



# City of Burbank Greenhouse Gas Reduction Plan Update

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# Table of Contents



1

Introduction



14

Inventory, Forecast, and Targets



25

GHG Emission Reduction Measures



89

Adaptation and Resilience Measures



99

Implementation

## Appendices

Appendix A: Regulatory Background

Appendix B: Cal-Adapt

Appendix C: Forecast, Target, and Measures

Appendix D: Measure Substantial Evidence

Appendix E: Funding Strategy

Appendix F: CEQA Documentation

Appendix G: CEQA GHG Emissions Thresholds and Guidance



# Acronyms & Abbreviations

AB	Assembly Bill
BAU	Business as usual
BWP	Burbank Water and Power
CalRecycle	California Department of Resources, Recycling, and Recovery -
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDC	Centers for Disease Control and Prevention
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH <sub>4</sub>	Methane
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
COVID-19	Coronavirus disease 2019
EO	Executive Order
EV	Electric Vehicle
GGRP	Greenhouse Gas Reduction Plan
GHG	Greenhouse Gas
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
ICLEI	International Council for Local Environmental Initiatives
IPCC	United Nations Intergovernmental Panel on Climate Change
kW	kilowatt
kWh	Kilowatt hour

MT	Metric ton
MT CO <sub>2</sub> e	Metric tons of carbon dioxide equivalent
NASA	National Aeronautics and Space Administration
NF <sub>3</sub>	Nitrogen trifluoride
N <sub>2</sub> O	Nitrous oxide
PFCs	Perfluorocarbons
PV	Photovoltaic
RCP	Representative Concentration Pathway
RPS	Renewable Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SB	Senate Bill
SF <sub>6</sub>	Sulfur hexafluoride
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
ZEV	Zero Emission Vehicle





# Introduction

# Background

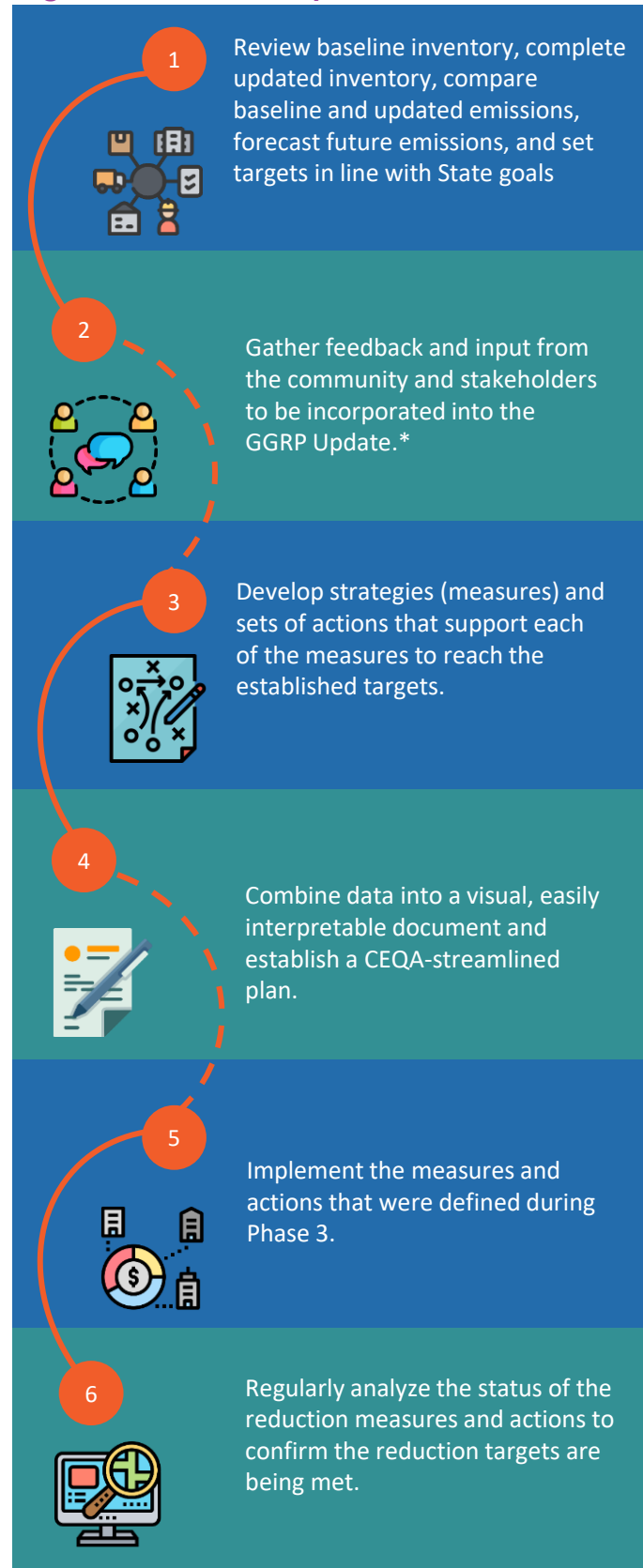
The Greenhouse Gas Reduction Plan (GGRP) Update is a long-range planning document that builds off of the 2013 GGRP and guides the City towards long-term emission reductions in accordance with the State’s goals. The GGRP Update analyzes current (2019) emission sources within the City, forecasts future (2030, 2035, and 2045) emissions, and establishes emission reduction targets that align with California’s long-term goals (See *Inventory, Forecast and Targets* and Appendix C).

This GGRP Update is Burbank’s roadmap to achieving the City’s 2030 target and State mandated goal of 40 percent below 1990 levels by 2030 and demonstrates substantial progress towards achieving carbon neutrality by 2045. The GGRP Update also includes a framework for implementation and monitoring emission reduction activities, and further promotes adaptation and resilience. The plan is intended to be a qualified GHG Reduction Plan and meets the requirements of the California Environmental Quality Act (CEQA) Section 15183.5(b), see Figure 1.

## 2013 GGRP

On February 19, 2013, the Burbank City Council adopted the GGRP, which is a standalone planning document that accompanies Chapter 2, *Air Quality and Climate Change Element*, of the Burbank 2035 General Plan. The 2013 GGRP established a baseline greenhouse gas (GHG) emission inventory for 2010 and forecast emissions for 2020 and 2035 (See *Inventory, Forecast, and Targets*, for a discussion of the 2010 inventory and for more information on how it is integrated into this GGRP Update). Additionally, the 2013 GGRP enabled development streamlining opportunities for discretionary projects under the CEQA

Figure 1 GGRP Update Process



\* Stakeholder and community outreach is ongoing throughout the climate action planning process



through 2020 and serves as the foundation for this GGRP Update.

## Burbank's Vision

As recognized in the 2013 GGRP, climate change and the associated effects are real and are already being felt locally, with projections demonstrating that the impacts will become more extreme over the next century without a collective global effort to actively make real change and reduce GHG emissions. Therefore, this GGRP Update aims to build off of the 2013 GGRP and encourage policies and practices that protect the environment, enhance the quality of life for residents in Burbank, encourage equity in decision-making practices, support a stable and resilient economy, and continue to reduce the City's emissions consistent with California's goals. To achieve these goals, the plan provides a set of updated measures for Burbank to reduce its emissions, mitigate and adapt to climate change risks, establish a more resilient community, and lead the way toward a more sustainable future. The key components of a sustainable future for Burbank include:

- **Social Equity** – Protecting those most vulnerable, including, disadvantaged communities and small businesses, against the impacts of climate change by creating a healthier and more resilient City.
- **Economic Resilience** – Making the City and economy more resilient to unpredictable climate emergencies, providing more efficient and affordable utilities, creating clean energy jobs, and promoting resource conservation.
- **High-Quality of Life** – Enhancing the quality of life for all members of the community by working towards a shared and collaborative civic identity that prioritizes safety, security, and diversity.

- **Community Involvement** – Inviting all Burbank residents, business owners, and stakeholders to actively play a role in the climate planning process provides an opportunity for those who are interested and invested to actively influence the decision-making in our City. It is our collective goal to engage in and promote activities that minimize the potential environmental, social, and economic impacts of climate change.
- **Collaborative Partnerships** – Working together with stakeholders that have the ability to support others in the community make decisions that are guided by science and aim to reduce emissions while creating a more sustainable, resilient, and equitable community.

## COVID-19 and Climate Action Planning

We are collectively facing a unique public health emergency related to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and spread of the associated coronavirus disease (COVID-19). The COVID-19 pandemic has disrupted our daily lives and both the local and national economies, bringing the intersection of climate change and public health to the public eye. The pandemic also shines the light on how disasters disproportionately affect already-vulnerable communities. Disadvantaged communities, already suffering from exposure to higher levels of toxic air pollution, are more vulnerable to respiratory disease and are dying at disproportionately higher rates from the pandemic. Similarly, the economic impacts have affected many and are increasing the economic divide across California.<sup>1</sup> At the same time, global

1. <https://calmatters.org/economy/2020/07/california-covid-deepening-income-inequality-data/>



response to the pandemic has shown that an extreme reaction to disasters of this magnitude is both possible and necessary. We can and should strive for a future with cleaner air; safer homes and public spaces; more secure, high-paying jobs; and reliable access to renewable resources. Planning for resilience, particularly at the local level, should include a focus on addressing environmental justice and climate equity. This GGRP Update outlines how Burbank will work towards this future in light of and inspired by the obvious impacts of the COVID-19 crisis.

## Purpose

This GGRP Update will build on the successful work of the 2013 GGRP and continue to guide the City of Burbank towards reducing GHG emissions consistent with the targets set out by Assembly Bill (AB) 32 and Senate Bill (SB) 32, as well as fulfill the requirements of the California Environmental

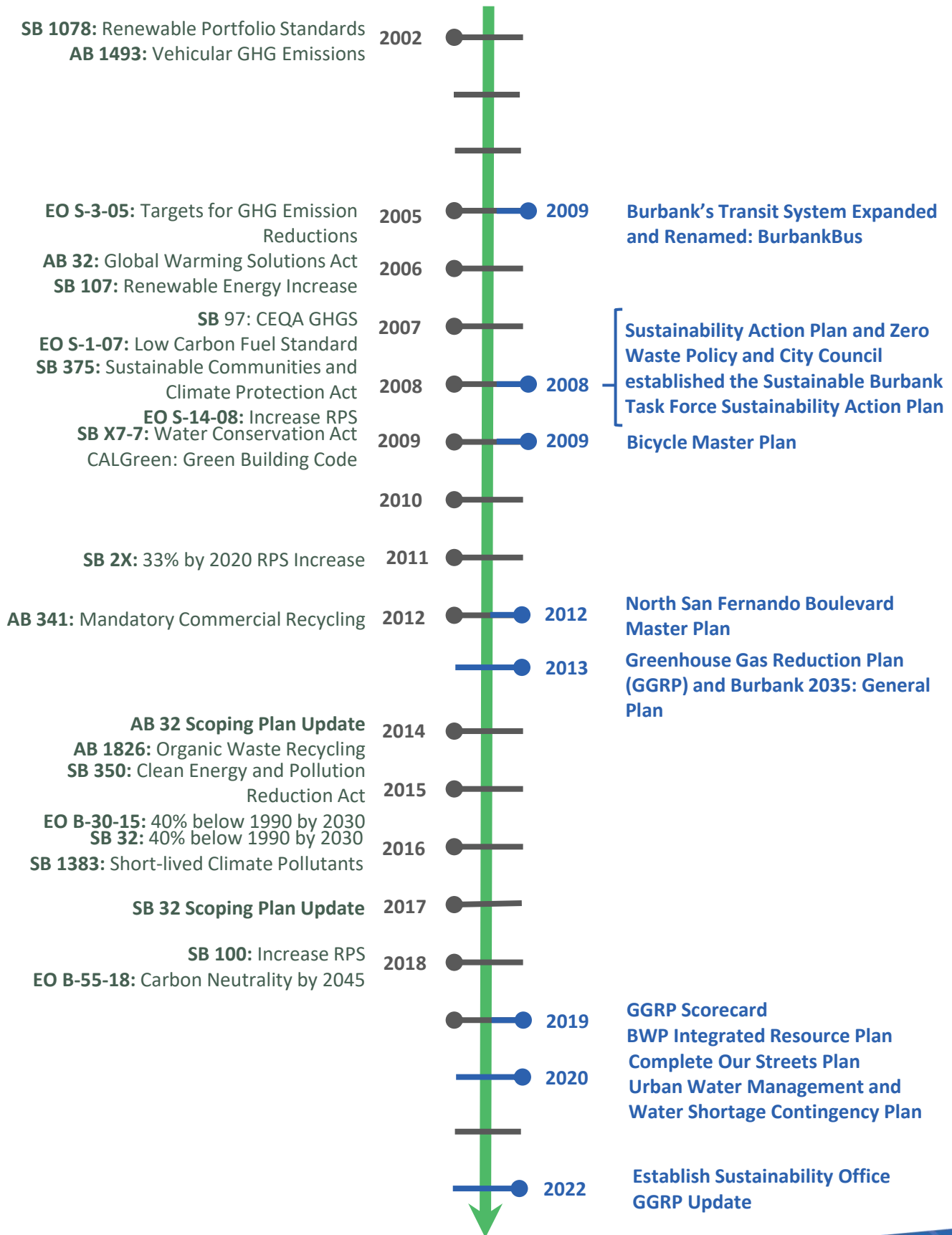
Quality Act (CEQA) Guidelines § 15183.5(b). California AB 32 established a statewide target to reduce GHG emissions to 1990 levels by 2020 and SB 32 established a statewide target to reduce GHG emissions to 40 percent below 1990 levels by 2030. Please see Figure 2 and Appendix A, *Regulatory Summary*, for a written description and a timeline of the State regulations and City initiatives related to climate action planning and sustainability.

Similar to the 2013 GGRP, the GGRP Update and its accompanying environmental documentation are consistent with the criteria set forth in CEQA Guidelines Section 15183.5(b) as outlined below:

- A. Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area (See *Inventory, Forecast, and Targets*);



**Figure 2 State of California and City of Burbank Climate Action Timeline**



- A. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable (See *Inventory, Forecast, and Targets*);
- B. Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area (See *Inventory, Forecast, and Targets*);
- C. Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level (See *GHG Emission Reduction Measures*);
- D. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels (See *Implementation*);
- E. Be adopted in a public process following environmental review (See Appendix E).

If projects are consistent with the GGRP Update, CEQA analysis can be streamlined by presuming that the project's GHG emissions are not significant.<sup>2</sup>

## GHG Emission Background

Most of the energy that affects Earth's climate comes from the sun. When solar radiation reaches the Earth's atmosphere, some of it is reflected back into space and a small portion is absorbed by Earth's surface. As Earth absorbs the solar radiation, its surface gains heat and then re-radiates it back into the atmosphere. Some of this heat gets trapped by gases

in the atmosphere, causing Earth to stay warm enough to sustain life. This is known as the "greenhouse effect" and the gases trapping the heat are known as "greenhouse gases."<sup>3</sup>

The greenhouse effect is integral to sustaining life on Earth. However, human activities emit GHGs in excess of natural ambient concentrations, thereby contributing to the enhancement of the natural greenhouse effect. This enhanced greenhouse effect contributes to global warming, an accelerated rate of warming of Earth's average surface temperature. More specifically, by burning fossil fuels to power homes, businesses, and automobiles, we increase the amount of GHGs emitted into the atmosphere,<sup>4</sup> which, in turn, leads to increased absorption of infrared radiation by the Earth's atmosphere and increasing temperatures near the surface.

### Types of Greenhouse Gases

Greenhouse gases listed by the United Nations Intergovernmental Panel on Climate Change (IPCC) include: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), as well as chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which are collectively called fluorinated gases.<sup>5</sup> Ninety-seven percent of the annual GHG emissions generated in the United States consist of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O,<sup>6</sup> while fluorinated gases<sup>7</sup> result in the remaining three percent of emissions.

3. <https://scied.ucar.edu/longcontent/greenhouse-effect>

4. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

5. <https://www.c2es.org/content/main-greenhouse-gases/>

6. <https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector>

7. Fluorinated gases, which includes four main types: hydrofluorocarbons 8. (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>), are man-made gases that can stay in the atmosphere for centuries and contribute to the GHG effect.

2. [https://opr.ca.gov/docs/OPR\\_C8\\_final.pdf](https://opr.ca.gov/docs/OPR_C8_final.pdf)





Each of these gases has its own global warming potential (GWP), or extent to which it traps energy in the atmosphere, ranging from a decade to several thousand years. CO<sub>2</sub> is used as the reference point to compare the potential impact of different GHGs, therefore CO<sub>2</sub> has a GWP of 1. Methane has a GWP of 28, meaning that each metric ton (MT) of methane causes 28 times more warming than 1 MT of CO<sub>2</sub>. Nitrous oxide has a GWP of 265 or 265 times the GWP of 1 MT of CO<sub>2</sub>.<sup>8</sup>

### Sources of Greenhouse Gas Emissions

The combustion of fossil fuels (such as natural gas and gasoline), the decomposition of waste, and industrial processes are the primary sources of GHG emissions. With the accelerated increase in fossil fuel combustion and deforestation since the Industrial Revolution of the 19th century, concentrations of GHG emissions in the atmosphere have increased exponentially. The United States Environmental Protection Agency (U.S. EPA) tracks the country-wide emissions and publishes an annual report: Inventory of U.S. Greenhouse Gas Emissions and Sinks.<sup>9</sup>

According to the U.S. EPA, gross GHG emissions nationwide have increased by 1.3 percent since 1990. Annual flux of GHG emissions can be attributed to changes in the economy, the price of fuel, and land-use change. For example, in 2017, nationwide GHG emissions decreased compared to 2016 levels, but rose again in 2018 by 3.1 percent. The fluctuation in CO<sub>2</sub> emissions from fossil fuel combustion was a result of multiple factors: although there continues to be a shift from coal to natural gas and increased use of renewables in the electric power sector, more extreme weather (colder winter, hotter summer) led to increased overall electricity use.

8. <https://www.ipcc.ch/assessment-report/ar5/>

9. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>



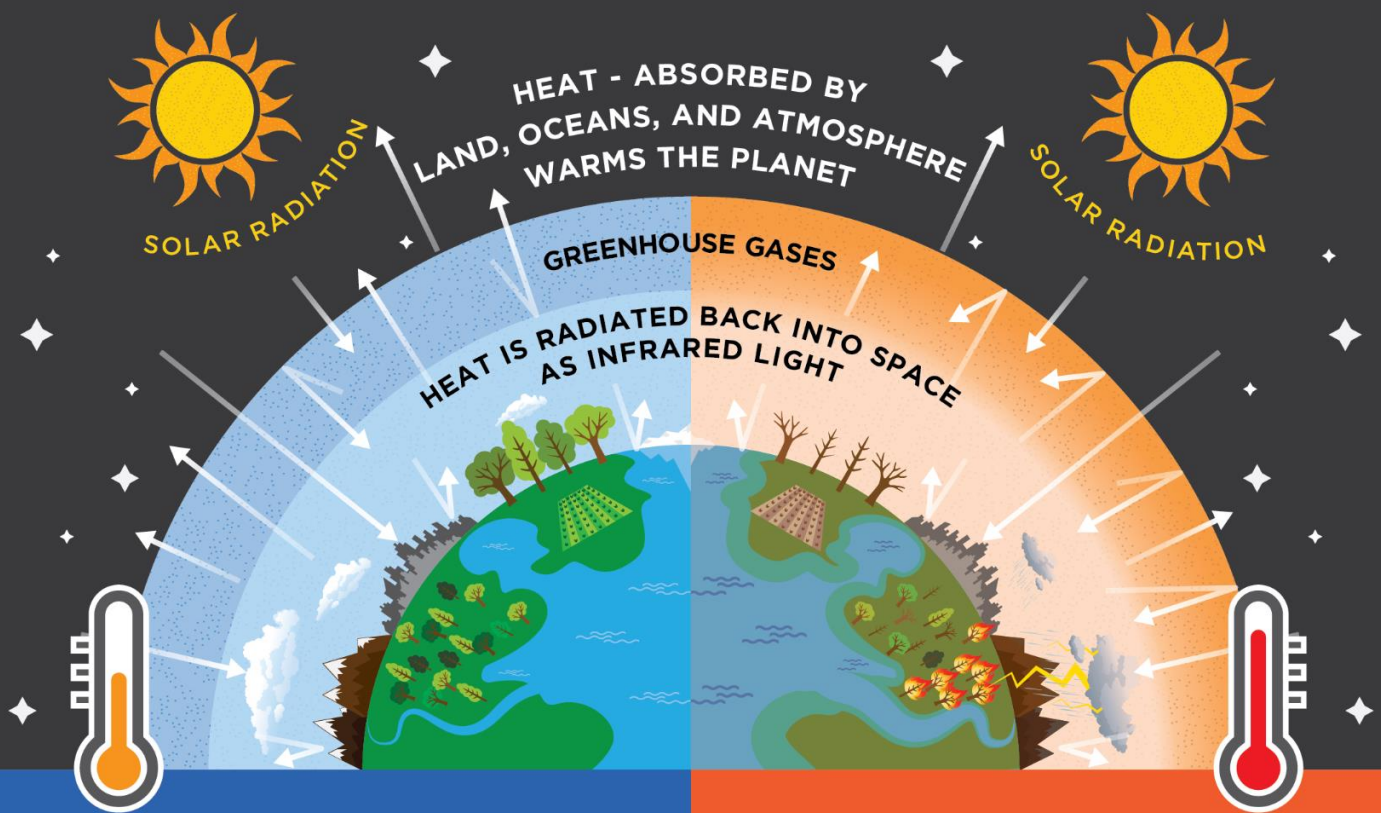
# GREENHOUSE EFFECT

In the last century, human activities such as burning fossil fuels and deforestation have caused a jump in the concentration of greenhouse gases in the atmosphere.

THE RESULT: Extra trapped heat and higher global temperatures.

## WITH NORMAL GREENHOUSE GASES

## WITH INCREASED GREENHOUSE GASES



Some heat continues into space while the rest, trapped by greenhouse gases, help maintain the planet's relatively comfortable temperatures.

Increased greenhouse gases means less heat escapes to space. Between preindustrial times and now, the earth's average temperature has risen by 1.8°F (1.0°C).

LESS GAS =  
LESS HEAT TRAPPED IN THE ATMOSPHERE

MORE GAS =  
MORE HEAT TRAPPED IN THE ATMOSPHERE

Retaining more reliable:

More intense:

- Weather
- Temperature
- Rainfall
- Sea Level

- Storms
- Heat
- Drought
- Sea Level Rise

# Vulnerability

In general, vulnerability refers to the level or degree to which an individual or entity are able to cope with the adverse impacts of climate change. The three dimensions that make up climate vulnerability are exposure, sensitivity, and adaptive capacity.

## Climate Impacts

Anthropogenic (human) caused climate change is well-understood and widely accepted by the scientific community, with over 97 percent of climate scientists agreeing that the planet is warming and human activities are the root cause.<sup>10</sup> Climate change is the addition of excess GHGs to the atmosphere which traps energy (heat) and causes changes to temperature, wind patterns, and precipitation. Because of human activities, these GHGs are now higher than they have been in the past 400,000 years, raising carbon dioxide levels from 280 parts per million to 400 parts per million in the last 150 years.<sup>11</sup> Although many changes to climate are governed by natural processes, human activities have contributed an increasing amount of GHGs to the atmosphere at a rate that is unprecedented in Earth's history.

## Effects of Climate Change

Climate change causes fluctuations in temperature and precipitation globally, which impact ecosystems and communities worldwide. Scientists have measured shrinking ice sheets, warming oceans, increasing global temperatures, less snow cover, sea level rise, and species extinction. Consequently, climate change has the potential to result in flooding of low-lying areas (due to sea level rise), reduction of fresh-water

supply (due to rainfall and snowfall changes), adverse changes to biological resources and public health (due to increased temperature, less-productive habitats, and expansion of disease vectors), as well as many other adverse environmental consequences.<sup>12</sup>

Globally, a warming trend is abundantly clear, with all the top six hottest years on record happening during the past six years.<sup>13</sup> Additionally, the 10 hottest years on record have all occurred since 2009.<sup>14</sup> Climate change is a global phenomenon that has the potential to impact local health, natural resources, infrastructure, emergency response, tourism, and many other facets of society. The direct impacts projected for the City of Burbank include increased temperatures and potential changes in precipitation patterns.

## Climate Change in the City of Burbank

In the City of Burbank, the most pronounced effects of climate change will be increased average temperature, more days of extreme heat, and elevated drought risk. Air quality impacts from fires may also continue to be an issue. The projections in Figure 3 and described in text below were taken from Cal-Adapt, an interactive platform that allows users to explore how climate change might affect California at the local level under different emissions scenarios and climate models. The main emissions scenario used in this analysis is Representative Concentration Pathway (RCP) 8.5, also known as the high emissions scenario, which assumes high population, slow technological progress, and no policy-driven mitigation.

10. [https://climate.nasa.gov/climate\\_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/](https://climate.nasa.gov/climate_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/)

11. <https://climate.nasa.gov/scientific-consensus/>

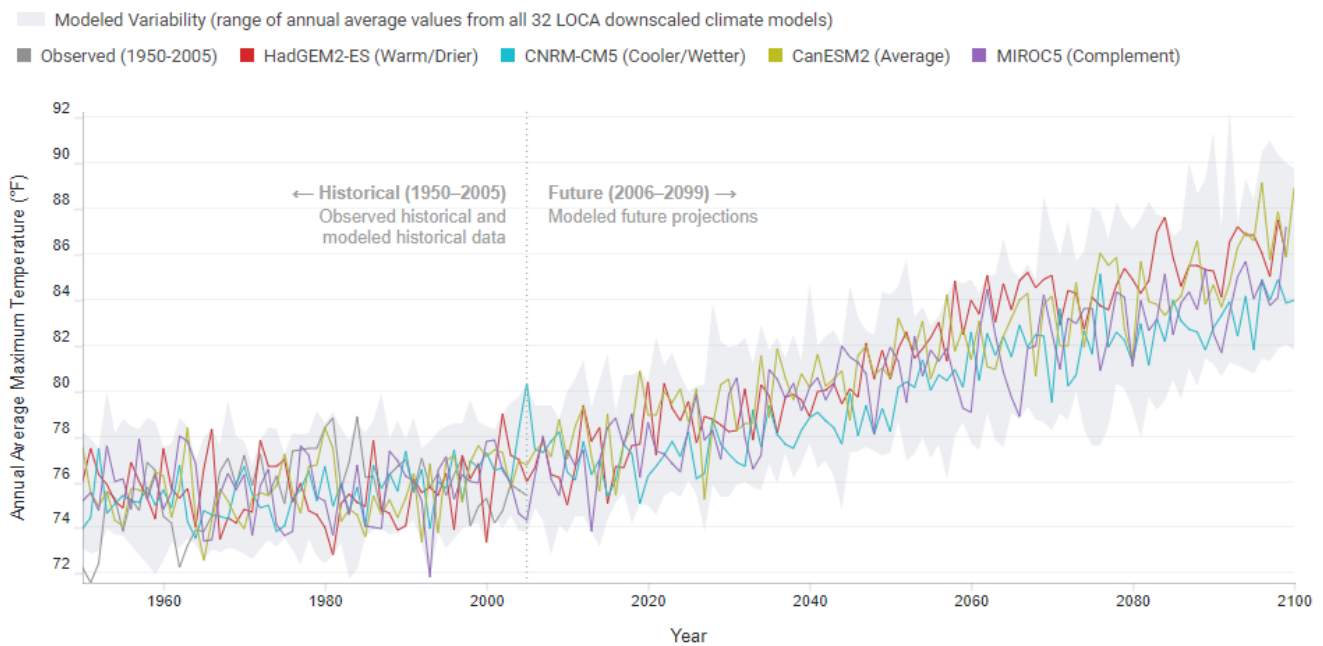
12. <https://www.ipcc.ch/sr15/chapter/chapter-3/>

13. <https://climate.nasa.gov/evidence/>

14. <https://www.climatecentral.org/gallery/graphics/top-10-warmest-years-on-record>



**Figure 3 Annual Average Maximum Temperature in Burbank (Grid Cell 34.15625, -118.34375) under RCP 8.5**



For a broader view of potential impacts, RCP 4.5 is also used below. This scenario, otherwise known as the stabilizing scenario, assumes emissions peak around 2040 before declining due to the use of a range of emissions reduction technologies and strategies. A range of climate models exist to cover the variability of physical processes, leading to warm/dry simulations and cool/wet simulations. Best practices for conservative planning indicate that an average of all models gives the most representative value. See Technical Appendix B, *Cal Adapt*, for further information on RCPs and climate models used.

Average maximum temperatures in the City of Burbank are expected to rise between 5.1° F (under RCP 4.5, the stabilizing scenario) and 10.3° F (under RCP 8.5, the high emissions scenario) from 2005 to 2100.<sup>15</sup> Figure 4 shows observed and projected annual average maximum temperatures in Burbank. Burbank is also projected to experience more extreme heat

conditions. The annual number of heat waves, defined as four or more days over 99.6°F, is projected to increase from zero in 2005 to four in 2099, based on the high emissions scenario. Additionally, based on the high emissions scenario, the annual number of extreme heat days with temperatures greater than 99.6°F, is projected to increase from zero in 2005 to approximately 38 by the end of the century. This combination of increasing maximum temperatures, annual heat waves, and annual number of extreme heat days will result in longer heat waves. In 2005, there were no observed consecutive extreme heat days. By the end of the century the high emissions scenario projects the longest heat wave to last about 10 days (see Figure 4).

Moreover, the timing of extreme heat days is expected to change. In 1990, the only

15. <https://cal-adapt.org/>

**Figure 4 Observed and Projected Climate Change Impacts in Burbank (RCP 8.5)**



extreme heat days were in September; however, by 2099, the earliest day of extreme heat is expected to occur in late April with the last day of extreme heat occurring in late October, under the high emissions scenario. This would extend the period of extreme heat days by approximately four months.

### Social Vulnerability

Those that are most vulnerable will bear the greatest burden associated with the potential impacts of a changing climate. Race, ethnicity, gender identity, sexual orientation, age, social class, physical ability, religious or ethical value systems, national origin, immigration status, linguistic ability, and zip code do not make an individual inherently vulnerable. Vulnerabilities arise from systemic deficiencies rather than a judgement of any community member or neighborhood. This document provides a foundation to even the playing field for all members of society and to ultimately reduce potential burdens of climate change on vulnerable populations.

### Potential Impacts to the Community

The City of Burbank may experience a variety of impacts due to climate change, including an increase in average temperature and changes in precipitation, as outlined above under Climate Change in the City of Burbank. Increased temperatures have the potential to affect the City in a variety of ways, especially through decreased public health. Public health may be negatively impacted by a changing climate as a result of changing environmental conditions including extreme weather events, changes in temperature and rainfall that decreased water supply, worsening air quality, and increases in allergens and air pollutants. Children, the elderly, asthmatics, and others susceptible to harm from air pollution exposure, are at the greatest

risk of the negative impacts associated with climate change.<sup>16</sup> Increases in temperature could also worsen local heat island effects in Burbank and the surrounding area, meaning that urban areas could experience a compounded level of heating due to built environments absorbing and re-emitting more heat than rural communities with more natural landscapes.<sup>17</sup>

This could lead to hazardous conditions such as heat stroke and respiratory ailments for community members. Potential impacts to public health include premature death from heat stroke, cardiovascular disease, respiratory disease, and cerebrovascular disease; cardiovascular stress; and kidney and respiratory disorders.<sup>18</sup> Those in the community without health insurance (about 8.4 percent of the population under 65) and those living under the poverty line (approximately 10.8 percent of the population) are particularly vulnerable.<sup>19</sup>

With anticipated increases in temperature, those without health insurance and/or those that are economically disadvantaged may find it more difficult to afford the additional costs of cooling their homes. Consequently, many low-income households, especially those of seniors and people with disabilities, may become physically vulnerable to the effects of extreme heat events.

It is imperative that the City of Burbank act now to mitigate and prepare for these climate threats and hazards. The measures included in this Greenhouse Gas Reduction Plan set a path to achieving GHG reduction goals that will contribute to long term stability. These measures and actions will build and decarbonize the local economy in a cost-effective manner that prioritizes benefits to the community.

This Plan includes actions in which every part of the community – residents, property owners, businesses, and City government – can participate to improve quality of life. The City of Burbank will strive to set an example at the municipal level by doing its part to achieve climate goals and fostering a safe, healthy, vibrant, and resilient community for all in Burbank.

### What does science tell us about climate change?

- Ranges of many of the world's plant and animal species could decrease by more than 50% by the 2080s.
- Changes to weather patterns such as increased heat and prolonged drought can significantly impact agricultural production and global food security.
- 7x more people could experience the impacts of 100-year floods compared to the 1980s.
- Over 2/3 of coral reefs could experience long term degradation.

Source: <https://www.wri.org/ipcc-infographics-emissions>

16. <https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment>

17. <https://www.epa.gov/heatislands/learn-about-heat-islands>

18. [https://www.cdc.gov/climateandhealth/effects/temperature\\_extremes.htm](https://www.cdc.gov/climateandhealth/effects/temperature_extremes.htm)

19. <https://www.census.gov/quickfacts/fact/table/burbankcitycalifornia/PST045219>

# GGRP Update

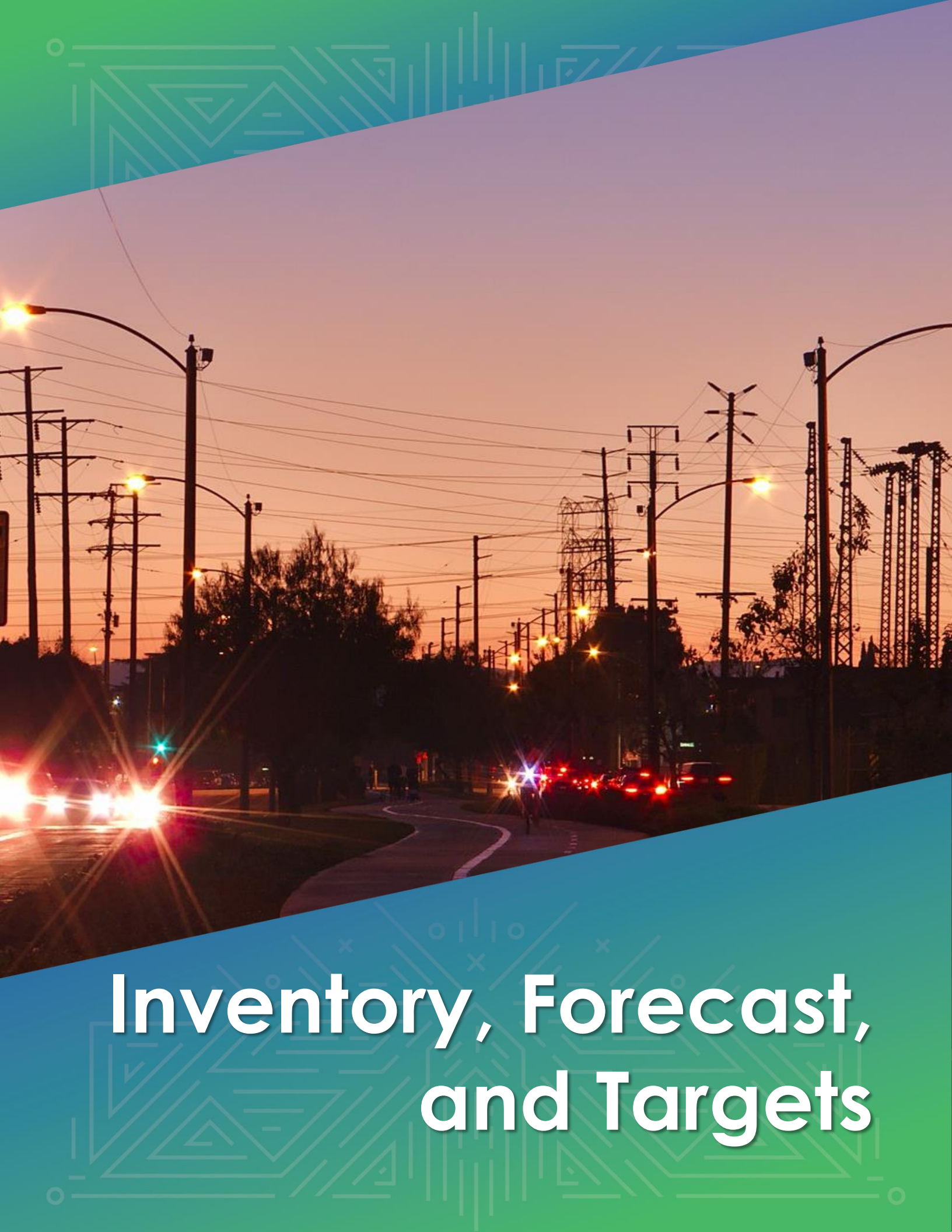
Purposeful and transparent stakeholder group and community participation in the climate action planning process ensured that this GGRP Update is representative of the needs and desires of all members of the community. The GGRP Update was led by the Community Development Department and developed through an integrated partnership between City staff from a variety of departments, including

Burbank Water and Power, the Fire Department, Information Technology, Parks and Recreation, Public Works, and the City Manager’s Office; City Boards and Commissions, including the Park’s Board, Youth Board, BWP Board, Sustainable Commission, Transportation Commission; RISE – Residents Inspiring Service and Empowerment; and the community, as summarized in Table 1.

**Table 1 Summary of Outreach Events**

Date	Audience	Topic
August 12, 2020	Sustainable Commission	Project Introduction/Status Update
September 22, 2021	Sustainable Commission	Existing Measures
November 5, 2020	Community	Inventory/Forecast/Target Review
January 14, 2021	Park’s Board	Project Introduction/Status Update
January 25, 2021	Transportation Commission	Project Introduction/Status Update
January 28, 2021	Sustainable Commission	Proposed Measures
February 3, 2021	Youth Board	Project Introduction/Status Update
February 4, 2021	BWP Board	Project Introduction/Status Update
February 24, 2021	RISE – Residents Inspiring Service and Empowerment	Introduction and Measure Discussion
February 27, 2021	Farmers Market	General GGRP Update Information
March 3, 2021	Community	Proposed Measures and GGRP Update Draft Information Session
March 15, 2021	Transportation Commission	Proposed Measures
March 15, 2021	Sustainable Commission	Proposed Measures
June 21, 2021	Sustainable Commission	Draft GGRP Update
July 20, 2021	Transportation Commission	Draft GGRP Update
March 9, 2022	Sustainable Commission	Final GGRP Update
March 14, 2022	Planning Board	Final GGRP Update
March 21, 2022	Transportation Commission	Final GGRP Update
April 6, 2022	Youth Board	Final GGRP Update
April 7, 2022	Burbank's Transportation Management Organization	Final GGRP Update
April 7, 2022	BWP Board	Final GGRP Update
April 14, 2022	Park Board	Final GGRP Update
April 18, 2022	Sustainable Commission – Eco Council	Final GGRP Update
May 3, 2022	City Council	Final GGRP Update Adoption





# Inventory, Forecast, and Targets





## Review of 2010 Baseline Emissions Inventory

The GGRP included a baseline GHG emissions inventory for the City of Burbank in 2010. Although many emission reduction measures included in the 2013 GGRP were implemented over time, there was no mechanism in place to track the actual changes in emissions. Therefore, as part of this GGRP Update, a new 2019 GHG emission inventory was completed to help measure the GHG emissions reduction progress since the 2010. To verify that the baseline (2010) and new (2019) GHG inventory were consistent, the 2010 GHG inventory was updated with consistent GWPs and calculation methodology to more closely match the current (2019) inventory.

Both the 2010 and 2019 inventories include GHG emissions from the community, as well as municipal emissions that are generated by City buildings and operations. It is important to note that the municipal operations inventory is a subset of the community inventory, meaning that the municipal emissions are included within the communitywide inventory. To allow for comparison among GHG emissions sources, all emissions are translated to the equivalent of one metric ton of carbon dioxide, or MT CO<sub>2</sub>e. One MT CO<sub>2</sub>e is the equivalent of using 113 gallons of gasoline or driving 2,492 miles in a standard combustion vehicle.<sup>20</sup>

20. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator?unit=gasoline&amount=2445>





## Updated 2019 GHG Emissions Inventory

### GHG Methodology

Emissions estimates were calculated using the methodologies from the International Council for Local Environmental Initiatives (ICLEI). Specifically, the U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions Version 1.2 (Community) is used to calculate communitywide emissions and the Local Government Operations Protocol Version 1.1 (LGO) is used to calculate municipal emissions. See Appendix C for more information on the methodology.

The municipal operations, including the industrial operation inventory is a subset of the community inventory, meaning that the municipal emissions are included within the communitywide inventory.



## 2019 Community-wide GHG Emissions

In 2019, the Burbank community emitted approximately 1,084,854 MT CO<sub>2</sub>e. As shown in Table 2 and Figure 5, electricity and natural gas consumption within the residential and commercial sectors were the largest source of emissions, generating approximately 573,376 MT CO<sub>2</sub>e, or 53 percent of the total 2019 emissions. The transportation sector was the second largest source of emissions, generating approximately 470,653 MT CO<sub>2</sub>e, or 43 percent of total 2019 emissions. Waste generation, including processing and the decomposition of waste, resulted in three percent (35,890 MT CO<sub>2</sub>e) of the City's emissions, while water use and wastewater generation resulted in the remaining percent (4,936 MT CO<sub>2</sub>e).

### Progress Since 2010

The 2013 GGRP established a 2020 emission reduction target of 15 percent below 2010 GHG emission levels and a 2035 target of 30 percent below 2010 GHG emission levels. As of 2019, the City of Burbank has reduced GHG emission by 28 percent, exceeding the 2020 target and approaching the 2035 target established in the original GGRP well in advance of the horizon year. The majority of these GHG emission reductions occurred in the transportation and energy sectors through increased efficiency and increased renewable energy procurement by BWP, as well as increased fuel efficiency in the on-road vehicle fleet. The water sector also experienced relatively significant GHG emission reductions through increased renewable energy procurement statewide. Table 3 shows the emission reductions between 2010 and 2019.

### Change between the 2010 and 2019 emissions:

- Increased energy efficiency and solar photovoltaic adoption
- Increased fuel efficiency in the on-road vehicle fleet
- Reduced reliance on energy intensive imported water
- Cleaner electricity purchased by Burbank Water and Power

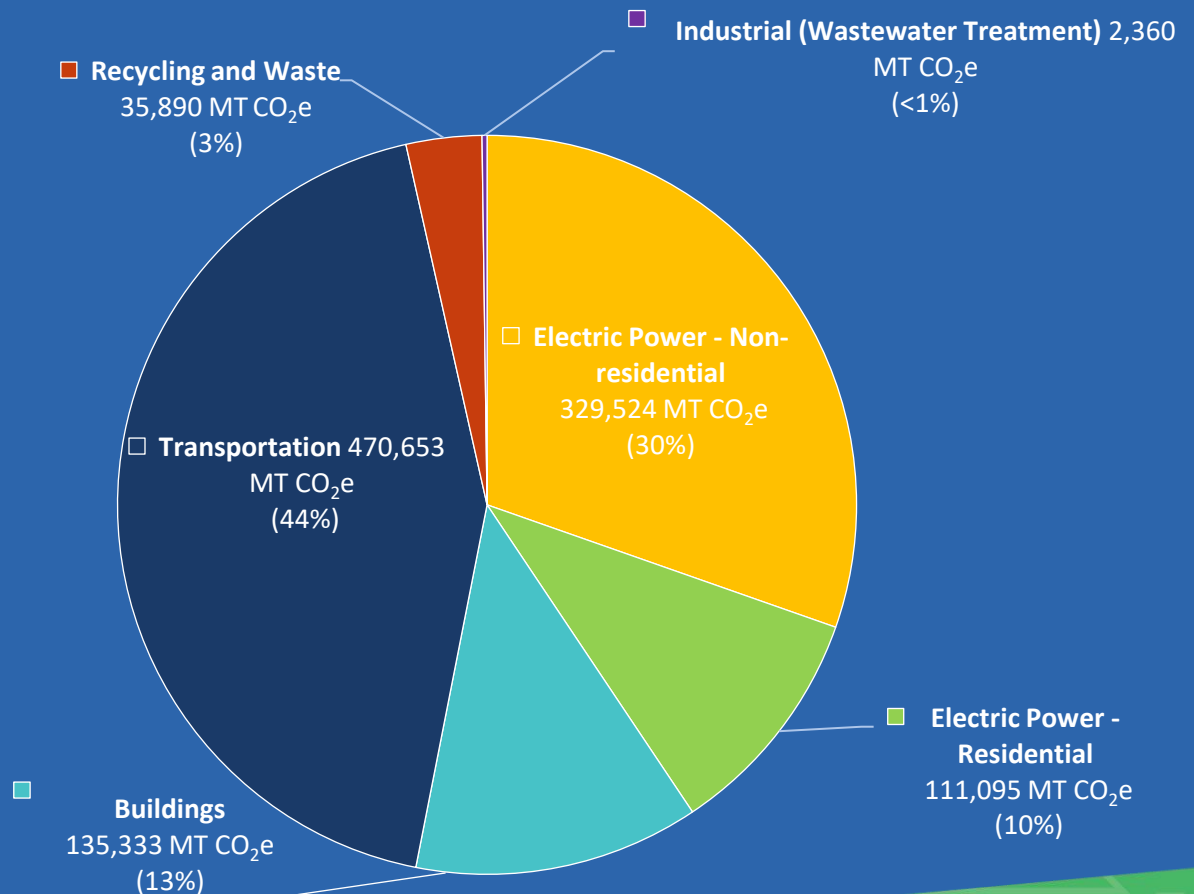
### 2019 Municipal GHG Emissions

With the unique circumstances in Burbank, where the City has some degree of operational control over the energy supply, wastewater treatment, and landfill, the municipal GHG inventory was broken into an "Industrial Operations" sector and a "Municipal Operations" sector to clearly demonstrate emission sources that are under the operational control of the City but have major implication for the overall community GHG emissions. Each of these sectors is discussed in more detail in the following section.

**Table 2 2019 Community Emissions Summary by Sector**

Sector	GHG Emissions (MT CO <sub>2</sub> e)	Percentage of Total Emissions
Electric Power - Non-residential	329,524	30%
Electric Power - Residential	111,095	10%
Buildings	135,333	12%
Transportation	470,653	43%
Recycling and Waste	35,890	3%
Industrial (Wastewater Treatment)	2,360	<1%
<b>Total</b>	<b>1,084,854</b>	<b>100%</b>

**Figure 5 2019 Community Emissions Summary by Sector**





**Table 3 GHG Emission Reductions between 2010 and 2019**

Sector	Change in GHG Emissions (MT CO <sub>2</sub> e)	Percentage Emissions Reduction
Electric Power - Non-residential	-123,847	-27%
Electric Power - Residential	-28,411	-20%
Buildings	-21,481	-14%
Transportation <sup>1</sup>	-256,419	-35%
Recycling and Waste	2,251	7%
Industrial (Wastewater Treatment)	48	2%
<b>Total</b>	<b>-427,859</b>	<b>-28%</b>

Notes:

1. Changes in GHG emissions between 2010 and 2019 may be influenced by the use of different models for vehicle miles traveled in each GHG inventory year. For further discussion, please reference Appendix C.



## Industrial Operations

The City of Burbank owns and operates Burbank Water and Power (BWP), which provides the majority of the water and power to the community. The City also operates the Burbank Landfill Site No. 3, which processes approximately 35 percent of landfilled waste in the City and the Burbank Water Reclamation Plant (BWRP), which treats the majority of the community wastewater. These City-owned operations provide a unique opportunity for GHG emission reductions, as the City directly manages its energy, water, and waste emission sources and the related GHG emissions.

In 2019, BWP generated electricity through combustion of natural gas at the Lake One and Magnolia Power Plants and purchased electricity from in-state and out-of-state sources. In total, BWP was responsible for approximately 509,439 MT CO<sub>2</sub>e in 2019. The Burbank Landfill Site No.3 also generated approximately 12,178 MT of CO<sub>2</sub>e from the decay of waste landfilled, and the BWRP generated approximately 2,360 MT CO<sub>2</sub>e (see Table 4). While these emissions fall under the industrial umbrella, they are attributable to resources used by the community in its entirety and therefore it is our collective responsibility to reduce these emissions.

**Table 4 Industrial Operations GHG Emissions for 2019 Municipal GHG Inventory**

Sub-Sector	GHG Emissions (MT CO <sub>2</sub> e)	Percentage of Industrial Emissions
Burbank Water and Power	509,439	97
Burbank Landfill Site No. 3	12,178	2
Burbank Water Reclamation Plant	2,360	<1
<b>Total</b>	<b>523,977</b>	<b>100%</b>

Notes: MT CO<sub>2</sub>e = Metric tons of carbon dioxide equivalent

1. GHG emissions from electricity procurement are not included in the LGOP protocols as a GHG emission source that should be reported; however, these emissions are captured in the community GHG inventory.

## Municipal Operations Emissions

In 2019, the City of Burbank’s GHG emissions associated with municipal operations totaled 29,647 MT CO<sub>2</sub>e. These emissions are generated by the regular activities that are involved in the running of a municipality, and these emissions sources can be directly influenced by the City. As shown in Table 5 and Figure 6, emissions from the City’s energy use were the largest sector (19,042 MT CO<sub>2</sub>e, or 64 percent).

second largest source of emissions (7,892 MT CO<sub>2</sub>e, or approximately 27 percent) was from transportation emissions from the City’s vehicle, equipment, and transit fleets as well as employee commute and business travel. Solid waste generated 2,712 MT CO<sub>2</sub>e, which represents nine percent of the total emissions. The remaining municipal emissions (1,019 MT CO<sub>2</sub>e, or approximately three percent) were from water use and wastewater generation by the City’s operations.

**Table 5 2019 Municipal Emissions Summary by Sector**

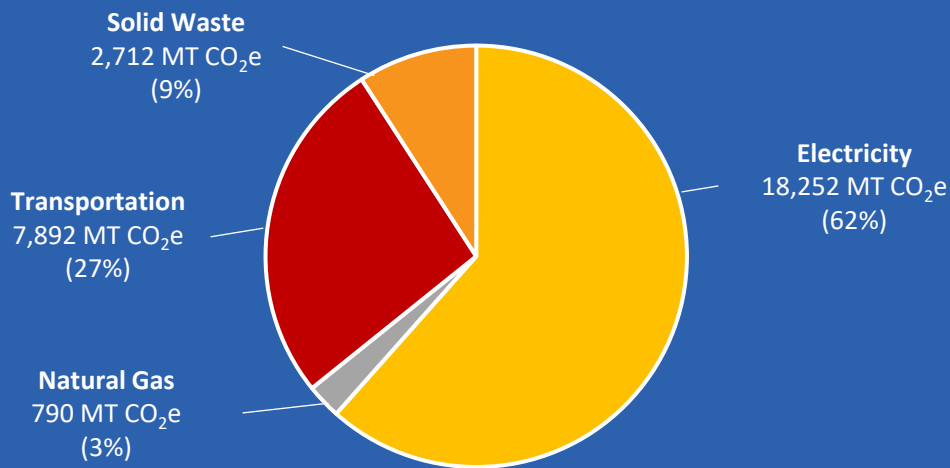
Sector	GHG Emissions (MT CO <sub>2</sub> e)	Percentage of Total Emissions
<b>Energy</b>	<b>19,042</b>	<b>64</b>
Electricity	18,252	62
Natural Gas	790	3
<b>Transportation</b>	<b>7,892</b>	<b>27</b>
Vehicle and Equipment Fleet	2,303	8
Transit Fleet	456	2
Employee Commute	5,113	17
Employee Business Travel	19	<1
<b>Water and Wastewater<sup>1</sup></b>	<b>1,019</b>	<b>3</b>
<b>Solid Waste</b>	<b>2,712</b>	<b>9</b>
<b>Total</b>	<b>29,647</b>	<b>100</b>

Notes: MT: Metric tons; Emissions have been rounded and therefore sums may not match.

1. Water sector GHG emissions are not added to the Municipal Operations GHG emission total due to risk of double counting with energy sector emissions, which includes the electricity used to pump and treat water supplied to the City.

Source: Emissions were calculated following ICLEI LGO (May 2010) and using data provided and approved by the City.

**Figure 6 2019 Municipal Emissions Summary by Sector**



## Emissions Forecasts

Emissions forecasts (what we predict GHG emissions to be in the future) are generated from the 2019 inventory to help identify actions that must be taken now in order to meet future targets. This GGRP Update identifies GHG emissions reduction targets for the years 2030 (SB 32 target year), 2035 (City of Burbank’s General Plan horizon year), and 2045 (EO B-55-18 target year). A business-as-usual scenario provides a forecast of how GHG emissions would change in the years 2030, 2035, and 2045 if consumption trends continue as they did in 2019 and growth were to occur as projected in the City’s General Plan. Burbank’s business-as-usual GHG emissions are projected to increase to

1,153,935 MT CO<sub>2</sub>e in 2030, 1,171,033 MT CO<sub>2</sub>e in 2035, and 1,205,229 MT CO<sub>2</sub>e in 2045 (see Table 6).

However, several State regulations (i.e., SB 1, SB 100, AB 1493) have been enacted that will reduce future local emissions. These regulations have been incorporated into an adjusted forecast, which provides a more accurate picture of future emissions growth and the emission reduction the City and community will be responsible for after State regulations have been implemented (see Table 6 and Appendix C).

**Table 6 Burbank Business-as-Usual and Adjusted Forecast**

Emissions Forecast	2019 (MT CO <sub>2</sub> e)	2030 (MT CO <sub>2</sub> e)	2035 (MT CO <sub>2</sub> e)	2045 (MT CO <sub>2</sub> e)
Business-as-Usual Forecast	1,084,854	1,153,935	1,171,033	1,205,229
Emission Reductions from State Measures	0	295,896	424,475	674,026
<b>Adjusted Forecast</b>	<b>1,084,854</b>	<b>858,039</b>	<b>746,557</b>	<b>531,203</b>

Notes: MT CO<sub>2</sub>e = Metric tons of carbon dioxide equivalent; emissions have been rounded to the nearest whole number; therefore, sums may not match.

## Emissions Targets

The purpose of target setting is to develop the trajectory toward achieving the State’s 2030 goal and prepare for the deep decarbonization needed by 2045 in a cost-effective manner by setting an incremental path toward achieving the EO B-55-18 goals. As such, it is recommended that the City first strive to exceed the SB 32 targets of reducing GHG emissions 40% below 1990 levels, while establishing a policy framework to achieve the long-term target of carbon neutrality by 2045.

To maintain consistency with the 2013 GGRP, GHG emission reduction targets will be set based on the 2010 community GHG inventory. The 2013 GGRP established the following GHG emission reduction targets:

- Reduce GHG emissions to 15% below 2010 levels by 2020 (AB 32 target year) and
- Reduce GHG emissions to 30% below 2010 levels by 2035.

With the GHG reduction legislation enacted by the State since adoption of the 2013 GGRP,



it is recommended that the original targets, which were based on AB 32, be updated to levels which are consistent the current State goals established by SB 32 and EO B-55-18. These update targets seek to:

- Reduce GHG emissions to 49% below 2010 levels by 2030 (SB 32 target year),
- Reduce GHG emissions to 66% below 2010 levels by 2035 (General Plan horizon year), and
- Achieve carbon neutrality by 2045 (EO B-55-18 target year).

While State legislation compares emissions reduction targets to a 1990 baseline, the targets provided here for the City are compared to a 2010 baseline. Consistent with the methodology used for setting targets in the 2013 GGRP, 1990 GHG emission levels are assumed to be 15% below 2010 levels. Table 7 provides a description of the calculations performed to convert the State's 1990 baseline targets to align with the City's 2010 baseline.

In accordance with the new California Air Resource Board (CARB) methodology and the statewide goal established in SB 32, this absolute emissions<sup>21</sup> target was then translated into a 2030 per capita emission target of 7.0 MT CO<sub>2</sub>e per year by dividing the 2030 absolute target by Burbank's projected population in 2030. The following per capita GHG reduction targets were established by the City of Burbank to remain consistent with the State's 2030 (SB 32) goal and be in line with the reduction trajectory to achieve the State's long-term 2045 goal:

- Reduce GHG emissions to 7.0 MT CO<sub>2</sub>e per capita by 2030 (the SB 32 target year)
- Reduce GHG emissions to 0.0 MT CO<sub>2</sub>e per capita by 2045 (the EO B-55-18 target year)

As shown in Table 7 and Figure 7, Burbank would be required to implement local reduction measures to meet the State goals established for 2030 and 2045 even after accounting for reductions that will result from State regulations. Table 7 shows that Burbank would be required to reduce 86,555 MT CO<sub>2</sub>e by 2030, 232,235 MT CO<sub>2</sub>e by 2035, and 531,203 MT CO<sub>2</sub>e by 2045 to meet the State goals. Table 7 also shows the remaining per capita reductions needed to meet the goal (MT CO<sub>2</sub>e per capita).

These reductions will be achieved through implementation of local measures and actions developed from best practices of other similar and neighboring jurisdictions, as well.

**The City of Burbank established an emission reduction target to reach carbon neutrality by 2045, in line with EO B-55-18.**

21. Absolute emissions refer to the total quantity of GHG emissions being emitted.

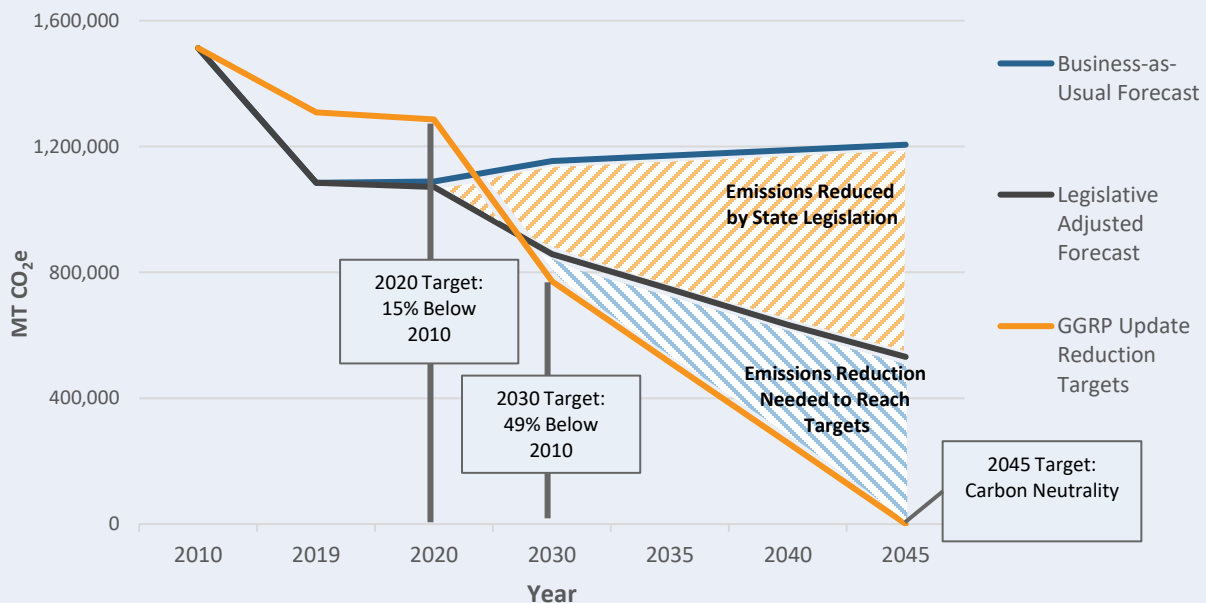
**Table 7 Burbank Business-as-Usual and Adjusted Forecast**

Emissions Forecast	2019 <sup>2</sup> (MT CO <sub>2</sub> e)	2030 <sup>3</sup> (MT CO <sub>2</sub> e)	2035 <sup>4</sup> (MT CO <sub>2</sub> e)	2045 <sup>5</sup> (MT CO <sub>2</sub> e)
<b>Mass Emissions Target and Gap</b>				
Mass Emissions Adjusted Forecast	1,084,854	858,039	746,557	531,203
Mass Emissions Targets	1,084,854	771,484	514,322	0
Remaining Emissions Gap	0	86,555	232,235	531,203
<b>Per Capita Emissions Target and Gap</b>				
Population <sup>1</sup>	105,496	109,686	111,591	115,400
Per Capita Adjusted Forecast (MT CO <sub>2</sub> e per capita)	10.3	7.8	6.7	4.6
Per Capita Targets (MT CO <sub>2</sub> e per capita)	10.3	7.0	4.6	0.0
<b>Remaining Per Capita Emissions Gap (MT CO<sub>2</sub>e per capita)</b>				
	0.0	0.8	2.1	4.6

Notes: MT CO<sub>2</sub>e = Metric tons of carbon dioxide equivalent. Emissions have been rounded to the nearest whole number; therefore, sums may not match.

- Population projections from SCAG Connect SoCal. Demographics and Growth Forecast. [https://www.connectsocial.org/Documents/Draft/dConnectSoCal\\_Demographics-And-Growth-Forecast.pdf](https://www.connectsocial.org/Documents/Draft/dConnectSoCal_Demographics-And-Growth-Forecast.pdf). Accessed September 22, 2020. The population included in this GGRP and associated Initial Study/Negative Declaration (Appendix F) is different from the population included in the Housing Element Environmental Impact Report (EIR) because the Department of Housing and Community Development (HCD) recommends that each jurisdiction create a buffer in the housing element inventory of at least 15 to 30 percent more capacity than required to ensure that sufficient capacity exists in the housing element to accommodate the Regional Housing Need Allocation throughout the planning period. Including a buffer in the GGRP could result in an overly-conservative emissions reduction forecast and target because these scenarios are in part, calculated based on future population scenarios. [https://www.hcd.ca.gov/community-development/housing-element/docs/sites\\_inventory\\_memo\\_final06102020.pdf](https://www.hcd.ca.gov/community-development/housing-element/docs/sites_inventory_memo_final06102020.pdf)
- As of 2019, the City has exceeded the 2020 GHG reduction target of 15% reduction below 2010 GHG emissions levels. The current targets represent updated targets based on SB 32 and EO-B-55-18.
- SB 32 requires the CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 level by 2030.
- Interim target year based on General Plan horizon year.
- EO-B-55-18 sets a 2045 target of carbon neutrality.

**Figure 7 Community Emissions, Targets, and Reductions Needed to Meet Targets**





# GHG Emission Reduction Measures



# Reducing Emissions in Burbank

Burbank’s GGRP Update is designed to reduce GHG emissions through implementation of achievable GHG emissions reduction measures that equitably benefit the entire community. The City is committed to reducing GHG emissions and has made substantial progress implementing the 2013 GGRP. This GGRP Update evaluates and modernizes the 2013 GGRP such that the City will transition away from less successful measures and incorporates new best practices, technology, and the most recent State legislation. The measure development process began with a thorough review of progress implementing the 2013 GGRP

to identify what measures and actions worked and which did not produce the projected results. From there, measures that were previously successful were refined based on currently available information and measures that were less successful in or difficult to track were revised or removed, and new measures were developed to provide the strategies that will achieve the GHG emissions reduction necessary to meet the community's reduction target. Each of the measures is associated with a specific strategy and includes supportive actions that provide a path for the measure to be implemented. See Figure 8.

**Figure 8 Strategy, Measure, and Action Process Flow**



**Focus on key pillars, such as:**

- Equity
- Funding
- GHG Reduction
- Education
- Structural Change
- Partnerships

Additional strategies, measures, and actions have been included to incorporate new GHG reduction best practices. These have been specifically designed to achieve Burbank's fair share of GHG emissions and achieve the community's identified GHG reduction targets. In addition to the strategies and measures that were included in the 2013 GGRP and either updated or refined, new measures and Cornerstone and Adaptation Strategies have been included in the GGRP Update. A detailed description of the Cornerstone measure is included below and the adaptation measures are discussed in Section 4, Adaptation.

## Cornerstones of Climate Action Planning

Fundamentally, a Cornerstone measure is an example measure that provides a foundation for understanding the fundamental needs to achieve long-term GHG reduction and clearly illustrates the importance and manner in which the action pillars support the implementation of a measure. Burbank's Cornerstone measure was developed to embody the spirit and character of Burbank. The goal of the Cornerstone Measure is to educate and build support around an area of community pride. The Measures included under each Strategy are intended to pull in the same direction, providing the most effective means for achieving the GHG reductions necessary to reach the 2030 target, and establish the framework for the deep decarbonization needed to reach the 2045 target of carbon neutrality.<sup>22</sup>

The City recognizes that despite the great successes accomplished so far in reducing GHG emissions as a community, long-term sustainable change must continue to occur to reach the established GHG reduction targets and limit impacts related to climate change. To be truly effective, this change must be reasonable and equitably driven. Continued progress will require a community-wide commitment at all levels to implement the measures outlined in this plan and by making the necessary adjustments identified through regularly monitored progress.

Over-time Burbank has learned that high-quality climate action planning is built on six essential components that result in implementable and effective GHG emission reduction strategies. These essential components include:

- *Social equity*
- *Connectivity with community and resources*
- *Structural change*
- *Cost effectiveness and financing*
- *Outreach and education*
- *Effective GHG reductions*

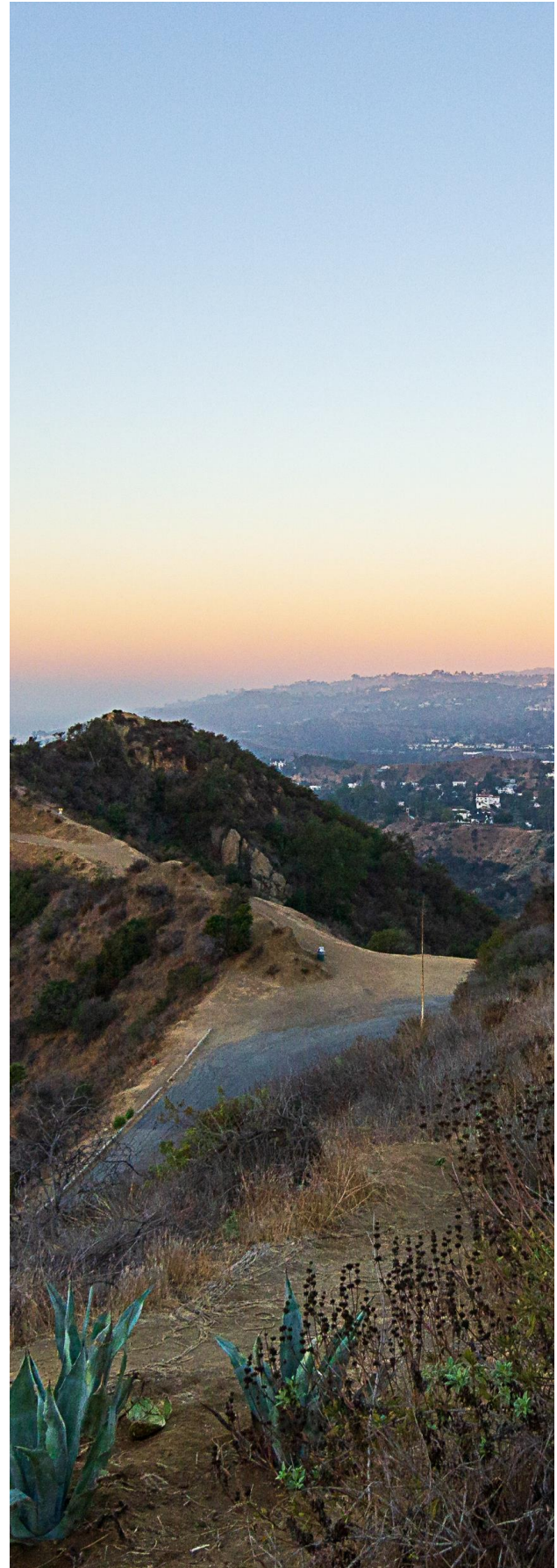
These pillars provide a foundation for actions that make transformational change and are important steps that drive measures that will engage the community and achieve the GHG emissions reduction goals laid out in the Plan.

22. The GHG reduction measures included in this GGRP Update are intended to meet the GHG reduction target codified by SB 32 of reduce GHG emissions to 40 percent below 1990 levels by 2030. According to the Association of Environmental Professionals (AEP) 2016 White Paper "Beyond 2020 and Newhall," meeting the long-term target of carbon neutrality in 2045 will require substantial advances in cost-effective technological solution related to GHG reductions. As such, the GHG reduction measures will provide substantial progress toward meeting the long-term 2045 target but will need to be reassessed as future advances in technology become available.

### Cornerstone Measure (C.1.1)

*Lead by example by focusing on equity constraints associated with existing building electrification by leveraging BWP's operations and efficiency programs to develop an Affordable Housing Electrification Program to lead Burbank's electrification targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 320 affordable housing units owned by Burbank Housing Corporation (BHC) in the City by 2045.*

- The Cornerstone focuses on **social equity** and works to overcome financial impacts of modernization, which is one of the greatest barriers of climate change. With this measure the City is committed to providing support to low-income households in the community by developing an Affordable Housing Electrification Plan and establishing a funding program to provide high-quality discounted appliances and equipment, as well as technical assistance with installation and electrical panel and circuit upgrades for retrofits and time of replacement upgrades of appliances and equipment in affordable housing units.
- **Connects** the City with non-profit partners, such as BHC, who are well positioned, such as GRID Alternatives, to implement a low-income solar installation program for affordable housing units and also includes a workforce installation training program to provide opportunity and remove barriers to entry into the solar workforce.



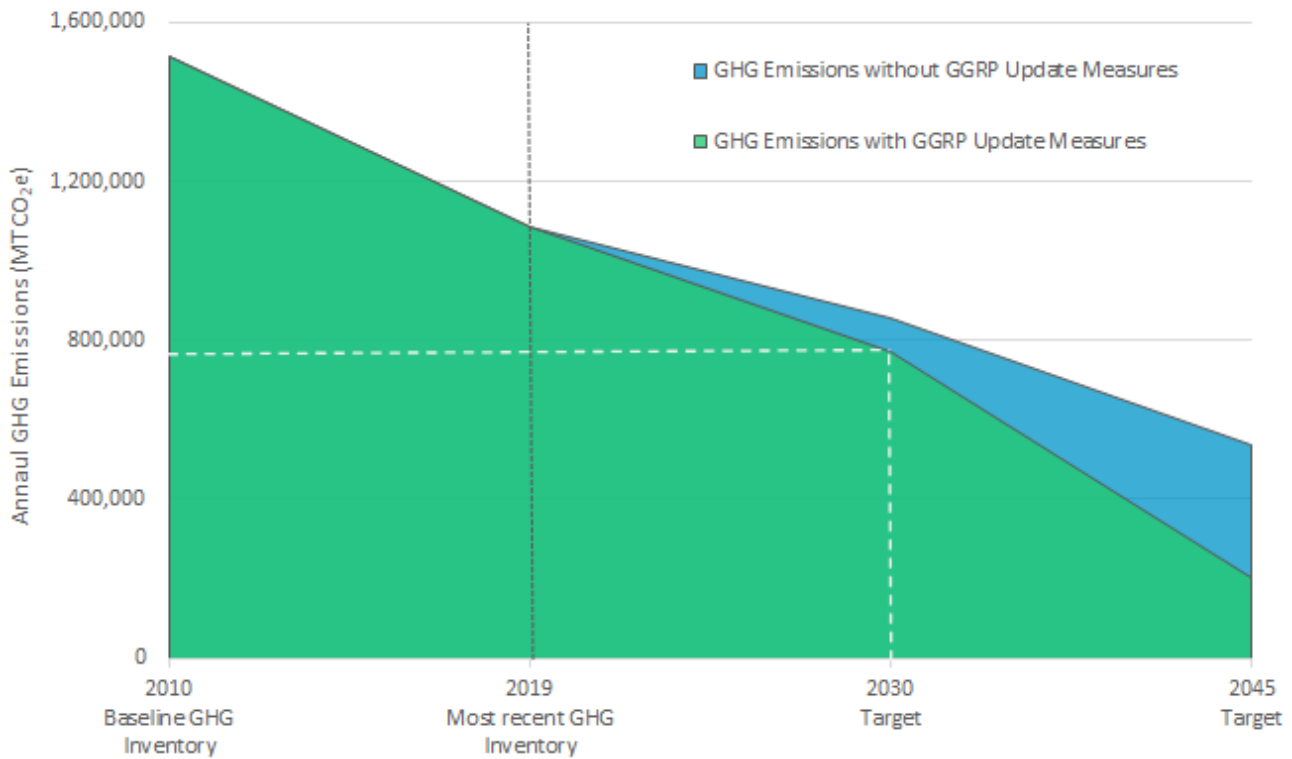




- Supports **structural change** by establishing a Burbank Housing Corporation program to performing an electrification needs and existing building retrofit cost assessment for all affordable housing units owned and managed by the BHC and identify an electrification retrofit pilot project that includes retrofitting of an entire building of affordable housing units to 100% electric.
- Provides a feasible and **economical** carbon reduction pathway by developing a tariffed on-bill financing program and other incentive program to allow for equitable electrification of buildings within BWP service area.
- Establishes and implements a program to provide **outreach and education** to building owners, building managers, landlords and residents in low-income housing developments to communicate the efficiency, cost, funding opportunities, and health benefits of electrification.

BWP has developed a pathway to provide 100% carbon neutral electricity before 2045. Thus, electrification of existing buildings is a clear way to significantly reduce GHG emissions. One of the biggest hurdles to reach carbon neutrality is the high cost of existing buildings. By establishing funding mechanisms for low-income residents and implementing the electrification of a complete neighborhood composed of low-income and affordable housing, Burbank is actively reducing GHG emissions and overcoming a barrier to carbon neutrality.

**Figure 9 Strategy, Measure, and Action Process Flow**



### Meeting the State's Goals

The City's approach to carbon neutrality has been developed through a collaborative process with City staff from all Departments, the City Council, various Boards and Commissions, including the Sustainable Commission, and the community, and was designed to support the six pillars of climate action. These pillars have been used to establish actions that will drive the implementation measures that will in-turn achieve the 2030 emissions reduction target and provide substantial progress to the long-term 2045 target of carbon neutrality. The 2030 and 2045 targets represent the City's fair share reductions towards achieving the State's overall climate goals (see Appendix D for more information on the emission reductions anticipated to be achieved from each measure).

### GHG Reduction Measures and Actions

The measures and supporting actions outlined in this section were established and refined to meet

the City's GHG emissions reduction target for 2030 (49% below 2010, as discussed in further detail in Section 2, Inventory, Forecast, and Targets) and provide substantial progress towards meeting the longer-term target of carbon neutrality by 2045, which aligns with the State's established goals.

As shown in Figure 9, the measures and actions established in this GGRP Update help the City meet the 2030 target and put the City on the trajectory towards meeting the 2045 target of carbon neutrality. While the measures and actions included in this GGRP Update reach the 2030 targets, more work is needed to reach the longer-term 2045 emission reduction target. It is anticipated that the GGRP Update will be reviewed and updated on a triennial basis, as discussed in CG-1.1 and Section 5, Implementation. Future iterations of the GGRP Update will outline additional ways to meet the longer-term 2045 emission reduction target as new technologies and solutions become available.





Burbank is actively engaged in creating unique solutions and working with local partners as demonstrated by the GHG reduction measures and actions, which are summarized in Table 8. The City of Burbank understands the responsibility of taking a leadership role in climate action by developing programs, providing education and engagement opportunities, identifying funding, and developing partnerships that spur change in the community. Additionally, there are measures that the City would implement to reduce GHG emissions from municipal operations. These measures include retrofitting streetlights with energy efficient bulbs, electrifying city facilities, and implementing a city employee flexible commuting program.



**Table 8 Greenhouse Gas Emissions Reduction Measure Potential**

Measure	GHG Emissions Reduction Potential
<b>Strategy C-1: Cornerstone</b>	
<p>C-1.1 Lead by example by focusing on equity constraints associated with existing building electrification by leveraging BWP’s operations and efficiency programs to develop an Affordable Housing Electrification Program to lead Burbank’s electrification targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 320 affordable housing units owned by Burbank Housing Corporation in the City by 2045.</p>	<p>2030: 90 MT CO<sub>2</sub>e 2045: 591 MT CO<sub>2</sub>e</p>
<b>Strategy BE-1: Building Energy</b>	
<p>BE-1.1 Electrify 100% of new construction in the City by 2023.</p>	<p>2030: 5,631 MT CO<sub>2</sub>e 2045: 17,603 MT CO<sub>2</sub>e</p>
<p>BE-1.2 Leverage BWPs marketing programs to convert 3,000 residential and 170 commercial natural gas-fueled HVAC and water heating units in existing private buildings to electric heat pumps by 2030, and 10,000 residential and 560 commercial units by 2045.</p>	<p>2030: 6,867 MT CO<sub>2</sub>e 2045: 46,352 MT CO<sub>2</sub>e</p>
<p>BE-1.3 Continue to increase building energy efficiency through BWP's rebate and incentive programs to reduce annual customer energy use by a collective 63 GWh by 2030.</p>	<p>2030: 17,549 MT CO<sub>2</sub>e 2045: Not Quantified</p>
<b>Strategy EG-1: Electricity Generation Strategy</b>	
<p>EG-1.1 Goal to achieve 100% GHG-neutral electricity generation by 2040.</p>	<p>2030: Not Quantified 2045: Not Quantified</p>
<b>Strategy T-1: Reduce Passenger Car Vehicle Miles Traveled</b>	
<p>T-1.1 Implement the Complete Our Streets Plan, increasing active transportation modeshare 2% by 2030 and 3% by 2045.</p>	<p>2030: 941 MT CO<sub>2</sub>e 2045: 1,566 MT CO<sub>2</sub>e</p>
<p>T-1.2 Provide clean, abundant, affordable and accessible public transit, with a zero-emissions bus fleet by 2030.</p>	<p>2030: Not Quantified 2045: Not Quantified</p>
<b>Strategy T-2: Transportation Demand Management</b>	
<p>T-2.1 Continue Transportation Management Organization (TMO) Expansion, reaching 60% of employees by 2030 and 90% by 2045.</p>	<p>2030: Supportive 2045: Supportive</p>
<p>T-2.2 Update the TMO program and ordinance to increase compliance with the City’s 1.61 Average Vehicle Ridership (AVR) Goal to reduce employees commuting to Burbank via single occupancy vehicle. Require 30% of TMO businesses achieve the 1.61 AVR target by 2030, and 60% by 2045.</p>	<p>2030: 7,682 MT CO<sub>2</sub>e 2045: 8,759 MT CO<sub>2</sub>e</p>

Measure	GHG Emissions Reduction Potential
<b>Strategy T-3: Zero-Emission Vehicles</b>	
T-3.1 Increase zero-emission vehicle adoption to 23% of all passenger vehicles by 2030 and 100% by 2045.	2030: 38,179 MT CO <sub>2</sub> e 2045: 238,989 MT CO <sub>2</sub> e
<b>Strategy T-4: Parking</b>	
T-4.1 Implement Parking Management as identified in the Burbank2035 General Plan Mobility Element and the City Council’s Six Parking Management Principles.	2030: 968 MT CO <sub>2</sub> e 2045: 7,334 MT CO <sub>2</sub> e
<b>Strategy W-1: Water-Energy Nexus</b>	
W-1.1 Reduce per capita water consumption from current levels of 132 GPCD (gallons per capita per day) to 124 GPCD by 2030 (a 6.1% reduction) and to 120.5 GPCD by 2045 (an 8.7% reduction).	2030: 405 MT CO <sub>2</sub> e 2045: Not Quantified
<b>Strategy SW-1 Organic Waste Diversion</b>	
SW-1.1 Meet SB 1383 organics and recycling requirements, reducing organic waste disposal 75% by 2025.	2030: 11,040 MT CO <sub>2</sub> e 2045: 11,692 MT CO <sub>2</sub> e
<b>Strategy CS-1: Carbon Sequestration Strategy</b>	
CS-1.1 Plant 2,000 net new trees by 2030 and 5,000 net new trees by 2045 to sequester carbon and create urban shade to reduce the urban heat island effect.	2030: 71 MT CO <sub>2</sub> e 2045: 177 MT CO <sub>2</sub> e
<b>Strategy CG-1 City Government Actions</b>	
CG-1.1 Complete annual progress reporting and a triennial GGRP review and update.	2030: Supportive 2045: Supportive
CG-1.2 Retrofit all City Streetlights and Outdoor Lighting to Light-Emitting Diode (LED) by 2030.	2030: 953 MT CO <sub>2</sub> e 2045: Not Quantified
CG-3.1 Electrify 25% of existing City facilities by 2030 and 100% of existing City facilities, where electrification is practical and feasible, by 2045, as well as all newly constructed City buildings.	2030: 88 MT CO <sub>2</sub> e 2045: 722 MT CO <sub>2</sub> e
CG-4.1 Implement a flexible employee commute program, with a target of 25% of applicable City employee staff time utilize telecommuting by 2030.	2030: 946 MT CO <sub>2</sub> e 2045: 824 MT CO <sub>2</sub> e
<b>Total</b>	<b>2030: 90,347 MT CO<sub>2</sub>e 2045: 333,943 MT CO<sub>2</sub>e</b>

Notes:

Not Quantified = GHG emissions reduction are not quantified due to risk of double counting reductions.

Supportive = Supportive measures do not carry GHG emissions reduction but contribute to reductions elsewhere.

# Reading the GHG Emission Reduction Measures

**1** **C-1.1** **2**

**Lead by example by focusing on equity constraints associated with existing building electrification by leveraging BWP's operations and efficiency programs to lead Burbank's Affordable Housing Electrification Program to lead Burbank's income and affordable housing targets through retrofitting low-income and electrification targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 320 affordable housing units owned by Burbank Housing Corporation in the City by 2045.**

**3** Communities will be impacted by the changing climate; however, the impacts will not be equal. According to the IPCC's Fifth Assessment Report (AR5),<sup>23</sup> socially and economically disadvantaged people are disproportionately affected by climate change. Climate change has the potential to exacerbate inequalities and socially and geographically disadvantaged people in particular face the negative effects of climate hazards. Therefore, equitable change is essential and requires a multi-faceted approach that is built off the understanding that environmental justice lies at the core of high-quality climate action.

**4** **1-3 Years** **4-6 Years** **7-9 Years**

**C-1.1a - C-1.1b** **C-1.1c - C-1.1f** **C-1.1e - C-1.1j**

**5** **Key Target Metrics:**  
Retrofit 100 affordable units by 2030 and 320 affordable units by 2045

**6** **GHG Reduction Potential**  
90 by 2030  
591 by 2045

**7**

23 <http://www.ipcc.ch/report/ar5/>

### Measure Key

- 1. Measure ID** – unique measure code that identifies what strategy the measure is under (e.g., C – Cornerstone)
- 2. Measure** – community established GHG emission reduction measure
- 3. Measure Description** – paragraph outlining importance and implementation of the measure
- 4. Timeline** – outlines timeframe for implementation of each supportive action
- 5. Key Target Metrics** – tracking mechanism for the specific measure

- 6. GHG Reduction Potential** – possible emission reductions achieved from full implementation of the measure
- 7. Strategy Icon** – demonstrates measure connectivity
- 8. Co-benefits** - the additional advantages of the specific measure
- 9. Supporting Actions** - mechanisms that support overall measure
- 10. Co-Benefit Key** – list of co-benefits and icons

**C-1.1: Overcome the equity constraints of existing building electrification by leveraging BWP's operations and efficiency programs to lead Burbank's Affordable Housing Electrification Program to lead Burbank's income and affordable housing targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 1,400 affordable housing units in the city by 2045.**

ID	Actions	Co-benefits
C-1.1a	Expand upon BWP's low-income Refrigerator Exchange Program by identifying funding to provide electric heat-pump water heaters and HVAC units to low-income households.	Improved Public Health, Increased Resilience, Reduced Reliance on Fossil Fuels, Green Jobs, Healthier Ecosystems, Cost Savings
C-1.1b	Explore a partnership with non-profit organizations, such as GRID Alternatives, to implement a low-income solar installation program, which includes a workforce training program for groups not typically represented in the solar workforce.	Improved Public Health, Increased Resilience, Reduced Reliance on Fossil Fuels, Green Jobs, Healthier Ecosystems, Cost Savings
C-1.1c	Establish a program with Burbank Housing Corporation to provide discounted electric appliances and equipment, as well as technical assistance with installation and electrical panel and circuit upgrades for retrofits and time of replacement upgrades of appliances and equipment in affordable housing units.	Improved Public Health, Increased Resilience, Reduced Reliance on Fossil Fuels, Green Jobs, Healthier Ecosystems, Cost Savings
C-1.1d	Partner with Burbank Housing Corporation to perform an assessment of all affordable housing units owned and managed by the Burbank Housing Corporation to identify an electrification retrofit pilot project that includes retrofitting of an entire building of affordable housing units.	Improved Public Health, Increased Resilience, Reduced Reliance on Fossil Fuels, Green Jobs, Healthier Ecosystems, Cost Savings

**Co-benefit Key**

- Improved Public Health
- Increased Resilience
- Reduced Reliance on Fossil Fuels
- Green Jobs
- Healthier Ecosystems
- Cost Savings



# C-1: CORNERSTONE

- C-1.1** Lead by example by focusing on equity constraints associated with existing building electrification by leveraging BWP’s operations and efficiency programs to develop an Affordable Housing Electrification Program to lead Burbank’s electrification targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 320 affordable housing units owned by Burbank Housing Corporation in the City by 2045.

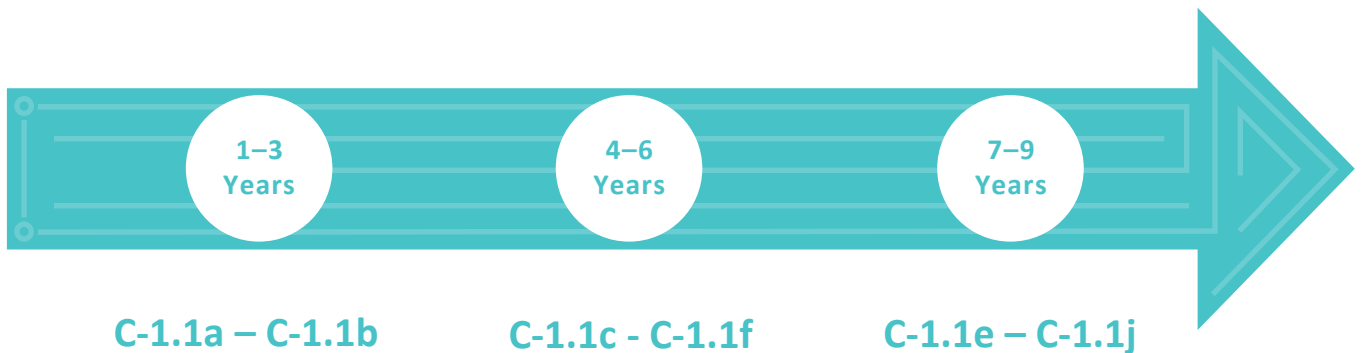




### C-1.1

**Lead by example by focusing on equity constraints associated with existing building electrification by leveraging BWP’s operations and efficiency programs to develop an Affordable Housing Electrification Program to lead Burbank’s electrification targets through retrofitting low-income and affordable housing units in Burbank to all electric, retrofitting 100 affordable housing units by 2030 and all 320 affordable housing units owned by Burbank Housing Corporation in the City by 2045.**

Communities will be impacted by the changing climate; however, the impacts will not be equal. According to the IPCC’s Fifth Assessment Report (AR5),<sup>23</sup> socially and economically disadvantaged people are disproportionately affected by climate change. Climate change has the potential to exacerbate inequalities and socially and geographically disadvantaged people in particular face the negative affects of climate hazards. Therefore, equitable change is essential and requires a multi-faceted approach that is built off the understanding that environmental justice lies at the core of high-quality climate action.



#### Key Target Metrics:





Retrofit 100 affordable units by 2030 and 320 affordable units by 2045

#### GHG Reduction Potential







90 MT CO<sub>2</sub>e in 2030  
591 MT CO<sub>2</sub>e in 2045



23. <https://www.ipcc.ch/report/ar5/syr/>

ID	Actions	Co-benefits
C-1.1.a	Expand upon BWP’s low-income Refrigerator Exchange Program by identifying funding to provide electric heat-pump water heaters and HVAC units to low-income households.	
C-1.1.b	Explore a partnership with non-profit organizations, such as GRID Alternatives, to implement a low-income solar installation program, which includes a workforce installation training program for groups not typically represented in the solar workforce.	
C-1.1.c	Establish a program with Burbank Housing Corporation to provide discounted electric appliances and equipment, as well as technical assistance with installation and electrical panel and circuit upgrades for retrofits and time of replacement upgrades of appliances and equipment in affordable housing units.	
C-1.1.d	Partner with Burbank Housing Corporation to perform an electrification needs and existing building retrofit cost assessment for all affordable housing units owned and managed by the Burbank Housing Corporation to identify an electrification retrofit pilot project that includes retrofitting of an entire building of affordable housing units.	

**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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ID	Actions	Co-benefits
C-1.1.e	Conduct targeted outreach to low-income housing developments to engage building owners, building managers, landlords and residents to communicate benefits of electrification, discuss potential for retrofitting buildings, gain buy-in from community members, and providing education and trainings on incentives, technical requirements, and available resources.	
C-1.1.f	Implement a pilot project for retrofitting of an entire building of affordable housing units, as determined feasible.	
C-1.1.g	Perform an existing buildings analysis specifically targeted towards low-income neighborhoods to identify neighborhoods or building blocks for larger-scale electrification projects in partnership with BWP.	
C-1.1.h	Identify and implement a pilot project for electrification of a complete neighborhood composed of low-income and affordable housing, including energy bill protections in case energy bills exceed costs to residents prior to project implementation and pursuing opportunities for natural gas infrastructure pruning.	
C-1.1.i	Develop a tariffed on-bill financing program or other incentive program to allow for equitable electrification of buildings within BWP service area.	
C-1.1.j	Evaluate opportunities to provide technical and financial assistance to low-income property owners and low-income homeowners looking to electrify.	

### Co-benefit Symbol Key:



Improved Public Health



Increased Resilience



Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems



Cost Savings

# BE-1: BUILDING ENERGY & EFFICIENCY

- BE-1.1** Electrify 100% of new construction in the City by 2023.
- BE-1.2** Leverage BWP's marketing programs to convert 3,000 residential and 170 commercial natural gas-fueled HVAC and water heating units in existing private buildings to electric heat pumps by 2030, and 10,000 residential and 560 commercial units by 2045.
- BE-1.3** Continue to increase building energy efficiency through BWP's rebate and incentive programs to reduce annual customer energy use by a collective 63 GWh by 2030..

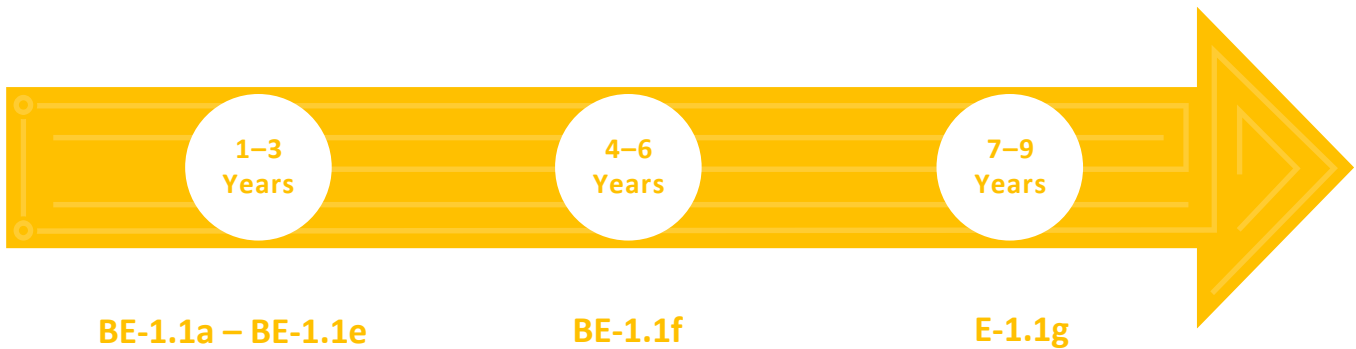




### BE-1.1

## Electrify 100% of new construction in the City by 2023.

It is estimated that if building electrification is not adopted, new construction could add approximately 170 thousand therms of natural gas use in Burbank annually, which would be approximately 40 million therms consumed, collectively, by 2045. Developing all-electric buildings has been found to be less expensive to construct and operate in Burbank’s Climate Zone (Climate Zone 9) compared to constructing buildings with both gas and electric utilities, especially when paired with solar photovoltaic and solar thermal installations, which are not yet mandatory under Title 24 of the California Building Code.<sup>24</sup> To meet the long-term goal of carbon neutrality by 2045, the direct GHG emissions from natural gas will need to be phased out. Therefore, it is important to limit new natural gas infrastructure and construct buildings today that are ready for the future.



### Key Target Metrics:

Electrify 100% of new construction by 2023





### GHG Reduction Potential

5,631 MT CO<sub>2</sub>e in 2030  
17,603 MT CO<sub>2</sub>e in 2045












24. This analysis was done using Los Angeles Department of Water and Power (LADWP) rates which are higher than BWP rates (\$0.04 per kWh vs. \$0.07 per kWh for the first 300 kWh. Source: <https://explorer.localenergycodes.com/studies/city-burbank/results?studies=2,3&cz=9-LADWP>




ID	Actions	Co-benefits
BE-1.1a	<p>Adopt an Electrification Reach Code for all new buildings, which prohibits the piping of natural gas:</p> <ul style="list-style-type: none"> <li>Engage with stakeholders, both internal stakeholders, such as City staff and officials, and external stakeholders, such as local developers regarding the purpose and impact of the reach code</li> <li>Conduct a cost effectiveness study</li> <li>Develop and draft an ordinance</li> <li>Conduct public hearings, public notices, and formally adopt the ordinance</li> <li>Submit the adopted ordinance to the California Energy Commission (CEC) and California Building Standards Commission (CBSC)</li> </ul>	
BE-1.1b	<p>Provide education around cooking with electric appliances, including demonstrations from chefs and/or local restaurants.</p>	
BE-1.1c	<p>Provide technical resources, including hosting workforce development trainings for installers and building owners/operators to discuss benefits and technical requirements of electrification.</p>	
BE-1.1d	<p>Building and Safety Division and BWP will promote the cost and environmental benefits of electrification to builders, property owners, and contractors on the City website and at the City permit counters.</p>	

**Co-benefit Symbol Key:**


 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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ID	Actions	Co-benefits
BE-1.1e	Establish a partnership with the Building Decarbonization Coalition, or a similar organization, to engage with local building industry stakeholders in development of an Electrification Reach Code.	
BE-1.1f	Conduct an electrification infrastructure and capacity feasibility study to identify expected increases in electricity demand due to building and vehicle electrification, build capacity to meet that demand, and identify any infrastructure improvements.	
BE-1.1g	Work with SoCalGas to identify opportunities for natural gas infrastructure pruning to reduce the chance of stranded assets, provide potential funding, and establish an efficient transition to carbon neutral buildings.	


**Co-benefit Symbol Key:**




Improved Public Health




Increased Resilience




Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems



Cost Savings



**Leverage BWP's marketing programs to convert 3,000 residential and 170 commercial natural gas-fueled HVAC and water heating units in existing private buildings to electric heat pumps by 2030, and 10,000 residential and 560 commercial units by 2045.**

California adopted SB 100 in 2018, making electrification an important strategy for reducing GHG emissions. SB 100 requires that all retail energy sold in California be 100 percent carbon-free by 2045. Therefore, electrifying a fossil fuel source such as a natural gas hot water heater means that piece of equipment will also be carbon-free by 2045. In addition to GHG reductions, removing natural gas from homes and businesses has been found to also improve indoor air quality by reducing atmospheric particulate matter less than 2.5 micrometers in size (PM<sub>2.5</sub>). When coupled with Measure EG-1.1, reducing direct emissions from natural gas consumption in existing buildings will result in buildings that run more efficiently and cleanly in terms of their energy use. Upgrading existing buildings, which use gas appliances to all-electric can be cost-effective in Burbank for both commercial and residential buildings especially when paired with solar photovoltaics.<sup>25</sup>



**Key Target Metrics:**

Electrify 10% of existing buildings by 2030 and 100% by 2045




**GHG Reduction Potential**

6,847 MT CO<sub>2</sub>e in 2030  
46,352 MT CO<sub>2</sub>e in 2045












25. <https://explorer.localenergycodes.com/>



ID	Actions	Co-benefits
BE-1.2a	Build upon the success of BWP’s retrofit package and rebate and incentive programs with an All-Electric Building Initiative, or tariffed on-bill financing program that expands rebates and incentives to electric heat-pump water heating, HVAC units, and electrical panel upgrades and expands the business retrofit packages to include electric heat-pump water heaters and HVAC units.	
BE-1.2b	<p>Partner with BWP to develop an education campaign to promote the All-Electric Building Initiative that builds upon the success of other BWP programs. The program would include:</p> <ul style="list-style-type: none"> <li>▪ Utility bill inserts to advertise the incentive programs and the cost and health benefits of electric appliances</li> <li>▪ Targeted outreach to builders and property managers with an informational brochure describing the financial benefits of replacing natural gas appliances with all electric appliance when they apply for permits</li> <li>▪ Targeted outreach to local property managers to address appliance energy use and benefits of all electric appliances in multi-family units</li> <li>▪ Provide informational webinars and an updated website to advertise and promote All-Electric Building Initiative rebates and incentives</li> </ul>	
BE-1.2c	Review incentives and rebates for procedural equity and develop a process so that existing and updated incentive programs continue to be equitably distributed to the community. Hurdles to equitable implementation could include credit checks, excessive procedural hurdles and lack of targeted outreach.	

**Co-benefit Symbol Key:**

					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings

ID	Actions	Co-benefits
BE-1.2d	Initiate separate application process for electric conversions in the building permit system to track the number of permitted natural gas fueled water heaters and HVAC equipment replaced with electric fueled equipment, as well as if this has resulted in a building becoming all-electric, with indication of whether or not BWP's incentive and rebate programs are being utilized to pay for new equipment.	
BE-1.2e	Partnership between Building and Safety and BWP to perform an electrification feasibility study to identify costs, benefits, potential hurdles, and policy strategies for electrifying existing buildings in Burbank. Strategies could include time of replacement, time of sale, and building performance policies.	
BE-1.2f	Work with a non-profit organization, such as Building Decarbonization Coalition or Rocky Mountain Institute, to develop a best practices model based on the progress electrifying existing buildings to significantly increase electrification post-2030.	

### Co-benefit Symbol Key:



Improved Public Health



Increased Resilience



Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems



Cost Savings



## Continue to increase building energy efficiency through BWP's rebate and incentive programs to reduce annual customer energy use by a collective 63 GWh by 2030.

The City of Burbank has achieved great success in reducing energy consumption on a per-service population basis through BWP's incentive programs and adoption of increasingly stringent Building Energy Efficiency Standards, also known as Title 24. While overall electricity consumption has generally increased over time with growth, the amount of energy consumed per person who lives and works in the City has decreased. In the years between the 2010 and 2019 Community GHG Inventories, electricity consumption on a per-service population basis (total City population plus jobs) has decreased by approximately 28 percent.<sup>26</sup> Measure BE-1.3 aims to continue and expand the currently available BWP rebates and incentives for energy efficiency to continue attaining increases in efficiency that result in community GHG reductions. BWP tracks the annual participation rate in energy efficiency programs and uses that information to estimate the kWh reductions attributable to the energy efficiency programs. BWP tracks the annual participation rate in energy efficiency programs and uses that information to estimate the kWh reductions attributable to the energy efficiency programs. Therefore, despite anticipated increases in total electricity use due to a potential increase in electric vehicle use and building electrification fuel switching, the success of this measure is trackable.



### Key Target Metrics:

Reduce annual customer energy use by a collective 63 GWh by 2030

### GHG Reduction Potential







17,549 MT CO<sub>2</sub>e in 2030

Not quantified for 2045









26. 2019 Community GHG Emissions Inventory. See Appendix C of the GGRP Update.



ID	Actions	Co-benefits
BE-1.3a	Implement a retrofit package tracking system for BWP’s energy efficiency retrofit incentive program, which includes tracking of the number of pre-defined packages installed.	
BE-1.3b	Continue to perform outreach for smart grid integration and promotion of smart grid-compatible technologies.	
BE-1.3c	Maintain BWP’s current rebate and incentive programs, ENERGY STAR appliance program, and Energy Conservation Programs; with continued public outreach and promotion.	
BE-1.3d	Continue collaboration between BWP and Burbank Unified School District to provide 6 <sup>th</sup> graders with a “Resource Action Kit,” which contains energy and water saving devices for the student to install in their home, and information to complete a home audit report. Use this opportunity to teach students about the energy-water nexus as well.	
BE-1.3e	Provide information to Community Development staff regarding annual energy savings from energy conservation programs for GGRP implementation tracking.	
BE-1.3f	Update the BWP Home Upgrade Program to include electrification with a focus on heat pump hot water heaters and HVAC systems, which can be up to 400% efficient.	

**Co-benefit Symbol Key:**

 <p>Improved Public Health</p>	 <p>Increased Resilience</p>	 <p>Reduced Reliance on Fossil Fuels</p>	 <p>Green Jobs</p>	 <p>Healthier Ecosystems</p>	 <p>Cost Savings</p>
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# EG-1: ELECTRICITY GENERATION

**EG-1.1** Goal to achieve 100% GHG-neutral electricity generation by 2040.





## EG-1.1

### Goal to achieve 100% GHG-neutral electricity generation by 2040.

Measure EG-1.1 is carried over from the 2013 GGRP, providing access to 100% GHG-neutral electricity will be essential to achieve carbon neutrality by 2045. Meeting the Renewable Portfolio Standard requirements of SB 100 requires strategic planning to increase renewable energy procurement without significantly increasing customer electricity rates. As such, BWP is challenged with the task of balancing the reduction of GHG emissions associated with the electricity supply, while not disproportionately impacting low-income households with higher energy costs. An equitable pathway towards exceeding the required 60 percent RPS in 2030 is not identified in this Measure; therefore, the Measure does not quantify GHG emissions reductions for the 2030 target year addressed in this analysis. However, implementation of Measure EG-1.1 will provide GHG reduction beyond 2030 and leading up to 2045. Additionally, the Actions included under the Measure serve to increase the local renewable energy supply and explore options for battery storage. These Actions will increase community resilience to power outages during extreme weather events, improving the City’s ability to adapt to future impacts of climate change.



#### Key Target Metrics:

Achieve 100% GHG-neutral electricity generation by 2040.







#### GHG Reduction Potential

Not quantified for 2030







Not quantified for 2045






ID	Actions	Co-benefits
EG-1.1a	Implement programs, similar to BWP's Green Choice Program, to facilitate access for customers to adopt more renewable energy.	
EG-1.1b	Conduct a feasibility study to understand potential for installation of renewable energy generation at BWP water facilities.	
EG-1.1c	Conduct analysis on risks and benefits associated with relying on battery storage to achieve carbon neutral electricity and grid resiliency goals and set a MW capacity goal for installed battery storage by 2030 and 2040 consistent with BWP rules and regulations.	
EG-1.1d	Conduct a feasibility study to identify locations in the City for installation of local renewable energy generation and energy storage projects.	
EG-1.1e	Direct BWP to continue to work with businesses (especially the studios) on partnerships designed to maximize the use of renewable energy including solar/ storage, appropriate tariff changes and microgrid opportunities.	
EG-1.1f	Develop a battery storage program in which BWP provides battery storage incentives in return for a commitment to operate (CTO) distributed battery storage projects for a set amount of time (i.e., 5-10 years), consistent with BWP rules and regulations.	

**Co-benefit Symbol Key:**


					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings

ID	Actions	Co-benefits
EG-1.1g	Identify grant funding opportunities to increase landfill gas capture rate at Burbank Landfill Site No. 3 to the maximum extent practicable.	
EG-1.1h	Install 5 MW of local solar capacity, utilizing parking structure roofs and buildings around City as means to increase load capacity, including in areas where high loads from electric vehicle charging is likely.	
EG-1.1i	Expand renewable energy generation at BWP facilities, with a goal of installing renewable energy generation at all feasible locations by 2040.	


**Co-benefit Symbol Key:**




Improved Public Health




Increased Resilience




Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems



Cost Savings

# T-1: REDUCE PASSENGER CAR VMT

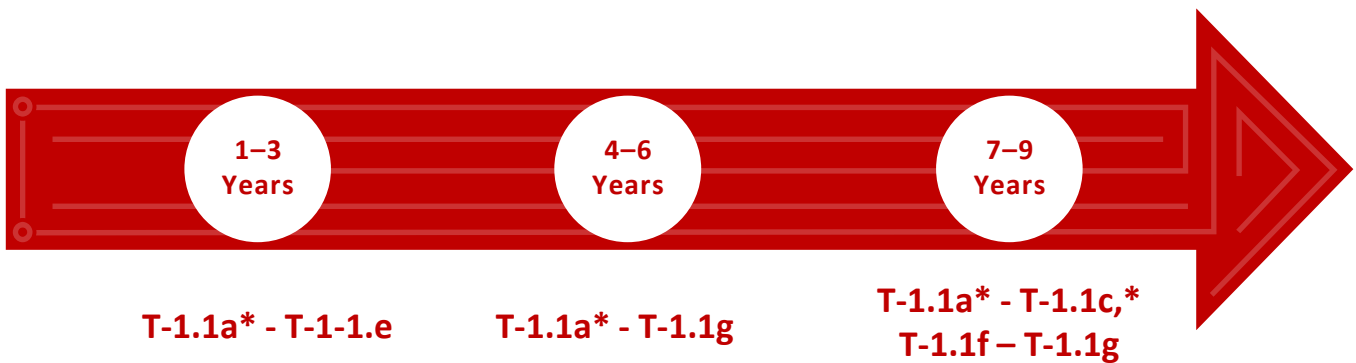
- T-1.1** Implement the 2020 Complete Our Streets Plan, increasing active transportation mode share 2% by 2030 and 3% by 2045.
- T-1.2** Provide clean, abundant, affordable and accessible public transit, with a zero-emissions bus fleet by 2030.





## Implement the 2020 Complete Our Streets Plan, increasing active transportation mode share 2% by 2030 and 3% by 2045.

The City’s Complete Our Streets Plan<sup>27</sup> (adopted June 16, 2020) aims to transform the Burbank2035 General Plan’s goals and policies into an actionable plan and includes specific goals from the Mobility and Land Use Elements that are relevant to complete streets. Policies are included throughout the Plans 10 primary goals that aim to increase or facilitate active transportation, while Goal 5 specifically supports bicycle and pedestrian mobility. The goals and policies included in the Complete Our Streets Plan strive to maximize safety, accessibility, connectivity, and education; establish policies that require new development to set aside land to accommodate bicycle and pedestrian networks; and implementing the Bicycle Master Plan<sup>28</sup> by maintaining and expanding the bicycle network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.



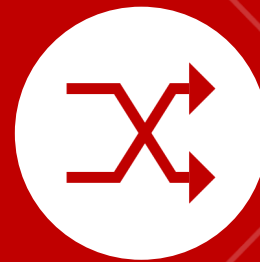
*\*Timeframes range, as outlined in the Complete Our Streets Plan.*

### Key Target Metrics:

Implement the Complete Our Streets Plan

### GHG Reduction Potential

941 MT CO<sub>2</sub>e in 2030  
1,566 MT CO<sub>2</sub>e in 2045











27. <https://www.burbankca.gov/web/community-development/complete-streets-plan>  
28. <https://www.burbankca.gov/documents/173607/240347/20210204-Bicycle-Master-Plan-001.pdf/53be8720-2d59-19ad-bd4a-168ac74d7d22?t=1612567201263>









ID	Actions	Co-benefits
T-1.1a	Implement all policy recommendations included in the Complete Our Streets Plan to improve pedestrian and bicycle networks and increase transit ridership based on the established timeframes.	
T-1.1b	Integrate the Complete Our Streets “Checklist for New Projects” into the City’s Development Review process and Capital Improvement Program to ensure new projects include Complete Our Streets measures.	
T-1.1c	Continually work to identify grant funding opportunities to implement Complete Our Streets projects included in the Complete Our Streets Plan.	
T-1.1d	Complete and implement the Citywide Safe Routes to School Plan consistent with the Complete Our Streets Plan upon identification of funding.	
T-1.1e	Develop and implement a bicycle safety program as part of the Citywide Safe Routes to School Plan focused on educating bicycle riders of all ages and skill levels to increase ridership by offering bicycle safety resources and classes.	

**Co-benefit Symbol Key:**

-   
 Improved Public Health
-   
 Increased Resilience
-   
 Reduced Reliance on Fossil Fuels
-   
 Green Jobs
-   
 Healthier Ecosystems
-   
 Cost Savings

ID	Actions	Co-benefits
T-1.1f	Evaluate and update the City’s existing Zoning Code, Transportation Demand Management Ordinance, and California Green Building Code to require the installation of bicycle parking areas in instances where off-street parking is required. Also, providing technical assistance to developers seeking to comply with these requirements.	
T-1.1g	Utilize performance measures included in the Complete Our Streets Plan to monitor and track realized mode shift from plan implementation.	

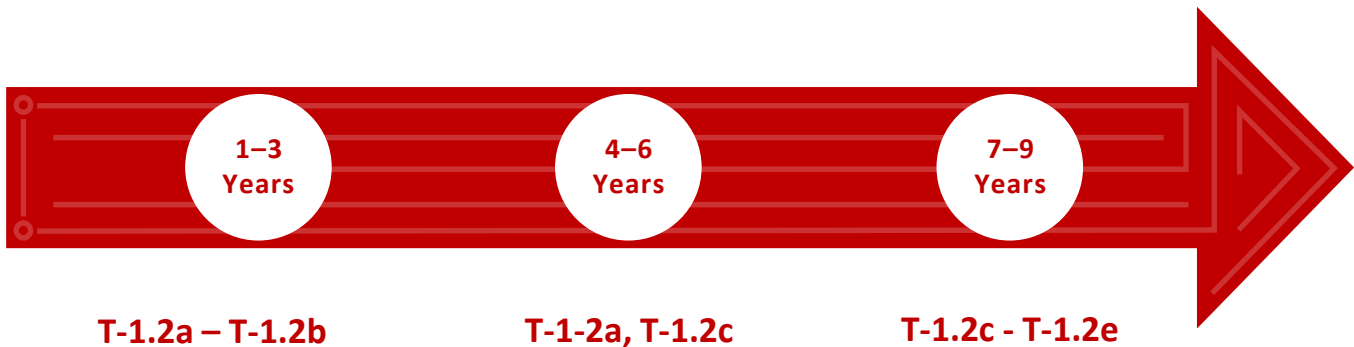
**Co-benefit Symbol Key:**

					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings



## Provide clean, abundant, affordable and accessible public transit, with a zero-emissions bus fleet by 2030.

The City operates its own small transit fleet, BurbankBus, which provides three fixed-line routes and paratransit options to connect to employment hubs and help fill gaps in LA Metro transit service in the City. The service is operated by the City, which includes a fare subsidy for eligible senior and disabled riders through the Burbank Pass Program. Measure T-1.2 aims to expand access to the BurbankBus service by accepting transit subsidies provided by LA Metro’s LIFE low-income EZ Pass and expand the Burbank Pass Program to fill gaps in LA Metro’s low-income subsidy programs, through Action T-1.2.a. The Measures also strives to improve first-last mile connectivity by adopting an ordinance that allows and manages shared-use mobility devices in the City, through Acton T-1.2.b.



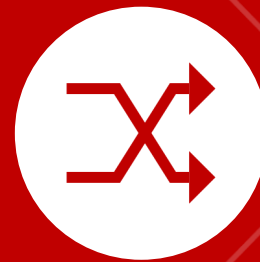
### Key Target Metrics:






Establish zero-emission bus fleet by 2030

### GHG Reduction Potential







Not Quantified for 2030

Not Quantified for 2045



ID	Actions	Co-benefits
T-1.2a	Work with Metro to expand use of Metro’s LIFE low-income EZ Pass transit subsidy by Burbank low-income households who ride BurbankBus and expand Burbank Pass program transit subsidy program to BurbankBus fixed-route service to cover gaps in the Metro LIFE program.	
T-1.2b	Adopt an ordinance to allow and manage shared-use mobility devices, including but not limited to e-scooters and bikes to facilitate increased ridership by overcoming the last mile access hurdles.	
T-1.2c	Apply for California Transit and Intercity Rail Capital Program (TIRCP), Low Carbon Transit Operations Program, or other Greenhouse Gas Reduction Fund grants, to facilitate electrification of bus fleet.	
T-1.2d	Use electric bus fleet to generate revenue through programs, such as the California’s Low Carbon Fuel Standards, to pay for increased bus service frequencies and/or other supportive infrastructure.	
T-1.2e	Electrify the Burbank Bus fleet in accordance with California Air Resources Board mandates and the City’s Transit Fleet Electrification Study.	

**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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# T-2: TRANSPORTATION DEMAND MANAGEMENT

**T-2.1** Continue Transportation Management Organization (TMO) Expansion, reaching 60% of employers by 2030 and 90% by 2045.

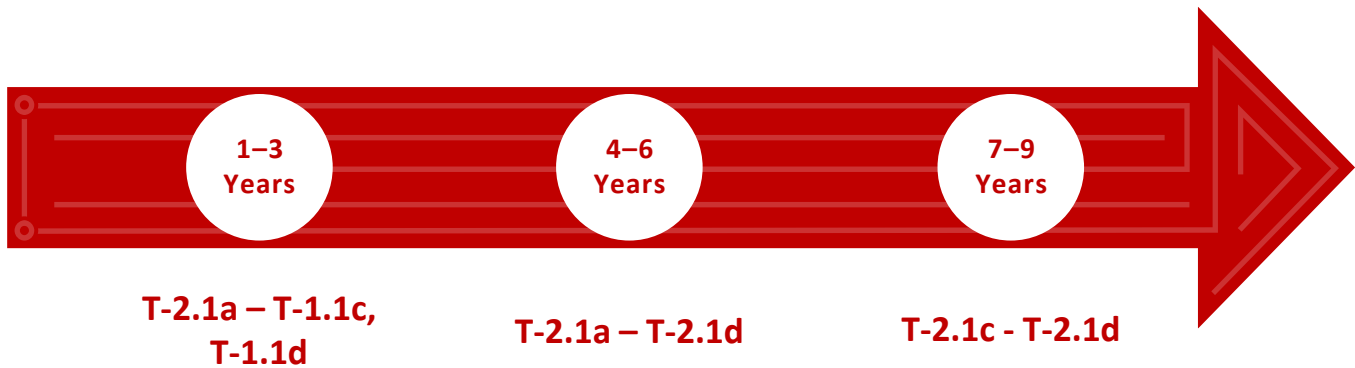
**T-2.1** Update the TMO program and ordinance to increase compliance with the City's 1.61 Average Vehicle Ridership (AVR) Goal to reduce employees commuting to Burbank via single occupancy vehicle. Require that 30% of TMO businesses achieve the 1.61 AVR target by 2030, and 60% by 2045.





## Continue Transportation Management Organization (TMO) Expansion, reaching 60% of employers by 2030 and 90% by 2045.

The Burbank Transportation Management Organization (TMO) is a private sector, non-profit organization formed to reduce congestion during peak-hours and help solve transportation problems by providing services directly to its members and their employees.<sup>29</sup> Currently, employers in Downtown Burbank or the Burbank Media District with 25 or more employees are required to reduce the number of employee vehicular trips that their businesses generate. As part of this measure, the City of Burbank will update the Burbank Center Plan and the Media District Specific Plan, adopt the proposed Golden State Specific Plan, and update the Plan Transportation Management Organization requirements to reflect TDM best practices so that the TMO expansion goals are achieved.



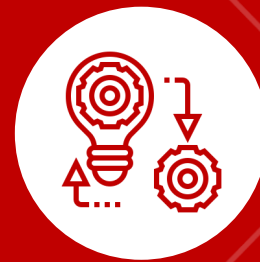
### Key Target Metrics:

Include 60% of employees in TMO by 2030 and 90% by 2045





### GHG Reduction Potential

Supportive for 2030

Supportive for 2045



29. <https://btmo.org/what-is-btmo/>

ID	Actions	Co-benefits
T-2.1a	Work with the Burbank TMO to update the TMO website annually to provide program information to current and potential members.	
T-2.1b	Work with the Burbank TMO to continue to implement TMO outreach strategy to increase membership and active participation in TMO programs.	
T-2.1c	Update the Burbank Center Plan and the Media District Specific Plan, adopt the proposed Golden State Specific Plan, and update the Plan Transportation Management Organization requirements to reflect TDM best practices. Collectively, these updates should evaluate which businesses are subject to TMO requirements, membership requirements and fees, TDM strategies offered by the TMO, reporting requirements and performance measures, and funding requirements. Utilize lessons learned from COVID-19 on transportation habits, impacts on transit, and potential hurdles and opportunities connected to these changes.	
T-2.1d	Expand geographic boundary of TMO to Golden State /Airport areas by 2025 as part of the Golden State Specific Plan, and citywide by 2035.	

**Co-benefit Symbol Key:**



Improved Public Health



Increased Resilience



Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems

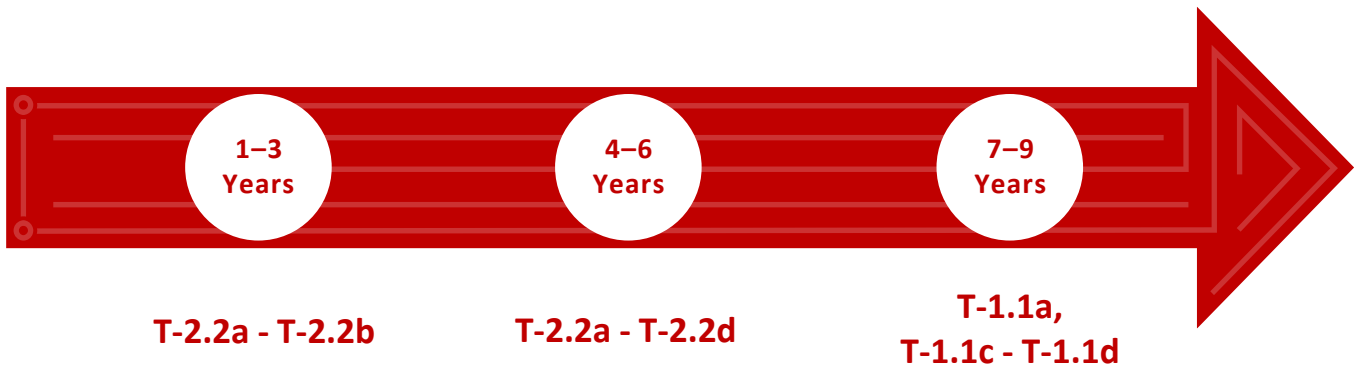


Cost Savings



**Update the TMO program and ordinance to increase compliance with the City’s 1.61 Average Vehicle Ridership (AVR) Goal to reduce employees commuting to Burbank via single occupancy vehicle. Require that 30% of TMO businesses achieve the 1.61 AVR target by 2030, and 60% by 2045.**

The intent of Measure T-2.2 is to amend the TDM ordinance so that the City can develop a fee structure that results in 30 percent of businesses subject to the TDM ordinance will reach the 1.61 Average Vehicle Ridership (AVR) target. This would allow the City to increase fees when the AVR target is not being met, as well as reduce fees if AVR targets are being exceeded. The fees collected would be used to fund TMO programs, increase transit service, and fund active transportation projects, which would supplement employers’ abilities to reduce vehicle trips. Additionally, Measure T-2.2 would work to increase access to broadband internet throughout the City, furthering the opportunities for employers to have employees telecommute and reduce commute vehicle trips.

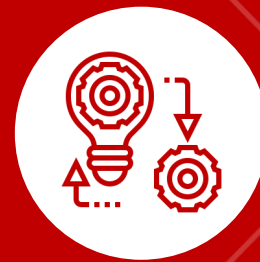


**Key Target Metrics:**





30% of TMO achieve 1.61 AVR target by 2030 and 60% by 2045

**GHG Reduction Potential**







7,682 MT CO<sub>2</sub>e in 2030  
8,759 MT CO<sub>2</sub>e in 2045





ID	Actions	Co-benefits
T-2.2.a	To enhance the Burbank community’s ability to telecommute, partner with telecom companies to perform a Broadband Access Study to identify areas of the City have limited access to broadband service due to infrastructure and financial limitations.	
T-2.2.b	Identify grant funding opportunities to help bridge the broadband access gap in the City by helping to fund installation of infrastructure or subsidize broadband service for low-income households.	
T-2.2.c	Update the Burbank Municipal Code to require that the City set TMO fees through its fee schedule rather than impose fees established by the TMO. Impose a tiered fee that decreases fees for businesses who achieve 1.61 AVR and increases fees for businesses who do not achieve 1.61 AVR. Raise and lower TMO fees based on the number of employers who achieve 1.61 AVR.	
T-2.1.e	Direct TMO fees towards expanded BurbankBus transit services, employee rideshare subsidies, and active transportation infrastructure.	

**Co-benefit Symbol Key:**

-   
 Improved Public Health
-   
 Increased Resilience
-   
 Reduced Reliance on Fossil Fuels
-   
 Green Jobs
-   
 Healthier Ecosystems
-   
 Cost Savings

# T-3: ZERO-EMISSION VEHICLES

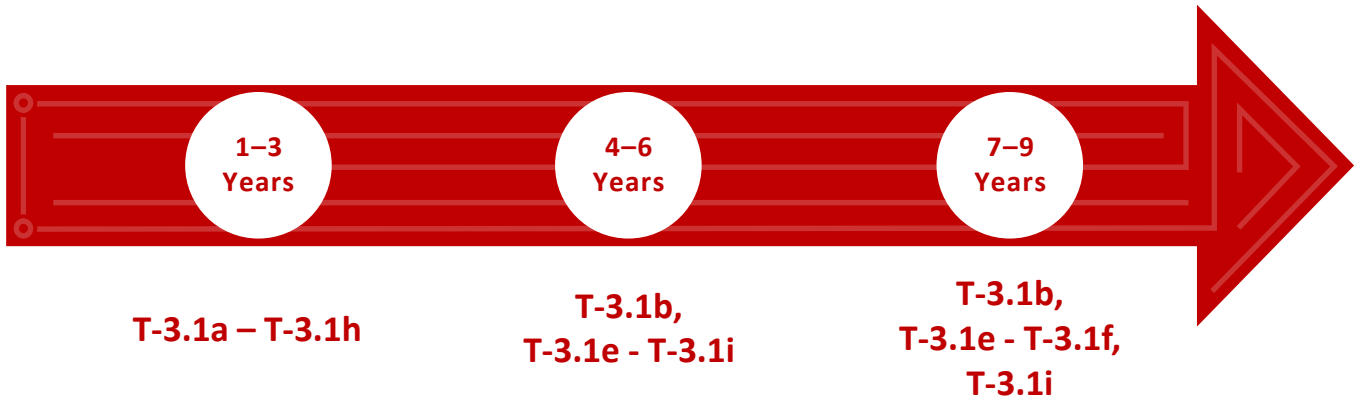
**T-3.1** Increase zero-emission vehicle adoption to 23% of all passenger vehicles by 2030 and 100% by 2045.





## Increase zero-emission vehicle adoption to 23% of all passenger vehicles by 2030 and 100% by 2045.

Zero emission vehicle (ZEV), such as electric vehicle (EV), adoption will continue to be driven at the State level in part by Executive Order (EO) N-79-20, which directs the California Air Resources Board (CARB) to develop regulations to achieve 100 percent zero-emission car sales in California by 2035 and zero-emission medium- or heavy-duty vehicles by 2045. Currently the most promising ZEV are electric; however, the City will continue to consider new technologies as they become available and will shift to alternative ZEV in the future, if feasible. A key component to facilitate the purchase of EVs over traditional fossil fuel-powered vehicles include access to reliable EV charging stations at home and work. For example, lack of residential access to EV charging infrastructure in multi-family units is a major hurdle to EV ownership. Implementation of BWP’s Transportation Electrification Plan to facilitate installation of 1,950 EV charge ports by 2030 through customer rebates and direct installation of charging stations will provide access to EV charging stations to those living, working, or visiting the City. Increased access to EV charge ports will reduce range anxiety and encourage a shift to EV ownership at a rate that achieves the goal of 23% zero-emission vehicle ownership in the City by 2030.








### Key Target Metrics:

Achieve 23% ZEV adoption by 2030 and 100% by 2045







### GHG Reduction Potential

38,179 MT CO<sub>2</sub>e in 2030  
238,989 MT CO<sub>2</sub>e in 2045







ID	Actions	Co-benefits
T-3.1a	Adopt an EV Charging Retrofits in Existing Commercial and Multifamily Buildings Reach Code requiring major retrofits, with either a building permit with square footage larger than 10,000 square feet or including modification of electric service panels, to meet CalGreen requirements for “EV Ready” charging spaces and infrastructure.	
T-3.1b	Coordinate with BWP to enhance promotion of public and private conversion to zero-emission vehicles; including use of City events, social media, and the City website to educate on benefits of zero-emission vehicles and available incentives.	
T-3.1c	Conduct a City Fleet Optimization Study to understand the potential to replace fossil-fuel powered vehicles with alternative fuel-powered vehicles as they are replaced, with a goal of replacing 25% of light-duty fleet vehicles by 2030.	
T-3.1d	Evaluate alternative options to gas powered landscape and forestry maintenance equipment when replacing City-owned equipment.	
T-3.1e	Implement the BWP Transportation Electrification Plan to facilitate installation of EV charge ports through customer rebates and direct installation of charging stations.	







**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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ID	Actions	Co-benefits
T-3.1f	Investigate opportunities to help fund additional EV charging infrastructure by leveraging public/private partnerships and ensuring the City is charging for EV infrastructure use at City-owned facilities.	
T-3.1g	Adopt an electric and alternative fueled vehicles and equipment purchasing policy for light-duty vehicles for all City departments, including BWP, allowing for exceptions for heavy-duty and emergency response vehicles.	
T-3.1h	Adopt an EV Reach Code requiring new commercial and multifamily construction to install the minimum number of EV charge ports based on Tier 2 CalGreen requirements (20% of total).	
T-3.1i	Update the BWP Transportation Electrification Plan by 2026 to reflect changes in State goals, consumer behavior, technology and lessons learned.	

**Co-benefit Symbol Key:**

					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings

# T-4: PARKING

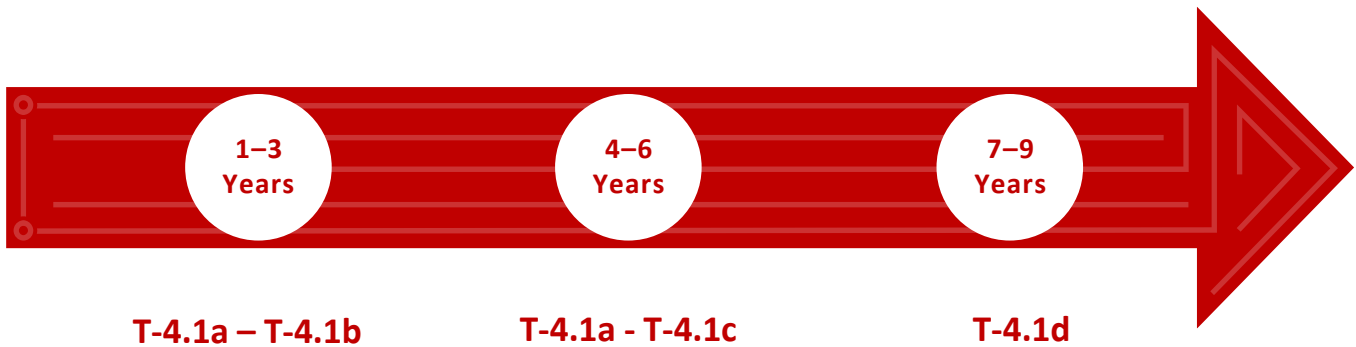
- T-4.1** Implement Parking Management as identified in the Burbank2035 General Plan Mobility Element and the City Council's Six Parking Management Principles.





## Implement Parking Management as identified in the Burbank2035 General Plan Mobility Element and the City Council’s Six Parking Management Principles.

In 2019 the City Council adopted Six Parking Management Principles, which include: *Protect Single Family Parking, Increase Parking Availability, Leverage Underused Private Parking, Regulate Street Parking and Public Parking Lots with Pricing, Reinvest Parking Revenue, and Tailor Implementation to Neighborhoods.* These principles aim to protect residential on-street parking and streamline the ability for employees and visitors to find parking. Managing parking will also incentivize the use of travel notes that reduce GHG emissions generated by transportation in the City. Parking management serves as the primary way to reduce the use of vehicles to reach their destination, reducing vehicle trips and reducing the need for cruising to find parking in congested areas. Measure T-4.1 strives to implement parking management throughout the City in a stepwise fashion between 2025 and 2040, starting with areas near transit stations and within specific plan areas.







### Key Target Metrics:

Implement Parking Management


### GHG Reduction Potential

968 MT CO<sub>2</sub>e in 2030  
7,334 MT CO<sub>2</sub>e in 2045




ID	Actions	Co-benefits
T-4.1a	Implement managed parking at the Downtown Burbank Metrolink Station, the Burbank Airport North Metrolink Station, and the Burbank Airport South Metrolink Station through parking pricing so that at least 20 percent of station parking supply is available for transit users at any time of the day.	
T-4.1b	<p>By 2025, implement the City’s 6 Parking Management Principles in the Burbank Center Plan area. This would include:</p> <ol style="list-style-type: none"> <li>1. Pricing all public parking (streets and structures) so that at least 20 percent of parking supply (one or two spaces per block) is available at any time of day</li> <li>2. Updating BMC Zoning rules to improve flexibility of off-street parking requirements for new development</li> </ol>	
T-4.1c	<p>By 2030, implement the City’s 6 Parking Management Principles in the Golden State Specific Plan area and Media District Specific Plan area. This would include:</p> <ol style="list-style-type: none"> <li>1. Pricing all public parking (streets and structures) so that at least 20 percent of parking supply (one or two spaces per block) is available at any time of day</li> <li>2. Updating BMC Zoning rules to improve flexibility of off-street parking requirements for new development</li> </ol>	
T-4.1d	<p>By 2040, implement the City’s 6 Parking Management Principles citywide. This would include:</p> <ol style="list-style-type: none"> <li>1. Pricing all public parking (streets and structures) so that at least 20 percent of parking supply (one or two spaces per block) is available at any time of day</li> <li>2. Updating BMC Zoning rules to improve flexibility of off-street parking requirements for new development</li> </ol>	


**Co-benefit Symbol Key:**




Improved Public Health




Increased Resilience




Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems



Cost Savings



# W-1: WATER-ENERGY NEXUS

**W-1.1** Reduce per capita water consumption from current levels of 132 GPCD (gallons per capita per day) to 124 GPCD by 2030 (a 6.1% reduction) and to 120.5 GPCD by 2045 (an 8.7% reduction).

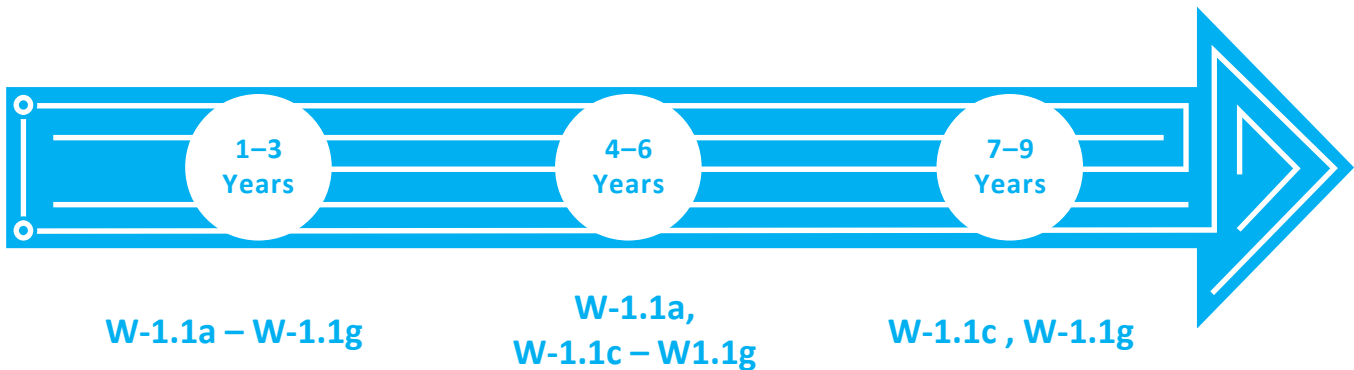




### W-1.1

**Reduce per capita water consumption from current levels of 132 GPCD (gallons per capita per day) to 124 GPCD by 2030 (a 6.1% reduction) and to 120.5 GPCD by 2045 (an 8.4% reduction).**

Water use generates GHG emissions through the consumption of energy to transport, treat, and distribute water. The interconnection between energy and water is considered the water-energy nexus. Reducing potable water use therefore, would also reduce energy use. Implementation of this measure will include continuing to enforce Model Water Efficient Landscape Ordinance (MWELO) requirements, continuing enforcement of large irrigation customers required to use recycled water; and coordinating with BWP to implement a public education campaign that highlights water conservation practices, with focus on low-income households with high utility bill burdens in the short term. Additionally, this measure includes a goal to modernize at least three City-owned irrigation controllers each year to reduce water use and maximize watering efficiencies, upgrading systems throughout the entire City by 2030.










#### Key Target Metrics:

Reduce per-capita water consumption to 124 GPCD by 2030 and to 120.5 by 2045







#### GHG Reduction Potential

405 MT CO<sub>2</sub>e in 2030  
Not Quantified for 2045



ID	Actions	Co-benefits
W-1.1.a	Continue to implement the UWMP water conservation programs.	
W-1.1.b	Continue to enforce MWELo requirements.	
W-1.1.c	Continue enforcement of large irrigation customers required to use recycled water.	
W-1.1.d	Coordinate with BWP to implement a public education campaign that highlights water conservation practices and promotes and provides demonstrations of graywater and rainwater systems, with focus on low-income households with high utility bill burdens.	
W-1.1.e	Install a new Advanced Metering Infrastructure (AMI) system in the next four years that will include easy-to-use web-based tools that allow customers to track and monitor water use. Promote the availability of Home Water Reports and provide materials on how to utilize the available information.	
W-1.1.f	Update BWP's 2010 Recycled Water Master Plan to identify success since 2010 and feasible opportunities for expanding recycled water use. Work with developers to expand recycled water system and develop a recycled water expansion program.	
W-1.1.g	Modernize at least three City-owned irrigation controllers each year to reduce water usage and maximize watering efficiencies, upgrading systems throughout the entire City by 2030.	

**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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# SW-1: ORGANIC WASTE DIVERSION

**SW-1.1** Meet SB 1383 organics and recycling requirements, reducing organic waste disposal 75% by 2025.

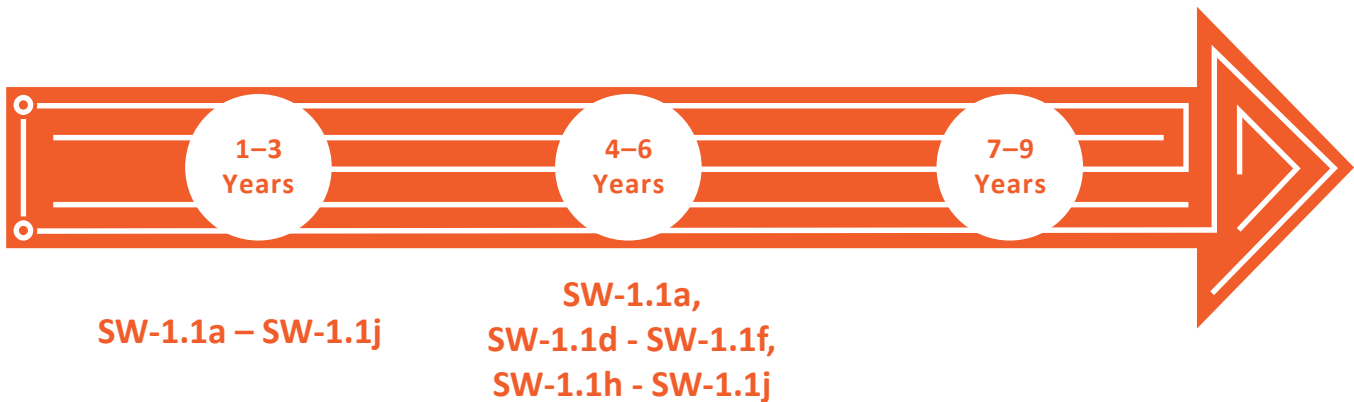






## Meet SB 1383 organics and recycling requirements, reducing organic waste disposal 75% by 2025.

Methane gas is released from the anaerobic or oxygen free decomposition of organic waste in landfills making landfills a significant source of GHG emissions. Diverting organic waste from landfills through the recovery of edible food for human consumption or through composting prevents these emissions. It is estimated that if action is not taken, then Burbank would send approximately 100,000 tons of waste to landfills annually by 2045. Full implementation of SB 1383 requirements will drastically reduce the volume of organics landfilled through prevention, recovery of edibles, and composting organic waste. This will have the additional unquantified benefits of maximizing the resources used to grow and transport food.



### Key Target Metrics:

Reduce organic waste disposal  
75% by 2025







### GHG Reduction Potential





11,040 MT CO<sub>2</sub>e in 2030  
11,692 MT CO<sub>2</sub>e in 2045









ID	Actions	Co-benefits
SW-1.1.a	Engage with all waste haulers operating within the City to discuss SB 1383 requirements for waste haulers (i.e., organics receptacles and labeling requirements).	
SW-1.1.b	Adopt procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.	
SW-1.1.c	Adopt an Edible Food Recovery Ordinance for edible food generators, food recovery services, or organization that are required to comply with SB 1383.	
SW-1.1.d	Partner with all City waste haulers, to provide organic waste collection and recycling services to all commercial and residential generators of organic waste.	
SW-1.1.e	Adopt an ordinance requiring all residential and commercial customers to subscribe to an organic waste collection program and/or report self-hauling or backhauling of organics.	
SW-1.1.f	Conduct a Feasibility Study and prepare an action plan to provide for edible food reuse infrastructure is sufficient to accept capacity needed to recover 20% of edible food disposed or identify proposed new or expanded food recovery capacity.	

**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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ID	Actions	Co-benefits
SW-1.1.g	Establish an education and outreach program for school children and adults around food waste prevention, nutrition education, and the importance of edible food recovery.	
SW-1.1.h	Establish an edible food recovery program to minimize food waste.	
SW-1.1.i	Adopt an ordinance or enforceable mechanism to regulate haulers collecting organic waste, including collection program requirements and identification of organic waste receiving facilities.	
SW-1.1.j	<p>Partner with all waste haulers within the City to:</p> <ul style="list-style-type: none"> <li>Provide for organic waste collection from mixed waste containers are transported to a high diversion organic waste processing facility</li> <li>Provide quarterly route reviews to identify prohibited contaminants potentially found in containers that are collected along route.</li> <li>Clearly label all new containers indicating which materials are accepted in each container, and by January 1, 2025 place or replace labels on all containers.</li> </ul>	

**Co-benefit Symbol Key:**

 Improved Public Health	 Increased Resilience	 Reduced Reliance on Fossil Fuels	 Green Jobs	 Healthier Ecosystems	 Cost Savings
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# CS-1: CARBON SEQUESTRATION

- CS-1.1** Plant 2,000 net new trees by 2030 and 5,000 net new trees by 2045 to sequester carbon and create urban shade to reduce the urban heat island effect.







**Plant 2,000 net new trees by 2030 and 5,000 net new trees by 2045 to sequester carbon and create urban shade to reduce the urban heat island effect.**

Burbank is expected to see increasing trends in extreme-heat days, as detailed further in the Adaptation Section. Extreme heat events will have greater effects on populations such as the homeless, aging adults, outdoor workers, people with chronic illnesses, and pregnant women. Homeless people may not have access to indoor spaces or even shade to escape these temperatures. To help sequester GHG emissions in the City and increase resilience to these events, there are long-term preventative strategies such as the strategic planting of trees and vegetation cover. The City of Burbank currently has approximately 33,000 trees within its borders. Due to the size constraints of planting areas that limit the growth of older trees in the City, the City replaces about up to 500 trees per year.<sup>30</sup> This effort works to preserve the urban forest canopy and continue to provide carbon sequestration value as the replaced trees mature.



**Key Target Metrics:**




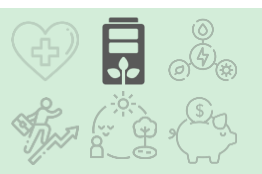


Plant 2,000 net new trees by 2030 and 5,000 net new trees by 2045

**GHG Reduction Potential**







71 MT CO<sub>2</sub>e in 2030  
177 MT CO<sub>2</sub>e in 2045



30. Information on the number of trees and tree replacement was obtained from conversation with the City of Burbank Parks and Recreation Department.

ID	Actions	Co-benefits
Action CS-1.1.a	Identify funding to expand BWP’s Shade Tree Program to include targeted outreach to multi-family and low-income housing.	
Action CS-1.1.b	Implement a tree removal permit fee, which provides funding for the City to plant a new tree for every tree removed from private property.	
Action CS-1.1.c	Adopt a Greenscaping Ordinance that has a street tree requirement for all zoning districts; has a shade tree requirement for new development; requires greening of parking lots; and increases permeable surfaces in new development.	
Action CS-1.1.d	Develop an Urban Forest Plan to identify City's potential capacity for new tree planting, identify a timeframe for implementation and provide a management plan for existing trees.	
Action CS-1.1.e	Adopt a standard policy and set of practices for expanding the urban tree canopy and placing vegetative barriers between busy roadways and developments to reduce exposure to air pollutants from traffic.	
Action CS-1.1.f	Conduct an urban canopy study and identify low income and/or disadvantaged communities with lower than average tree canopy coverage in order to prioritize planting in these areas to provide equitable access to the health and resiliency benefits of trees.	

### Co-benefit Symbol Key:

					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings

# CG-1: CITY GOVERNMENT

**CG-1.1** Complete annual progress reporting and a triennial GGRP review and update.

**CG-1.2** Retrofit all City Streetlights and Outdoor Lighting to Light-Emitting Diode (LED) by 2030.

**CG-1.3** Electrify 25% of existing City facilities by 2030 and 100% of existing City facilities, where electrification is practical and feasible, by 2045, as well as all newly constructed City buildings.

**CG-1.4** Implement a flexible employee commute program, with a target of having 25% of applicable City employees telecommuting by 2030.





## CG-1.1

### Complete annual progress reporting and a triennial GGRP review and update.

The GGRP is a living document that needs to be updated and refined as California’s regulatory landscape changes and new technologies become available. Regularly evaluating the success of the plan will allow the GGRP to continue to be used for CEQA streamlining purposes. To monitor and track implementation of the measures into the future, it will be essential to continue to regularly review the GGRP progress and update the plan over time. As outlined further in Section 5, *Implementation*, the community-wide GHG emissions inventory will be updated annually in CAPDash, an online tool that is publicly accessible. Additionally, the progress on GHG reduction measure implementation will also be reported annually in CAPDash, which will be publicly available online. Tracking the emission reductions and measure implementation progress provides a regular mechanism to track successes and find areas for improvements that will feed into the triennial GGRP Updates. If it is determined that specific measures are not successful, new or revised measures can be included in future updates to include best practices and meet the City’s long-term targets.



#### Key Target Metrics:

Complete annual progress reports and triennial GGRP updates







#### GHG Reduction Potential

Supportive for 2030







Supportive for 2045





ID	Actions	Co-benefits
CG-1.1.a	Update community-wide GHG emissions inventory annually.	
CG-1.1.b	Obtain annual progress updates from BWP on energy efficiency program implementation and city-wide energy consumption.	
CG-1.1.b	Establish reporting of annual volumes of landfill gas captured and methane fraction of landfill gas at Burbank Landfill Site No. 3 for better understanding of future landfill emissions.	
CG-1.1.c	Update progress on GHG Reduction Measures annually in reporting tool.	
CG-1.1.d	Regularly update the GGRP webpage to include updates on ordinances, programs, and policies implemented as part of the GGRP.	
CG-1.1.e	Earmark funding for triennial GGRP updates.	

**Co-benefit Symbol Key:**

 <p>Improved Public Health</p>	 <p>Increased Resilience</p>	 <p>Reduced Reliance on Fossil Fuels</p>	 <p>Green Jobs</p>	 <p>Healthier Ecosystems</p>	 <p>Cost Savings</p>
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## CG-1.2

### Retrofit all City Streetlights and Outdoor Lighting to Light-Emitting Diode (LED) by 2030.

The City of Burbank adopted a Streetlighting Master Plan in 2019 with a purpose of providing public roadway and related illumination to our customers in a safe, responsive, aesthetically-sensitive, and fiscally-sound manner that furthers the goals of the City.<sup>31</sup> This measure aims to implement this plan and also establish and implement a plan for converting outdoor lighting at all City facilities, City parking areas, and parks to light emitting diodes (LEDs). In general, LEDs last longer, are more durable, and offer comparable or better light quality than other types of lighting. According to the United States Department of Energy, by 2027, widespread use of LEDs could save about 348 terawatt hour (TWh) of electricity nationwide, which is the equivalent annual electrical output of 44 large electric power plants (1000 megawatts each), and a total savings of more than \$30 billion at today's electricity prices.<sup>32</sup>



#### Key Target Metrics:

Retrofit all street and outdoor lights to LEDs by 2030





#### GHG Reduction Potential

953 MT CO<sub>2</sub>e in 2030  
Not Quantified for 2045



31. [https://burbank.granicus.com/MetaViewer.php?view\\_id=2&clip\\_id=8743&meta\\_id=356281](https://burbank.granicus.com/MetaViewer.php?view_id=2&clip_id=8743&meta_id=356281)


32. <https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/led-lighting>

ID	Actions	Co-benefits
CG-1.2.a	Establish a plan for converting outdoor lighting at City facilities, City parking areas, and parks to LED.	
CG-1.2.b	Continue to implement 2019 Streetlighting Master Plan for conversion of existing High-Pressure Sodium streetlights to Light-emitting Diode (LED).	
CG-1.2.c	Continue with annual reporting of BWP’s streetlight replacements, with the number of replacements and estimated annual energy savings associated with replacements.	
CG-1.2.d	Implement plan for converting all outdoor lighting at City facilities, City parking areas, and parks to LED by 2030.	

**Co-benefit Symbol Key:**

  
Improved Public Health

  
Increased Resilience

  
Reduced Reliance on Fossil Fuels

  
Green Jobs

  
Healthier Ecosystems

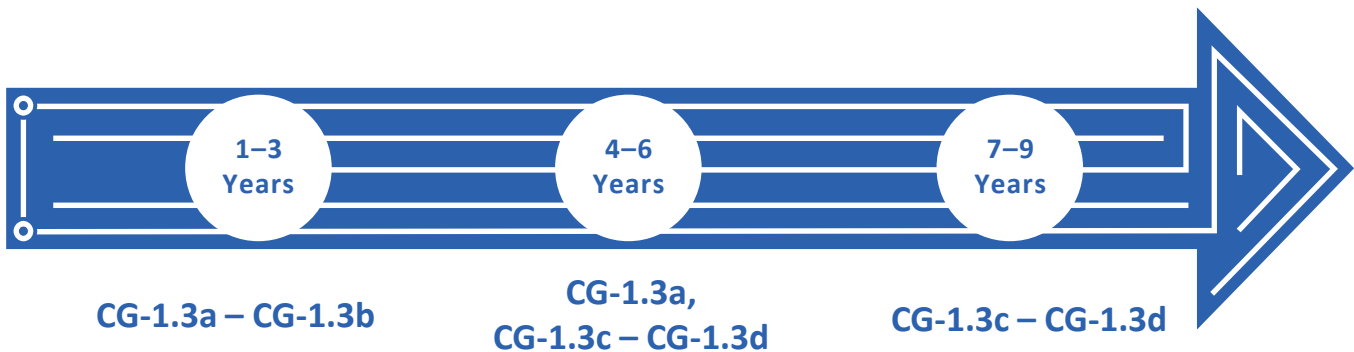
  
Cost Savings



### CG-1.3

**Electrify 25% of existing City facilities by 2030 and 100% of existing City facilities, where electrification is practical and feasible, by 2045, as well as all newly constructed City buildings.**

The City owns approximately 145 buildings total, 70 of which are considered major. This measure would be implemented through a series of steps, including a Public Works collaboration with Building and Safety to conduct an electrification opportunity assessment for all City buildings and facilities and establishing a replacement plan for replacing natural gas fueled equipment with electric. The next step will include establishing an electrification first policy in which natural gas fueled equipment at City facilities is replaced with electric equipment at time of replacement, and newly constructed City facilities and buildings are designed to be all-electric.<sup>33</sup> Switching to electricity helps avoid potential natural gas cost increases, which are expected to greatly outpace electricity increases. When it comes to new construction, all electric buildings are often less expensive to build and operate.<sup>34</sup> This measure also requires conducting a feasibility study to understand the cost and impacts of updating the thermal energy storage system as well installing photovoltaic at all City buildings where feasible to offset at least 80% of energy consumption. While this measure reduces emissions, it also demonstrates leadership at the City level and aims to educate and promote the benefits of retrofits, further encouraging community efforts.



#### Key Target Metrics:

Electrify 25% of existing construction by 2030 and 100% by 2045





#### GHG Reduction Potential

88 MT CO<sub>2</sub>e in 2030  
722 MT CO<sub>2</sub>e in 2045









33. <https://gridworks.org/initiatives/cagas-system-transition/>

34. <https://explorer.localenergycodes.com/>

ID	Actions	Co-benefits
CG-1.3.a	Partner with Building and Safety to conduct an electrification opportunity assessment for all City buildings and facilities and establish a replacement plan for replacing natural gas fueled equipment with electric.	
CG-1.3.b	Establish an electrification first policy in which natural gas fueled equipment at City facilities is replaced with electric equipment at time of replacement, and newly constructed City facilities and buildings are designed to be all-electric.	
CG-1.3.c	In partnership with BWP, install photovoltaic at all City buildings where feasible to offset at least 80% of energy consumption and use excess generation to contribute to City-wide renewable energy sources.	
CG-1.3.d	Identify and install battery energy storage systems at appropriate City facilities, and leverage projects to further promote benefits of distributed energy storage.	

### Co-benefit Symbol Key:

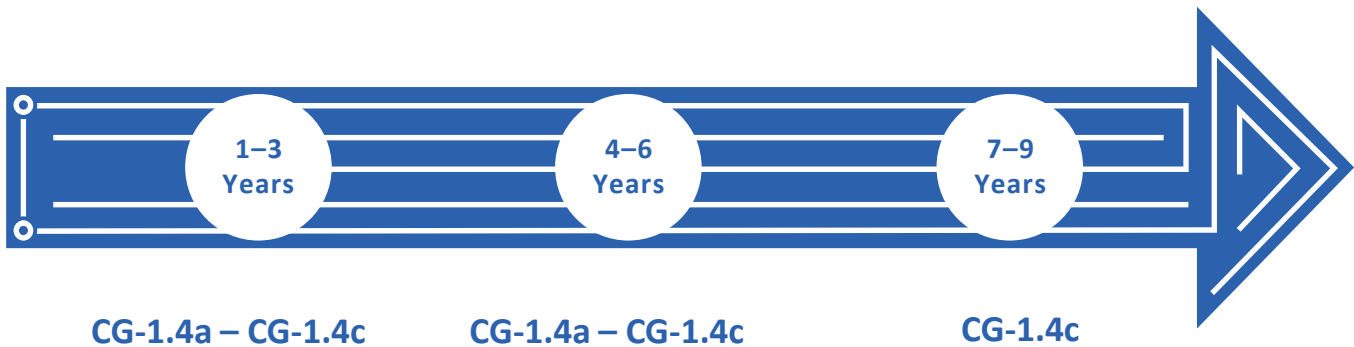
					
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings





## Implement a flexible employee commute program, with a target of having 25% of applicable City employees telecommuting by 2030.

The Covid-19 pandemic has drastically altered a variety of the ways we operate, including for some, how and if we commute to and from work. Measure CG-1.4 builds on this shift and aims to establish a flexible employee commute program for City staff with a target of having 25% of City employees staff time utilizing telecommuting by 2030. Implementation of this measure includes maintaining a subsidized transit commute program and expanding the employee carpool program to reduce employee commute miles in single occupancy vehicles (SOV). Based on an employee commute survey completed by City staff in 2019, 82 percent of employees primarily drove a SOV; nine percent carpooled; four percent used the Metrolink/rail; while the remaining six percent actively commuted, rode a motorcycle, took the bus, or used vanpool services. To reach the goal of the measure and decrease vehicle miles traveled (VMT), in SOVs, this measure also allow 25% of employees located at the City of Burbank to telecommute or utilize flexible schedules through 2030 to reduce travel time, VMT, and GHG emissions. Success for this measure will be determined via the annual employee commute survey that is completed per the requirements of the TMO.



### Key Target Metrics:




Implement a flexible employee commute program

### GHG Reduction Potential

181 MT CO<sub>2</sub>e in 2030

157 MT CO<sub>2</sub>e in 2045



ID	Actions	Co-benefits
Action CG-1.4.a	Maintain a subsidized transit commute program and expand the employee carpool program to reduce employee commute miles in single occupancy vehicles.	
Action CG-1.4.b	Expand employee use of carbon-free and low carbon transportation by providing education programs on the benefits of commute options including public transportation, EV/ZEV options, and vanpools.	
Action CG-1.4.c	Allow 25% of employees located at the City of Burbank to telecommute or utilize flexible schedules through 2030 to reduce travel time, VMT, and GHG emissions.	

### Co-benefit Symbol Key:



Improved Public Health



Increased Resilience



Reduced Reliance on Fossil Fuels



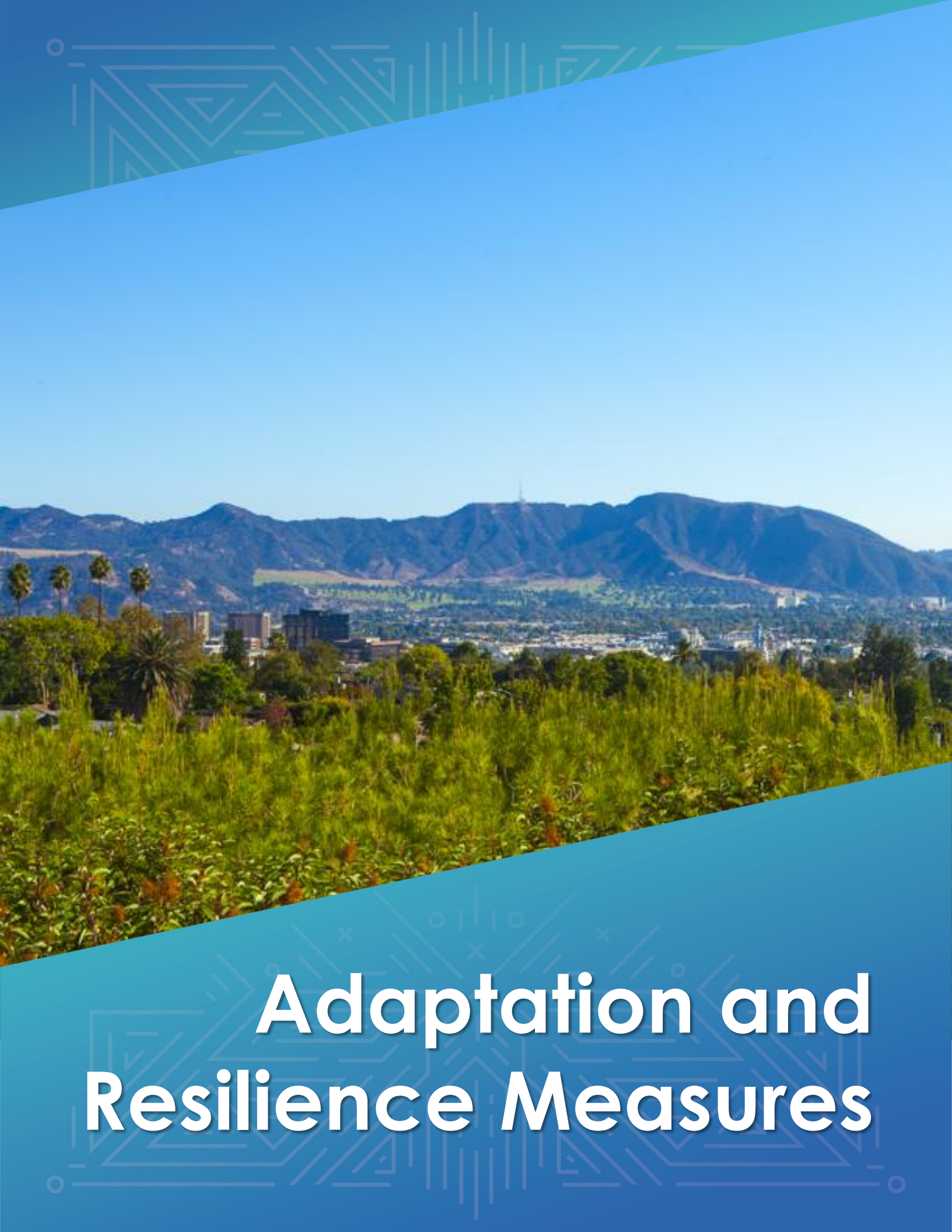
Green Jobs



Healthier Ecosystems



Cost Savings



# Adaptation and Resilience Measures

# Climate Vulnerability and Adaptation

The current concentration of GHG emissions in the atmosphere will continue to impact the climate and the City of Burbank even if emission generating sources such as transportation and industry stopped emitting today. In addition to mitigating the impacts of climate change through increased resilience, the City recognizes that adapting to potential impacts from the changing climate is also an essential component of climate action planning. This is especially crucial because research suggests that disadvantaged communities are the most vulnerable and least likely to have the ability to adapt to the changing climate.<sup>35</sup> This is due in part because disadvantaged communities are often politically, socially, and economically marginalized, which increases their vulnerability to our changing climate. Burbank currently has eight census tracts that are designated as disadvantaged communities.<sup>36</sup> Therefore, equitable adaptive measures (A-1.1 – A.1-3) have been developed and vetted by various stakeholders, including City staff, the Sustainable Commission, and community members, to further protect Burbank and the most vulnerable from the impacts of climate change. Measures A-1.1 – A-1.3 are discussed in detail on the following pages.

## Resilience

Resilience is defined as the ability to recover quickly and adapt to new, unique, or difficult situations. In general, California has proven to be resilient and communities as well as individual residents throughout the State take steps to enhance resilience by protecting and repairing

hillsides to reduce fire risk and damage, exploring and implementing large scale renewable energy projects, and investing in technologies of the future. As mentioned in Section 1, *Introduction*, risks of climate change in the City include increasing temperatures, decreased rainfall, and more frequent heat waves. Public health may be negatively impacted as a result of these changing environmental conditions including extreme weather events, changes in temperature and rainfall that decreases water supply, worsening air quality, and increases in allergens and air pollutants.<sup>37</sup>

These impacts will have inequitable effects on the City's residents, business owners, and visitors; infrastructure; environment; and economy. Being resilient will require the City to adapt to these vulnerabilities and continue to operate in a sustainable environment with a healthy economy and an emphasis on protecting those who may face the greatest impacts.

## Disadvantaged Communities

Disadvantaged communities are defined as the top 25 percent scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.

35. <https://www.carbonbrief.org/mapped-how-climate-change-disproportionately-affects-womens-health>

36. <https://oehha.ca.gov/calenviroscreen/sb535>

37. [https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-human-health\\_.html](https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-human-health_.html)





Although the climate is changing, we can actively make a difference and work collectively to reduce the potential worst-case scenario impacts of climate change and the inequity associated with those impacts while also preparing for the realities of our future. However, it will take preparation and conscientious change to make sure the community is prepared for those impacts.

## Increasing Adaptive Capacity and Climate Change Resilience

This GGRP Update embraces an equitable transition towards a future that is resilient for all and includes measures and actions that focus on the aspects of resilience and adaptation that are generally excluded from specific GHG emissions

reduction strategies (Section 3), with an emphasis on increasing social justice. Although resilience and adaptation measures do not directly reduce GHG emissions, they are included in the GGRP Update to bolster the community's resilience and increase the City's adaptive capacity. The measures in this section are abbreviated with an "A" for adaptation and should be read the same way as the GHG reduction strategies in Section 3. The measures in this section include partnering with Ready LA County to educate the community about heat exposure and identifying low-cost mechanisms to reduce impacts of extreme heat on the community; completing and implementing a robust citywide Vulnerability Assessment and Adaptation Plan; and evaluating/maintaining biodiversity in the City.



# A-1: ADAPTATION

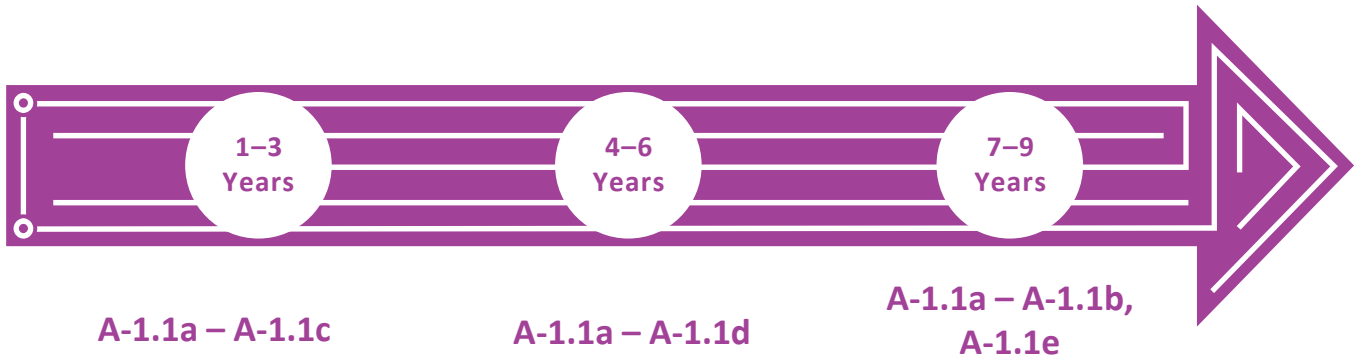
- A-1.1** Partner with Ready LA County to educate the community about the dangers of heat exposure and identify low-cost mechanisms to reduce impacts of extreme heat on the community.
- CG-1.2** Retrofit all City Streetlights and Outdoor Lighting to Light-Emitting Diode (LED) by 2030.
- A-1.2** Complete and implement a robust citywide Vulnerability Assessment and Adaptation Plan.
- A-1.3** Evaluate biodiversity in the City as well as policies/programs to maintain or increase native species.





## Partner with Ready LA County to educate the community about the dangers of heat exposure and identify low-cost mechanisms to reduce impacts of extreme heat on the community.

Extreme heat is projected to continue increasing throughout California due to climate change, according to the State’s climate projections.<sup>38</sup> This means more extreme heat days, longer heat waves, warmer nights, and increased stress on our water resources and energy systems. Public health is a major concern as extreme heat increases throughout the region. The people most at-risk include small children, the elderly, low-income populations, outdoor workers, and those with pre-existing conditions and chronic diseases, such as asthma, lung disease, heart disease, renal disease, diabetes, and obesity.<sup>39</sup> Prolonged exposure to extreme heat is dangerous, and can cause serious illness or even death.<sup>40</sup> Therefore, providing current and updated information to educate the community around the dangers of heat exposure is essential. As part of this measure, Burbank will review and update the City’s Emergency Preparedness webpage; work with Ready LA County to establish a multi-lingual outreach campaign to provide the community with information regarding the symptoms of extreme heat exposure; identify low-cost mechanisms to reduce the impacts of extreme heat; and identify new cooling centers that are distributed throughout the City .



### Key Target Metrics:

Establish partnership with Ready LA County.

### GHG Reduction Potential

Supportive for 2030  
Supportive for 2045



38. <https://cal-adapt.org/>

39. [https://www.cdc.gov/climateandhealth/pubs/extreme-heat-final\\_508.pdf](https://www.cdc.gov/climateandhealth/pubs/extreme-heat-final_508.pdf)

40. <https://www.cdc.gov/disasters/extremeheat/warning.html>

## A-1.1: Partner with Ready LA County to educate the community about the dangers of heat exposure and identify low-cost mechanisms to reduce impacts of extreme heat on the community.

ID	Actions	Co-benefits
A-1.1a	Review and update the City’s Emergency Preparedness webpage to reflect ways to prepare for events that may be likely to increase due to climate change.	
A-1.1b	Work with Ready LA County to develop and implement an outreach campaign to provide members of the community with information regarding the symptoms of extreme heat exposure and how to reduce risk in English, Spanish, and Armenian.	
A-1.1c	Identify low-cost mechanisms (e.g., planting trees around homes and businesses and/or increasing energy efficiency) to reduce the impact of extreme heat on the community, especially on the most vulnerable members of society (i.e., children, the elderly, economically disadvantaged groups, and those with chronic health conditions made worse by heat exposure), and review grant opportunities to fund and implement.	
A-1.1d	Identify three new community locations that are either owned by the City or a trusted private entity that can serve as shelter, evacuation, and/or clean air centers for future climate emergency events distributed throughout the City to ensure that those most vulnerable have easy access.	

### Co-benefit Symbol Key:



Improved Public Health



Increased Resilience



Reduced Reliance on Fossil Fuels



Green Jobs



Healthier Ecosystems

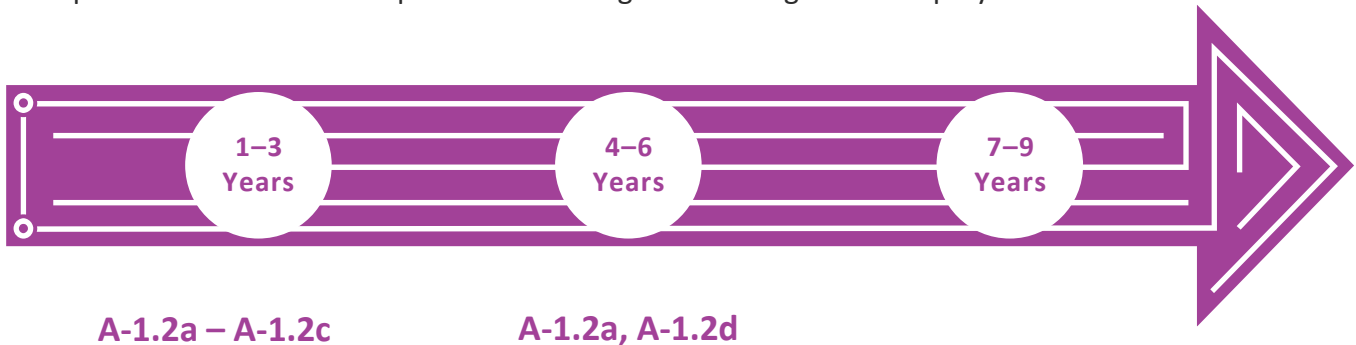


Cost Savings



## Complete and implement a robust citywide Vulnerability Assessment and Adaptation Plan.

Vulnerability to climate change refers to the degree to which a system is susceptible to or unable to cope with the adverse impacts of climate change. Burbank, like many other cities across California, will be exposed to a variety of unavoidable climate change hazards. It is anticipated that Burbank will experience more droughts and intense rains, as well as more frequent and severe heat waves. However, exposure to these hazards does not mean that all members of the community will be impacted or affected in the same way. Several factors, including age and socioeconomic status, will determine the degree of impact each person will experience. To better understand how climate-related hazards may impact the community, a citywide climate Vulnerability Assessment and Adaptation Plan should be completed and include an evaluation of the following components: exposure to climate change hazards, sensitivity to hazards, potential climate change impacts, and risks, as well as opportunities to adapt to the changing climate. Implementation of this measure will begin by partnering with the Burbank Fire Department to review and update the Local Hazard Mitigation Plan and then the Vulnerability Assessment and Adaptation Plan will be completed upon identification and acquisition of grant funding. Once adopted, the Vulnerability Assessment and Adaptation Plan would be implemented through the oversight of an equity committee.



### Key Target Metrics:

Identify and complete grant application;  
Complete a Vulnerability Assessment and Adaptation Plan

### GHG Reduction Potential

Supportive for 2030  
Supportive for 2045



## A-1.2: Complete and implement a robust citywide Vulnerability Assessment and Adaptation Plan.

ID	Actions	Co-benefits
A-1.2a	Work with the Burbank Fire Department to review and update the Local Hazard Mitigation Plan to confirm that it aligns with the Federal requirements, including identification of hazards and a climate risk assessment.	
A-1.2b	Establish or contract with a grant team tasked with Identifying and applying for grant funding opportunities and/or earmark additional funding opportunities to complete and implement a robust city-wide Vulnerability Assessment and Adaptation Plan.	
A-1.2c	Provide information on the City's website about updated climate vulnerability information and information on how the community can increase their adaptive capacity.	
A-1.2d	Upon acquisition of funding, complete a Vulnerability Assessment and Adaptation Plan that focuses on the City's most vulnerable communities and establishes specific goals to reduce the vulnerability of those most susceptible to the impacts of climate change.	
A-1.2e	Implement the Vulnerability Assessment and Adaptation Plan and establish an equity committee to steer the implementation in a direction that continues to make an equitable impact in the community.	

### Co-benefit Symbol Key:

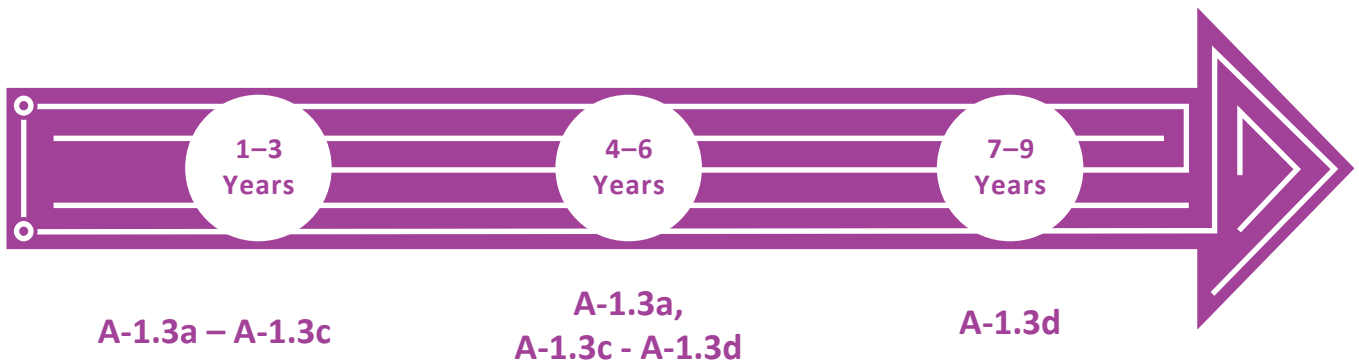
Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings





## Develop a mechanism to evaluate biodiversity in the City as well as policies/programs to maintain or increase native species.

Los Angeles County is located in a global biodiversity hotspot, which is defined as having at least 1,500 endemic vascular plants and 30 percent or less of its original natural vegetation.<sup>41</sup> Currently, Los Angeles County is home to more than 4,000 distinct species of plants and animals, including 52 endangered species — more than any county outside of Hawaii.<sup>42</sup> Biological biodiversity refers to the variety of life on Earth at all levels, from genes to ecosystems, and can encompass the evolutionary, ecological, and cultural processes that sustain life.<sup>43</sup> Unfortunately, climate change is anticipated to affect important environmental factors that support the region’s ecosystems. Therefore, it is essential to protect this diversity. Researchers at the University of California, Los Angeles (UCLA) created the Biodiversity Atlas of Los Angeles, which is an ongoing project developed by the UCLA Department of Geography and supported by the UCLA Sustainable LA Grand Challenge. As part of this measure, the City of Burbank would seek to partner with researchers and/or students at UCLA to utilize the Biodiversity Atlas of Los Angeles to understand best practices on how to track, interpret, update, and maintain data associated with biodiversity throughout the City. Additionally, this measure directs the City to work with Trails LA County and/or the Stough Canyon Nature Center to design and implement a multi-lingual program that invites all residents to visit the City’s local natural ecosystems.



### Key Target Metrics:

Establish a partnership with UCLA

### GHG Reduction Potential

Supportive for 2030

Supportive for 2045



41. <https://www.conservation.org/priorities/biodiversity-hotspots>  
42. <https://newsroom.ucla.edu/releases/la-county-biodiversity-atlas>  
43. <https://www.amnh.org/research/center-for-biodiversity-conservation/what-is-biodiversity>

### E-1.3: Evaluate biodiversity in the City and establish policies/programs to maintain or increase native species.

ID	Actions	Co-benefits
A-1.3a	Seek out partnership opportunities with researchers and/or students at the University of California, Los Angeles (UCLA) to utilize the Biodiversity Atlas of Los Angeles to understand best practices on how to track, interpret, update, and maintain data associated with biodiversity throughout the City.	
A-1.3b	Provide a direct link on the City’s website to the Biodiversity Atlas of Los Angeles in addition to any updated biodiversity inventories, which should be completed regularly. In addition, provide an avenue for citizen scientists to participate in reporting and tracking of species, when possible.	
A-1.3c	Work with Trails LA County and/or the Stough Canyon Nature Center to design and implement a program that invites all residents to visit the local natural ecosystems and utilize the local hiking trails, that also provides a multi-lingual educational component, with an emphasis on low-income and disadvantaged community members.	
A-1.3d	Review and identify funding opportunities to update and maintain a tracking mechanism to regularly evaluate biodiversity in the City.	

#### Co-benefit Symbol Key:

Improved Public Health	Increased Resilience	Reduced Reliance on Fossil Fuels	Green Jobs	Healthier Ecosystems	Cost Savings





# Implementation and Monitoring



# Implementation and Monitoring

This GGRP Update will serve as the Burbank’s updated roadmap to achieve the City’s 2030<sup>44</sup> target and State mandated goal of 40 percent below 1990 levels by 2030, with the ultimate goal of achieving carbon neutrality by 2045. While substantial evidence suggests that the emission reduction measures outlined in this Plan will achieve the City’s 2030 targets, uncertainty increases over time (see Appendix C for a discussion on the substantial evidence used to quantify the emission reductions attributable to each measure). The adoption rates of each measure and action, costs of technology, legislative environment, and benefits assumed in this report will continue to evolve over time. Therefore, this GGRP Update should be viewed as a strategic framework that will be reevaluated on a tri-annual basis. This section outlines how the City will implement the actions included in the GGRP Update, monitor progress, and prepare updates over time.

## Implementation

Full implementation of the City’s GGRP Update will require investments on the part of the City, local households and property owners, and commercial businesses. In most cases, the expenditures will not only help to reduce GHG emissions but will also bring other valuable co-benefits as described in Section 3. Some expenditures will not represent net cost increases, but instead will involve substituting investments to GHG emissions reducing alternatives for equipment, materials, and technologies that would otherwise have been made on less climate-friendly options. For example, residents and businesses are

encouraged to make investments in water and energy conservation improvements, for which the initial expenditure on the improvements will be offset by long-term savings from reduced water or energy usage. The benefits may also provide additional, unquantified improved resilience and operational benefits. As part of this GGRP Update, existing funding and financing mechanisms that may support measure implementation for a prioritized list of three GHG emission reduction themes to meeting the established emission reduction target were established.

## Team Burbank

The City of Burbank recognizes that everyone has a role in reducing the impacts of climate change and meeting the State goals and City targets for GHG emission reductions. It is imperative that we all actively participate in the process and aim to reduce our fair share of emissions. At the City level, the Community Development Department led the GGRP Update; however, during the process, all City departments, including Public Works, Parks and Recreation, Burbank Water and Power, Information Technology, City Manager’s Office, and the Fire Department were invited to the table to discuss the findings of the updated inventory, review and refine emission reduction measures, and provide input on the final document (see the Introduction for a summary on outreach events and stakeholder meetings that were held as part of the GGRP Update). This ongoing involvement and collaboration was essential to establishing a successful and implementable Plan.

The GGRP Update builds off of the success from the original GGRP and focuses on making the next set of changes, infrastructure investments, and policy directives that will allow Burbank to transition to carbon neutrality. Making meaningful progress towards reducing our GHG emissions starts with City

44. As mentioned in the Section 2, *Inventory, Forecast, and Targets*, to reduce GHG emissions to 40 percent below 1990 levels in accordance with SB 32, the City of Burbank established a GHG reduction target of 55 percent below 2010 GHG emission levels.

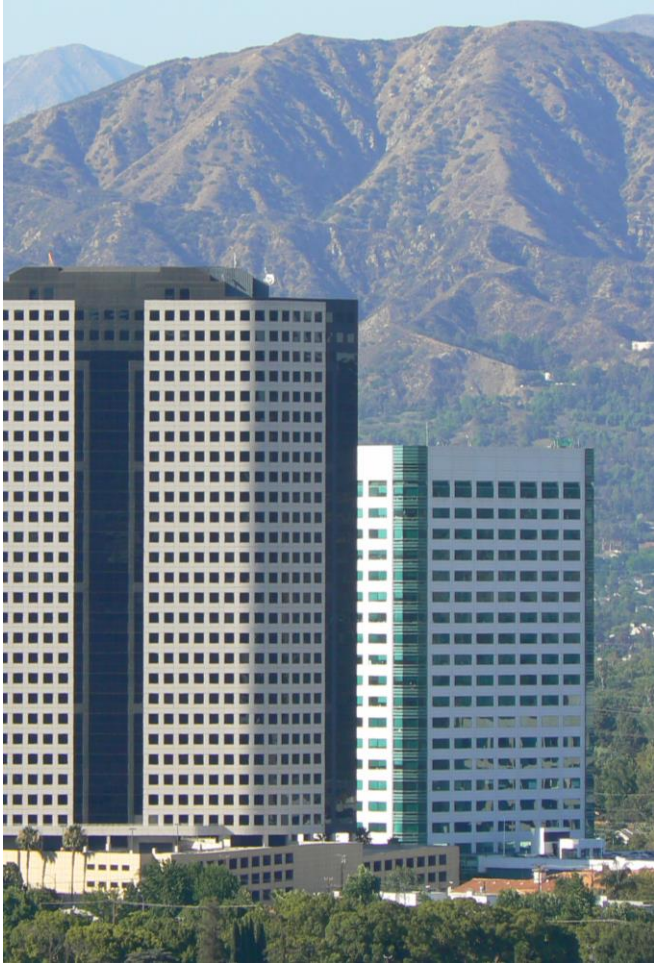


leadership, through policies, education, ordinances, and investments that act as catalysts for change throughout the wider community. As such, the City can update building codes, provide electric vehicle charging infrastructure and designate bike lanes, but it is up to the broader community to embrace these new services and technologies and gain the benefits outlined in this plan. Community partners can then support these policies with incentives and programs and businesses can leverage these policies to provide new services and adopt new practices. Finally, residents that have been provided with the incentives and education, can adapt behavior to lower GHG emissions communitywide. As policies and programs are developed and infrastructure is constructed, City staff will work to engage the community on progress and opportunities for improvement. We're excited to offer the community new programs that will help meet the GHG emissions reduction goals.

## Funding Strategy and Financing Approaches

As part of this GGRP Update, funding and financing mechanisms that can support implementation for were identified to help the City meet the established emissions reduction targets outlined in the *Inventory, Forecast, and Targets* Section. Cities around the world already face challenges in meeting community's needs for investment in many types of critical infrastructure and programs. Therefore, this analysis examines approaches that go beyond the use of General Fund monies to pay for climate-related infrastructure as funding and financing from beyond municipal sources is central to unlocking investments that generate benefits for a wide group of stakeholders in Burbank. Funding and financing strategies that go beyond publicly-led approaches may also reduce the burden on low-income residents to fund investments that broadly



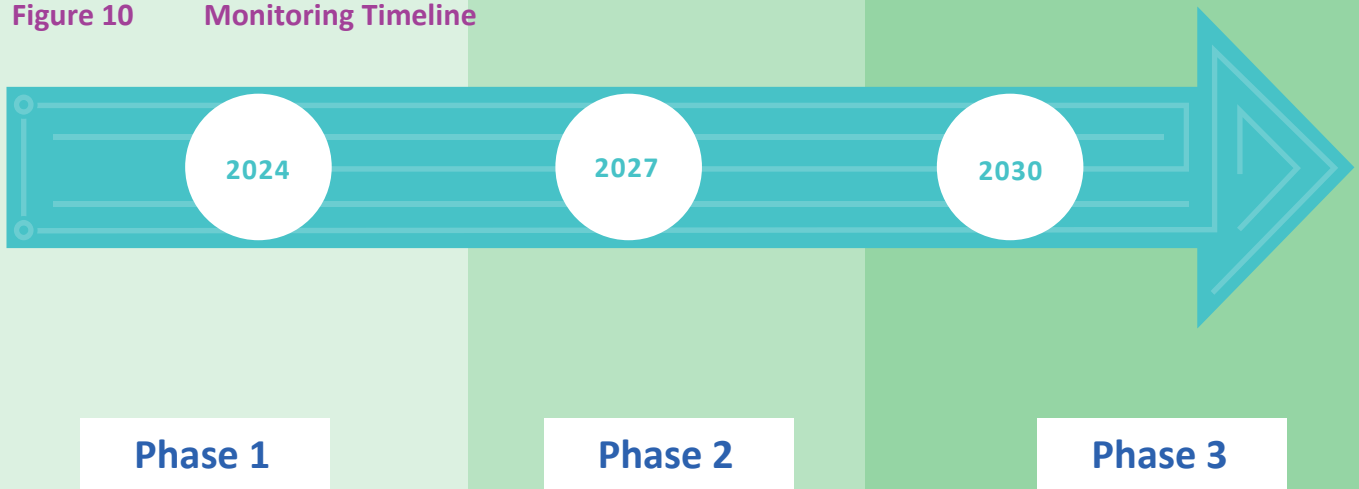


support all residents and businesses in Burbank and beyond. See Table 9 for a funding summary and Appendix E for specific details on funding mechanisms. Also shown in Table 9 is a high-level cost estimate with an approximate price range to implement each action over the next decade based on a conservative estimate.

### Monitoring Timeframe

As part of this GGRP Update, the City will complete an annual progress report using CAPDash as well as a triennial GGRP review and update. The timeline in Figure 10 shows the triennial update schedule, with a phased approach to measure implementation. The annual progress reports will include calculating an annual community-wide GHG emissions inventory in CAPDash, as well as updating the progress of the emission reduction measures in the tool. Monitoring will be completed by the “Chief Reminding Officers” (CRO) embedded within each departments and data will be shared with the City Sustainability Officer. These CROs would have the tools necessary to monitor and track the implementation of the measures that their department is responsible for and would be supported by a Climate Change Task force that guides and oversees the process.

Figure 10 Monitoring Timeline







In order to achieve the 2030 GHG emissions reductions targets discussed in Section 3, Burbank will need to begin implementing the measures and actions as soon as possible to make real progress over the next decade. Therefore, the GGRP Update takes a phased approach to implementation, beginning with Phase 1, which will occur in the short-term over the next three years (2021 – 2024). Phase 2 would include implementation of the mid-term measures, while Phase 3 would include implementation of the longer-term measures, that are anticipated to occur after feasibility studies are complete and initial measures are implemented. If the actions identified in the GGRP Update to meet the 2030 GHG emissions reduction milestone goal are not implemented, it is likely additional actions will need to be developed. The longer an action is delayed, the more significant actions need to be taken to achieve the longer-term GHG emissions reduction targets. Some actions such as adopting ordinances or resolutions to establish an

electrification reach code can be done on a short timetable; while others, such as implementation of the full Complete Our Streets Plan will require longer timelines for both rollout of the infrastructure and use by the community.

### CAPDash

CAPDash is a web-based dashboard developed by Rincon Consultants, Inc. that allows Burbank to track the annual emission reductions achieved through implementation of each Measure and meet the requirements of CEQA Section 15183.5(b). The City will conduct annual implementation monitoring of the GHG emissions reduction measures. The process for monitoring and quantifying measure implementation status relies on key target metrics identified for each of the GGRP Update measures and actions. By committing to annual monitoring implementation progress and adjusting where necessary,



Burbank will rise to meet the local and global imperative of reducing GHG emissions. In the process of meeting that challenge, we will benefit from the supplemental health, economic, resilience, and other co-benefits of the GHG emissions reduction measures. This game plan marks another major milestone in the City's commitment to a sustainable future.

## Next Steps

The City of Burbank takes pride in tracking the implementation of their long-term emission reduction plans, as evidenced by completion of the Score Card in 2019 and this GGRP Update, which demonstrates that the City has exceeded its 2020 emission reduction goal. Successful implementation of a long-range planning document requires detailed tracking that will be done by City staff in all departments. This is a hybrid approach that does not place the onus on one person or department, but instead relies on individual expertise with collective vigilance. This approach is essential to successful implementation because it gives everyone a seat at the table and demonstrates that climate action requires collective participation to result in real change. As mentioned above, Table 9 shows each of the measures with supporting actions and includes the lead or responsible department that is in charge of overseeing and implementing each item, as well as the phase in which the action will be implemented and potential funding sources.



