construction by 40%.

- **SB.G3-S1:** Lead by example through design and construction standards
- **SB.G3-S2:** Incentivize lower-carbon materials
- **SB.G3-S3:** Educate stakeholders on materials best practices
- **SB.G3-S4:** Stimulate decarbonization with local producers

**SB, Goal 4 (SB.G4):** Equitably achieve a community-wide water demand of approximately 152,000 acre-feet per year.

- **SB.G4-S1:** Engage residents in water efficiency technological transitions, and conservation programs
- **SB.G4-S2:** Evaluate water conservation, customer assistance, and workforce development program participation criteria
- **SB.G4-S3:** Reduce emissions at the water-energy nexus

## Transportation and Land Use (TLU)

**TLU, Goal 1 (TLU.G1):** 80% of new non-residential development is located within the city's activity centers and corridors.

- **TLU.G1-S1:** Plan for complete communities
- **TLU.G1-S2:** Work with employers on location and amenities
- **TLU.G1-S3:** Create mobility hubs
- **TLU.G1-S4:** Phase out free parking

**TLU, Goal 2 (TLU.G2):** By 2027, preserve and produce 135,000 housing units, including 60,000 affordable housing units, with 75% of new housing located within ½ mile of activity centers and corridors.

- **TLU.G2-S1:** Offer immediate affordable housing assistance
- **TLU.G2-S2:** Fund affordable housing
- **TLU.G2-S3:** Enhance community engagement for affordable housing and anti-displacement programs

**TLU, Goal 3 (TLU.G3):** 50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home.

- **TLU.G3-S1:** Expand and improve public transportation
- **TLU.G3-S2:** Promote free transportation options
- **TLU.G3-S3:** Enhance transit stations and stops
- **TLU.G3-S4:** Prioritize bicycle networks
- **TLU.G3-S5:** Enhance bicycle education and training
- **TLU.G3-S6:** Improve sidewalks, urban trails, and crossings

## Transportation Electrification (TE)

**TE, Goal 1 (TE.G1):** 40% of total vehicle miles traveled in Austin are electrified, and electric vehicle ownership is culturally, geographically, and economically diverse.

- **TE.G1-S1:** Conduct an EV Community Needs Assessment
- **TE.G1-S2:** Create equitable incentives for buying and leasing EVs
- **TE.G1-S3:** Reduce tolls for EVs in the Eastern Crescent
- **TE.G1-S4:** Launch an e-bike and electric car-sharing program
- **TE.G1-S5:** Electrify public sector fleet vehicles

**TE, Goal 2 (TE.G2):** Austin has a compelling and equitably distributed mix of level 1, 2, and DC fast-charging stations to accommodate 40% of total vehicle miles traveled in the city.

- **TE.G2-S1:** Create a network with more low-cost, accessible charging stations
- **TE.G2-S2:** Incentivize internet-connected smart charging
- **TE.G2-S3:** Adopt new energy and building codes
- **TE.G2-S4:** Expand outreach to systematically excluded groups

**TE, Goal 3 (TE.G3):** The Austin-Round Rock-San Marcos area is a leader in transportation electrification by adopting policies that maximize economic and health benefits while supporting the growth of this emerging industry.

- **TE.G3-S1:** Create a regional coalition to support EVs
- **TE.G3-S2:** Pilot and adopt new technology
- **TE.G3-S3:** Prioritize a just transition
- **TE.G3-S4:** Expand the EV-related business ecosystem

## **Food and Product Consumption (FPC)**

**FPC, Goal 1 (FPC.G1):** Ensure all Austinites can access a food system that is community-driven, addresses food insecurity, prioritizes regenerative agriculture, supports dietary and health agency, promotes plant-based foods, and minimizes food waste.

- **FPC.G1-S1:** Support institutional food purchasing
- **FPC.G1-S2:** Promote and fund community-driven food retail programs
- **FPC.G1-S3:** Incentivize pro-climate, pro-health food choices
- **FPC.G1-S4:** Conduct a food waste root cause analysis

**FPC, Goal 2 (FPC.G2):** Reduce greenhouse gas emissions from institutional, commercial, and government purchasing by at least 50%.

- **FPC.G2-S1:** Measure institutional lifecycle emissions
- **FPC.G2-S2:** Strengthen the City's sustainable purchasing program
- **FPC.G2-S3:** Strengthen non-City institutional purchasing programs
- **FPC.G2-S4:** Expand the City's Circular Economy Program

**FPC, Goal 3 (FPC.G3):** Aggressively pursue waste reduction, organics composting, and recycling to achieve a new zero-waste goal following adoption of the new Austin Resource Recovery Zero Waste Plan.

- **FPC.G3-S1:** Promote waste reduction and reuse
- **FPC.G3-S2:** Create Eco-hubs
- **FPC.G3-S3:** Create a workforce development program for the circular economy
- **FPC.G3-S4:** Offer incentives for products that have lower negative environmental and social impact
- **FPC.G3-S5:** Retool the bulk pick-up collection program



## Natural Systems (NS)

**NS, Goal 1 (NS.G1):** Legally protect an additional 20,000 acres of carbon pools on natural lands and manage all new and existing natural areas (approx. 70,000 acres total), focusing on resilience.

- **NS.G1-S1:** Protect natural lands
- **NS.G1-S2:** Manage natural lands for resilience
- **NS.G1-S3:** Increase community access and positive perceptions of public land
- **NS.G1-S4:** Protect water sources

**NS, Goal 2 (NS.G2):** Protect 500,000 acres of farmland from development in the five-county region through legal protections and regenerative agriculture programs.

- **NS.G2-S1:** Protect working lands
- **NS.G2-S2:** Reform agricultural tax appraisals
- **NS.G2-S3:** Support farmers through financial assistance
- **NS.G2-S4:** Provide farmers with resources
- **NS.G2-S5:** Expand composting
- **NS.G2-S6:** Strengthen workforce development for farmers

**NS, Goal 3 (NS.G3):** Achieve at least 50% citywide tree canopy cover by 2050, focusing on increasing canopy cover equitably.

- **NS.G3-S1:** Protect canopy cover on City lands
- **NS.G3-S2:** Promote tree protections and landscape regulations
- **NS.G3-S3:** Increase community tree planting
- **NS.G3-S4:** Promote tree health and resilience on private and non-City public lands

**NS, Goal 4 (NS.G4):** Include all City-owned lands under a management plan that results in neutral or negative carbon emissions and maximizes community benefits.

- **NS.G4-S1:** Prioritize carbon neutrality for public lands
- **NS.G4-S2:** Reclaim public space and prioritize green infrastructure
- **NS.G4-S3:** Promote community stewardship
- **NS.G4-S4:** Promote carbon farming

## II. GLOSSARY OF TERMS

**A note about language:** Many of the terms used in this document have historical and evolving meanings based on time, context, location, community, and evolution of environmental policy.

**Additional Resource:** <http://racialequitytools.org/glossary>

**Advanced Metering Infrastructure (AMI)** – Advanced metering infrastructure is an integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers.

**Affordable Housing** – According to the United States Department of Housing and Urban Development, the generally accepted definition of affordability is for a household to pay no more than 30% of its annual income on housing. Families who pay more than 30% of their income for housing are considered cost-burdened and may have difficulty affording necessities such as food, clothing, transportation, and medical care.

**Social Agency** – The capacity of an individual or community to act independently and make their own free choices.

**Agrihood** – A community that integrates agriculture and working farms into a housing development.

**Black, Indigenous, and People of Color (BIPOC)** – A term used to highlight the unique relationship to whiteness that Indigenous and Black (African-Americans) people have, which shapes the experiences of and relationship to white supremacy for all people of color within a U.S. context.

**Carbon Dioxide Removal (CDR)** – Refers to methods of removing carbon dioxide from the atmosphere and storing it for long periods. The term usually refers to engineered or technological methods, but in some contexts may also include nature-based solutions.

**Carbon Farming** – Agricultural practices that increase the rate at which carbon is removed from the atmosphere and sequestered into the soil, crop roots, woody material, and vegetation. This agricultural practice can aid in plant growth, reduce fertilizer use, improve water retention, and more.

**Carbon-free Generation** – Power generation sources such as wind power, solar power, hydropower, and nuclear power. The term excludes conventional fossil fuel energy sources.

**Carbon Offset/Carbon Credit** – A unit of carbon dioxide equivalent that is reduced, avoided, or sequestered to compensate for emissions occurring elsewhere.

**Circular/Circular Economy** – A circular organization, business, or economy that eliminates waste and pollution through design, keeps products and materials in use, and restores natural systems.

**Climate Change Mitigation** – Actions to limit the magnitude or rate of global warming and its related effects. This generally involves reductions in human-generated greenhouse gas emissions.

**Communities of Color/People of Color** – Often the preferred collective term for referring to non-white racial groups. Racial justice advocates have been using the term “people of color” (not to be confused with the derogatory “colored people”) since the late 1970s as an inclusive and unifying frame across different racial groups that are not white to address racial inequities. While “people of color” can be a politically useful term and describes people with their own attributes (as opposed to what they are not, e.g., “non-white”), it is also important whenever possible to identify people through their own racial/ethnic group, as each has its own distinct experience and meaning and may be more appropriate.

“People of color” and “communities of color” are also used consistently throughout this plan as a conscious effort to move away from the term “minorities”. Seen collectively, racial and ethnic groups increasingly represent the majority in communities throughout the nation, so the word “minorities” is inaccurate in those settings. Further, people of color have sought consciously to move from a deficit to an asset model in describing themselves, preferring to highlight their strengths.

**Community Driven** – Programs and initiatives that are started, led, and evaluated by low-income communities and communities of color, with explicit mechanisms for soliciting community input, developing community leaders, and sharing outcomes within and outside the community.

**Community Garden** – A piece of land gardened collectively for food production by a group of people sharing resources and tools. In this model, community members have their own designated plot within the garden that they are responsible for maintaining. [City of Austin-endorsed Community Gardens](#) are approved sites for growing produce for non-commercial use that are operated and maintained by committed volunteers. Some community gardens may be on City of Austin-owned land, but it is still up to the community to create, cultivate and manage these gardens.

**Community Solar** – Refers to local solar facilities that are shared by multiple community subscribers or owners who receive credit on their electricity bills for their share of the power produced.

**Commuter Benefits Program** – Benefits that allow employers to offer support for their employees for their daily commute. These can include parking and transit benefits, as well as benefits for vanpool and bicycle commuting.

**Complete Communities** – A planning concept that aims to meet the basic needs of all residents in a community through integrated land use planning, transportation planning, and community design.

**Conservation Development** – An approach to development — usually housing developments and master-planned communities — that balances the protection of natural resources with the provision of housing, economic development, and social benefits for people.

**Conservation Easement** – Voluntary deed-recorded legal agreements between a landowner and the easement “holder” — usually a government agency ([Travis County](#) and City of Austin) or local [land trust](#). While each easement is unique, all conservation easements restrict certain land uses in order to preserve a property’s natural, cultural or agricultural value. For more resources, see the [Texas Land Trust Council](#). As with all easements, the landowner retains ownership of the land but agrees to restrict or allow other parties certain rights of ownership.

**Corridors (Transportation)** – Primary roadways that affect the overall transportation network. They are used for connecting destinations for residents and visitors, and are home to businesses and many Austinites.

**Critical Water Quality Zone (CWQZ)** – Generally the most sensitive portions of watersheds, often including flood plains and other areas closest to streams and lakes. In Austin, these are regulated by the [Watershed Protection Ordinance](#).

**Culturally Relevant** – Used to describe programs, food, products, and policies that are mindful of the culture and practice of the intended user or consumer.

**Customer Assistance Program (CAP)** – The Customer Assistance Program encompasses all of the City of Austin-sponsored programs designed to financially assist moderate to low-income customers with their utility bills.

**Decarbonization** – Refers to the phasing out of carbon dioxide emissions from the use of fossil fuels.

**Deeply Affordable** – [Affordable housing units](#) at 20% and 30% Median Family Income (MFI) and below. For a family of four in [Austin](#), 20% MFI is an annual income of \$19,500, and 30% is \$29,300. 30% MFI is defined by the United States Department of Housing and Urban Development (HUD) as extremely low-income.

**Demand (as related to energy or water)** – Describes the amount of energy or water required to meet consumption. The term can be applied at the community or individual household level.

**Demand Response** – Provides an opportunity for consumers to reduce or shift their electricity usage during periods when overall demand for electricity is high.

**Desertification** – The process by which fertile land is degraded, loses biological function, and becomes “desert” — typically as a result of prolonged drought, deforestation, or harmful agricultural practices.

**(Prime) Development Parcel** – As used in this plan, a prime development parcel refers to a piece of land that is well-suited for development because it has limited barriers to being easily and profitably developed. These barriers to development could be physical (such as steep slopes and floodplains) and/or regulatory (such as environmental regulations). A prime development parcel would not have these barriers.

**Discrimination** – The unequal treatment of members of various groups based on race, gender, social class, sexual orientation, physical ability, religion, and other categories.

**Distributed Generation** – Refers to a variety of technologies that generate electricity at or near where it will be used, such as solar panels and combined heat and power.

**Diversity** – All the ways in which people differ, encompassing the different characteristics that make one individual or group different from another. It is all-inclusive and recognizes everyone and every group as part of the diversity that should be valued. A broad definition includes not only race, ethnicity, and gender — the groups that most often come to mind when the term "diversity" is used — but also age, national origin, religion, disability, sexual orientation, socioeconomic status, education, marital status, language, and physical appearance. It also involves different ideas, perspectives, and values.

**Eastern Crescent** – Used to describe the geographic area that stretches from East Austin to the eastern edges of North and South Austin, including the St. John's neighborhood in the Northeast and Montopolis south of the Colorado River.

**Ecological** – Of or relating to the science of ecology or the patterns of relationships between living things and their environment.

**Electric Generation Facilities** – Power plants that generate electricity. Can include solar and wind farms, nuclear facilities, coal-powered plants, etc.

**Electrical Load** – Any component of a circuit that consumes power or energy. In a household setting, the most obvious examples of electrical loads include light bulbs and appliances.

**Electrification** – Fully or partially switching from technologies that directly use fossil fuel to those that use electricity.

**Embodied Carbon** – The embodied carbon of a building refers to the sum of the carbon emissions from the extraction, manufacturing, and transportation of its materials. It may also refer to the emissions associated with its lifecycle, including construction and disposal or reuse. Embodied carbon can be applied to the production of any good, product, or material and may take into account its entire lifecycle.

**Embodied Carbon Footprint** – The "footprint" of embodied carbon considers how many greenhouse gases are released throughout the supply chain associated with a product.

**Energy Benchmarking** – A method used to determine whether a building is using more or less energy than its peer facilities with similar occupancies, climates, and sizes

**Energy Burden** – The percentage of household income spent on home energy bills.

**Energy Conservation** – Any behavior that results in the use of less energy. Turning the lights off when leaving the room and recycling aluminum cans are both ways of conserving energy.

**Energy Efficiency** – Using technology that requires less energy to perform the same function. Using a light-emitting diode (LED) light bulb or a compact fluorescent light (CFL) bulb that requires less energy than an incandescent light bulb to produce the same amount of light is an example of energy efficiency.



**Energy Poverty** – Describes a condition faced by many Americans in which the personal cost of energy consumption needed to maintain a healthy lifestyle creates a significant economic hardship.

**Environmental Flows** – The quantity and timing of water needed to maintain the natural functions of aquatic and associated ecosystems.

**Environmental Justice** – The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

**Environmental Product Declaration (EPD)** – An independently verified and registered document that communicates transparent and comparable information about the lifecycle environmental impact of products.

**Ethnicity** – A social construct that divides people into smaller social groups based on characteristics like values, behavioral patterns, language, political and economic interests, history, and ancestral geographical base.

**Equity** – Racial equity is the condition when race no longer predicts a person's quality of life outcomes in our community. The City of Austin recognizes historical and structural disparities and a need for alleviation of these wrongs by critically transforming its institutions and creating a culture of equity. The City recognizes that race is the primary determinant of social equity, and therefore we begin the journey toward social equity with this definition.

**Fee Simple (Land) Acquisition** – Transfers full ownership of a property to another party through purchase or donation.

**Flex Schedule** – Allows employees to work outside traditional hours during the most convenient times for them or when they feel most productive.

**Food Forest** – A low-maintenance, sustainable, and diverse planting of edible plants, such as fruit and nut trees, shrubs, herbs, vines, and perennial vegetables, that attempts to mimic the ecosystems and patterns found in nature and is based on the understanding of how natural forests grow and sustain themselves without human intervention.

**Food System** – A system that encompasses all the stages of keeping us fed: growing, harvesting, packing, processing, transforming, marketing, consuming, and disposing of food.

**Geology** – Relating to the form, arrangement and internal structure of rocks.

**Global Warming Potential (GWP)** – A measurement that was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period, relative to the emissions of 1 ton of carbon dioxide (CO<sub>2</sub>).

**Grid Services** – Refers to services required in the U.S. electric power system to support reliable grid operations and respond to the inherent variability and uncertainty of electricity supply and demand.

**Growth Center** – Areas in Austin where an increased concentration of people, jobs, businesses, and services are or will be located.

**Health Product Declaration (HPD)** – Provides a standardized way of reporting the material contents of building products and the health effects associated with these materials.

**Housing Trust Fund** – The [Austin Housing Trust Fund](#) supports the development and rehabilitation of owner-occupied homes, rental housing development, and acquisition of property for use as affordable housing.

**Hydrology** – Relating to the properties, distribution, and circulation of water on and below the earth's surface and in the atmosphere.

**Racial and Ethnic Identity** – An individual's awareness and experience of being a racial and ethnic group member. The racial and ethnic categories that individuals choose to describe themselves are based on biological heritage, physical appearance, cultural affiliation, early socialization, and personal experience.

**Implicit Bias** – Also known as unconscious or hidden bias, implicit biases are negative associations that people unknowingly hold. They are expressed automatically, without conscious awareness.

**Inclusion** – Authentically bringing traditionally excluded individuals and/or groups into processes, activities, and decision/policy making in a way that shares power.

**Institutional Racism** – Refers specifically to how institutional policies and practices create different outcomes for different racial groups. The institutional policies may never mention any racial group, but their effect creates advantages for whites and oppression and disadvantage for people from groups classified as people of color.

**Intersectionality** – An approach advanced mainly by women of color, arguing that classifications such as gender, race, class, and others cannot be examined in isolation from one another — they interact and intersect in individuals' lives, in society, in social systems, and are mutually constitutive.

**Latinx** – A word for those of Latin American descent who do not identify as being of the male or female gender or who simply don't want to be identified by gender.

**Level 1 Charger (Electric Vehicle)** – The simplest way to power up an Electric Vehicle (EV) at home because it plugs into a normal 120-volt electrical outlet. This also means that getting a full charge can take a long time. Plug-ins get an average of 4.5 miles of driving out of each hour of charge, though how long a full recharge takes depends on battery size.

**Level 2 Charger (Electric Vehicle)** – These 240-volt chargers have to be professionally installed and have an output current of up to 32 Amps. There's some variation depending on the charger model and the kind of EV, but these typically charge about five times faster than a Level 1 charger.

**Direct Current (DC) Fast Charger (Electric Vehicle)** – EV chargers capable of charging 80% of the electric vehicle's battery in 20 or 30 minutes for most cars.

**LGBTQIA+** – Acronym used for lesbian, gay, bisexual, transgender, queer, intersex, asexual, and additional sexual and gender identities

**Lifecycle Assessment (LCA)** – A tool that can be used to evaluate the potential environmental impacts of a product, material, process, or activity.

**Median Family Income (MFI)** – Refers to the figures published by the [U.S. Census Bureau](#) each year. The most recent median family income published by the Census Bureau was in September of 2019, which was the household income of 2018 in the United States. The 2018 median family income was \$61,937.

**Megawatt** – A unit for measuring power that is equivalent to one million watts.

**Mono-use** – Having a single use or function.

**Natural Systems** – Networks of living organisms and the physical environment in which they live, including plants, animals, humans, soils, inorganic matter (such as rocks and metals), and natural forces (such as weather, water, and fire). All of these link together and interact to form the complex “web of life.”

**Net-Zero Carbon Buildings** – A highly energy-efficient building that is fully powered from on-site and/or off-site renewable energy sources.

**Net-Zero Emissions** – When all human-made greenhouse gas emissions are removed from the atmosphere through direct reduction and the use of carbon offsets or carbon dioxide removal as needed.

**Net-Zero Operational Carbon** – A building operates at net-zero operational carbon when all of the carbon dioxide (CO<sub>2</sub>) emitted from operations during the in-use phase of a building is avoided or offset.

**Operational Carbon** – Operational carbon refers to the carbon dioxide (CO<sub>2</sub>) emitted resulting from operations, such as lighting and heating, during the in-use phase of a building.

**Oppression** – Systemic devaluing, undermining, marginalizing, and disadvantaging particular social identities in contrast to the privileged norm — when some people are denied something of value, while others have ready access.

**Paratransit** – Flexibly scheduled and routed public transit services available to any community member in the coverage area regardless of distance from bus routes.

**Parking Cashout** – When employees are paid a subsidy or stipend to give up access to dedicated parking.

**Passive Survivability** – Refers to a building's ability to maintain critical life-support conditions in the event of extended loss of power, heating fuel, or water.

**Peak Capacity** – Capacity refers to the amount of electricity a generator can produce when it's running at full blast. This maximum amount of power is typically measured in megawatts or kilowatts and helps utilities project just how big an electricity load a generator can handle. Peak capacity refers to the amount of capacity available to meet the peak demand, which is the highest electrical power demand that has occurred as measured over a specific time, such as during the hottest or coldest times of the year.

**Peak-load Shifting** – The process of reducing the effect of high energy demand (load) during a period of time by delaying use until the power supply system can readily accept additional load.

**Physical Determinants of Health** – Along with social determinants, physical determinants have an impact on health and quality of life outcomes. Examples of physical determinants include the natural environment, built environment, workplace, school, housing, and exposure to industrial hazards or toxic substances.

**Potable Water** – Water that meets or exceeds U.S. Environmental Protection Agency drinking water quality standards (or a local equivalent outside the U.S.) and is approved for human consumption by the state or local authorities having jurisdiction. It may be supplied from wells or municipal water systems.

**Power (Control)** – The possession of control, authority, or influence over others. Power is unequally distributed globally and in U.S. society. Some individuals or groups wield greater power than others, allowing them greater access and control over resources. Wealth, whiteness, citizenship, patriarchy, heterosexism, and education are a few key social mechanisms through which power operates. Although power is often conceptualized as power over other individuals or groups, other variations are power with (used in the context of building collective strength) and power within (which references an individual's internal strength). Learning to “see” and understand relations of power is vital to organizing for progressive social change.

**Prejudice** – A pre-judgment or unjustifiable, and usually negative, attitude of one type of individual or group toward another group and its members. Such negative attitudes are typically based on unsupported generalizations (or stereotypes) that deny the right of individual members of certain groups to be recognized and treated as individuals with individual characteristics.

**Privilege** – A special advantage, immunity, permission, right, or benefit granted to or enjoyed by an individual because of their class, caste, gender, or racial/ethnic group.

**Pro-climate, Pro-health Diet** – A diet that maximizes health benefits while minimizing greenhouse gas emissions. Eating more fruits, vegetables, and whole grains, and less meat and dairy, reduces the risk of chronic diseases, such as type 2 diabetes, heart disease, and certain types of cancer, while also protecting against climate change.

**Race** – A political construction created to concentrate power with white people and legitimize dominance over non-white people.

**Racial Equity** – The condition that would be achieved if one's racial identity no longer predicted, in a statistical sense, how one fares.

**Racial Profiling** – The discriminatory practice by law enforcement officials of targeting individuals for suspicion of crime based on the individual’s race, ethnicity, religion or national origin.

**Racism** – A complex system of beliefs and behaviors, grounded in a presumed superiority of the white race. These beliefs and behaviors are conscious and unconscious, personal and institutional, and result in the oppression of people of color and benefit the dominant group — whites. A simpler definition is racial prejudice + power = racism.

**Reclaimed Water** – Wastewater that has been treated and purified for reuse.

**Regenerative Agriculture** – An approach to farming and agriculture that seeks to improve and work in harmony with natural systems. Many specific practices can fall under the umbrella of regenerative agriculture, often focusing on soil health, biodiversity, water quality, and resilience to climate change impacts. By using regenerative practices, farmers increase organic matter in soils, replenishing the land and sequesters more carbon from the atmosphere. Additionally, the yield for the farmer should increase over time as the topsoil deepens, production increases, and fewer external inputs are required.

**Renewable Natural Gas (RNG)** – A term used to describe biogas that has been upgraded for use in place of fossil natural gas. The biogas used to produce RNG comes from a variety of sources, including municipal solid waste landfills, digesters at wastewater treatment plants, livestock farms, food production facilities, and organic waste management operations.

**Resilience (Community)** – The sustained ability of a community to use available resources (energy, communication, transportation, food, etc.) to respond to, withstand and recover from adverse situations (e.g., economic collapse to global catastrophic risks).

**Resilience (Ecological)** – The capacity of an ecosystem to respond to a natural or human-caused disturbance by resisting damage and recovering quickly to its original function. When major disturbances, such as climate change, become too much for ecosystems to be resilient, the ecosystems respond by adapting and changing, which poses significant consequences for human populations.

**Riparian** – Lands, ecosystems, or plant communities that occur along bodies of water, especially rivers and streams. They are distinct from surrounding lands, having unique soils, vegetation, and habitat due to the presence of water. Riparian areas serve important water quality functions and usually contain more biological diversity than other types of land.

**Scope 1 Emissions** – Direct greenhouse gas emissions from sources owned or controlled by a given entity, such as emissions from fossil fuels burned on-site.

**Scope 2 Emissions** – Indirect greenhouse gas emissions associated with the purchase of electricity, heating/cooling, or steam created off-site through a utility provider for an entity’s consumption.

**Scope 3 Emissions** – Indirect emissions (not included in scope 2) that occur in the value chain of the reporting organization, including both upstream and downstream emissions.



**Carbon Sequestration** – Sometimes referred to as carbon dioxide removal, carbon sequestration removes and stores carbon dioxide from the atmosphere through biological, physical, or chemical processes. These can be natural or engineered processes and often lead to the long-term storage of carbon in plant materials, soils, rock, or bodies of water.

**Shared Solar** – Falling under the “community solar” umbrella, shared solar allows multiple participants to benefit directly from the energy produced by one solar array. Shared solar participants typically own or lease a portion of a system or purchase kilowatt-hour blocks of renewable energy generation.

**Social Determinants of Health** – Social conditions where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

**Stewardship** – The careful and responsible management of something entrusted to one's care. In relation to public lands, community stewardship means that community members have a meaningful level of authority, influence, and involvement in the use and care of the lands in and around their communities.

**Structural Racism** – The normalization and legitimization of an array of dynamics — historical, cultural, institutional, and interpersonal — that routinely advantage white people while producing cumulative and chronic adverse outcomes for people of color. Structural racism encompasses the entire system of white domination, diffused and infused in all aspects of society, including its history, culture, politics, economics, and entire social fabric. Structural racism is more difficult to locate in a particular institution because it involves the reinforcing effects of multiple institutions and cultural norms, past and present, continually reproducing old and producing new forms of racism. Structural racism is the most profound and pervasive form of racism — all other forms of racism emerge from structural racism.

**Sustainability** – Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

**Tax Increment Finance (TIF) District** – TIF is a financial tool cities use to stimulate economic development by subsidizing developments, infrastructure, or other community improvement projects. When a TIF is established, it designates certain areas in which property taxes continue to be paid as normal on an established “base value” of the property, but any increases in tax revenue collected from an increase in property values – the tax increment – is deposited into a separate TIF fund that is used for specific purposes designated by the TIF and usually for reinvestment within the TIF District boundary. The investments done within a TIF District are often criticized for driving gentrification, so careful consideration should be done to ensure anti-displacement plans are in place before the TIF is implemented. Additionally, a portion of TIF funds can be earmarked for anti-displacement efforts and/or providing affordable housing in the district.

**Telework** – A work flexibility arrangement when an employee performs the duties and responsibilities of their position and other authorized activities from an approved worksite other than the location from which the employee would otherwise work. Also sometimes referred to as “telecommute.”

**Thermal Storage** – A technology that stores thermal energy by heating or cooling a storage medium so that the energy can be used at a later time for heating and cooling applications and power generation.

**Transit Priority Network** – Priority networks that are designated for the roadway, public transportation, and bicycle systems. Priority networks are intended to provide guidance on where special treatments should be focused through strategic improvements in infrastructure and technology.

**Tree Canopy** – Refers to the layer of mature tree leaves, branches, and stems that provide coverage of the ground below.

**Urban Forest** – The collection of trees that grow within the built environment, whether on public or privately owned lands, that offer various benefits to humans.

**Vehicle Miles Traveled (VMT)** – A measurement of travel for all vehicles in a geographic region over a given time. It is calculated as the sum of the number of miles traveled by each vehicle.

**White Privilege** – Refers to the unquestioned and unearned set of advantages, entitlements, benefits, and choices bestowed on people solely because they are white. Generally, white people who experience such privilege do so without being conscious of it.

**Workforce Development** – Refers to a set of tools and strategies to prepare workers with the skills necessary for a specific type of job. Workforce development aims to train, place, and retain workers in jobs with high growth potential.

## III. COMMUNITY ENGAGEMENT

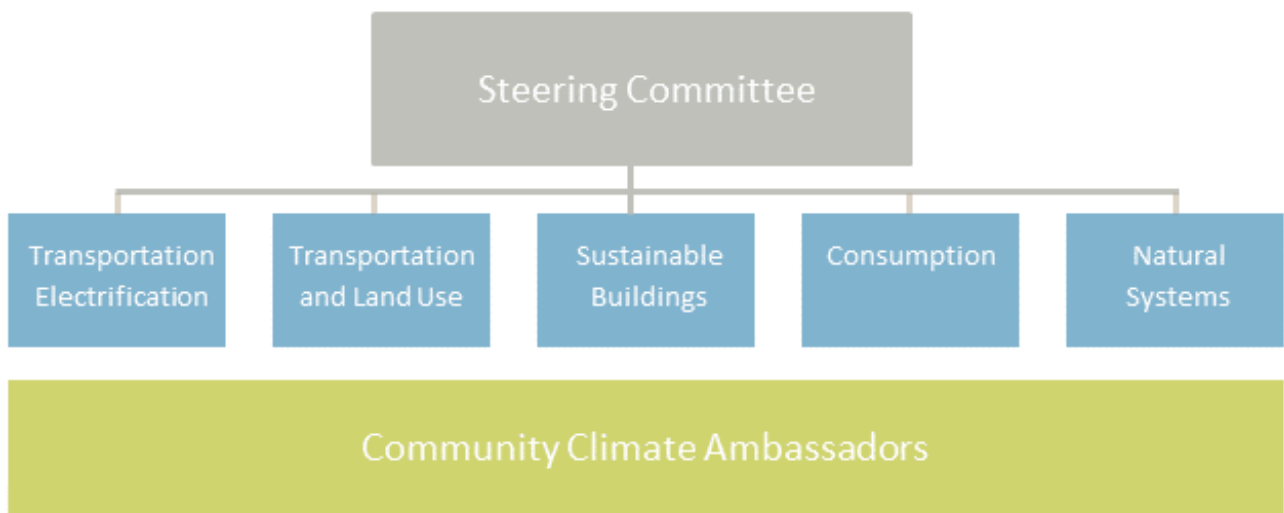
1. [Organizing Structure](#)
  - a. [Steering Committee](#)
  - b. [Advisory Groups](#)
  - c. [Community Climate Ambassadors](#)
2. [Climate Equity Workshops](#)
3. [Community Climate Ambassadors Program](#)
4. [Community Outreach](#)
  1. [Community Climate Workshops](#)
  2. [Other Community Outreach Events](#)
  3. [City of Austin Boards and Commissions Presentations](#)
  4. [SpeakUp Austin! Surveys](#)
  5. [Austin Justice Coalition Survey](#)

# Organizing Structure

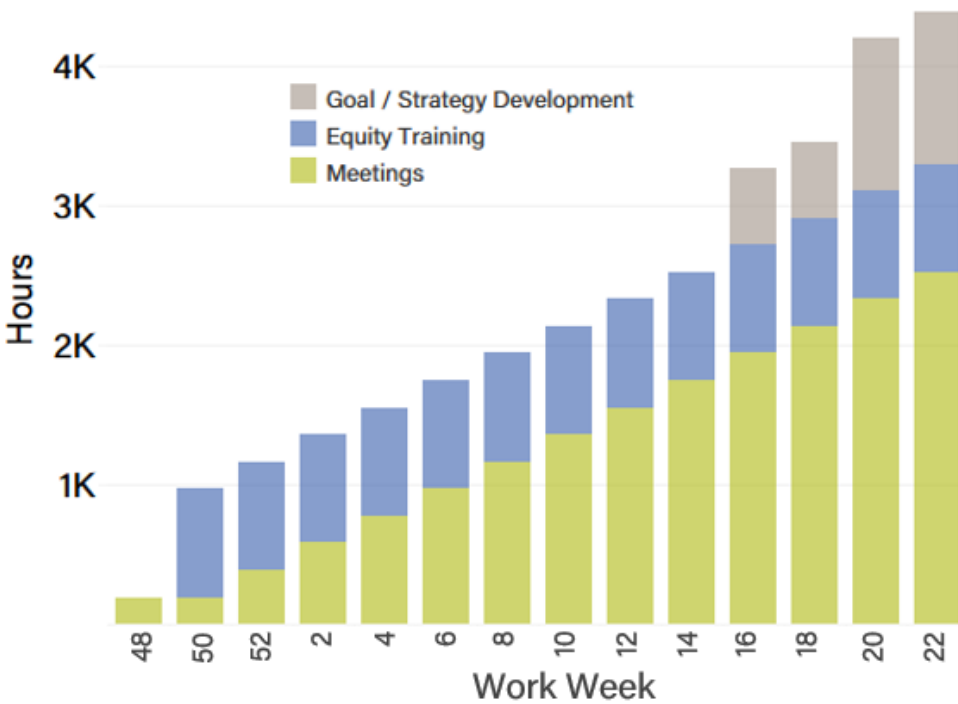
From the start, the Office of Sustainability and the [Joint Sustainability Committee](#) — which provides community accountability for the City’s climate action work — committed to building a more inclusive, equitable plan that benefits everyone. To do this, they worked with the City’s Equity Office to develop a process for engaging with people of color and other community members who are often systematically left out of conversations around climate change and the environment to join the Steering Committee, advisory groups, and Community Climate Ambassadors. The Office of Sustainability hired former Urban Sustainability Directors Network Equity Diversity Inclusion Fellow Celine Rendon as a Community Engagement Specialist to help recruit and sustain meaningful community engagement throughout the plan update.

We used a multi-layered organizational model, including a Steering Committee, five topic-specific advisory groups, and the Community Climate Ambassadors. In total, more than 150 stakeholders contributed more than 5,000 hours from November 2019 through October 2020.

Austin Climate Equity Plan Organizational Chart



Cumulative Stakeholder Time Commitment



Steering Committee

Working with the Joint Sustainability Committee, the Office of Sustainability convened a group of Austin community members who provided leadership and guidance to City staff and the advisory groups as they worked on updating Austin’s Community Climate Plan. Along with providing their expertise and experience, the Steering Committee ensured the plan and process centered equity, garnered political support, and was well-positioned for successful implementation and ongoing accountability. A list of Steering Committee members and their demographic information is below.

Steering Committee Members

Alberta Phillips	Bike Texas, Ending Community Homelessness Organization
Ben Leibowicz	The University of Texas at Austin
Darien Clary	Austin Independent School District
Drew Nelson	Mitchell Foundation
Jim Walker	The University of Texas at Austin

Joep Meijer	Climate Buddies
Rocío Villalobos	Children in Nature Collaborative of Austin (CiNCA), City of Austin Equity Office
Shane Johnson	Sierra Club
Kaiba White	Public Citizen
Katie Coyne	Asakura Robinson
Kenneth Thompson	Solar Austin
Lauren Perresini	Sunrise Movement
Mayuri Raja	AZAAD Austin
Pooja Sethi	Asian American Quality of Life Commission
René Renteria	Austin Community College/Local Journalist
Rodrigo Leal	Central Health Community Health Champions/EcoRise/Hispanic Austin Leadership/Navigant
Shawanda Stewart	Huston-Tillotson
Susana Almanza	People Organized in Defense of Earth and Her Resources (PODER)
Suzanne Russo	Pecan Street

## Steering Committee Member Demographics

*\*Note: Percentages are rounded.*

Austin Climate Equity Plan (N=19)		
Race/Ethnicity	White	43%
	Hispanic/Latino	21%
	Black/African-American	16%



	Asian	11%
	Native American or Pacific Islander	0%
	Two or more races	5%
	Prefer not to answer	5%
	N/A	0%
<b>Gender/Sexuality</b>	Female	52.6%
	Male	42.1%
	Transgender Male	0%
	Transgender Female	0%
	Gender Variant/Non-conforming	5.3%
	Prefer not to answer	0%
	N/A	0%
<b>Age</b>	Under 18	0%
	18-24 years old	10.53%
	25-34 years old	21.05%
	35-44 years old	26.32%
	45-54 years old	15.8%
	over 55	15.8%

	N/A	10.5%
City Council District	1	10.5%
	2	0%
	3	21.1%
	4	16.8%
	5	5.3%
	6	0%
	7	10.5%
	8	0%
	9	21.1%
	10	5.3%
	I do not live in an Austin City Council District	5.3%
	N/A	5.3%

## Advisory Groups

Five advisory groups, each made up of about 20-30 City staff, local experts, and community members, created the goals and strategies organized by each of the plan's topic sections:

- The **Sustainable Buildings** Advisory Group focused on reducing greenhouse gas emissions from building design, construction, and operation.
- The **Transportation and Land Use** Advisory Group focused on reducing greenhouse gas emissions from all forms of transportation and land use patterns.
- The **Transportation Electrification** Advisory Group focused on supporting and accelerating the transition to zero-emission electric transportation options.

- The **Food and Product Consumption** Advisory Group focused on reducing greenhouse gas emissions from the food and products we consume.
- The **Natural Systems** Advisory Group focused on promoting natural systems, landscapes, and maintenance practices that capture and store carbon and/or reduce greenhouse gas emissions.

## Advisory Group Members

Thank you to the following people who have contributed their time, effort, lived experience or expertise in making the Climate Equity Plan:

Consumption Advisory Group	
Amanda Mortl Walker	Austin Independent School District
Amanda Rohlich	City of Austin, Office of Sustainability
Ashlee Bushee	University of Texas at Austin, College of Education
Brandi Clark Burton	Austin EcoNetwork
Brianna Duran	University of Texas at Austin, Office of Sustainability
Caroline Phillips	LifeWorks
Christine Jovanovic	UTHealth
Elizabeth Nelson	City of Austin, Austin Resource Recovery
Gina Lee	Circular CoLab
Jen Cregar (staff lead)	City of Austin, Office of Sustainability / Natural Resources Defense Council
Kaiba White	Public Citizen
Kane Carpenter	City of Austin, Department of Aviation
Karen Magid	City of Austin Food Policy Board, Huston-Tillotson University
Kat Lopez	Veggie Mijxs
Lindsey Hutchison	University of Texas at Austin, Resource Recovery
Lisa Barden	City of Austin Zero Waste Advisory Commission, Keep Austin Fed
Madison Matheus	Community Member
Melissa O de León	re/GENERATE Fashion
Molly Costigan	Sustainable Food Center
Myrrhijah Aquino-Whitehead	Sunrise Movement
Natalie Betts	Austin Resource Recovery
Ona McGovern	Urban Roots
Ricardo Garay	Central Health Community Health Champions, Dell Medical School, CAN, ECHO
Ricardo Guerrero	Community Member
Sam Night	City of Austin, Office of Sustainability
Tim Dombeck	City of Austin, Purchasing Office

Tom Gleason	Travis County, Transportation & Natural Resources Department
<b>Natural Systems Advisory Group</b>	
Adrienne Haschke	Former SFC
Amanda Ross	COA, Parks and Recreation Department
Amy Belaire	Nature Conservancy
Amy Concilio	St. Edward's University
Ana Gonzalez	City of Austin, Watershed Protection
Andreina Alexatos	Tree Folks
Brittany Paige Moore	Community Member
Bruce Melton	Sierra Club
Caitlin Admire (staff lead)	City of Austin, Office of Sustainability
Desarae Ybarra	City of Austin, Parks and Recreation Department
Edwin Marty	City of Austin, Office of Sustainability
EJ Yang	University of Texas at Austin
Ellyssa Saldivar	City of Austin, Parks and Recreation Department
Emily King	City of Austin, Development Services Department (Forestry)
Eric Paulus	Ecology Action
Francisco Rosales	TBG, Latinos in Architecture
Jon White	Travis County
Kate Zahn	UT Student/Public Citizen Intern
LaJuan Tucker	City of Austin, Parks and Recreation Department
Lisa Storer	City of Austin, Parks and Recreation Department
Marisa Perales	Environmental attorney, TCEF
Mateo Scoggins	City of Austin, Watershed Protection
Matt Hollon	City of Austin, Watershed Protection
Matt McCaw	Austin Water Utility
Natalia Monet Cox	Huston-Tillotson Student
Nathan Stevens	Community Member
Nick Kincaid	City of Austin, Watershed Protection
Sarah Dooling	Living City ATX
Sari Alborno	City of Austin, Watershed Protection
Tom Ennis	City of Austin, Watershed Protection
Ucha Abbah	Asakura Robinson
Vanessa Hague	Conservation Fund
<b>Electric Vehicles Advisory Group</b>	
Adele Noel	Travis County
Andrea Tosi	Pecan Street

Andrew Hoekzema	Capital Area Council of Governments
Cameron Freberg	City of Austin, Austin Energy
Chris Campbell	Air and Waste Management Association
Christiane Alepuz	Capital Area Council of Governments
Dana Wen	Software Eng/formerly 350 member
David Laderberg	Smart Charge America
David Tuttle	Electric Utility Commission / University of Texas at Austin
Doug Lewin	Energy Foundation
James Adams	350.org
Janis Bookout	Earth Day ATX
Jennifer Walls	City of Austin, Austin Energy - Fleet
Joshua Lewin	7th grader, AISD
Karl Popham	City of Austin, Austin Energy
Kelsey Vizzard	Sunrise Movement ATX
Kris Hafezizadeh	Austin Independent School District
Laura Morrison	Texas Electric Transportation Resources Alliance
Rob Borowski	CapMetro
Zach Baumer (staff lead)	City of Austin, Office of Sustainability
<b>Transportation &amp; Land Use Advisory Group</b>	
Daniel Alvarado	GrantWorks
Daniel Llanes	Raza Roundtable, PODER
Danielle Skidmore	Movability Board
Emily Ackland	Travis County
Heather Houser	UT - Planet Texas 2050
Joelynn Avendano	Dell Medical School
Joey Gidseg	President, Texas Democrats with Disabilities
Jonathan Mosteiro	Nelson Nygaard
Kate Zahn	Public Citizen
Liane Miller (staff lead)	City of Austin, Austin Transportation Department
Manuel Ortiz	Jolt / Jolt Youth Chapter
Marc Coudert (staff lead)	City of Austin, Office of Sustainability
Maria Renee Morales	Jolt / Jolt Youth Chapter
Marina Islas	Austin History center
Marla Torrado	Community Powered Workshop
Matt Dugan (staff lead)	City of Austin, Planning and Zoning
Matthew Kim	Austin Climate Coalition
Nakia Winfield	Equity Consultant



Robert San Soucie	Sunrise Movement ATX
Seth Fowler	Austin Neighborhood Council
Yannis Banks	CapMetro
Zack Lofton	Capital Area Metropolitan Planning Organization
<b>Sustainable Buildings</b>	
Angela Gaudette	City of Austin, Planning and Zoning
Ashley Williams	Austin Independent School District
Bungane Mehlomakulu	Integral Group
Cassidy Ellis	South-central Partnership for Energy Efficiency as a Resource
Dana Harmon	Texas Energy Poverty Research Institute
David Carroll	Joint Sustainability Committee
Diane Irwin	Positive Energy
Dirk Kestner	Walter P Moore
Gilbert Rivera	Raza Roundtable
Heather Dalrymple	Austin Water Utility
Jan Adler	City of Austin, Development Services Department
Kalan Contreras	City of Austin, Planning and Zoning
Karen Hadden	Electric Utility Commission
Karmella Green	Austin Revitalization Authority
Katelynn Essig	Foundation Communities
Kurt Stogdill	Austin Energy
Larry Graham	Texas Gas Service
Marisa Flores Gonzalez	Austin Water Utility
Megan Slattery	Studio8 Architects
Miriam Solis	University of Texas at Austin
Phoebe Romero (staff lead)	City of Austin, Office of Sustainability
Quincy Dunlap	Austin Area Urban League
Rey Torres	Austin Independent School District
Sarah Migl	Ecotech Engineering
Sarah Talkington	City of Austin, Austin Energy
Shaun Auckland	Travis County / USGBC
Tasha Stewart	Austin Water Utility
Victoria Dianne O'Dell	Community Member
Yure Suarez	Perkins&Will

## Advisory Group Member Demographics

*\*Note: Percentages are rounded.*

		Austin Climate Equity Plan (N=130)
Race/Ethnicity	White	45.4%
	Hispanic/Latino	19.2%
	Black/African-American	9.2%
	Asian	3.1%
	Native American or Pacific Islander	1.5%
	Two or more races	3.9%
	Prefer not to answer	1.5%
	N/A	16%
Gender/Sexuality	Female	47.7%
	Male	32.4%
	N/A	16.2%
	Gender Variant/Non-conforming	2.3%
	Prefer not to answer	0.8%
	Transgender Female	0.8%
	Transgender Male	0.0%
	N/A	22.8

<b>Age</b>	25-34 years old	21.5%
	35-44 years old	20.8%
	45-54 years old	9.4%
	over 55	8.1%
	18-24 years old	4.03%
	Under 18	0.8%
<b>City Council District</b>	N/A	24.62
	1	13.1%
	3	11.5%
	7	10.0%
	9	7.0%
	10	6.2%
	5	6.2%
	8	4.6%
	I do not live in an Austin city council district	4.6%
	4	3.9%
	2	3.1%
	6	1.5%

## Community Climate Ambassadors

The Community Climate Ambassadors program was a pilot initiative to provide a two-way exchange with the Ambassadors' communities and the Climate Equity Plan participants. The Office of Sustainability used an application process to select 12 racially and economically diverse Ambassadors who were compensated to contribute their personal and their communities' lived experience to inform the plan through an equity lens. The Ambassadors had the flexibility to adapt the outreach and program design to fit their communities' needs and interests. More information about the Ambassadors and program can be found in the "Community Climate Ambassador Program" section below.

### Community Climate Ambassador Demographics

*\*Note: Percentages are rounded.*

		Austin Climate Equity Plan (N=144)
<b>Race/Ethnicity</b>	Black/African-American	50%
	Hispanic/Latino	25%
	Asian	8.3%
	Native American or Pacific Islander	8.3%
	Two or more races	8.3%
	Prefer not to answer	0%
	White	0%
<b>Gender/Sexuality</b>	Female	75.0%
	Male	16.7%
	Gender Variant/Non-conforming	8.3%
	Transgender Female	0%
	Transgender Male	0%

	Prefer not to answer	0%
<b>Age</b>	18-24 years old	33.3%
	Under 18	16.7%
	25-34 years old	16.7%
	35-44 years old	8.3%
	45-54 years old	8.3%
	over 55	8.3%
	Prefer not to answer	8.3%
<b>City Council District</b>	9	33.3%
	1	25%
	5	16.7%
	3	8.3%
	4	8.3%
	I do not live in an Austin City Council District	8.3%
	2	0%
	6	0%
	7	0%
	8	0%
	10	0%



## Climate Equity Workshops

All Plan participants were required to participate in an [equity workshop](#) to build a baseline understanding of past and present racial equity and environmental justice issues in Austin. A total of six workshops were offered, with attendance by 140 (90%) of the approximately 150 Plan participants attending.

[Dr. Tane Ward](#) facilitated four day-long workshops. The conversations were designed to challenge long-held perspectives and create an understanding of how economic and racial segregation impacts health, education, wealth, and other quality of life outcomes. Dr. Ward offered a Justice Litmus test as a screening tool that plan participants were encouraged to use to highlight and override white supremacist culture during the planning process. The tool is based on [Tema Okun's work](#) on dismantling white supremacist culture in organizations.

### Justice Litmus Test

- 1. Is there a sense of urgency in our work?*
- 2. Are we using either/or thinking or decision-making?*
- 3. Is our work displaying signs of paternalism?*
- 4. Is there fear of open conflict in our work?*
- 5. Is the right to comfort being prioritized in our work?*
- 6. Are we applying tunnel vision to our work?*
- 7. Are we avoiding "reinventing the wheel" in our work?*
- 8. Does growth or money reflect our values?*
- 9. Are leaders being nurtured and developed horizontally?*
- 10. Is open critique of our work met with "aggressive appreciation" to minimize the critique or avoid discomfort?*

The Community Climate Ambassadors participated in one of two abbreviated two-hour workshops facilitated by Susana Almanza, Executive Director of [People Organized in Defense of Earth and Her Resources \(PODER\)](#). The workshop highlighted the history of environmental injustices of land use planning and zoning. Participants discussed race, class, and equity in the context of Austin's history.

## Community Climate Ambassadors Program

The Community Climate Ambassadors Program was created as a pilot program to elevate the voices of people who have been systematically left out of, misrepresented in, or ignored during climate change conversations and City planning initiatives. The program sought to 1) identify key concerns, priorities, and needs related to environmental sustainability from Austin's communities of color and other historically excluded groups, and 2) recommend a long-term process and structure for ongoing collaboration with these communities and the Office of Sustainability.

Desired program outcomes included:

- Learning people's lived experience and how that experience presents barriers (e.g., structural, cultural, informational, financial) to climate action

- Understanding how we can improve lives, increase affordability, and craft equitable solutions that work for communities of color while reducing emissions
- Including community members in the action creation process
- Getting direct community feedback on proposed actions and programs

We hoped to flip the conventional engagement process to first listen and understand our community's needs and priorities before jumping into goal setting and strategy development. In practice, the advisory groups were crafting the plan's goals and strategies in parallel with the Ambassadors gathering community input. This led to some adjustments to the advisory groups' recommendations along the way based on Climate Ambassador feedback and insights gained from the application of the Equity Tool.

## Application and Selection Process

The Office of Sustainability held a 2.5-week application period in November 2019. It promoted the program by sharing with community networks, posting at libraries and community recreation centers, and utilizing Austin's Neighborhood Groups Community Registry. Potential applicants found it most helpful to learn about the program from trusted contacts and community networks. Seventy-one people applied. A selection panel with two participants from the Steering Committee and three Office of Sustainability staff evaluated the applications received using a criteria score sheet that the Equity Office reviewed. The Equity Office joined the selection panel to choose the selected Ambassadors among the top 25 applicants. Ten individuals and two organizations were selected.

## Community Climate Ambassador Responsibilities

The ten individuals received a \$1,500 stipend, and the two organizations received \$3,000 to complete the tasks and deliverables outlined below.

## Climate Ambassador Tasks and Deliverables

<b>Task 1 – Training &amp; Education:</b> Participate in a series of meetings and workshops to better understand climate change-related issues and how they might apply to their communities. (15-hour estimated time commitment, January - March 2020)		
Background knowledge building around climate change issues and community priorities. Work with staff to design and develop an interview guide. <ul style="list-style-type: none"> <li>• Kickoff Meeting (2 hours)</li> <li>• Homework (3 hours)</li> <li>• 2<sup>nd</sup> Meeting Follow up (2 hours)</li> </ul>	Jan. 2020	7-hour estimated time commitment
Attend at least one community workshop focused on each of the Advisory Group topics	Feb. 2020	3-hour estimated time commitment
Participate in monthly check-in calls (30 min-1 hour each)	Jan. – Mar. 2020	5-hour estimated time commitment

<b>Task 2 – Interview Reports:</b> Conduct interviews to gather and share information about climate change issues with their communities. Prepare report of interview findings. (35-hour estimated time commitment, February - May 2020)		
Host a minimum of 3 gatherings (1-2 hours each), with a minimum of 5 interview reports completed. <ul style="list-style-type: none"> <li>Gatherings could be one-on-one, small groups, or larger events.</li> <li>Gatherings were originally intended to be in person, but some were virtual due to COVID-19.</li> </ul>	Feb. - June 2020	6-hour estimated time commitment
Prepare interview report summarizing community feedback. <ul style="list-style-type: none"> <li>Office of Sustainability staff provided support in creating and formatting the reports.</li> </ul>	Feb. - June 2020	12-hour estimated time commitment
Complete other tasks as needed to gather feedback.	Mar. - June 2020	17 hours
<b>Task 3 – Program Evaluation and Ongoing Engagement:</b> Collaborate with the Office of Sustainability to document lessons learned, share information, and ask for support implementing the Climate Equity Plan with Ambassadors' networks. (25-hour estimated time commitment, ongoing)		
Attend a minimum of 2 advisory group meetings. (2 hours each)	Feb. - Apr. 2020	4-hour estimated time commitment
Document lessons learned and program recommendations with the Office of Sustainability.	June 2020	2-hour estimated time commitment
Participate in a Reflection Session to review Community Climate Plan Proposed goals and strategies go over lessons learned from the Community Climate Ambassador Program.	June 2020	4-hour estimated time commitment
Continue Climate Equity Plan outreach to support plan implementation.	Ongoing	15-hour estimated time commitment

## Feedback from Community Climate Ambassador Outreach

The Community Climate Ambassadors held 35 engagement events (gatherings, one-on-one interviews, personalized surveys/worksheets, etc.) over six months. A summary of their events is below. You can view more about the ambassador reports [here](#). More detail and backup materials, including ambassador interview reports, are available upon request. Please email [sustainability@austintexas.gov](mailto:sustainability@austintexas.gov) for more info.

- **Anthony Gamez Jr.**, an Austin High School student, hosted online events, including group discussions with the Black Student Alliance at Austin High School. He held group discussions with family members that participate in resource conservation.
- **Deborah Beresky**, a peer-support specialist providing permanent supportive housing services to individuals experiencing chronic homelessness with complicated chronic health, addiction, and mental health issues, held a few house meetings with her Mary Lee

Foundation community before the COVID-19 Stay-at-Home order. In response to the order, she created worksheets to help track community discussions, including consumption and at-home waste disposal practices.

- **Chelsea Gomez**, active in her neighborhood, local farmers markets, and job endeavors, held discussions with Austin Independent School District (Austin ISD) parents and children using her relationships built while delivering environmental education in Austin ISD schools. She also created a public survey that received 114 responses. The respondents' demographic information is incorporated in the table below.
- **Sheridan Ray**, an Akins Early College High School student, held community conversations with her fellow Akins students and her neighborhood church group.
- **Kiounis Williams**, an active member of his church health ministry, the UT African-American Wellness project, and the AMEN project for health and wellness, conducted three interviews with his East Austin family members to hear different generational experiences of gentrification.
- **Lynn Huyn**, a University of Texas at Austin student who works on racial equity in various organizing and research spaces, spoke with student organizers about living in Austin.
- **Sayuri Yamanaka**, a leader of Spanish social media group "Come Fresco y Sana en Austin" and organizer of delivering healthy foods to low-income communities, and **Lourdes Kaman**, an active member in a catering business and other community-based groups, jointly hosted bilingual sessions with Spanish speakers to gauge their awareness of and involvement in climate change issues.
- **Nakysia Fralin**, an environmental studies major at Huston-Tillotson University, held online conversations with Huston-Tillotson students and faculty on climate change topics.
- **Dianna Dean**, a nurse for over 35 years and active volunteer in her neighborhood, church, and local elementary schools in Austin, created worksheets to facilitate community conversations on climate change, sustainability, housing, and affordability in East Austin.
- **KB**, Founder and Lead Organizer of ATX Interfaces, hosted a series of recorded online workshops:
  1. [What is Climate change & what does it have to do with race?](#)
  2. [Cybersecurity & Climate Justice](#)
  3. [Black ecopoetics & getting reconnected to the land](#)
  4. [Natural Solutions to climate change: food, gardens, and farming](#)
  5. [How sensuality & incarceration are impacted by the climate crisis](#)
  6. [a panel/performance](#)
- **Taylor Huntley**, a Program Coordinator and Health Educator with Mama Sana Vibrant Woman, facilitated an online workshop with worksheets and guides to help mothers learn more about the importance of indoor air quality. Taylor created a space for Black, Indigenous, and women of color to focus on cultural connection and historical perspectives.

More than 70 people participated in the Ambassadors' events and/or completed Ambassador-distributed surveys. Ambassadors were encouraged to collect demographic data from these contributors. While this was not possible for all events, demographic information was provided for 70 contributors.

**A note on the COVID-19 Pandemic:**

The COVID-19 pandemic and local Stay-at-Home orders affected the in-person gatherings planned by the Community Climate Ambassadors. The Ambassadors chose to adapt their gatherings to online and socially distanced events that included:

- Online group discussions and workshops
- One-on-one phone calls
- Use of personalized surveys and worksheets

**Demographics Collected from Community Climate Ambassador Outreach**

*Note: Percentages are rounded.*

		Austin Climate Equity Plan (N=70)
<b>Race/Ethnicity</b>	Hispanic/Latino	49%
	Black/African-American	23%
	White	16%
	Native American or Pacific Islander	5%
	Two or more races	3%
	Asian	1%
	Prefer not to answer	0%
<b>Gender/Sexuality</b>	Female	72.9%
	Male	22.9%
	Prefer not to answer	4.3%
	Transgender Male	0%
	Transgender Female	0%
	Gender Variant/Non-conforming	0%



<b>Age</b>	35-44 years old	24.3%
	25-34 years old	21.4%
	18-24 years old	20.0%
	Under 18	11.4%
	45-54 years old	11.4%
	over 55	8.6%
	Prefer not to answer	2.9%
<b>City Council District</b>	9	33.3%
	1	25%
	5	16.7%
	3	8.3%
	4	8.3%
	I do not live in an Austin City Council District	8.3%
	2	0%
	6	0%
	7	0%
	8	0%
	10	0%

Office of Sustainability staff analyzed the Ambassadors' 50+ interview reports and noted major themes that were integrated into the Climate Equity Plan. These themes led to refinements of the goals and strategies recommended by the advisory groups and offered a way to incorporate storytelling around community priorities and concerns.

### Emergent themes based on ambassador discussions:

*\*The frequency of excerpts does not indicate importance but rather an awareness of a recurring theme for respondents.*



## Community Outreach

In addition to the many Steering Committee, advisory group meetings, and Climate Ambassador events, plan participants and Office of Sustainability staff conducted broad and more targeted outreach to ensure the plan represented the entire Austin community's input. COVID-19 mandated unforeseen adjustments, shifting all but a few socially distanced Ambassador events online after mid-March 2020. Outreach methods included:

- Five in-person community workshops, one for each advisory group topic
- 22+ community outreach events, online community presentations including webinars and panel discussions
- 24 online presentations to City of Austin boards and commissions
- Digital communication, including emails, e-newsletters, and social media

Additional details of these events are provided below.

## Community Climate Workshops

The Office of Sustainability worked with the advisory groups to host five community workshops centered around the advisory group topic areas (e.g., sustainable buildings, natural systems) in February 2020. The events were held in person at public locations that were convenient to transit and provided parking. Onsite childcare, food, and beverages were provided. More than 200 people participated in the workshops and contributed their ideas for a carbon-free and sustainable future. Desired workshop outcomes included:

- Provide input and feedback to City staff about the challenges and barriers to reaching Austin's climate goals.
- Discuss the benefits and drawbacks of current sustainability trends and practices.

- Help identify priorities and strategies to improve lives, increase affordability, and craft equitable solutions that work for people.

## Community Climate Workshops Summary

Advisory Group Workshop Topic	Date and Location	Description	Number of Participants
Transportation Electrification Community Climate Workshop	Tues., Feb. 4, 2020 5:30-8:00 pm  Austin Energy Town Lake Center, Assembly Room 130	A community workshop to discuss the future of transportation in Austin.	55
Sustainable Buildings Community Climate Workshop	Sat., Feb. 8, 2020 2:00-4:30 pm  Huston-Tillotson University, Dickey-Lawless Science Building	A community workshop to discuss the future of green building and sustainable infrastructure in Austin.	46
Natural Systems Community Climate Workshop	Tues., Feb. 11, 2020 5:30-8:00 pm  Austin Public Library - Carver Branch, Auditorium	A community workshop to discuss the future of our natural systems in Austin.	38
Transportation and Land Use Community Climate Workshop	Thurs., Feb. 13, 2020 5:30-8:00 pm  Austin Public Library - Carver Branch, Auditorium	A community workshop to discuss the future of transportation and land use in Austin.	30
Consumerism and Climate Change Community Climate Workshop	Sun., Feb. 23, 2020 1:00-3:00 pm  Travis County Administration Building	A community workshop to discuss consumerism, how it contributes to climate change, and how to tackle related issues.	70

## **Summary of key discussion points from each community workshop:**

### **Transportation Electrification Workshop**

Transportation Electrification workshop participants discussed rebates and affordability, education and outreach, equity and low-income issues, institutional fleets, and electric grid climate impacts.

Recommended strategies included:

- Ensure creative and inclusive financing strategies
- Eliminate tolls for electric vehicles
- Create public-private partnerships with dealerships and real estate and rental companies
- Use culturally relevant marketing and outreach strategies
- Streamline permitting process for electric vehicle infrastructure

### **Sustainable Buildings Workshop**

Sustainable Buildings workshop participants discussed challenges with reducing emissions in existing buildings, the relationship among energy, nature, and buildings, transit-oriented neighborhoods, equity and affordability, and sustainable building materials. Recommended strategies included:

- Have a diversified approach that includes targeted outreach, and explore a customer advisory group that examines and improves existing programs
- Conduct pilot projects and offer incentives for low-carbon building materials
- Expand advocacy to include increasing affordable green housing
- Maximize the use of public spaces and normalize community input
- Create workforce development opportunities and help support a union presence within the solar, carpentry, and green building industries

### **Natural Systems Workshop**

Natural Systems workshop participants discussed their relationships with natural spaces such as parks, wildlife, and wilderness. Recommended strategies included:

- Develop a skilled workforce for specialized landscape maintenance.
- Create new ways for the community to influence decision-making.
- Provide a just transition and economic development opportunities for low-income communities and communities of color.
- Support existing programs related to natural systems.
- Consider ideas for underutilized or mono-use green spaces.

### **Transportation and Land Use Workshop**

Transportation and Land Use workshop participants discussed active transportation like biking and walking, land use, public transit, open space, and regional collaboration. Recommended strategies included:

- Consider a “complete streets” ordinance.
- Ensure transportation systems are accessible to all.
- Create more diverse housing choices near existing transit.
- Find new ways to pave park surfaces that contribute to less impervious cover and are still accessible.
- Have a high-speed rail system that makes regional and cross-city travel in Texas more efficient.

### Consumerism and Climate Change Workshop

Consumerism and Climate Change workshop participants discussed producer and consumer responsibility, circular economy, zero waste infrastructure, fast fashion, plastics, and landscaping. Recommended strategies included:

- Provide transparency on lifecycle impacts of products.
- Expand education and marketing around circularity, shopping secondhand, durability, minimal packaging, resisting trends that support fast fashion, and linear systems.
- Incentivize business solutions, manufacturers, etc., to drive change.
- Collaborate with large institutions and producers.
- Create a local free resource exchange network.

## Other Community Outreach Events

The Office of Sustainability staff organized and attended several community events from Fall 2019 through mid-March 2020 to share information about the Climate Equity Plan and encourage community participation and feedback. Unfortunately, due to COVID-19, in-person engagement ended in March 2020, and many events planned for the spring, particularly around Earth Month, were canceled.

### Outreach Event Summary, Oct 2019-Oct. 2020

Event Name and Type	Date and Location	Description	Number of Participants
Tabling Event 1: Austin Energy <a href="#">Community Connections Resource Fair</a>	Sat., Oct. 19, 2019 11:30 am- 2:00 pm  Navarro Early College High School (formerly Lanier High School)	Local service providers and City departments host this annual event where community assistance resources are available for moderate-to-low income families in the Austin area. The Office of Sustainability provided information on the office and asked people what a sustainable Austin looks like for them.	70+
Tabling Event 2: Austin Code <a href="#">Spooktacular Bash</a>	Sat., Oct. 26, 2019 11:00 am-2:00 pm  George Washington Carver Museum	The Austin Code Department hosts this community engagement event. The Office of Sustainability provided information on the office and asked people what a sustainable Austin looks like for them.	50+
<a href="#">Austin CityWorks Academy</a> Class #12	Weds., Nov. 20, 2019 6:00 pm-9:00 pm  Austin Central Library	CityWorks Academy is a free program where City of Austin executive team members, department directors, and other	32

		staff give Austinites hands-on experience in City government operations. The Office of Sustainability presented background information about sustainability work and the new Climate Equity Plan process, and how to get involved.	
KAZI FM 88.7 Radio Outreach	Mon., Feb. 10, 2020 8 am  On air	Austin Community Radio, Inc. operating as KAZI 88.7 is the oldest community station in Austin. The station is a listener-supported, non-commercial community radio station. Their mission is to reach and provide educational programming and information with special emphasis on media access for the African-American community and other groups previously unserved by existing radio stations in Austin. The Office of Sustainability was interviewed about the Climate Equity Plan and answered call-in questions.	N/A
The Climate of Urban Design Presentation	Fri., Feb. 28, 2020 3-4:30 pm  UT School of Architecture	The Climate of Urban Design is the second AIA RUDC One-day Symposium on the Future of Urban Design Education and Practice. The Office of Sustainability joined Huston-Tillotson University to present how partnerships can serve to deliver more equitable and sustainable urban environments.	50+
GreenLatinos Discussion	Weds., June 3, 2020 3 pm  Online	The Office of Sustainability facilitated a panel discussion with plan participants on how equity was centered in the plan and the Community Climate Ambassadors Program.	20+
Austin Youth Forest Council (AYFC) Discussion	Weds., June 10, 2020  Online	The AYFC is a year-long paid internship program for 16- to 19-year-olds in Austin to work with City of Austin staff to build their personal leadership skills, support Austin's urban forest and gain hands-on experience in green careers. The	15+



		Office of Sustainability joined a discussion about green jobs and Climate Equity Plan Q&A.	
American Institute of Architects (AIA) Committee on the Environment Presentation	Weds., June 24, 2020  Online	The AIA is the industry association for architects. Committees on the Environment from four Texas AIA chapters hosted this event with city leaders from Austin, Dallas, Houston, and San Antonio to discuss updates to their city's climate action plans.	100+
Austin Carbon Leadership Forum Presentation	Thurs., June 25, 2020	The Carbon Leadership Forum shares best practices and solutions to decarbonize the built environment. The Office of Sustainability presented to the Austin chapter focusing on building materials and refrigerant management building strategies.	35
Austin Energy Green Building: Emerging Technologies Webinar	Tues., July 14, 2020  Online	This seminar covered current and emerging technologies in transportation electrification, specific projects in Austin, and how we can prepare for this shift to continue in the future. The Office of Sustainability presented the process and background of the Climate Equity Plan.	N/A
Cities Connecting Children to Nature (CCCN) Youth Leadership Development Working Group	Weds., July 22, 2020 3:00-4:30 pm  Online	The Office of Sustainability presented an overview of the Climate Equity Plan. CCCN is a national initiative to create more abundant and equitable access to nature in cities. Panelists discussed their connection to the outdoors and shared their environmental and racial equity journey.	15+
South-Central Partnership for Energy Efficiency as a Resource (SPEER) Panel	Thurs., July 23, 2020  Online	SPEER aims to accelerate the adoption of advanced building systems and energy-efficient products and services in Texas and Oklahoma. The Office of Sustainability joined representatives from the Cities of Houston, Dallas, and San Antonio	40

		to discuss how equity shaped and guided climate plans and implementation strategies.	
U.S. Green Building Council (USGBC) Texas Webinar: Climate Action in Texas	Thurs., Aug. 6, 2020 3:00-4:30pm  Online	The USGBC promotes sustainable building practices. Six Texas cities, including Austin, described the processes of their respective climate action plans, including multiple strategies to address issues across the spectrum of a city's operations, investments, and infrastructure.	N/A
AIA Excellence Conference 8/20/20	Thurs., Aug. 20, 2020  Online	The AIA is the industry association for architects. The Office of Sustainability presented on the Climate Equity Plan revision process, focusing on discussing equity and the Community Climate Ambassadors Program.	25
Community Resilience Trust	Thurs., Aug. 27, 2020 9 am	The Community Resilience Trust Is a network for community leaders to convene an equitable response to COVID-19 community needs for resilience. The Office of Sustainability presented the Climate Equity Plan process with Q&A.	18
Austin Climate Equity Plan Community Climate Ambassador Panel	Weds., Sept. 2, 2020, 2:00-3:30 pm  Online	The Office of Sustainability moderated a panel discussion with six Community Climate Ambassadors to learn about their role and experiences participating in the Climate Equity Plan process.	70+
Solar Austin Presentation	Tues., Sept. 22, 2020 5:00-7:00 pm  Online	Solar Austin accelerates the transition to clean, renewable energy in Central Texas and expands access to the benefits of solar to everyone. The Office of Sustainability presented the Climate Equity Plan as part of series discussion on local, federal, and state energy policy.	N/A
Climate Equity Plan Steering Committee Panel	Thurs., Sept. 24, 2020, 6:00-7:30 pm	The Office of Sustainability moderated a panel discussion with the Steering Committee who helped	50+

	Online	lead the Climate Equity Plan process. Steering Committee members shared their role in the Climate Equity Plan and dug into topics related to the intersection of climate change and racial and environmental justice.	
AustinCorps Presentation	Mon., Sept. 28, 2020 9:30-11:30 am  Online	The City of Austin and Austin Independent School District partner with AustinCorps, a civic education and leadership development program for Austin high school students. The Office of Sustainability presented the Climate Equity Plan and ways students can get involved in climate action.	40+

## City of Austin Boards and Commissions Presentations

Office of Sustainability Staff presented the process, goals, and strategies of the Climate Equity Plan to City boards and commissions as follows:

08-03-20 – Commission on Immigrant Affairs  
 08-12-20 – Commission on Seniors  
 08-12-20 – Zero Waste Advisory Commission  
 08-14-20 – Mayor’s Committee for People with Disabilities  
 08-17-20 – Asian American Quality of Life Advisory Commission  
 08-26-20 – Joint Sustainability Committee  
 09-02-20 – Environmental Commission  
 09-02-20 – Parks and Recreation Board  
 09-11-20 – Urban Transportation Commission  
 09-09-20 – Water and Wastewater Commission  
 09-11-20 – African-American Resource Advisory Commission  
 09-11-20 – LGBTQ Quality of Life Advisory Commission  
 09-14-20 – Austin-Travis County Food Policy Board  
 09-14-20 – Electric Utility Commission  
 09-14-20 – Pedestrian Advisory Council  
 09-15-20 – Bicycle Advisory Council  
 09-15-20 – Resource Management Commission  
 09-18-20 – Economic Prosperity Commission  
 09-25-20 – Hispanic/Latino Quality of Life Advisory Commission  
 09-30-20 – Design Commission  
 10-02-20 – Human Rights Commission  
 10-07-20 – Commission on Women  
 10-13-20 – Planning Commission  
 10-13-20 – Community Development Commission

[SpeakUp Austin!](#) is the community engagement website for the City of Austin. The Office of Sustainability posted [information about the Climate Equity Plan](#) throughout the plan update process that anyone could comment on and hosted two surveys via the site. The first survey was posted at the beginning of the process to serve as a vision-setting tool and the second survey coincided with the release of the draft plan and public comment period. Additional detail on both surveys, including the results and demographics of respondents, is provided below.

The first survey, titled "Quick Community Survey," sought to hear from residents about what a positive future for Austin looks like for them and their community.

- 109 responses were received. The responses were synthesized to help understand the community's major concerns and priorities and how these could be addressed in the Climate Equity Plan. Respondents expressed a need and desire for increased green spaces, public transportation, and affordable housing. Concerns highlighted included increased cost of living, homelessness, and traffic. The "Climate and Our Community" section of the plan seeks to draw connections between the plan and these community concerns and priorities and demonstrate how the recommendations in the plan play a role in the solutions.



*Note: Percentages are rounded.*

Austin Climate Equity Plan (N=109)		
Race/Ethnicity	White	64.2%
	Hispanic/Latino	15.6%
	Black/African-American	5.5%

	Asian	5.5%
	Two or more races	5.5%
	Prefer not to answer	5.5%
	Native American or Pacific Islander	0.9%
	Alaska Native	0.0%
	Native Hawaiian	0.0%
<b>Gender/Sexuality</b>	Female	56.9%
	Male	39.4%
	Prefer not to answer	3.7%
	Transgender Female	0.0%
	Transgender Male	0.0%
	Gender Variant/Non-conforming	0.0%
<b>Age</b>	25-34 years old	35.6%
	18-24 years old	11%
	35-44 years old	23.2%
	45-54 years old	15.1%
	over 55	9.6%
	Prefer not to answer	5.5%

	Under 18	0.0%
<b>City Council District</b>	9	22.9%
	1	14.7%
	7	10.1%
	5	9.2%
	3	9.2%
	8	8.3%
	2	7.3%
	I do not live in an Austin City Council District	7.3%
	4	5.5%
	10	4.6%
	6	0.9%

#### **Draft Plan Public Comment Survey** (available September 2-30, 2020)

The draft Austin Climate Equity Plan was publicly released on September 2, 2020. The Office of Sustainability used a second survey — along with informal feedback mechanisms like email and one-on-one conversations — to gather feedback on the draft plan through September 30, 2020. The survey was available in English and Spanish, though the Spanish version was released halfway through the public comment period on September 17, 2020. We received no Spanish survey responses. Improving our multilingual communication and timing during plan implementation is an area of growth and focus. For example, partnering with multilingual membership-based organizations to spread the word, simplifying and shortening feedback mechanisms (regardless of language), and meeting people where they are can help us increase multilingual engagement.

The public comment survey had several sections: a big picture section discussing perspectives on climate change and sections dedicated to each advisory group topic area (e.g., Transportation and



Land Use, Food and Product Consumption). Participants were asked to rank strategies based on the order of importance to help staff prioritize strategies during implementation. Open-ended questions were included to gather feedback on community engagement and education for each topic area, as well as any other feedback desired.

A total of 1,577 responses were received. A detailed analysis of all survey responses is available [here](#). Key findings include:

- 79% of respondents indicated that they were at least somewhat **concerned about climate change**. Despite this concern about climate change, nearly a third of open-ended responses displayed an **anti-government / anti-science stance**.
- **Affordability, displacement, accountability, and health** were noted as top areas of concern. These concerns align with the earlier SpeakUp Austin! survey results and feedback from the Community Climate Ambassadors' discussions. These equity-based issues were considered by the advisory groups in refining the plan's goals and strategies based on analysis using the Equity Tool (see Appendix IV).
- **Sustainable Buildings** received the most attention among the five advisory group topic areas. Most of these comments were related to opinions on **building electrification** that were likely generated in response to a position email that Texas Gas Service sent to many of its Austin area customers on September 28, 2020. Most of the building electrification comments were against restricting the use of natural gas in buildings (145 against electrification vs. 17 for electrification). The Office of Sustainability also received 97 emails supporting the transition away from natural gas — including building electrification, based on action alerts from environmental advocacy organizations.

## SpeakUp Austin! Draft Plan Public Comment Survey Demographics

*Note: Percentages are rounded.*

		Austin Climate Equity Plan (N=1577)
Race/Ethnicity	White	63%
	Prefer not to Answer	15%
	Hispanic/Latino	10%
	Black/African-American	4%
	Asian	4%
	Two or more races	4%

	Other	2%
	Native American or Pacific Islander	0.3%
<b>Gender/Sexuality</b>	Female	46%
	Male	45%
	Prefer not to answer	8%
	Gender Variant/Non-conforming	0.8%
	Transgender Female	0.3%
	Transgender Male	0.1%
<b>Age</b>	over 55	44%
	35-44 years old	19%
	45-54 years old	18%
	25-34 years old	12%
	Prefer not to answer	3%
	Under 18	0.4%
	18-24 years old	0.1%
	10	17%
	7	13%
	8	13%

City Council District	5	11%
	6	10%
	1	8%
	9	8%
	4	6%
	3	6%
	2	5%
	I do not live in an Austin City Council District	4%

- *Thinking about Austin, what climate change impacts are you most concerned about? (Potential areas of focus: higher temperatures, drought, increased risk of wildfires, intense rain and flooding, damage to property, poorer human health, reduced food access, rising costs, etc.)*
- *Overall, what would make it easier for you and others to participate in the Community Climate Planning process? (Potential areas of focus: transportation, location, day and timing, daycare, incentives, etc.)*
- *Are there any other comments you'd like to be considered in planning a more equitable and sustainable Austin?*

115 responses were received. The responses were synthesized to help understand the community's major concerns and priorities and how these could be addressed in the Climate Equity Plan. Respondents expressed a need and desire for community-based solutions, affordable housing, and improved public transportation. Concerns highlighted included gentrification, affordability, and inequitable access.

## Austin Justice Coalition Survey Demographics

*Note: Percentages are rounded.*

		Austin Climate Equity Plan (N=114)
Race/Ethnicity	White	61%
	Black/African-American	14%
	Hispanic/Latino	10%
	Two or more races	10%
	Asian	4%
	Prefer not to answer	1%
	Other	1%
	Native American or Pacific Islander	0%
	Female	68%

<b>Gender/Sexuality</b>	Male	28%
	Gender Variant/Non-conforming	2%
	Transgender Male	1%
	Prefer not to answer	1%
	Transgender Female	0%
<b>Age</b>	25-34 years old	60%
	18-24 years old	7%
	35-44 years old	16%
	45-54 years old	11%
	over 55	6%
	Prefer not to answer	1%
	Under 18	0%
<b>City Council District</b>	9	21%
	1	14%
	3	14%
	4	9%
	I do not live in an Austin City Council District	9%
	5	8%

	7	8%
	2	7%
	8	5%
	6	3%
	10	3%

## IV. HISTORY AND EQUITY RESOURCES

To know where we are going, we must first know where we have been. Learning about past inequities and social justice issues in our community can prevent repeating the same mistakes. ([City of Austin Equity Assessment Tool Pilot I: Analysis of Department Responses](#))

### Learn More about Austin’s Racial History:

- [Austin- A “Family-Friendly” City: Perspectives and Solutions from Mothers in the City. \(2015\)](#)
- [Link to full Master Plan of 1928](#) (the “Koch Proposal”), which formally and legally segregated the City by only providing essential city services (utilities, education, paved roads) to people of color in areas east of what is now I-35.
- [“How East Austin Became a Negro district”](#) (East End Cultural Heritage District)
- [East Austin Gentrification Overview](#) (East End Cultural Heritage District)
- [“Austin: A Liberal Oasis?”](#), a slide presentation by Undoing White Supremacy Austin, presenting a brief overview of the history of institutional racism in Austin ([document format](#))
- [Shadows of a Sunbelt City \(Dr. Eliot Tretter, 2016, University of Georgia Press\)](#) Planning for displacement. The partnership between the University of Texas, the state and federal governments, and the real estate industry and its dominance over City planning and economic development. Chapter 6 (“The Past is Prologue”) describes how the City’s legal and administrative policies, in conjunction with private zoning deed restrictions, codified institutional racism. [Interview with Dr. Tretter](#)
- [Austin Restricted: Progressivism, Zoning, Private Racial Covenants, and the Making of a Segregated City](#) (Tretter, Sounny-Slitine, Final Report to the Institute for Urban Policy Research and Analysis, 2012)
- [Austin Gentrification Maps](#) (making visible one of the effects of City of Austin policy and practice)
- [Inheriting Inequality](#) (maps of the history of the racial divide in Austin)



- [Crossing Over: Sustainability, New Urbanism, and Gentrification in Austin, Texas](#) (the downside of the “new urbanist” movement)

### Resources used to develop the Land Acknowledgement:

- [What is colonialism](#), Erin Blakemore (National Geographic, 2017)
- [The Roots—and Replacement—of Colonization](#), Michelle Holiday (Age of Thrivability, 2018)
- [Land Reparations & Indigenous Solidarity Toolkit](#) (Resource Generation, 2018)
- [Western University Land Acknowledgment](#)
- [Native Governance Center Resources](#)
- [University Writing Center Land Acknowledgement](#) (University of Texas at Austin, 2019)
- [Native American and Indigenous Studies Land Acknowledgment](#) (University of Texas at Austin)
- [The Tonkawa Indians, the Historic Round Rock Collection: An Ongoing History](#) (City of Round Rock)
- [American Indians - A Story Told for Thousands of Years](#) (Bullock Museum)
- [Indian Nations of Texas](#) (Texas State Library and Archives Commission)
- [Indian Reservations in Texas Today](#) (The Texas Politics Project)
- [A Statement Regarding Indigenous Peoples in Texas](#) (Society of Southwest Architects)
- [Native American Resource Guide](#) (Austin History Center, 2012)
- [Texas Hill Country Native Americans: A Forgotten History](#), Athena Hessong (Texas Hill Country)
- [Protocols for Native American Archival Materials](#) (Northern Arizona University)
- [Finding Loston](#), Tane Ward
- [Federal and State Recognized Tribes](#) (National Conference of State Legislatures)
- [Coahuiltecan Indians](#) (Texas State Historical Association Handbook of Texas)
- [Indigeneity, the Legacy of Texas Hispanics](#) (Indigenous Cultures Institute)
- [The U.S. – Mexican War: Forgotten Foes](#), Brian DeLay (Berkeley Review of Latin American Studies, 2010)
- [Indian Removal 1814 – 1858](#) (PBS People and Events)
- [Unequal Impact: The Deep Links Between Racism and Climate Change](#), Beth Gardiner (Yale School of the Environment, 2020)
- [Five Things we've Learned from Nature Crisis Study](#), Matt McGrath (BBC, 2020)
- [Population of top 10 Counties for Disasters: 81% Minority](#), Thomas Frank (E&E News, 2020)
- [Climate Justice is Racial Justice is Gender Justice](#), Bill McKibben (Yes! Magazine, 2017)
- [2006 IPCC Guidelines for National Greenhouse Gas Inventories](#) (ETDEWEB, 2016)
- [Colonization Destroyed Native Food Systems](#), Chelsea Luger (Yes! Magazine, 2018)
- [Indigenous peoples hardest hit by climate change describe impacts](#) (United Nations University, 2008)
- [What Indigenous Rights Have to Do with Fighting Climate Change](#), Andre Pagliarini (The New Republic, 2019)
- [Abolition of Slavery Announced in Texas on "Juneteenth"](#) (History)
- [Smart Growth, Historic Zoning and Gentrification of East Austin: Continued Relocation of Native People from Their Homeland](#) (People Organized in Defense of Earth and her Resources [PODER], 2002)
- [Housing Affordability in Austin Brings New Attention to Mobile Home Parks](#), Gabriel Amaro (University of Texas at Austin Latino Research Initiative, College of Liberal Arts, 2017)

- [Housing Patterns Study: Segregation and Discrimination in Austin, Texas](#) (Austin History Center, 1979)
- [A City Plan for Austin, Texas](#) (Koch & Fowler, 1928)
- [A Legacy of Zoning Bias](#), Scott Greenberger (Austin American-Statesman)
- [Mayor's Task Force on Institutional Racism and Systemic Inequalities](#) Report (City of Austin, 2017)
- [Progress Report '72: A History of Urban Renewal in Austin](#) (Austin History Center, 1972)
- [Austin's History: Gentrification](#) (Austin History Center)

## V. EQUITY SCREENING QUESTIONS

The Equity Tool was developed with a working group from the Steering Committee to develop a mechanism to evaluate goals and strategies that center racial equity. The seven values of Health, Affordability, Accessibility, Just Transition, Community Capacity, Accountability, and Cultural Preservation were identified in our early Climate Equity Workshops through a visioning exercise facilitated by Dr. Tane Ward. Steering Committee members then helped define these values and what we need to consider when centering racial equity and the potential impact of proposed goals and strategies. Advisory groups evaluated the goals of their advisory group topics and held discussions to consider more detailed goals or strategies that could maximize positive benefits and minimize potential negative impacts.

1. **Health:** Strategy improves health (physical and mental) outcomes for low-income communities and communities of color. The strategy upholds the fundamental human right to clean, healthy and adequate air, water, land, food, education, transportation, safety, and housing.
  - a. Does the proposed action reduce air pollution (Ozone, VOC, NOx, etc.) and reduce asthma and other respiratory-related hospital visits?
  - b. Does the proposed action extend expected longevity and/or quality of life for populations experiencing health disparities?
  - c. Does the proposed action reduce stress, anxiety, and depression, i.e., improve mental health?
  - d. Does the proposed action help restore or protect ecosystem health (air, land, water, soil)?
2. **Affordability:** Strategy lowers and stabilizes costs related to basic living needs (housing, food, utilities, healthcare, transportation, etc.) for low-income communities and communities of color.
  - a. Could this limit the displacement of residents and small businesses when surrounding property values rise?
  - b. Is the proposed action affordable to all residents, and/or does this offer inclusive financing strategies that prioritize the most income-burdened populations? (be specific about whether you're financing through an organization or the city, etc.)

- c. Does the proposed action reduce the cost burden and the number of families that are cost-burdened by housing (including utilities) and transportation (defined as spending more than 33% of income on housing and transportation)?
  - d. Does the proposed action generate burdens (including financial, health costs), either directly or indirectly, to communities of color or low-income populations? If yes, are there opportunities to mitigate these impacts?
- 3. **Accessibility:** Strategy increases access to jobs, housing, transportation, funding, education, healthy foods, and a clean environment for low-income communities and communities of color. Strategy removes barriers through city infrastructure, policy, and investments.
  - a. Does the proposed action expand access to healthy/clean transport systems, such as walking paths, bike routes, and public transit, to access essential services (hospital, school), amenities, and/or jobs?
  - b. Does the proposed action improve amenities and essential services in traditionally underserved geographies/neighborhoods? Essential services: hospitals, schools, and groceries; Amenities: parks / green spaces.
  - c. Does the proposed action increase equitable access to information/education around climate, i.e., impacts, benefits, and programs?
  - d. Does the proposed action remove any barriers that might prevent individuals in low-income communities and communities of color from benefiting fully if this strategy were implemented as written? *(Consider language, gender, socio-economic status (SES), digital inequality, LGBTQ status, (dis)ability, employment status, immigration status, education level, geography, environment, religious beliefs, culture, history of incarceration, etc.)*
- 4. **Just Transition:** Strategy ensures economic justice so that low-income communities and communities of color are prioritized in the benefits of the strategy and are protected from any potential negative consequences.
  - a. Does the proposed action support low-income communities and communities of color through workforce development, contracting opportunities, or the increased diversity of City staff?
  - b. Does the proposed action create local opportunities for livable wage jobs for low-income communities and communities of color?
  - c. Does the proposed action place responsibility on institutions to address historical disparities in contributing to climate change?
- 5. **Community Capacity:** Strategy elevates the voices of low-income communities and communities of color by developing and strengthening the skills, abilities, and resources that a community needs to survive, adapt and thrive.
  - a. Does the proposed action engage and continue to empower communities of color and low-income populations in a meaningful, authentic, and culturally appropriate manner? Does it respect community-based knowledge, and is it based on community-identified needs and input/feedback?

- b. Does the proposed action help build community capacity through funding, educational opportunities and/or other resources?
  - c. Does the proposed action help foster the building of effective, long-term relationships and trust between diverse communities and local government? (by leveraging resources and building collaborative partnerships) Does this action strengthen community relationships and partnerships?
- 6. **Accountability:** Strategy ensures that low-income communities and communities of color can hold governments and institutions accountable for equitable implementation.
  - a. Does the proposed action have provisions to ensure ongoing collection of data (that can be disaggregated by race/ethnicity/income) and public reporting of data? Can this data be validated qualitatively by community members?
  - b. Does the proposed action have clear markers of short-term and long-term success and timelines for meeting markers of success? If so, what are the mechanisms we will utilize to ensure that goals are met (successful implementation and enforcement)?
  - c. Does the proposed action address consequences if goals are not met? Is there a process for those impacted by the policy to express grievances or satisfaction and to ensure that concerns are met?
  - d. Is the proposed action adequately funded to achieve its designed goals?
- 7. **Cultural Preservation:** Strategy deliberately and respectfully honors cultural relevance and history to maintain cultural heritage from the past and present for the benefit of all generations.
  - a. Does the proposed action acknowledge/respect/honor the culture, historic assets, and traditions of low-income and communities of color?
  - b. Does the proposed action improve social cohesion (engagement and connection within/to the community) among low-income communities and communities of color?
  - c. Does the proposed action's decision-making processes go beyond dollars and cents to address shared values and cultural differences to support implementation?

Detailed Equity Tool responses for goals within each Advisory Group [can be found here](#).

## VI. ALIGNMENT WITH STRATEGIC DIRECTION 2023

### Strategic Direction 2023

The Austin City Council adopted a strategic direction on March 8, 2018, guiding the City of Austin for the next three to five years. Austin Strategic Direction 2023 outlines a shared vision and six priority Strategic Outcomes. In each Outcome Area, we have identified the following indicators and metrics that directly align with the goals of the Austin Climate Equity Plan.

- **Economic Opportunity and Affordability:** Having economic opportunities and resources that enable us to thrive in our community.

*Aligned Indicators / Metrics:*

- Number and percentage of commercial and mixed-use development permits that are issued in Imagine Austin activity centers and corridors (EOA.A3)
  - Percentage of households paying more than 30 percent of income toward housing (EOA.C.1)
  - Number of subsidized and incentivized rental units considered to be affordable (EOA.D.4)
  - Number of persons experiencing homelessness - Point in Time Count (EOA.E.1.a)
  - Number and percentage of people who successfully complete workforce development training (EOA.F.4)
- **Mobility:** Getting us where we want to go, when we want to get there, safely and cost-effectively.

*Aligned Indicators / Metrics:*

- Number and percentage of City-owned battery-electric vehicles (BEV) (M.A.6)
  - Percent satisfaction with cost of transportation to get around Austin (M.B.2)
  - Percent of households reducing the number of cars in their household (M.B.3)
  - Percent satisfaction with transportation options (aside from personal vehicle) to get around Austin (e.g., rideshare, bus/train, bike, walk) (M.C.2)
  - Percentage of existing sidewalks that are functionally acceptable (M.C.4)
- **Safety:** Being safe in our home, at work, and in our community.

*Aligned Indicators / Metrics:*

- Percentage of residents living in high-risk areas for natural disasters who say they have access to information and education pertaining to disasters and other major emergencies (S.C.2)
- Percentage of residents who say that they are prepared to help themselves, their families, and their neighbors to respond effectively to disasters and major emergencies (S.C.3)

- **Health and Environment:** Enjoying a sustainable environment and a healthy life, physically and mentally.

*Aligned Indicators / Metrics:*

- Percentage of residents who have access to parks and open spaces (live within one-quarter mile in the urban core and within one-half mile outside of the urban core) (HE.C.1)
  - Austin's ParkScore ranking (absolute score and ranking among U.S. cities) (HE.C.2)
  - Percentage of residents satisfied with Parks and Recreation programs and facilities (HE.C.3)
  - Number and percentage of creeks and lakes in good or excellent health (HE.D.3)
  - Community carbon footprint (number of metric tons of carbon dioxide emissions) (HE.E.1)
  - Percentage of total energy consumed that is generated by renewable power sources (HE.E.4)
  - Percentage of residents living in proximity to a City-supported fresh food access point (HE.F.2)
- **Culture and Lifelong Learning:** Being enriched by Austin's unique civic, cultural, ethnic, and learning opportunities.

*Aligned Indicators / Metrics:*

- Percentage of residents who report feeling welcome in Austin (CLL.C.1)
- **Government That Works for All:** Believing that City government works effectively and collaboratively for all of us - that it is equitable, ethical, and innovative.

*Aligned Indicators / Metrics:*

- Percentage (number and square footage) of all City buildings eligible for ENERGY STAR scores with a score greater than or equal to 75 (GTW.B.4)
- Percentage of residents who report being satisfied or very satisfied with their civic engagement experience with the City (GTW.E.2)



## VII. QUANTIFICATION METRICS AND METHODS

This appendix includes summaries of the methods used for quantification metrics included in the Climate Equity Plan. Due to the large number of pages, the full set of materials related to quantification metrics and methods is available upon request from the Office of Sustainability. You can request these materials via email at [sustainability@austintexas.gov](mailto:sustainability@austintexas.gov).

### **Greenhouse Gas Emission Inventories**

The Office of Sustainability estimates historical community-wide greenhouse gas emissions annually using the GHG Protocol's [Global Protocol for Community-Scale Greenhouse Gas Emission Inventories](#). Forward-looking greenhouse gas projections are modeled based on previous inventories' emission trends and extrapolated forward using broadly accepted demographic and technological assumptions.

### **Electricity**

Greenhouse gas emissions from electricity consumed within the city boundary are estimated using a customer load-based calculation of carbon intensity from Austin Energy's electricity generation portfolio multiplied by aggregated Austin Energy billing data from customers located within the boundary.

### **Natural Gas**

Greenhouse gas emissions from natural gas consumed within the city boundary are estimated using a national average carbon intensity figure multiplied by the sum of aggregated natural gas billing data from customers located within the boundary, plus the estimated leaks within the natural gas distribution system within the boundary.

### **Refrigerants (Ozone-Depleting Substances)**

Greenhouse gas emissions from ozone-depleting substances, including refrigerants, are adapted from the U.S. Environmental Protection Agency's (U.S. EPA) [Inventory of U.S. Greenhouse Gas Emissions and Sinks](#) by scaling them to the city population within the boundary.

### **Transportation**

Starting in 2018, on-road transportation emissions within the boundary are estimated using Google's [Environmental Insights Explorer](#) web tool. This tool estimates all trips and average distance by mode made within the city boundary. To ensure comparability to pre-2018 transportation-related greenhouse gas emissions estimates, staff used the Texas Transportation Institute's vehicle miles traveled estimates for Travis County to forecast and then backcast the emissions estimated by Environmental Insights Explorer in 2018.

#### ***Light / Heavy-Duty Vehicles***

Vehicle miles traveled, and vehicle emissions were broken into Light-Duty (e.g., passenger cars and trucks) and Heavy-Duty (e.g., buses, long-haul trucks) categories to show the differences in emissions and projections for these vehicle classes.

#### ***Electric Vehicles***

Greenhouse gas emissions reductions from electric vehicles are estimated using Austin Energy's projected carbon intensity. Austin Energy's load-based carbon intensity of

electricity generation is expected to decline significantly in the next decade. Therefore the greenhouse gas emissions reduction benefit from switching to electric vehicles is expected to increase with time.

### ***Transit***

Transit ridership was established using Environmental Insights Explorer. Historical ridership data and projections from Capital Metro were used to bound potential future ridership within the city boundary.

### ***People-Powered Transportation***

People-powered transportation includes biking and walking trips, which are estimated by Environmental Insights Explorer. Bounds on future bike trips were calculated using data from the City of Austin's [2014 Bicycle Plan](#).

## **Industrial Processes**

Greenhouse gas emissions from industrial processes that exceed 25,000 metric tons of carbon dioxide-equivalent are reported to the U.S. EPA annually and are included in Austin's greenhouse gas inventory. These predominantly process gases from semiconductor manufacturing but also include a large lime manufacturing facility. Projections of industrial emissions in the plan remain at current levels as there is no imminent growth or decline in this sector within the city boundary.

## **Waste**

Greenhouse gas emissions from the waste sector are predominantly from area landfills. All landfills are required to report estimated emissions from their property to the U.S. EPA annually. Landfill emissions are projected to remain flat over the next decade. Greenhouse gas emissions from wastewater treatment are also included in this category.

## **Natural Systems**

The quantification of carbon sequestration in natural systems is an emerging practice, and many localized variables make these calculations hard to predict accurately. Sequestration is not currently a metric tracked in the global greenhouse gas inventory protocol used by the City and most organizations and is not included in Austin's greenhouse gas inventory.

A working group of the Natural Systems Advisory Group estimated the carbon sequestration potential of the Natural Systems recommendations in the Climate Equity Plan. The working group conducted a literature review to establish a potential *additional* carbon sequestration rate per acre per year for each of Austin's general landscape types (grasslands, woodlands, croplands, rangelands, urban trees, and urban landscapes). In this case, *additional* refers to the extra amount of carbon that different landscape types could sequester if the Natural Systems strategies are implemented fully. The selected sequestration rates do not consider the existing amount of carbon already being sequestered in these natural systems, nor the greenhouse gas emissions avoided via changes in land and landscape management practices.

These landscape-specific additional carbon sequestration rates were multiplied by the estimated acres of land by landscape type and summed to get a total additional carbon sequestration potential estimate. This number was cross-referenced with currently available information and is believed to be "aspirational but defensible."

### **Carbon Offsets and Carbon Dioxide Removal**

One of the overarching strategies identified in the plan references the use of carbon offsets and carbon dioxide removal to help reach the plan's proposed 2040 net-zero carbon goal. That strategy calls for the "need to remove 288 million tons of carbon dioxide from the atmosphere and safely store it away for at least 100 years" and "explore how Austin can create negative emissions via Carbon Dioxide Removal strategies." The technologies and other approaches to achieve this level of carbon sequestration and removal will take additional research and development to fully understand their potential and develop widely accepted quantification protocols. Therefore, quantification of these strategies was not included in the plan.