



Agenda Report

March 5, 2018

TO: Honorable Mayor and City Council
FROM: Planning & Community Development Department
SUBJECT: PASADENA CLIMATE ACTION PLAN (CAP)

RECOMMENDATION:

It is recommended that the City Council:

1. Adopt the Negative Declaration (Appendix E of Attachment A); and
2. Adopt the Pasadena Climate Action Plan (Attachment A) by resolution to implement Program B.3 of the Land Use Element of the General Plan; and
3. Direct the City Attorney to prepare amendments to Chapter 2.140 of the Pasadena Municipal Code to make the primary function of the Environmental Advisory Commission the monitoring of the implementation of the Climate Action Plan and establish that Commission meetings shall be quarterly.

MUNICIPAL SERVICES COMMITTEE RECOMMENDATION:

On January 23, 2018, the Municipal Services Committee (MSC) unanimously voted to recommend approval of the draft CAP and supported that the Environmental Advisory Commission have responsibility for monitoring and advising of the CAP.

ENVIRONMENTAL ADVISORY COMMISSION RECOMMENDATION:

On January 18, 2018, the Environmental Advisory Commission (EAC) unanimously voted to recommend that the City Council adopt by resolution the draft CAP with the suggestion to involve the Commission in monitoring and advising of the CAP in order to address concerns regarding the need for greater specificity within the draft CAP's stated actions and implementation.

EXECUTIVE SUMMARY:

Climate change presents Pasadena with both challenges and opportunities. During the past decade, Pasadena has pursued a variety of programs and policies that promote alternative modes of transportation, increase energy efficiency of new buildings, expand recycling, ban plastic bags and polystyrene products, and conserve natural resources to proactively reduce its carbon footprint and greenhouse gas (GHG) emissions. In the fall of 2015, the City embarked on a process to develop a climate action plan, a strategic framework for measuring, planning, and reducing the City's share of GHG emissions. The Pasadena Climate Action Plan (CAP) sets forth a strategy that builds upon existing programs and policies that address climate change, identifies where these existing efforts can be expanded, and ultimately establishes a roadmap that not only enables the City to reach the State's reduction targets called forth under Executive Order (EO) S-3-05, Assembly Bill (AB) 32, and Senate Bill (SB) 32 but is also consistent with the State's climate strategy. Overall, the CAP's strategies were developed based on three major factors: (1) consideration of the reductions needed to meet state-wide targets and local goals, (2) the sources and distribution of emissions revealed in the GHG inventory, and (3) the existing programs, policies and resources of Pasadena. The CAP is subject to future revisions as new technologies emerge and State legislation, such as CARB's 2017 Climate Change Scoping Plan, are adopted.

The CAP is divided into five strategies, 27 measures, and 142 actions that have the potential to reduce local GHG emissions from community-wide activities of residents, businesses, and municipal operations. The role of the CAP document is to:

- analyze the City's GHG emission levels and identifies major contributors;
- establish a baseline from which future GHG emissions will be compared;
- set local reduction goals and develop a strategy consistent with California's targets consistent with AB 32, SB 32, and EO S-3-05;
- identify existing and new programs to achieve reductions;
- monitor and evaluate progress;
- require new development projects subject to CEQA to reduce their share of emissions by demonstrating consistency with the CAP;
- serve as a qualified GHG emission reduction strategy consistent with the California Environmental Quality Act (CEQA) Guidelines Section 15183.5; and
- implement the Land Use Element of the General Plan.

BACKGROUND:

In response to the threat of climate change, different legislation, regulations, and executive orders have been enacted by the State to achieve robust GHG emissions reductions while addressing the impacts of a changing climate. In 2006, California passed the Global Warming Solutions Act, AB 32, becoming the first state in the U.S. to mandate state-wide reductions in GHG emissions as an effort to combat climate change. AB 32 established a state-wide target to reduce GHG emissions to 1990 levels by 2020. In 2016, the enactment of SB 32 extended this commitment by raising the

emissions reduction target to 40 percent below 1990 levels by 2030, demonstrating California's commitment towards achieving the overall state-wide target of reducing emissions 80 percent below 1990 levels by 2050 (as established in EO S-3-05).

Local governments have a vital role in assisting the State's climate change initiatives. In 2006, the City adopted the Green City Action Plan and compiled a "green team" to oversee the plan's sustainability goals and develop a sustainability program. The sustainability program continues throughout several City departments and includes work programs such as Public Works' Zero Waste Strategic Plan, Pasadena Water and Power's Power Integrated Resources Plan, and Department of Transportation's Bicycle Transportation Action Plan.

The preparation of the CAP involved a comprehensive review of the City's existing efforts and analyzed which programs or policies could contribute to potential GHG reductions. The CAP demonstrates the City's commitment towards achieving the state-wide emissions reduction targets and serves as a qualified GHG reduction plan per the CEQA Guidelines Section 15183.5. The timeframe for the CAP extends from the date of adoption through the year 2035, consistent with the horizon year of the 2015 General Plan.

PROJECT DESCRIPTION:

Pasadena's GHG Emissions Reduction Goals

The CAP establishes the following GHG emissions reduction goals that are consistent with the state-wide targets called for in AB 32, SB 32, and EO S-3-05, as shown in Figure 1.

Figure 1 – CAP Goals and State-wide GHG Emissions Reduction Targets		
Year	State-wide GHG Emissions Reduction Targets	CAP GHG Emissions Reduction Goals (relative to 2009 baseline and state-wide targets)
2020	1990 levels by 2020 per AB 32	27% below 2009 levels by 2020 (equivalent to 14% below 1990 levels)
2030	40% below 1990 levels by 2030 per SB 32	49% below 2009 levels by 2030 (equivalent to 40% below 1990 levels)
2035	The state does not have a 2035 target	59% below 2009 levels by 2035 (equivalent to 59% below 1990 levels)
2050	80% below 1990 levels by 2050 per EO S-3-05	83% below 2009 levels by 2050 (equivalent to 80% below 1990 levels)

Pasadena's GHG Emissions (2009 Baseline Inventory)

A community-wide inventory of GHG emissions was prepared for the year 2009 to establish a baseline, or a reference point, from which the City could set future emissions reduction goals and measure progress. The 2009 baseline inventory accounts for emissions in metric tons of carbon dioxide equivalent (MT CO₂e) resulting from four sectors: energy, transportation, water, and solid waste. In 2009, community-wide GHG emissions were approximately 2,044,921 MT CO₂e. As shown in Figure 2, the transportation sector accounted for the largest portion of emissions, contributing approximately 52 percent of the community-wide total. Energy use was the second largest producer of emissions, contributing approximately 47 percent of the community-wide total. For more information on the 2009 baseline inventory refer to Chapter 2 of the CAP.

Figure 2 – Community-wide Emissions (2009 Baseline)		
Sector	Primary Sources of Emissions	2009 MT CO ₂ e (Baseline)
Energy	Electricity and natural gas consumption by residents and businesses	956,239
Transportation	Vehicle fuel consumption	1,054,901
Waste	Methane generation from the decomposition of solid waste sent to landfills	15,019
Water	Electricity used to transport, treat, and pump water consumed by residents and businesses	18,792
	TOTAL	2,044,921

Pasadena's GHG Emissions Forecast

An emissions forecast was also prepared for Pasadena to better understand how projected trends in energy use, driving habits, population growth, and employment expansion will affect future GHG emissions in the community. Based on Pasadena's adjusted forecast, which accounts for a number of state-level programs that have been enacted since 2013, community-wide emission is forecasted to be 1,671,934 MTCO₂e by 2020 (approximately four percent below the state-wide target). It is forecasted that community-wide emissions will continue to decline over the next few decades and by 2050 emissions are forecasted to be 1,262,573 MTCO₂e. Despite the City's recent efforts to combat climate change, if no additional actions are taken, it will likely fall short

of meeting the state-wide targets for the years 2030 and 2050 by approximately 365,153 MT CO₂e and up to 957,151 MT CO₂e, respectively, as shown in Figure 3. For more information on the GHG emissions forecast refer to Chapter 2 of the CAP.

Figure 3- Comparison of Pasadena's Adjusted Forecast and State-wide Targets			
	2020 (MT CO₂e)	2030 (MT CO₂e)	2050 (MT CO₂e)
Adjusted Emissions Forecast	1,671,934	1,408,063	1,262,573 – 1,304,788
State-wide Targets	1,738,183 (15% below 2009 levels)	1,042,910 (49% below 2009 levels)	347,637 (83% below 2009 levels)
Reductions Needed to Achieve State-wide Targets	0	365,153	914,936 – 957,151

Pasadena's GHG Emissions Reduction Strategy

The CAP identifies five principle strategies to achieve the City's GHG reduction goals for the years 2020, 2030, and 2035: (1) Sustainable Mobility and Land Use, (2) Energy Efficiency and Conservation, (3) Water Conservation, (4) Waste Reduction, and (5) Urban Greening. It is important to note that although the CAP includes a reduction goal for the year 2050, no measures were developed due to a wide range of variables such as future state-level programs and new technologies or legislation that cannot be accounted for at this time. The following is a brief summary of each of the strategies that have been informed by community input and feedback from various City departments.

- 1) **Sustainable Mobility and Land Use** –focus on the reduction of GHG emissions from transportation fuel consumption by reducing vehicle miles traveled (VMT) and improvement of traffic flow. This strategy aims to create an interconnected transportation system and land use pattern that shifts travel from personal automobile to walking, biking, and public transit by improving pedestrian and bicycle infrastructure, enhancing carpooling and public transit services, supporting pedestrian and transit-oriented development, expanding the use of electric vehicles and related infrastructure, and improving the City's vehicle fleet.
- 2) **Energy Efficiency and Conservation** –focus on the reduction of GHG emissions by changing both energy demand and supply. The objective of this strategy is to minimize energy consumption, create high-performance buildings, and transition to clean, renewable energy sources by enhancing energy performance requirements for new construction and energy efficiency retrofits for

existing buildings, increasing the use of carbon-neutral and renewable energy, and improving community energy management.

- 3) **Water Conservation** – focus on the reduction of GHG emissions by conserving water. The purpose of this strategy is to promote water conservation and efficiency in both indoor and outdoor uses by increasing access to and use of recycled water and improving storm water infiltration.
- 4) **Waste Reduction** –focus on reducing GHG emissions associated with land filling, collection, and transportation of waste as well as the methane generation from the decomposition of solid waste sent to landfill and combustion facilities. Waste reduction measures aim to improve waste management and promote reuse, recycling, and composting.
- 5) **Urban Greening** – focus on the reduction of GHG emissions through the planting, care, and management of all vegetation in Pasadena including both developed natural areas such as street trees, landscaping, parks, and undeveloped natural areas and open space. Trees and other green space reduce GHG emissions by absorbing and capturing the GHG, carbon dioxide, from the atmosphere, also known as a process called carbon sequestration. Measures under this strategy seek to maintain a healthy urban forest by preserving greenspace and increasing the number of trees in Pasadena.

Each strategy includes a series of measures that define the direction the community and the City will take in order to accomplish state-wide targets and local reduction goals. The CAP contains 27 climate action measures that are regulatory, incentive-based, or voluntary. Overall, these measures were developed based on consideration of the reductions needed to meet state-wide targets and local goals, the sources and distribution of emissions revealed in the GHG inventory, and the existing priorities and resources of Pasadena. *Table 3.5 in Chapter 3 of the Proposed CAP outlines the CAP measures and potential GHG emissions reduction.*

Potential GHG Emissions Reductions from Implementing the CAP

In total, the strategies presented in the CAP have the potential to reduce emissions by approximately 181,197 MT CO₂e in 2020 and 458,181 MT CO₂e in 2035, creating the opportunity for Pasadena to achieve its GHG emissions reduction goals, as shown in Figure 4.

The transportation and energy sectors offer the most reduction potential. A significant proportion of Pasadena's residential buildings were built more than 30 years ago, prior to the adoption of California's energy efficiency standards. Considerable opportunities exist to reduce energy consumption, utilize energy more efficiently, and increase use of renewable energy within these structures. Pasadena also has a high potential to expand the availability and use of alternative fuel vehicles and fueling infrastructure to further reduce greenhouse gas emissions.

Figure 4- GHG Emissions Reduction Potential by Strategy (2020 and 2035)

	2020 (MT CO ₂ e)	% of total emission reductions in 2020	2035 (MT CO ₂ e)	% of total emission reductions in 2035
Sustainable Mobility and Land Use	66,288	37%	242,680	53%
Efficient Energy and Conservation	108,299	60%	199,044	43%
Water Conservation	1,867	1%	1,916	<1%
Waste Reduction	4,559	3%	14,197	3%
Urban Greening	184	<1%	344	<1%
Anticipated Reductions from CAP Implementation	181,197	--	458,181	-
Reductions Needed to Achieve Local CAP Goals	179,141	--	437,710	-

CAP Implementation and Monitoring

To achieve the GHG reduction goals established in the CAP, considerable changes within the community over the next few decades will be critical. To ensure this transformation is realized, each of the climate action measures is supported by a set of implementation actions intended to define the specific steps that both the City and the community will implement over time. The CAP contains 142 implementation actions that are ambitious, yet attainable and include a combination of ordinances, policies, programs, and incentives, as well as outreach and educational activities. Chapter 4 of the Proposed CAP provides an implementation chart for each climate action measure and details different action steps, the department(s) responsible for implementation, general timeline to achieve those actions, performance indicators, and estimated potential GHG reductions for the years 2020 and 2035. *Refer to Chapter 4 for additional information on the implementation actions.*

One of the benefits of adopting a local CAP is the ability to streamline the environmental review of projects. Per CEQA Guidelines Section 15183.5, the CAP is a qualified GHG reduction plan and allows the City to analyze the impacts associated with GHG emissions at a programmatic level so that project level environmental documents may tier from programmatic review. Since it is anticipated that GHG reductions will need to be achieved through better environmental and sustainable performance by new development projects, the CAP includes a consistency checklist that supports the

achievement of individual measures at a project level. Not only is the checklist a tool for new development projects that are subject to CEQA to demonstrate consistency with the CAP, but it also supports the City in achieving its emissions reduction goals. *Refer to Appendix D of the CAP for more information on the checklist.*

To monitor and evaluate the CAP's progress towards meeting the emissions reduction goals, a GHG emissions inventory will be conducted for the year 2020 and approximately every five years thereafter. If the inventory reveals that the CAP is not making the anticipated progress towards meeting reduction goals, the effectiveness of the measures and/or actions will be evaluated and modified as necessary. Following the inventory, a report will be prepared to update the City Council, residents, and other interested stakeholders on the overall progress of the CAP. Along with the inventory, staff will track the progress of CAP measures and implementation actions, including the performance indicators, and provide an annual update to the EAC and City Council. If necessary, the report will provide recommendations for changes to the implementation strategy or the CAP itself.

Additionally, staff is recommending that the City Council formally designate, through an amendment to Title 2 of the Pasadena Municipal Code, the EAC as the advisory body that should monitor and make recommendations related to the implementation of CAP. The EAC has a broad charge related to promoting environmental stewardship and urban sustainability, as set forth in Chapter 2.140 of the Municipal Code, and as such it is the logical body to serve in the suggested capacity. Staff is also recommending that the City Council modify the frequency of Commission meetings from no less than monthly, to no more than quarterly. The Commission is staffed by the Planning and Community Development Department. Given current and anticipated future workloads supporting monthly meetings has placed a strain on limited staff resources which are desperately needed to attend to other projects within the Department. Further, staff believes that quarterly meetings should be sufficient to allow the Commission to fulfill its mission, including the proposed addition of the CAP.

Community Meetings

As part of the CAP development process, staff solicited public input at two community meetings, two public hearings with the EAC, meetings with community organizations, and resident surveys.

The first community meeting was held on May 31, 2016 at the Lincoln Avenue Baptist Church with approximately 60 attendees to introduce the project and gather initial feedback. In general, residents were supportive of the Climate Action Plan and offered several ideas on how the City can reduce its GHG emissions. These public comments along with input from various City departments helped to inform proposed strategies and measures that were presented in the second community workshop. The second meeting was held on March 23, 2017 at the Throop Unitarian Universalist Church with more than 80 participants. The City received a variety of comments such as the suggestion of using carbon neutral and renewable energy, providing incentives for

electric vehicle charging infrastructure, installing additional bike lanes to reduce auto-dependency, and reducing the carbon footprint of hauling waste within Pasadena.

Public Hearings

On January 18, 2018, staff presented the draft CAP to the EAC and five individuals provided comments. Most of the comments pertained to the implementation and monitoring of the draft CAP. Additional comments included a recommendation to expand the City's mulch program, a request to present the draft CAP to the Transportation Advisory Commission (TAC) for its consideration on the transportation-related actions, a request for the City to review existing hauling and recycling programs, and a request that the City consider implementation of the draft CAP when reviewing long-term contracts.

Shortly after, staff presented the CAP to the MSC on January 23, 2018. Eight individuals commented on the draft document. Similar comments from EAC emerged at MSC regarding the implementation, enforceability, and monitoring of the draft CAP, as well as a request to present the draft CAP to the TAC for its consideration. Comments also included requests to diversify the City's energy portfolio to consist of multiple fuels and technologies, increase the City's goal for electric charging stations, upgrade City buses with electric powered vehicles, support transit-oriented development with unbundled parking for multi-family units, expand recycling services for multi-family apartments, separately reassess the performance indicators for new trees and consider a tree canopy inventory, create a connected east-west bicycle lane, compare the total length of roads in Pasadena with the CAP's proposed goal of 18 new miles of bike lanes, review potential partnerships with public organizations, and avoid long-term fossil-fuel contracts.

ENVIRONMENTAL DETERMINATION:

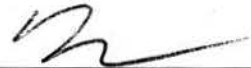
A Negative Declaration has been prepared in compliance with the California Environmental Quality Act (CEQA) provisions and City Guidelines (Attachment B - Initial Study and Negative Declaration). The Initial Study has determined that the proposed project would not have a significant effect on the environment and no mitigation is required.

The public review period for the Initial Study and Negative Declaration commenced on December 28, 2017 and concluded on February 10, 2018. Copies of the Draft Initial Study and Negative Declaration have been available to the public. No public comments were received.

FISCAL IMPACT:

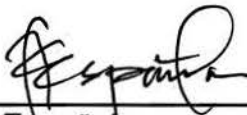
There is no direct fiscal impact associated with the approval of the proposed CAP. While the City may be eligible for grant funded resources in the future to assist with CAP implementation, there will also be costs to various City departments associated with implementation of the CAP that remain unknown at this time.

Respectfully Submitted,



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Development

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Attachment: (1)

Attachment A - Draft Pasadena Climate Action Plan