



STAFF REPORT

City Council Meeting Date: 8/27/2024
Staff Report Number: 24-149-CC

Regular Business: **Adopt a resolution to amend the 2030 climate action plan to include an implementation scope of work for 2025-2030**

Recommendation

Staff recommends the City Council adopt a resolution (Attachment A) to amend the 2030 climate action plan (CAP) to include an implementation scope of work for 2025-2030 (Exhibit A to Attachment A).

Policy Issues

In 2019, the City Council declared a climate emergency (Resolution No. 6535) committing to catalyze accelerated climate action implementation. Climate action has been a top City Council priority since 2020. In July 2020, the City Council adopted the 2030 CAP with a bold goal to be zero carbon by 2030. The CAP is a companion document to the General Plan providing an actionable scope of work to mitigate greenhouse gas (GHG) emissions and prepare the city for the impacts of climate change. Staff are seeking direction from the City Council on the implementation scope of work for 2025-2030.

Background

The 2030 CAP aims to achieve zero carbon across the city by 2030 through a 90% reduction in carbon dioxide equivalent emissions (CO₂e) from 2005 levels and elimination of the remaining 10% of CO₂e through direct carbon removal measures. The CAP serves as a roadmap that staff follow to prioritize and implement actions that reduce emissions and improve air quality across the city. It is a living document that evolves based on community priorities, technology advancements and alignment with county, state, and federal policies and programs.

In addition to the City's efforts, the State has established a framework for local jurisdictions to advance emissions reduction efforts. In 2016, California State Senate Bill 32 established a goal to reduce statewide emissions by 40% below 1990 levels by 2030, and the 2018 Executive Order 55-18 established a statewide policy to achieve carbon neutrality by 2045.

The City Council last directed updates to the 2030 CAP implementation scope of work on April 20, 2021, (Attachment B). Significant evolution in climate action strategies and recent progress created the need to update the CAP implementation scope of work to provide a framework for climate action for the last five years of the CAP. The scope of work update was included in the Environmental Quality Commission (EQC) fiscal year 2023-24 work plan. Between September 2023 and May 2024, the EQC reviewed and provided recommendations on actions to implement the six CAP strategies (Attachment C). City staff reviewed the EQC's recommendations, historical emissions data and staff capacity and budget considerations to develop the recommended implementation scope of work. The recommended implementation scope of work for 2025-2030 can be reviewed in the amended 2030 CAP (Attachment A, Exhibit A) or can be reviewed as a standalone document (Attachment D).

On Aug. 13, the City Council received the fiscal year 2023-24 CAP progress update outlining activities that are underway and completed providing a foundation for the work to continue to stay on track to achieving zero carbon (Attachment E).

Analysis

Leading with the best available science and community priorities, the 2030 CAP proposes innovative actions to address climate change through strategies in the following areas:

- Building electrification: Explore policy and program options to convert 95% of existing buildings to all-electric by 2030
- Electric vehicles: Set citywide goal for increasing EVs and decreasing gasoline sales
- Electric vehicle charging infrastructure: Expand access to EV charging for multifamily and commercial properties
- Transportation: Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission
- Municipal operations: Eliminate the use of fossil fuels from municipal operations
- Climate adaptation and resiliency: Develop a climate adaptation plan to protect the community from sea level rise and flooding

CAP strategy No. 1: Explore policy/program options to convert 95% of existing buildings to all-electric by 2030

The EQC's number one priority (Attachment D, Action ID 1.1) is to establish a policy to encourage building electrification for equipment installation or construction that requires a permit under the Energy Code, Part 6 of the California Building Standards Code. The Energy Code contains whole-building energy efficiency requirements for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The California Building Standards Code also includes green building requirements, such as electric vehicle charging requirements, in the California Green Building Code, Part 11 also known CALGreen.

The State provides updates to the Energy Code every three years with the next update (2025 code cycle) going into effect on Jan. 1, 2026. Each cycle the Energy Code increases energy efficiency requirements and gets closer to the State's goal of achieving carbon neutrality by 2045. The California Energy Commission will adopt the 2025 Energy Code at a public hearing in September. The proposed Energy Code baseline requires new single-family construction building to include heat pumps for water heating and space heating. Applicants who wish to use alternative equipment, including gas space heating and gas water heating, will face additional requirements to improve overall energy performance of the building, including increased energy efficiency measures and installing battery storage.

The City is currently enforcing the 2022 Energy Code, which became effective on Jan. 1, 2023 and may adopt amendments at any point in the code cycle to further electric-readiness and encourage electrification. Amendments must be more stringent than the Energy Code and demonstrate that the need for them is based on geological, topographical or climatic findings. The burden is on the City to demonstrate need and cost-effectiveness.

Staff considered a variety of options that would allow Menlo Park residents and businesses to better prepare for electric appliances now and in the future, particularly as the Bay Area Air Quality Management District's (BAAQMD) prohibition on natural gas appliance sales comes into effect. Policy options staff considered include:

- Recommendations from the EQC to amend the Energy Code by adopting both a zero nitrogen oxide (NOx) emissions ordinance for all types of construction and an energy performance requirement for new construction of all building types;
- Model ordinance from Peninsula Clean Energy to amend the Energy Code to improve energy performance in new construction of all building types;
- Ordinances adopted by local governments amending the Energy Code and the California Green Building Code to require pre-wiring and energy performance standards for construction projects in existing buildings.

The options discussed below could be incorporated into the City's local building code by amending either Energy Code or California Green Building Code. Amending either the Energy Code or California Green Building Code will require staff time to draft and present an update to the local municipal code and develop new City procedures. If amendments are proposed to the Energy Code, the City would be required to prepare a Cost-Effectiveness Study and obtain approval from the California Energy Commission (CEC), both of which would take additional time when compared to amending California Green Building Code, CALGreen.

- Option 1 – Expand electric prewiring requirements: The current California Building Standards Code already includes electrical prewiring requirements for some appliances in new single-family homes and multifamily residential buildings. Option 1 would amend the California Green Building Code to expand prewiring requirements for all residential construction including additions, alterations, repairs, and/or accessory dwelling unit conversions that include the replacement or upgrade of the main electric panel. Option 1's expanded prewiring requirements support the City's goal by ensuring homes are equipped for building electrification in the future, renewable energy adoption, and greater energy efficiency, thereby reducing greenhouse gas emissions and preparing for future advancements and regulations. Option 1 regulates prewiring standards to ensure that all new and modified residential constructions are ready for a seamless transition to all-electric appliances and systems, thereby fostering a more sustainable and environmentally friendly urban infrastructure.
 - The replacement/upgrade to the main electric panel would include:
 - The electrical capacity for and reservation of breaker space in the panel to accommodate the existing single-family electrical load and the future electrification of:
 - An electric stove and oven if the current stove and/or oven are gas;
 - An electric clothes dryer if the current clothes dryer is gas;
 - One level 2 electric vehicle charging equipment (EVCE);
 - Photovoltaic panels (PV); and
 - A 240-volt circuit capable of providing electricity to operate a heat pump water heater of comparable size to the existing gas fired water heater but a minimum of 30 amps per water heater.
 - All reserved breaker spaces permanently marked as "For Future EVCE, PV and heat pump water heater use".
 - A dedicated 240-volt branch circuit installed within three feet from the existing water heater location and rated at 30 amps minimum; both ends of the unused conductor labeled with the word "spare" and identified as 240 V ready for the future installation of an electric water heater.
 - Option 2 – Adopt energy performance local amendment for new construction: Provided as a model policy by Peninsula Clean Energy, Option 2 would amend the Energy Code to regulate the energy performance from equipment within a new construction building at a set percentage, established by the City, above the State Code minimum to encourage the use of all-electric appliances. This approach would utilize an existing, required Title 24 Compliance Report prepared by a licensed professional. This report serves as

an energy budget in that the applicant can adjust various energy efficiency improvements that are either existing or proposed in the building to meet a certain performance value. The primary goal of this amendment is to encourage the use of all-electric appliances in new construction projects, promoting greater energy efficiency and supporting a transition away from fossil fuels. A home with a heat pump water heater and heat pump space heater would not need to complete additional energy performance upgrades. This option allows the consumer to choose between different appliances, including natural gas appliances, to meet the energy performance threshold established by the City. It is important to note that the energy performance required by this proposed policy will be State baseline for the 2025 code cycle beginning Jan. 1, 2026.

- Option 3 – Explore policy options for additions, alterations, repairs, and/or accessory dwelling unit (ADU) conversions: There are a couple of pathways that could be considered for improving the energy performance and encouraging electrification in existing buildings. One approach is similar to Option 2, where single-family additions, alterations, repairs and ADU conversions would be required to meet a target score for energy performance. Peninsula Clean Energy has established a model ordinance for existing residential buildings. The City would need to demonstrate cost effectiveness, establish performance requirements for existing construction projects, conduct community outreach, and evaluate options for implementation. With City Council direction, staff can come back to evaluate energy performance policy options for existing buildings in 2025 as part of the 2025 triennial building code ordinance.

Since the State code will align with Option 2 starting January 1, 2026, staff's recommendation is to pursue Option 1 to expand electrical rewiring requirements in 2024. To do so, staff would use the limited time and resources to prepare an ordinance updating Menlo Park Municipal Code Chapter 12 (Menlo Park Building Code) to expand electrical rewiring requirements in 2024 (Option 1). Staff can conduct further study of energy performance requirements and other policy options for existing building projects (Option 3) as part of the 2025 Triennial Building Code Ordinance Update to Chapter 12 of the City Code in 2025.

CAP strategy No. 2 and No. 3: Set citywide goal for increasing electric vehicles (EVs) and decreasing gasoline sales; and expand access to EV charging for multifamily and commercial properties

The scope of work of these two strategies has been combined to support efficiencies in implementation. Recommended new actions include:

- Promoting existing EV programs
- Expanding EV charging network
- Increasing EV access

Descriptions and timelines for each action are in the recommended amended 2030 CAP (Attachment A, Exhibit A) and in the 2030 CAP implementation scope of work for 2025-2030 (Attachment D).

CAP No. 4 Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission

Much of the work to reduce VMT is described in the Transportation Master Plan, General Plan's Circulation Element, Complete Streets Policy, Citywide Crosswalk Policy, and Vision Zero Action Plan. The CAP serves as an opportunity to review the activities through an emissions-reduction lens.

The scope of work update reflects the priorities of the public works department and the Complete Streets Commission. Recommended new actions include:

- Implementing the Transportation Master Plan

- Completing a shuttle study
- Coordinating infrastructure improvements
- Providing data publicly on GIS
- Engaging community on bicycling
- Implementing Housing Element policies
- Coordinating with the San Mateo County City/County Association of Governments on applying and updating transportation demand management (TDM) requirements

CAP strategy No. 5: Eliminate the use of fossil fuels from municipal operations

Using the 2019 municipal emissions inventory and 2022 Facilities Conditions Assessments as a guide, the City has focused work on preliminary planning and project development for fleet decarbonization (i.e. deployment of zero-emission vehicles and equipment) and facility electrification. Under the 2021 scope of work, the City electrified equipment at the end of its useful life and leveraged grant funding for no-cost electrification of water heaters across facilities. More difficult and costly upgrades are required to remove remaining natural gas equipment from facilities. Recommended new actions include:

- Leveraging grants
- Identifying new financing for electrification projects
- Electrifying fleet and studying fleet right sizing
- Utilizing an energy management system
- Updating the municipal GHG inventory
- Capturing emissions from the Bedwell Bayfront landfill flare
- Exploring microgrids and battery storage
- Exploring ways to power key equipment from electric vehicles
- Addressing remaining emissions from solid waste and employee commutes
- Publishing data on progress

Actions that continue from the previous scope of work include:

- Electrifying equipment in City facilities
- Continuing to purchase and deploy zero-emission landscape equipment used by staff and City contractors

CAP strategy No. 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding

The EQC recommended expanding this strategy to look holistically at how the city can adapt and respond to the impacts of climate change. The scope of work update provides a new description for developing an adaptation plan that goes beyond sea level rise, supports the implementation of Environmental Justice Element, and is alignment with state policies, such as Senate Bill 272 that requires local governments to develop regional shoreline adaptation plans by 2034.

Additionally, the EQC recognizes that trees provide multiple benefits that support community resiliency including protection from heat. The scope of work includes the development of an urban forest management plan and tree planting.

Evaluation and monitoring

While it will be necessary for the City to implement the suite of activities outlined in this scope of work update to make progress towards achieving zero carbon, there will need to be efforts made at the federal, state and regional level to reach our collective climate goals. The scope of work update reflects areas where the City has the ability to take action, but there remains a need for behavior changes and larger systems

changes. Staff's focus is to use resources to improve quality of life and address known emission sources. Accounting of emission reductions will continue every two years leveraging resources like the San Mateo County Sustainability Department's Regionally Integrated Climate Action Planning Suite's (RICAPS) technical assistance. Each year, sustainability staff provides an annual progress update to City Council on CAP activities.

CAP amendments

Staff recommends adopting a resolution to amend the 2030 CAP (Attachment A). The amendment includes an implementation scope of work for 2025-2030 and minor edits to format and contact information, which can be tracked in Attachment F.

Impact on City Resources

No additional budget allocations are requested for the action items at this time. However, there are action items within the proposed scope of work update that would require additional funding for implementation. Funding would come from a variety of sources including grants and potential budget appropriations by the City Council.

Environmental Review

This action is not a project within the meaning of the California Environmental Quality Act (CEQA) Guidelines §§15378 and 15061(b) (3) as it will not result in any direct or indirect physical change in the environment.

Public Notice

Public notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting.

Attachments

- A. Resolution to amend the 2030 CAP to include a scope of work for 2025-2030 implementation
Exhibit A: Updated 2030 CAP
- B. Hyperlink – April 20, 2021 Staff Report # 21-064-CC:
menlopark.gov/files/sharedassets/public/v/1/agendas-and-minutes/city-council/2021-meetings/agendas/20210420-city-council-agenda-packet.pdf#page=120
- C. EQC recommendations for CAP 2025 to 2030 implementation scope of work
- D. 2030 CAP implementation scope of work for 2025-2030
- E. Hyperlink – Aug. 13 Staff Report # 24-138-CC: menlopark.gov/files/sharedassets/public/v/1/agendas-and-minutes/city-council/2024-meetings/agendas/20240813/n3-20240813-cc-cap-progress.pdf
- F. Updated 2030 CAP with amendments tracked

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Report reviewed by:
Deanna Chow, Community Development Director

Staff Report #: 24-149-CC

Ron La France, Extra Help Retired Annuitant Assistant Community Development Director
Azalea Mitch, Public Works Director

RESOLUTION NO. XXXX**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MENLO PARK
AMENDING THE CITY OF MENLO PARK'S 2030 CLIMATE ACTION PLAN**

WHEREAS, in December 2019, the threat of climate change and the urgent need to combat it, the City of Menlo Park adopted Resolution No. 6525, which resolved to:

1. Declare a climate emergency that threatens the economic and social well-being, health and safety, and security of the City of Menlo Park.
2. Commit to educating the City's residents about the climate emergency and working to catalyze accelerated climate action at the local, state, national, and global levels to provide maximum protection for Menlo Park residents as well as all the people and species of the world.
3. Include health, socio-economic, and racial equity in policymaking and climate solutions at all levels and across all sectors as the consequences of climate change have significant impacts on all Menlo Park residents, but especially the young, the elderly, low income or communities of color, and other vulnerable populations and age groups.
4. Join the nation-wide call for regional accelerated climate collaborative action focused on transforming the region, enacting policies that dramatically reduce heat-trapping emissions, and rapidly catalyzing climate action at all levels of government to restore a safe climate.
5. Commit to the completion of the City's Climate Action Plan 2.0 that will include measurable climate-related goals and actions to attain carbon neutrality in advance of the State of California's 2045 goal, and

WHEREAS, in July 2020, the City of Menlo Park adopted a 2030 Climate Action Plan (CAP) and scope of work that includes a bold goal to achieve zero carbon emissions, or 90 percent reduction in carbon dioxide equivalent (CO₂e), from 2005 levels by 2030 in advance of the State of California's 2045 goal; and

WHEREAS, in April 2021, the City Council approved an update to the CAP scope of work prioritizing key actions to electrify buildings, eliminate the use of fossil fuels in municipal operations, reduce gasoline sales, expand access to electric vehicle charging, reduce vehicle miles traveled, and prepare for the impacts of climate change; and

WHEREAS, since April 2021, City staff has successfully completed key actions and the Environmental Quality Commission prioritized recommending an updated scope of work as part of their fiscal year 2023-24 work plan; and

WHEREAS, between September 2023 and May 2024, the Environmental Quality Commission (EQC) provided recommendations to continue implementation on the CAP from 2025 through 2030; and

WHEREAS, staff evaluated the EQC recommendations and added recommendations to support each CAP strategy; and

WHEREAS, the recommended implementation scope of work for 2025-2030 establishes a new set of actions for staff to lead to increase education and outreach, enhance coordination across

City departments, and evaluate policies that support emission reductions and achieving zero carbon; and

WHEREAS, the implementation scope of work for 2025-2030 is an amendment to the 2030 CAP in Exhibit A.

NOW, THEREFORE, BE IT RESOLVED, by the Menlo Park City Council to accept and adopt the amendments to the 2030 CAP in Exhibit A.

I, Judi A. Herren, City Clerk of Menlo Park, do hereby certify that the above and foregoing City Council Resolution was duly and regularly passed and adopted at a meeting by said City Council on the twenty seventh day of August, 2024, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Official Seal of said City on this ___ day of August, 2024.

Judi A. Herren, City Clerk

Exhibits:

A. Updated 2030 CAP

2030 CLIMATE ACTION PLAN

Prepared by the Environmental Quality Commission

Adopted by City Council July 2020 (Resolution No.6575)

Amended April 20, 2021 (Resolution No. 6621)

Amended August 27, 2024 (Resolution No. XXXX)



Contact:

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Contributors

The Climate Action Plan was first developed in 2020 by:

- Rebecca Lucky, former Sustainability Manager, City of Menlo Park
- Tom Kabat, former Environmental Quality Commissioner, City of Menlo Park
- James Payne, former Environmental Quality Commissioner, City of Menlo Park
- Josie Gaillard, former Environmental Quality Commissioner, City of Menlo Park

INTRODUCTION

Menlo Park is uniquely threatened by climate change and is uniquely positioned to tackle it.

Menlo Park's location on the shore of San Francisco Bay places approximately \$1.3 billion¹ of property in our Belle Haven and Bayfront neighborhoods at risk of flooding from climate change by as early as 2070.² While it is impossible for Menlo Park alone to halt the global sea level rise that threatens our city, bold climate leadership on our part is perhaps our only hope of keeping sea level below the height of an "affordable" sea wall. The San Francisco Bay Area Joint Powers Authority estimated in a 2016 feasibility study that a combination of levees and sea walls built along the shoreline of Menlo Park and East Palo Alto to address just three feet of sea level rise would cost approximately \$100 million.³

If we do not provide visible and inspiring leadership on climate and global greenhouse gas emissions continue rising at their current rate, no sea wall or levee will save the portion of our city between Route 101 and the Bay. That land, which includes a disproportionate percentage of our city's low-income residents and residents of color, will be inundated and residents and businesses will have to permanently relocate. On the other hand, if we take a leadership position and our bold climate action inspires rapid and far-reaching climate action by other cities, we may be able to save our Belle Haven and Bayfront neighborhoods with a combination of sea walls and levees.

The good news is that if there is any city well positioned to lead on climate action, it is Menlo

Park. Located in Silicon Valley, our residents and leaders embrace innovation. Our county (San Mateo) is one of the wealthiest in the country,⁴ which means we have the financial resources to tackle the issue of climate change head on. Analysis conducted by members of the Environmental Quality (EQC) Commission's Climate Action Plan subcommittee shows that every dollar spent now by the City on bold climate action can be expected to save City residents \$100 in future adaptation costs⁵ addressing sea level rise alone, not to mention the healthcare costs associated with treating ailments caused by air pollution (see "Natural Gas Phase Out" section below).



The Bay is projected to rise 3.3 feet
YEAR: 2070-2100

Source: <http://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map>

¹ According to [County of San Mateo Sea Level Rise Vulnerability Assessment](#) p. 139, sea level rise of 3.3 feet will inundate Menlo Park real estate valued at \$1.288 billion and a rise of 6.6 feet will inundate \$1.621 billion in real estate.

² Griggs, G, Árvai, J, Cayan, D, DeConto, R, Fox, J, Fricker, HA, Kopp, RE, Tebaldi, C, Whiteman, EA (California Ocean Protection Council Science Advisory Team Working Group), [Rising Seas in California: An Update on Sea-Level Rise Science, California Ocean Science Trust, April 2017](#). Ranges shown are from the median (50th percentile) to the extreme (99.9th percentile) range of the projections.

³ [Public Draft Feasibility Report, SAFER Bay Project, Strategy to Advance Flood protection, Ecosystems and Recreation along San Francisco Bay, East Palo Alto and Menlo Park](#), October 2016, p. 37.

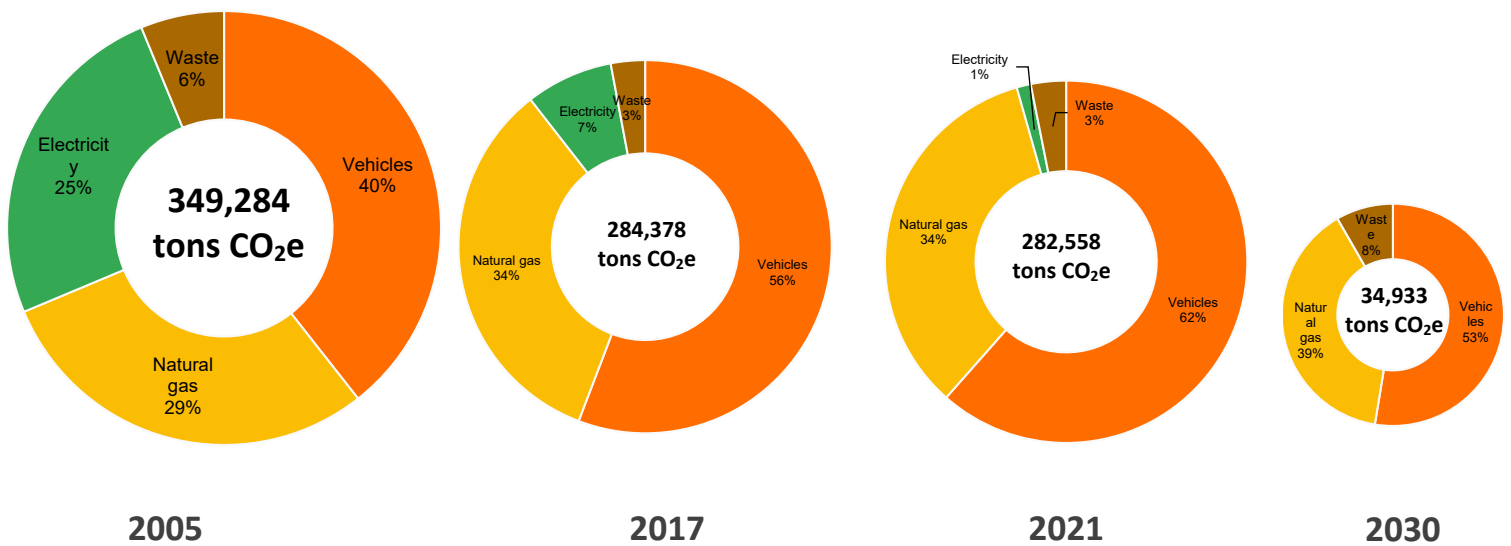
⁴ https://en.m.wikipedia.org/wiki/List_of_highest-income_counties_in_the_United_States

⁵ Supporting analysis available in PDF format in Appendix C and in Excel format upon request

ZERO CARBON BY 2030

In order to address the significant threat to Menlo Park posed by climate change, the City Council adopted a bold climate goal of zero carbon by 2030. This will be achieved through a 90% reduction in carbon dioxide equivalent emissions (CO₂e) from 2005 levels, and elimination of the remaining 10% of CO₂e through direct carbon removal measures.

The 2021 greenhouse gas emissions inventory revealed that emissions in Menlo Park fell from 349,284 tons in 2005 to 282,558 tons of CO₂e in 2021, a reduction of 19%. The aim of this plan will be to reduce community-wide emissions by another 71% for a total reduction of 90% from 2005 emissions, leaving just 34,933 tons of CO₂e per year by 2030.



Menlo Park Community Greenhouse Gas Emissions (metric tons of CO ₂ e)				
	2005	2017	2021	2030
Vehicles	137,628	158,686	152,034	18,373
Natural gas	102,295	95,742	84,253	13,656
Electricity	87,617	21,528	3,111	-
Waste	21,745	8,424	7,749	2,903
Total Emissions	349,285	284,380	282,558*	34,933

*The 2021 inventory included new categories not shown in this table, but included in total emissions (34,209 MTCO₂e from building energy stationary sources, 1,077 MTCO₂e from wastewater, and 124 MTCO₂e from water)

OPTIONS FOR ACTION

In order to achieve a goal of “Zero emissions by 2030,” Menlo Park must begin taking bold action immediately. Fortunately, the City has already decarbonized its electricity supply by joining with other cities in the County to create a joint powers authority (Peninsula Clean Energy) that sources power mainly from renewables and hydropower. This creates a clean energy stepping stone from which to decarbonize the rest of the City’s economy.

Our next step is to decarbonize all of our buildings and transportation. In an ideal world with more time, the City’s climate goals could be achieved simply by unleashing the power of free enterprise and relying on markets and educated consumers to transform our fossil-fuel dependent economy to one that stops emitting greenhouse gases in time to avert catastrophic climate change. Members of the Climate Action Plan (CAP) subcommittee of the Environmental Quality Commission (EQC), who prepared this plan, certainly would prefer this type of approach, as it limits the role of government and would reduce the likely opposition from some interest groups. However, no matter how carefully the subcommittee considered various incentive- and education-based laissez-faire approaches, none of them appears able to solve the climate problem in time to avert catastrophic change to our daily lives. In fact, the less action the City takes now, the costlier the government intervention will be later to deal with the resulting climate disasters.

The key reasons that market approaches alone cannot solve climate change are three-fold:

- 1) markets are currently distorted by the absence of accurate pricing for key externalities, such as the right to dump harmful greenhouse gas emissions into the atmosphere, which today is virtually free to any person or business who wishes to do it, leaving the rest of us bear the ever increasing cost,
- 2) powerful political interest groups such as the fossil fuel industry have successfully spread enough disinformation about climate change that Americans significantly

underestimate the problem and therefore underestimate the actions that must be taken to address it, and

- 3) polluting devices last far too long once installed and we simply do not have enough time for the typical market signals to trickle down to those who determine product offerings and today offer environmentally obsolete products to customers.

Just as the US government stepped in forcefully after the bombing of Pearl Harbor to require that much of America’s free market economy be transformed to support the war effort, so too must the government now step in forcefully and confidently to lead the American public away from the brink of climate disaster.

Thankfully, the actions required of every American citizen to forcefully combat climate change are much less onerous than the food rations or military conscription imposed on World War II-era Americans. We are fortunate that a robust private sector has already provided every technological solution and innovation necessary to almost completely retire fossil fuels as an energy source in America today.

PERSONAL ACTION

Below is a list of the personal actions that, if every citizen took them, would halt global warming in its tracks:

- Retire all gas vehicles immediately and replace them with electric vehicles, bikes, transit or another form of non-fossil transport
- Replace every gas appliance in a home (including furnace, water heater and stove) with an efficient electric version
- Power every home and car with 100% renewable electricity, either by installing solar panels or purchasing renewable energy from one’s utility
- Consider the greenhouse gas emissions associated with every purchase decision

and choose “low-carbon” products and services whenever possible

- Reduce weekly consumption of meat and animal products, a move which has significant ancillary health benefits.

GOVERNMENT ACTION

At the local government level, climate action must focus on eliminating the use of two categories of fossil fuels: 1) gasoline and diesel fuel in vehicles, and 2) natural gas in home appliances. Given the 25-year expected life of a typical gas furnace, it is critical for the City to begin prohibiting the installation of new replacement gas furnaces and water heaters as soon as possible.

In considering the wide-reaching actions and change required to meet the City’s proposed climate goals, researchers reviewed dozens of approaches employed by cities all over the world, including:

- A “5-minute city” approach to zoning implemented in Copenhagen, Denmark that drastically reduced vehicle miles traveled (VMT) and made the city more walkable
- A carbon fee on buildings recently implemented in New York City
- An announced plan to end the flow of natural gas in the City of Arcata, California and now being considered by Palo Alto.

After months of weighing each of the dozens of approaches, the CAP subcommittee identified three basic options for action: 1) a Bold Plan with 22 actions to be implemented over one year, 2) a Moderate Plan with 76 actions to be implemented over three years and 3) a Go Slow Plan with no specific actions other than to follow evolving state rules.

PLAN CHANGES DUE TO COVID-19 PANDEMIC

Shortly after the CAP subcommittee fleshed out the three different approaches to climate action described above, the world was gripped by the

global pandemic of COVID-19. The pandemic has significantly affected the context in which this plan is presented, namely:

- The time and attention of City Council and staff has understandably shifted almost entirely to managing the health risks and economic consequences of the pandemic
- Almost overnight, the country has gone from enjoying robust economic growth to experiencing one of the starkest economic recessions in US history
- Due to the economic recession, the City’s budget has shrunk dramatically, with a 2020-21 shortfall of \$12.7 million
- Layoffs of dozens of City staff as a result of the City’s budget shortfall
- City commissions, including the Environmental Quality Commission (EQC), unable to meet for 4 months, which means the CAP subcommittee has been delayed in vetting the CAP with the EQC

Despite disrupted City operations, the CAP subcommittee continued refining the Climate Action Plan and vetting it with the City Council’s CAP subcommittee (distinct from the EQC’s CAP subcommittee) to receive their input on what might be politically viable in Menlo Park. The result of that continued work is a significantly pared down plan, presented below. While the CAP subcommittee still believes that the original Bold or Moderate Plans (presented in Appendix B), with their 22 and 76 actions respectively, are in fact what the Climate Crisis requires, we have decided to propose a significantly pared down plan, with the thought that some action is better than no action. This plan includes only the highest impact actions. This does not mean it is the best plan. It means it is only a good subset of the best plan and future efforts should be made to expand it as our ability and the wisdom of doing so becomes ever more apparent.

THE PLAN

Strategies	#	Description	2030 GHG Reduction (tons/yr)	Estimated Initial Investment for FY 2020-2021
Explore policy/program options to convert 95% of existing buildings to all-electric by 2030	1	Two basic options: 1) Announce the “end of flow” of natural gas in the City by 2030 OR 2) Enact a “burn-out ordinance” requiring that when gas appliances expire, they must be replaced by electric (preferably high efficiency heat pump) alternatives; phase in for large commercial, small commercial, residential; may require follow-on compliance ordinance as current permit compliance for residential gas appliances is low; will require follow-up “cash-for-clunkers” program to achieve 2030 goal; relies on PCE subsidies to reduce or eliminate cost differential; may require use of UUT funds to cover additional cost differential for low-income residents. Extend burnout ordinance to expiring air conditioners, to be replaced with heat pumps, eliminating need for separate gas heating.	1) 86,465* OR 2) 51,636*	\$195,000 to \$275,000 *Initial investment to hire contract staff (building official, legal aid, energy analyst) and provide policy options that would lead to adoption of a policy, ordinance, and/or program
Set citywide goal for increasing EVs and decreasing gasoline sales	2	Announce and promote goals of 1) increasing the purchase of all new vehicles to be electric by 2025 and 2) reducing gasoline sales each year by 10%, based on the total reported in 2018. Track progress on both goals publicly on an annual basis.	<7,120*	\$0-\$20,000 to influence regional agency or organization to lead on behalf of the city
Expand access to EV charging for multifamily and commercial properties	3	Install or assist building owners in installing EV chargers throughout the City, siting them preferably where they will be used during daylight hours (when solar electricity is abundant on our grid) and also where residents of multi-family housing can access them. Current project to explore and evaluate policy options for existing multifamily properties.	7,370* <13,000* for multifamily	\$140,000 *Initial investment for contract analyst to evaluate multifamily properties
Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission	4	Reduce VMT, especially by gasoline vehicles, through a two-pronged approach: 1) Change zoning to encourage higher density (esp. for housing) near transit 2) Make the City easier to navigate without a car by accelerating implementation of the Transportation Master Plan with an emphasis on developing a clear network of protected pedestrian/bike paths throughout town Current projects underway that help achieve this goal: SB2 Housing grant, Transportation Management Plan, Transportation Management Association, and implementation of new VMT guidelines for new development	31,743*	Explore in 2021 or 2022 after current and complimentary projects are completed
Eliminate the use of fossil fuels from municipal operations	5	Replace 100% of the following municipal assets with efficient electric substitutes for: 1) Gas pool heating equipment 2) Gas and diesel municipal fleet vehicles 3) Gas furnaces 4) Gas hot water heaters 5) Gas-powered gardening equipment	879*	Currently budgeted for end of life assets/appliances, and new community center/library
Develop a climate adaptation plan to protect the community from sea level rise and flooding	6	Develop a climate adaptation plan focused on protecting areas of the community vulnerable to sea level rise and flooding, as forecasted by the National Oceanic and Atmospheric Administration (NOAA) and California State agencies. Consider requiring developers to fund efforts to protect the community.	0	Flood and Sea Level Rise Resiliency District to Lead
TOTAL (assumes option 2 is chosen in action #1)			98,748+	\$355,000 - \$435,000
*GHG emission reductions have been estimated and have not been verified				

You will notice that the plan, as presented, falls well short of the goal of reducing our greenhouse gas emissions by 249,447 tons/yr by 2030. In fact, the plan only addresses 40% of the sought-after reductions. This simplified six-strategy plan is significantly scaled back from the more comprehensive plans envisioned before COVID-19 struck, a compromise the CAP subcommittee felt was warranted, given the City's projected budget short-falls. The CAP subcommittee hopes that market momentum in the EV sector will make a significant contribution to the reduction of Menlo Park's greenhouse gas emissions, an effect not accounted for here. **The Environmental Quality Commission expects the significantly truncated six-strategy plan presented above to be completed within one year and strongly advises City Council to revisit the original, more comprehensive plan in July 2021, so that as the economy improves, those actions can be reincorporated into the plan.**

NATURAL GAS PHASE OUT

Ending the use of natural gas has multiple benefits, including the avoidance of failures in gas system operations, such as the one that destroyed homes and caused death in Brookline, Massachusetts in 2018 and the one that did even greater harm in San Bruno, California in 2010.

The normal operation of gas appliances in buildings has also been found to cause indoor air pollution that would be illegal outdoors due to its negative health impacts, according to a recent study from UCLA.⁶ That study links chronic exposure to the NO₂ emitted from gas stoves to a range of health ailments, including: asthma, lung inflammation, increased risk of respiratory infection, lung and breast cancer and low birth weight in babies. Doctors in a January article in the New England Journal of Medicine wrote the following, "As physicians deeply concerned about climate change and pollution and their consequences, we consider expansion of the natural gas infrastructure to be a

grave hazard to human health." They continued, "We also recommend that new residential or commercial gas hookups not be permitted, new gas appliances be removed from the market, further gas exploration on federal lands be banned, and all new or planned construction of gas infrastructure be halted."⁷ It is therefore within the City's normal powers, which are aimed at protecting the health and safety of its citizens, to seriously consider announcing the "End of Flow" (EOF) of natural gas.

This is similar to an approach proposed in the City of Arcata, California whereby the City would explore and pass an ordinance that sets an end date, for example 7/4/2030, for the flow of natural gas to all gas customers within the City limits. This sets a date certain by which community members would want to make any needed electrification updates to their homes for water heating, cooking and space heating. The City could then either stand back and let community members educate themselves on choices that would work for them, or the City could be an active partner to interested citizens, perhaps leading a helpful bulk buying program for: water heaters, heat pump HVAC units, EV chargers and installation services, or performing other joint effort transformation activities. There is already a local model for city-led bulk buying called Sunshares, which performs bulk buying for home solar systems and electric vehicles. While the idea of city-led bulk buying may sound new and different at first, we should realize that the City of Menlo Park already performs bulk buying of commodities and services for its citizens and businesses, including water supply, public safety services, street tree maintenance, roads and sidewalks, etc.

SOURCES OF FUNDS

Some of the six proposed strategies can most likely be implemented by existing staff with extra support from a contractor/consultants.

⁶ UCLA Fielding School of Public Health, "Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California," April 2020, <https://coeh.ph.ucla.edu/effects-residential-gas-appliances-indoor-and-outdoor-air-quality-and-public-health-california>

⁷ New England Journal of Medicine, "The False Promise of Natural Gas," Philip J. Landrigan, M.D., Howard Frumkin, M.D., Dr.P.H., and Brita E. Lundberg, M.D., <https://www.nejm.org/doi/full/10.1056/NEJMp1913663>

Other than the General Fund, there are two other potential sources of funds:

- 1) the \$400,000 presented in the 2020-21 Capital Improvement Plan (CIP) as earmarked for implementation of the Climate Action Plan and
- 2) issuing debt or borrowing money⁸.

Saving our community for future generations seems like one of the most prudent uses of borrowed funds one can imagine. Conversely, if we wait until extra City revenue is available to fund climate action, we will most certainly lose the climate fight.

There will be additional capital expenditures incurred as part of the Climate Action Plan, as well, including:

- Investment in EV charging infrastructure
- Street improvements related to the TMP implementation
- Investment in electric replacements for municipal gas and diesel assets

If funds for these capital expenditures have not already been allocated in the City's Capital Improvement Plan (CIP), an amendment would need to be made to the CIP for that purpose. The EQC's CAP subcommittee recommends **against** using funds currently earmarked in the CIP for climate action to pay for municipal greening projects. Such projects are good candidates for outside financing or borrowing, whereas the CAP funds in the CIP should be focused on high impact activities to reduce community-wide greenhouse gas reductions, such as policy development, programs, incentives, education and marketing.

PLAN METRICS

Climate Action Plans have a poor history of being effectively implemented and one reason for that is that progress is typically only measured every five years and with staff turnover, well intentioned plans can go unexamined for years. In order to avoid such an outcome, the CAP subcommittee

recommends that a short list of concrete metrics be adopted and that the City Council request quarterly, if not monthly, updates on those metrics.

Key metrics to track include:

1. Number of gas hot water heaters citywide that are replaced with electric versions (data source: Menlo Park Building Department)
2. Number of gas furnaces citywide that are replaced with electric versions (data source: Menlo Park Building Department)
3. Number of utility natural gas accounts terminated (data source: Peninsula Clean Energy or PG&E)
4. Number of new cars registered that are gas vs. EV (data source: DMV)
5. Number of total cars registered that are gas vs. EV (data source: DMV)
6. Gallons of gasoline sold in Menlo Park (data source: City sales tax reports)
7. Percentage of municipal assets converted from gas or diesel to electric (data source: Menlo Park Public Works Department)
8. Vehicle miles traveled, including trips inbound, outbound and within the City (Google Environmental Insights Explorer)
9. Number of other cities that query and/or copy Menlo Park's climate policies and programs (data source: outreach efforts and research by Menlo Park Sustainability staff)

While Sustainability staff and members of the CAP subcommittee question the value of conducting frequent high level greenhouse gas inventories, we do all agree that measurement is important and believe that tracking the specific items listed above will help staff and Council gain insight into the effectiveness of the climate actions that the City decides to undertake. County efforts to measure greenhouse gas emissions are expected to continue and will hopefully reflect progress made by cities within the County.

METHOD FOR EVALUATING ACTIONS

in order to continue disbursements,
<https://www.nytimes.com/2020/06/10/business/ford-foundation-bonds-coronavirus.html>.

⁸ An interesting model for borrowing against existing financial assets (such as the City's reserves) has been employed during the COVID recession by leading charitable Foundations who are borrowing at low interest rates against their endowments

The six strategies detailed above were selected from over 76 actions included in the original Bold and Moderate Plans, because they offer the City the most potential for Greenhouse Gas Reductions per dollar spent.

Dozens of potential climate actions were considered. Actions took many forms, including: city ordinances, city directives, programs and collaborations. Each action was evaluated for the following key criteria:

- Potential to reduce greenhouse gas (GHG) emissions
- City staff resources required to implement
- City cost to implement
- Out-of-pocket expenses for community members to implement (lifecycle economics for user)
- Political feasibility
- Potential for replication by other cities

The cost estimates above should be viewed as preliminary, requiring further thorough analysis by City staff prior to policy adoption.

THE TRUE COST OF CARBON

As mentioned above, there is in fact a societal cost to burning fossil fuels, sometimes referred to as the “cost of carbon.” There are debates today over how best to calculate that cost. Some say it should be based on the damages caused by those emissions. Others say it should be based on the cost to remove those carbon emissions from the atmosphere, once that becomes possible. In the absence of a global consensus, the EQC’s CAP subcommittee attempted to estimate the cost of carbon to Menlo Park by taking the projected losses from sea level rise in our city alone, \$1.3 billion, and dividing that by the tons of CO₂e we expect to emit over the next 40 years in a business as usual situation. Using this simple methodology, we arrived at a “cost of carbon” of \$130/ton for Menlo Park.

There are a number of ways the City could use this figure. We could consider levying a tax of \$130/ton on fossil fuels, in order to cover future damages the City will incur, in essence internalizing the externalized “cost of carbon.” Another way to use this figure would be for the City to factor it in to

all decisions concerning assets in the City that consume fossil fuels, for example in calculating the true cost to the City of a gasoline-powered police car or the true cost to citizens of a gas furnace.

NOTE ON LEADERSHIP

Saving our City from sea level rise will require collective global action, which Menlo Park can likely only influence through bold leadership. In evaluating the relative effectiveness of various climate actions, the CAP subcommittee noted the significant impact that replicability and demonstration of feasibility of a policy or program had on its potential to generate emissions reductions. If other cities can easily copy a policy or program, it is likely to **catalyze emissions reductions many times greater** than our City’s emissions reductions alone. Therefore, it is strongly advised that City staff favor simplicity and replicability in its design of climate policies and programs and it is further advised that the City invest resources in proactively sharing its climate policies and programs with other cities, counties and government entities.

We must also be nimble and ready to act on economic stimulus opportunities that may present themselves, as the Country attempts to pull itself out of a recession.

NOTE ON UTILITY PARTNERS

An analysis of community member economics for each action revealed that rebates can make or break the economics behind purchasing decisions for equipment like electric vehicles and electric heat pumps for space and water heating, all of which are essential for progress on climate action. The City can greatly increase the political feasibility of many climate actions included in this plan by calling on its local Community Choice Energy (CCE) provider to rapidly deploy the significant capital currently held on its balance sheet to fund rebates on electric replacements of gas appliances. Such rebates can make climate friendly replacements cost effective and that enables city councils like ours to pass ordinances requiring such replacements. In turn, the new electric devices generate net revenue that rebuilds the CCE’s financial reserves.

To this end, Peninsula Clean Energy’s board recently signaled its support for local cities’ efforts

to electrify, voting on May 28, 2020 to invest \$6 million to electrify existing buildings in San Mateo County. This program will reportedly include substantial incentives for: 1) the installation of electric heat pump water heaters, 2) upgrades to electric service panels so they can handle the increased electric demands of all-electric homes, and 3) whole-home electric conversions for low income residents. Such programs are a promising signal that local CCEs intend to help ease the financial burden of converting homes from natural gas to all-electric, since it is not only essential for fighting climate change but also in their long-term financial interest to do so.

NOTE ON EQUITY

Climate change does not affect all members of society equally. Tragically it disproportionately affects low income people and people of color, as evidenced right here in Menlo Park, where sea level rise is expected to have a devastating impact on residents of our Belle Haven neighborhood. A similar pattern is observed all over the globe, where poor island nations are becoming the first to be wiped off the globe. Climate justice advocate Hop Hopkins illustrates the connection between climate change and racism by explaining how allowing climate change to occur requires that we accept that portions of our local and global communities are “sacrifice zones, and you can’t have sacrifice zones without disposable people, and you can’t have disposable people without racism.”

Meanwhile wealthier segments of society go on emitting greenhouse gases at ten times the rate of poorer segments, unwilling to make even small changes to their purchasing decisions. The COVID crisis has shed a light on the shocking inequity in health outcomes for people of color, some of which can be attributed to well documented racial disparities in exposure to air pollution from fossil fuels. Menlo Park must ask itself whether it wishes to continue contributing to this global and local inequity, or whether it can strongly prioritize leadership in solving these interconnected problems.

Finally, although Menlo Park is situated in one of the wealthiest Counties in the country, that wealth is not equally distributed and some residents may find it difficult to afford at least the capital outlay for

the changes recommended in this plan. To address issues of equity, there are a number of options for ensuring that low-income residents have the financial support they need to make the required changes to their homes and vehicles. Both the State and local CCEs have shown a willingness to provide financial subsidies specifically targeted at low income residents. Peninsula Clean Energy recently set aside \$2 million, out of a \$6 million program, just to assist low-income residents with all-electric retrofits of their homes. If the City wishes to further bolster that support, it could consider allowing the Utility User’s Tax (UUT) on natural gas sales to increase from its current 1% level to the existing voter-approved level of 3.5%. That would provide an estimated \$500,000 in additional funding every year to low-income families converting gas appliances to all-electric. The City must take an active role in ensuring that low-income residents are not unfairly disadvantaged by the requirements of its Climate Action Plan.

ANOTHER NOTE ON COVID-19

Lastly, this Climate Action Plan is being presented to City leaders in the midst of a generation-defining event, namely the global COVID-19 pandemic. It is understandable and appropriate that City leaders would devote their immediate attention to protecting the health and wellbeing of our community, as we fight this deadly virus.

As the health emergency wanes, however, the CAP subcommittee hopes that Council members will view the proposed Climate Action Plan as an opportunity for Menlo Park. COVID-19 has jolted us all out of our routines and everyday existence, highlighting in a graphic way our vulnerability as a species. Climate change has the potential to do the same, only on an even greater scale. If we are able to take in the lessons presented to us by this current crisis, we will be better prepared to address the climate crisis that is coming. For example, we should ask ourselves: Do we want to be like South Korea and flatten the carbon “curve” by proactively investing in mitigating the carbon dioxide “contagion”? Or will we delay, like Italy, and only take decisive action once the problem has ballooned? Is it still acceptable to stand by and watch one window of opportunity after another close before our eyes, leaving us with a much

larger problem, the only response to which threatens to destroy our economy? Can we accept that this problem, like COVID, will ravage poor communities and people of color? The choice is ours. How will we act?

This Climate Action Plan presents us with economic opportunities as well. If enacted, this plan will jumpstart a new local market in electric appliance installation, injecting money into the economy and providing hundreds of new jobs, just when they are needed.

Finally, as medical professionals learn more about the adverse health impacts of burning fossil fuels in our homes, the Climate Action Plan offers Menlo Park an opportunity to set a new standard for health and safety in our homes and places of work by removing fossil fuels from our air completely.

Our future is in our hands. It is time to act.

APPENDIX A

ORIGINAL PLAN OPTIONS – BOLD, MODERATE AND GO SLOW

Dr. John Holdren, scientific advisor to President Obama, advised that humans have three basic choices when it comes to climate change: 1) mitigate the problem by reducing our emissions, 2) adapt to the problem and try to move out of harm's

way, or 3) suffer. What every civic leader must do today is pick the mix of those three options that they are willing to bring to their communities.

A summary of the benefits and drawbacks of each plan, from a City official's perspective, is offered below.

Bold Plan	Moderate Plan	Go Slow Plan
<ul style="list-style-type: none"> • A few bold actions • One-year implementation • Achieves goal of Zero by 2030 • Less \$ now (staff resources) • Less \$ later (lower sea walls) • Subject to opposition • Less human suffering • Regional leadership role 	<ul style="list-style-type: none"> • Many moderate actions • Three-year implementation • Makes progress toward goal of Zero by 2030 • More \$ now (staff resources) • Some \$ later (sea walls) • Subject to some opposition • Some human suffering • Regional leadership role 	<ul style="list-style-type: none"> • No proactive actions • No specific implementation time • Falls well short of Zero by 2030 goal • Less \$ now (staff resources) • More \$ later (high sea walls) • Subject to some opposition • More human suffering • No regional leadership role

THE MODERATE PLAN

The Moderate Plan is a set of 60+ actions (Appendix B), implemented over 3 years, that involve working with the community (residents, businesses and commuters) to assist and compel them to change, while simultaneously working with other cities, the County, the State and utilities to make such change easier. This would be accomplished by changing laws, capabilities and economics in a way that transforms standard practice, similar to the way that our all-electric Reach Codes are transforming standard practice in new construction. Menlo Park is gaining credibility in this area and therefore has a reasonable chance of catalyzing regional change through bold leadership and knowledge sharing.

The Moderate Plan would also seek an expanded vision and commitment from Community Choice Energy providers (CCEs), who will reap considerable benefit in the form of increased net revenue from electrification, just as oil companies will see diminishing revenue. According to this plan, the CCEs would be advised to rapidly deploy their net revenue, in order to quickly transform the market to support building electrification.

The Moderate Plan is the most time-intensive option of those presented, with significant staff resources deployed in the next three years to pass incremental ordinances that will drive needed behavior change. **Sustainability staff currently estimate that implementing the Moderate Plan would require approximately 6 incremental full time equivalent (FTE) staff for the first year and a similar or smaller number in the remaining two years included in the plan.** These incremental staff resources could be hired as consultants and would not be needed past the 3-year term of the plan.

While the action-intensive approach of the Moderate Plan may seem cumbersome, the CAP subcommittee suspects that the public requires incremental education and a piecemeal approach to rule changes, in order to have time to adjust to change. As such, the Moderate Plan also includes significant public outreach and education efforts to assist the public and businesses in understanding the benefits of mutual cooperation.

Finally, the Moderate Plan by itself would not guarantee that the City would reach its proposed climate goal of Zero emissions by 2030. Instead, this plan would put us on a path to achieve that goal in a later year or, alternatively, could be seen as laying the groundwork for implementation of additional measures, such as those outlined in the Bold Plan, starting in year 4 of climate action when the public may be more receptive to bolder action.

THE BOLD PLAN

The Bold Plan is much simpler (Appendix B) in that it involves far fewer actions and therefore fewer staff resources to implement. It also has the advantage of nearly guaranteeing achievement of the City's climate goals. It achieves this primarily by announcing to the community that the City will stop the flow of natural gas (a potent greenhouse gas) and restrict the use of gasoline vehicles within City limits by a certain date in the future, possibly by the year 2030. This approach gives community members time to make the needed adjustments to their homes and transportation, all of which are perfectly feasible, within an announced 10-year timeframe.

As for the elimination of gasoline and diesel (GAD) fuels from Menlo Park vehicles, the Bold Plan could include a normal health-and-safety powers type ordinance, requiring the phasing out of underground fuel tanks by 7/4/2030, for example. Any businesses that used underground fuel storage tanks would need to remove them for certain by that date. If climate preservation is being seriously pursued in the next decade and automobile makers follow their plans for electric vehicle production, there will be much lower need for GAD stations left in our area and those that remain will be selling a fraction of the volume of gasoline that they do now. This could mean that, regardless of which climate plan the City pursues, the number of local gasoline stations is likely to drop significantly within the next decade from the current 12 to as few as six. Some locations could be repurposed as EV charging stations with amenities such as a coffee shop, convenience store or car wash.

Another approach to eliminating GAD fuels would be for the City to pass a number of ordinances that reduce the subsidies currently offered to GAD-powered cars and trucks. Some of the subsidies

that could be reduced or eliminated for GAD vehicles include City-provided free parking in downtown lots and free parking on the side of public streets, a subsidy the City already limits overnight in Menlo Park. Both of these measures would encourage reductions in vehicle miles traveled (VMT) in the City, as well as conversions to electric vehicles (EVs). These shifts would also offer residents the ancillary benefits of reduced traffic congestion and/or reduced air pollution.

THE GO SLOW PLAN

The Go Slow Plan (GSP) would entail stepping back from climate leadership and following other entities, if and when they step forward to lead. The City would forgo the opportunity to carve out its own unique approach to problems, as we did with the recent Reach Codes, and would likely end up joining County efforts or copying other Cities' approaches. A Go Slow Plan would likely entail sitting quietly on the sidelines and following plans developed and offered by regional or state entities, as they emerge. The Go Slow Plan is by far the most risky of the plans in that it results in the highest likely damage cost to public and private property from sea level rise and would cause the most human suffering in vulnerable parts of our City. Gut-wrenching decisions will face City officials as they decide how much money to spend delaying the eventual loss of real estate valued at

over \$1 billion along our Bay shoreline. One can imagine weighty decisions about what neighborhoods to save resulting in heated disagreement among residents that would tear at the fabric of our community.

Although the Go Slow Plan may look "easy" in the short term, due to the lower staffing requirements and the slower pace of change required now, this approach may in fact prove to be penny wise and pound foolish. In reality, a Go Slow approach simply hands a growing problem to a future City Council, who would have even less time and resources at their disposal to battle climate change and oversee adaptation on multiple fronts.

We understand from the worldwide scientific body, the Intergovernmental Panel on Climate Change (IPCC), that time is of the essence and that in order to have a meaningful impact on climate change, any mitigation efforts must start immediately. This would render the Go Slow Plan scientifically imprudent, leaving the City Council to choose between: a) implementing the Moderate Plan immediately and simultaneously exploring the Bold Plan for later implementation if needed, b) cutting to the chase and just pursuing the Bold Plan immediately or c) developing a plan they feel would perform better.

APPENDIX B

2025 to 2030 Implementation Scope of Work

The updated CAP implementation scope of work outlines specific, feasible actions that the City will take between 2025 and 2030 to achieve carbon neutrality. The actions are organized by CAP strategy and identified by an action ID and a simplified name along with a more detailed description, the lead division(s) responsible for implementation, and estimated target timelines. Action items may shift depending on Council priorities, staffing, and other internal or external factors. Some actions involve policy decisions that would require further discussion and adoption by City Council. For the purposes of the table, the following definitions apply: short term is within one (1) year; medium term is within three (3) years, and long term is within five (5) years.

Interdepartmental collaboration will be crucial for the implementation of the scope of work outlined.

CAP Strategy No. 1: Explore policy/program options to convert 95% of existing buildings to all-electric by 2030					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
1.1	Building codes	Adopt pre-wiring requirements for existing buildings in the short term and evaluate performance requirements both new and existing buildings during the 2025 code cycle adoption	Building/ Planning/ Sustainability	Short term	Medium term
1.2	Multifamily electrification support	Support Peninsula Clean Energy (PCE) in the development of multifamily home electrification program	Sustainability	Medium term	Medium term
1.3	Community electrification	Develop additional program options to disperse California Energy Commission grant funds including opportunities for residents who are renting	Housing/ Sustainability	Short term	Short term
1.4	Outreach dashboard	Create a community outreach plan and measurement dashboard to track electrification progress, including data points for gas usage	Sustainability/ Information technology	Short term	Medium term
1.5	Permit streamlining	Continue to evaluate and enhance a permit streamlining program that: <ul style="list-style-type: none"> a. Provides a clear, fast, predictable, and interconnected process for permit applicants and staff b. Includes continuous improvement of permit and inspection process and monitoring best practices from other jurisdictions c. Solicits feedback from stakeholders who complete electrification projects (permit applicants, homeowners, contractors, and staff) 	Building/ Planning/ Sustainability	Ongoing	Ongoing
1.6	Affordable Housing	Require all-electric construction for affordable housing built on City owned land	Housing/ Planning/ Sustainability	Ongoing	Ongoing
1.7	Onsite energy generation	Complete a cost effectiveness study to activate Bayfront zoning green and sustainable building requirements (e.g. Municipal Code section 16.43.140(2)(A)) for onsite energy generation	Planning/ Building/ Sustainability	Medium term	Medium term
1.8	Online electrification education hub	Enhance outreach and education on electrification including presenting the benefits, available incentives, and permit process by improving the website and linking the sustainability, building and online permit websites. Create additional outreach materials and a strategic communications plan to direct community members to the resources online.	Building/ Sustainability	Short term	Medium term

CAP Strategy No. 2: Set citywide goal for increasing EVs and decreasing gasoline sales; and No. 3: Expand access to EV charging for multifamily and commercial properties					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
2/3.1	Existing EV program promotion	Inform stakeholders of current incentives and benefits by: a. Promoting existing information on EVs, affordability, and emphasizing current incentives b. Evaluating potential partners for Level 1 & Level 2 charging	Sustainability	Short term	Long term
2/3.2	EV charging network expansion	Focus on expanding EV charging network by: a. Leveraging partners who are already promoting EVs widely to prompt resident EV purchases b. Promoting focus on Level 1 & Level 2 chargers, not DC Fast Chargers, and evaluating future tech as it evolves / can scale c. Continuing to identify public lots for EV charging infrastructure d. Considering removal of other fees from City owned charging and identifying alternative funding to support operation, maintenance, replacement and/or additional chargers e. Explore building code policies to increase EV charging in new multifamily and commercial developments including the City of San Jose's EV charging building code f. Continue to adopt the City's current EV building code amendments with each code cycle	Public works/ Sustainability	Medium term	Long term
2/3.3	Increase EV access	Increase EV charging access in multifamily, small businesses, and city-owned buildings through partnerships, policy, and programs by: a. Exploring the creation of an inventory of installation opportunities in current buildings and future developments b. Partnering with public agencies and private property owners to install EV charging c. Shifting focus to private residences after completing target group above and utilizing lessons learned d. Exploring incentive-based rules (e.g. direct install programs) and building codes for existing buildings	Building/ Sustainability	Medium term	Long term

CAP Strategy No. 4: Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
4.1	Multi-modal networks	Continue to implement the Transportation Master Plan to build connected and safer multimodal transportation networks that make walking, bicycling and transit viable for more trips locally and regionally	Public works	Ongoing	Ongoing
4.2	TDM requirements	Apply and update transportation demand management (TDM) requirements to help produce development that is not dependent on single occupant vehicles	Public works/ Planning	Ongoing	Ongoing

4.3	Shuttle study	Complete a shuttle study to evaluate and optimize shuttle service and implement findings	Public works	Medium term	Medium term
4.4	Infrastructure coordination	Coordinate bike/pedestrian improvements with planned street resurfacing	Public works	Ongoing	Ongoing
4.5	GIS dashboard updates	Update the Transportation Master Plan GIS dashboard to quantify GHG impacts of planned and completed VMT reduction projects (bike lanes, sidewalks)	Public works/ Information Technology/ Sustainability	Short term	Short term
4.6	TDM programs	Continue to operate programs, including the shuttle program and Safe Routes to School, to enhance transportation options for students, commuters and transit dependent populations	Public works	Ongoing	Ongoing
4.7	Bicyclist engagement	Provide educational and engagement opportunities to support cyclists of all ages	Public works /Sustainability	Ongoing	Ongoing
4.8	Housing Element TOD	Continue to implement Housing Element policies that support transit oriented development	Housing/ Planning/ Public works	Short term	Ongoing
4.9	C/CAG coordination	Coordinate with C/CAG to remove cross-jurisdictional barriers to regional active transportation planning and infrastructure projects	Public works	Short term	Ongoing

CAP Strategy No. 5: Eliminate the use of fossil fuels from municipal operations					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
5.1	Leverage grants	Continue monitoring grant opportunities and prioritize capital projects that leverage grant funding	Sustainability	Ongoing	Long term
5.2	Creative financing	Explore electrification project financing options beyond Capital Improvement Program (CIP) allocations	Public works/Finance/ Sustainability	Short term	Long term
5.3	Fleet right sizing	Conduct a fleet rightsizing study to identify the number and type of vehicles needed for fleet operations and zero-emission alternatives	Public works/Police/ Sustainability	Short term	Short term
5.4	Utility dashboard	Develop or purchase an energy management software/dashboard that integrates utility billing/usage data with existing City asset management software	Information technology/ Sustainability	Short term	Short term
5.5	Facility electrification	Establish facility electrification prioritization criteria and continue to develop and complete projects to electrify all city-owned buildings by 2030	Public works/ Sustainability	Short term	Ongoing
5.6	Fleet decarbonization	Continue to use renewable diesel and replace vehicles with zero-emission options to decarbonize the fleet by 2030 based on mileage, age, downtime for repairs, mandated emission regulations and an assessment of all vehicles and equipment with readily available EVs	Public works/ Sustainability	Ongoing	Long term
5.7	Municipal GHG inventory	Update the municipal GHG inventory	Sustainability	Short term	Short term

5.8	Landfill flare	Capture emissions from Bedwell Bayfront landfill flare	Public works/ Sustainability	Short term	Medium term
5.9	CAP5 dashboard	Make data accessible to show the City's ability to reach its goal by 2030 (e.g. countdown to carbon neutrality, showing percentage of equipment electrified)	Information technology/ Sustainability	Short term	Ongoing
5.10	Microgrids	Explore creating additional microgrid opportunities to enhance community resiliency and preparedness	Public works/ Sustainability	Short term	Long term
5.11	Battery storage	Explore battery storage utility programs to shift peak loads and lower operational costs for city facilities	Sustainability	Medium term	Long term
5.12	V2B charging	Explore and install equipment for vehicle-to-building (V2B) bidirectional fleet charging	Public works/ Sustainability	Short term	Medium term
5.13	Remaining emissions	Develop programs and projects to eliminate the remaining greenhouse gas (GHG) emissions from the municipal inventory beyond building and fleet electrification including implementing programs in compliance with Senate Bill 1383 to increase organic collection services, establish food recovery programs, and purchase recycled organics products.	Sustainability/ Public works	Short term	Long term
5.14	ZELE for City crews	Continue to purchase and deploy zero-emission landscape equipment (ZELE) used by city staff and contractors	Public works/ Sustainability	Ongoing	Ongoing
5.15	Leave-the-leaves pilot	Explore a leave-the-leaves/blower-free park pilot	Public works/ Sustainability	Medium term	Medium term
5.16	Green Business Certification	Explore Green Business Certification for fleet and/or facilities	Public works/ Sustainability	Medium term	Long term

CAP Strategy No. 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
6.1	Planning and identifying funding	Engage the community in the areas of the city most vulnerable to the impacts of climate change to develop a climate adaptation plan beyond sea-level rise and flooding supporting implementation of the Environmental Justice Element programs and aligning with the four goals from the State of California framework (to tap into federal and state funding sources): 1) Build awareness and notification 2) Strengthen community services/response 3) Increase resilience of the built environment 4) Utilize nature-based solutions	Sustainability	Short term	Medium term
6.2	Urban forest management plan	Develop an urban forest management plan and lead an early action tree planting effort	Public works/ Sustainability	Short term	Short term



Environmental Quality Commission 2030 Climate Action Plan implementation scope of work for 2025-2030 recommendations

Table 1 is a compilation of the Environmental Quality Commission’s (EQC) implementation scope of work recommendations for 2025-2030. Each recommendation was issued by the Commission at a publicly noticed meeting. The meeting dates are included in the table and meeting minutes and recordings are available through the City webpage.

Staff reviewed and evaluated EQC recommendations to develop the staff recommendation. Staff applied an action name to every item. Action items where the staff recommendation modifies and/or differs from the EQC recommendation are identified with an asterisk and described in the table below. Action items that do not have an asterisk are included in the scope of work without modifications.

Table 1: EQC 2025-2030 implementation scope of work recommendations				
No. 1: Explore policy/program options to convert 95% of existing buildings to all-electric by 2030				
Action ID	Action name	Description	EQC meeting date	Modifications in staff recommendation
1.1*	Building codes	Adopt a dual coverage building code approach (Zero NOx Standard as primary code and Single Margin Approach as back up) to enhance building code and explore companion programs for equity and impact	3/20/2024	Staff recommendation is to adopt pre-wiring requirements and evaluate performance requirements for the 2025 code cycle
1.2*	Multifamily electrification support	Support Peninsula Clean Energy (PCE) in the development of multifamily home electrification program or explore establishing a turnkey multifamily electrification partner	3/20/2024	Staff recommendation is to support the PCE program
1.4*	Outreach dashboard	Create a community outreach plan and measurement dashboard (including data points for gas usage and electrification progress) to track progress.	3/20/2024	Restated for clarity
1.5*	Permit streamlining	Develop a permit streamlining program that provides a clear, fast, predictable, and interconnected process for permit applicants and staff, and includes continuous improvement of permit and inspection process through tracking of key metrics, monitoring of best practices from other jurisdictions, and solicitation of feedback from stakeholders (permit applicants, homeowners, contractors, and staff).	4/17/2024	Reformatted and updated to note these are continued efforts and feedback collection will focus on electrification projects
1.8*	Staff training	Provide staff sufficient training on electric appliances (including electric vehicle charging) and installation practices, particularly on calculating load requirements	4/17/2024	Revised to instead create an online electrification hub for broader education and outreach

CAP strategy No. 2 and No. 3: Set citywide goal for increasing EVs and decreasing gasoline sales; and expand access to EV charging for multifamily and commercial properties				
Action ID	Action name	Description	EQC meeting date	Modifications in staff recommendation
2/3.1*	Existing EV program promotion	<p>Inform stakeholders of current incentives and benefits</p> <p>a. Create education and outreach campaign on EVs, affordability, and emphasize current incentives</p> <p>b. Find potential partners for L1 & L2 charging</p> <p>c. Aggregate funding for EV charging and utilize a wider variety of grants from federal, state, local, and utility, especially for low-income housing</p>	2/21/2024	Updated to promoting existing resources, focusing new outreach campaign efforts on home electrification, evaluating potential partners, and eliminated staff aggregation of incentives
2/3.2*	EV charging network expansion	<p>Focus on expanding EV charging network</p> <p>a. Leverage partners who are already promoting EVs widely to prompt resident EV purchases</p> <p>b. Focus on L1 & L2 chargers, not DC Fast Chargers. Evaluate future tech as it evolves / can scale</p> <p>c. Consider removing other fees from city-owned charging and source alternative funding to support operation, maintenance, and additional chargers</p>	2/21/2024	Revised to clarify that the City will focus on promoting the installation of L1 & L2 chargers at multifamily and commercial properties. Added the opportunity to identify public lots for community EV charging and specific mention of San Jose EV code.
2/3.3*	Increase multi-family EV access	<p>Increase EV charging access in apartments (especially larger complexes), small businesses, and city-owned buildings through partnerships, policy, and programs</p> <p>a. Create an inventory of installation opportunities in current buildings and future developments</p> <p>b. Develop dashboard to show progress, including tracking EVs by income and charging availability</p> <p>c. Partner with public agencies and private property owners to install EV charging</p> <p>d. Focus on private residences after completing target group above and utilizing lessons learned</p> <p>e. Explore incentive-based rules (e.g. direct install programs) and building codes for existing buildings</p>	2/21/2024	Revised to evaluating creation of an inventory, removed the creation of a dashboard, and clarified that focus would shift to private residences after completion of target group
2/3.2*	EV building code	Evaluate San Jose's EV charging building code as a model for Menlo Park	2/21/2024	Incorporated into EV charging network expansion action

CAP strategy No. 4: Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission				
Action ID	Action name	Description	EQC meeting date	Modifications in staff recommendation
4.1*	Multi-modal networks	Build connected and safer multimodal transportation networks that make walking, bicycling and transit viable for more trips locally and regionally	5/15/2024	Revised to be tied to the continued implementation of the Transportation Master Plan
4.2	TDM requirements	Apply and update transportation demand management (TDM) requirements to help produce development that is not dependent on single occupant vehicles	5/15/2024	n/a
4.6*	TDM programs	Operate programs, including the shuttle program and safe routes to school to enhance transportation options for students, commuters and transit dependent populations	5/15/2024	Updated to note continued operations

CAP strategy No. 5: Eliminate the use of fossil fuels from municipal operations				
Action ID	Action name	Description	EQC meeting date	Modifications in staff recommendation
5.1/5.5/5.6*	Priority buildings	Continue electrifying the fleet and buildings including the Belle Haven Child Development Center, Arrillaga Family Recreation Center, and Burgess Pool leveraging grant funding	10/18/2023	Revised to be separate grant, fleet and facility action items tied to 2030 goal year
5.6*	Fleet decarbonization	Replace vehicles with the highest mileage and closest to end of life	10/18/2023	Updated to note continued efforts and specify replacements with zero emission vehicles
5.12*	V2B charging	Explore and install equipment for bidirectional fleet charging	10/18/2023	Updated to include description of acronym
5.10*	Microgrids	Explore additional microgrids for facilities and community resilience centers	10/18/2023	Broadened to also relate to preparedness efforts
5.11*	Battery storage	Explore battery storage programs	10/18/2023	Updated to note utility programs and distinguish this effort from microgrids to look for load shifting
5.13	Remaining emissions	Address the remaining 40% greenhouse gas (GHG) emissions from the municipal inventory beyond building and fleet electrification	10/18/2023	Revised to clarify the elimination of remaining emissions
5.7	Municipal GHG inventory	Update the municipal GHG inventory	10/18/2023	n/a
5.9	CAP5 dashboard	Make data accessible to show the City's ability to reach its goal by 2030 (e.g. countdown to carbon neutrality, showing percentage of equipment electrified)	10/18/2023	n/a

CAP strategy No. 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding				
Action ID	Action name	Description	EQC meeting date	Modifications in staff recommendation
6.1	Alignment with funding	Move the scope of Climate Action Plan (CAP) No. 6 beyond sea-level rise and flooding to develop our CAP No. 6 goal in alignment with the four goals from the State of California framework (to tap into federal and state funding sources): 1) Build awareness and notification 2) Strengthen community services/response 3) Increase resilience of the built environment 4) Utilize nature-based solutions	4/17/2024	Revised to focus engagement, support implementation of the Environmental Justice Element and restated for clarity
6.2	Urban forest management plan	Develop an urban forest management plan and lead an early action tree planting effort	4/17/2024	n/a



2030 CAP IMPLEMENTATION SCOPE OF WORK FOR 2025-2030

The updated CAP implementation scope of work outlines specific, feasible actions that the City will take between 2025 and 2030 to achieve carbon neutrality. The actions are organized by CAP strategy and identified by an action ID and a simplified name along with a more detailed description, the lead division(s) responsible for implementation, and estimated target timelines. Action items may shift depending on Council priorities, staffing, and other internal or external factors. Some actions involve policy decisions that would require further discussion and adoption by City Council. For the purposes of the table, the following definitions apply: short term is within one (1) year; medium term is within three (3) years, and long term is within five (5) years.

Interdepartmental collaboration will be crucial for the implementation of the scope of work outlined.

CAP Strategy No. 1: Explore policy/program options to convert 95% of existing buildings to all-electric by 2030					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
1.1	Building codes	Adopt pre-wiring requirements for existing buildings in the short term and evaluate performance requirements both new and existing buildings during the 2025 code cycle adoption	Building/ Planning/ Sustainability	Short term	Medium term
1.2	Multifamily electrification support	Support Peninsula Clean Energy (PCE) in the development of multifamily home electrification program	Sustainability	Medium term	Medium term
1.3	Community electrification	Develop additional program options to disperse California Energy Commission grant funds including opportunities for residents who are renting	Housing/ Sustainability	Short term	Short term
1.4	Outreach dashboard	Create a community outreach plan and measurement dashboard to track electrification progress, including data points for gas usage	Sustainability/ Information technology	Short term	Medium term

1.5	Permit streamlining	Continue to evaluate and enhance a permit streamlining program that: a. Provides a clear, fast, predictable, and interconnected process for permit applicants and staff b. Includes continuous improvement of permit and inspection process and monitoring best practices from of other jurisdictions c. Solicits feedback from stakeholders who complete electrification projects (permit applicants, homeowners, contractors, and staff)	Building/ Planning/ Sustainability	Ongoing	Ongoing
1.6	Affordable Housing	Require all-electric construction for affordable housing built on City owned land	Housing/ Planning/ Sustainability	Ongoing	Ongoing
1.7	Onsite energy generation	Complete a cost effectiveness study to activate Bayfront zoning green and sustainable building requirements (e.g. Municipal Code section 16.43.140(2)(A)) for onsite energy generation	Planning/ Building/ Sustainability	Medium term	Medium term
1.8	Online electrification education hub	Enhance outreach and education on electrification including presenting the benefits, available incentives, and permit process by improving the website and linking the sustainability, building and online permit websites. Create additional outreach materials and a strategic communications plan to direct community members to the resources online.	Building/ Sustainability	Short term	Medium term

CAP Strategy No. 2: Set citywide goal for increasing EVs and decreasing gasoline sales; and No. 3: Expand access to EV charging for multifamily and commercial properties					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
2/3.1	Existing EV program promotion	Inform stakeholders of current incentives and benefits by: a. Promoting existing information on EVs, affordability, and emphasizing current incentives b. Evaluating potential partners for Level 1 & Level 2 charging	Sustainability	Short term	Long term
2/3.2	EV charging network expansion	Focus on expanding EV charging network by: a. Leveraging partners who are already promoting EVs widely to prompt resident EV purchases b. Promoting focus on Level 1 & Level 2 chargers, not DC Fast Chargers, and evaluating future tech as it evolves / can scale c. Continuing to identify public lots for EV charging infrastructure d. Considering removal of other fees from City owned charging and identifying	Public works/ Sustainability	Medium term	Long term

		<p>alternative funding to support operation, maintenance, replacement and/or additional chargers</p> <p>e. Explore building code policies to increase EV charging in new multifamily and commercial developments including the City of San Jose's EV charging building code</p> <p>f. Continue to adopt the City's current EV building code amendments with each code cycle</p>			
2/3.3	Increase EV access	<p>Increase EV charging access in multifamily, small businesses, and city-owned buildings through partnerships, policy, and programs by:</p> <p>a. Exploring the creation of an inventory of installation opportunities in current buildings and future developments</p> <p>b. Partnering with public agencies and private property owners to install EV charging</p> <p>c. Shifting focus to private residences after completing target group above and utilizing lessons learned</p> <p>d. Exploring incentive-based rules (e.g. direct install programs) and building codes for existing buildings</p>	Building/ Sustainability	Medium term	Long term

CAP Strategy No. 4: Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
4.1	Multi-modal networks	Continue to implement the Transportation Master Plan to build connected and safer multimodal transportation networks that make walking, bicycling and transit viable for more trips locally and regionally	Public works	Ongoing	Ongoing
4.2	TDM requirements	Apply and update transportation demand management (TDM) requirements to help produce development that is not dependent on single occupant vehicles	Public works/ Planning	Ongoing	Ongoing
4.3	Shuttle study	Complete a shuttle study to evaluate and optimize shuttle service and implement findings	Public works	Medium term	Medium term
4.4	Infrastructure coordination	Coordinate bike/pedestrian improvements with planned street resurfacing	Public works	Ongoing	Ongoing

4.5	GIS dashboard updates	Update the Transportation Master Plan GIS dashboard to quantify GHG impacts of planned and completed VMT reduction projects (bike lanes, sidewalks)	Public works/ Information Technology/ Sustainability	Short term	Short term
4.6	TDM programs	Continue to operate programs, including the shuttle program and Safe Routes to School, to enhance transportation options for students, commuters and transit dependent populations	Public works	Ongoing	Ongoing
4.7	Bicyclist engagement	Provide educational and engagement opportunities to support cyclists of all ages	Public works /Sustainability	Ongoing	Ongoing
4.8	Housing Element TOD	Continue to implement Housing Element policies that support transit oriented development	Housing/ Planning/ Public works	Short term	Ongoing
4.9	C/CAG coordination	Coordinate with C/CAG to remove cross-jurisdictional barriers to regional active transportation planning and infrastructure projects	Public works	Short term	Ongoing

CAP Strategy No. 5: Eliminate the use of fossil fuels from municipal operations

Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
5.1	Leverage grants	Continue monitoring grant opportunities and prioritize capital projects that leverage grant funding	Sustainability	Ongoing	Long term
5.2	Creative financing	Explore electrification project financing options beyond Capital Improvement Program (CIP) allocations	Public works/Finance/ Sustainability	Short term	Long term
5.3	Fleet right sizing	Conduct a fleet rightsizing study to identify the number and type of vehicles needed for fleet operations and zero-emission alternatives	Public works/Police/ Sustainability	Short term	Short term
5.4	Utility dashboard	Develop or purchase an energy management software/dashboard that integrates utility billing/usage data with existing City asset management software	Information technology/ Sustainability	Short term	Short term

5.5	Facility electrification	Establish facility electrification prioritization criteria and continue to develop and complete projects to electrify all city-owned buildings by 2030	Public works/ Sustainability	Short term	Ongoing
5.6	Fleet decarbonization	Continue to use renewable diesel and replace vehicles with zero-emission options to decarbonize the fleet by 2030 based on mileage, age, downtime for repairs, mandated emission regulations and an assessment of all vehicles and equipment with readily available EVs	Public works/ Sustainability	Ongoing	Long term
5.7	Municipal GHG inventory	Update the municipal GHG inventory	Sustainability	Short term	Short term
5.8	Landfill flare	Capture emissions from Bedwell Bayfront landfill flare	Public works/ Sustainability	Short term	Medium term
5.9	CAP5 dashboard	Make data accessible to show the City's ability to reach its goal by 2030 (e.g. countdown to carbon neutrality, showing percentage of equipment electrified)	Information technology/ Sustainability	Short term	Ongoing
5.10	Microgrids	Explore creating additional microgrid opportunities to enhance community resiliency and preparedness	Public works/ Sustainability	Short term	Long term
5.11	Battery storage	Explore battery storage utility programs to shift peak loads and lower operational costs for city facilities	Sustainability	Medium term	Long term
5.12	V2B charging	Explore and install equipment for vehicle-to-building (V2B) bidirectional fleet charging	Public works/ Sustainability	Short term	Medium term
5.13	Remaining emissions	Develop programs and projects to eliminate the remaining greenhouse gas (GHG) emissions from the municipal inventory beyond building and fleet electrification including implementing programs in compliance with Senate Bill 1383 to increase organic collection services, establish food recovery programs, and purchase recycled organics products.	Sustainability/ Public works	Short term	Long term
5.14	ZELE for City crews	Continue to purchase and deploy zero-emission landscape equipment (ZELE) used by city staff and contractors	Public works/ Sustainability	Ongoing	Ongoing
5.15	Leave-the-leaves pilot	Explore a leave-the-leaves/blower-free park pilot	Public works/ Sustainability	Medium term	Medium term

5.16	Green Business Certification	Explore Green Business Certification for fleet and/or facilities	Public works/ Sustainability	Medium term	Long term
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CAP Strategy No. 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
6.1	Planning and identifying funding	Engage the community in the areas of the city most vulnerable to the impacts of climate change to develop a climate adaptation plan beyond sea-level rise and flooding supporting implementation of the Environmental Justice Element programs and aligning with the four goals from the State of California framework (to tap into federal and state funding sources): 1) Build awareness and notification 2) Strengthen community services/response 3) Increase resilience of the built environment 4) Utilize nature-based solutions	Sustainability	Short term	Medium term
6.2	Urban forest management plan	Develop an urban forest management plan and lead an early action tree planting effort	Public works/ Sustainability	Short term	Short term

2030 CLIMATE ACTION PLAN

Prepared by the Environmental Quality Commission

Adopted by City Council July 2020 (Resolution No.6575)

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INTRODUCTION

Menlo Park is uniquely threatened by climate change and is uniquely positioned to tackle it.

Menlo Park’s location on the shore of San Francisco Bay places approximately \$1.3 billion¹ of property in our Belle Haven and Bayfront neighborhoods at risk of flooding from climate change by as early as 2070.² While it is impossible for Menlo Park alone to halt the global sea level rise that threatens our city, bold climate leadership on our part is perhaps our only hope of keeping sea level below the height of an “affordable” sea wall. The San Francisco Bay Area Joint Powers Authority estimated in a 2016 feasibility study that a combination of levees and sea walls built along the shoreline of Menlo Park and East Palo Alto to address just three feet of sea level rise would cost approximately \$100 million.³

If we do not provide visible and inspiring leadership on climate and global greenhouse gas emissions continue rising at their current rate, no sea wall or levee will save the portion of our city between Route 101 and the Bay. That land, which includes a disproportionate percentage of our city’s low-income residents and residents of color, will be inundated and residents and businesses will have to permanently relocate. On the other hand, if we take a leadership position and our bold climate action inspires rapid and far-reaching climate action by other cities, we may be able to save our Belle

In order to address the significant threat to Menlo Park posed by climate change, the City Council adopted a bold climate goal of zero carbon by 2030. This will be achieved through a 90%

Haven and Bayfront neighborhoods with a combination of sea walls and levees.

The good news is that if there is any city well positioned to lead on climate action, it is Menlo Park. Located in Silicon Valley, our residents and leaders embrace innovation. Our county (San Mateo) is one of the wealthiest in the country,⁴ which means we have the financial resources to tackle the issue of climate change head on. Analysis conducted by members of the Environmental Quality (EQC) Commission’s Climate Action Plan subcommittee shows that every dollar spent now by the City on bold climate action can be expected to save City residents \$100 in future adaptation costs⁵ addressing sea level rise alone, not to mention the healthcare costs associated with treating ailments caused by air pollution (see “Natural Gas Phase Out” section below).



ZERO CARBON BY 2030

reduction in carbon dioxide equivalent emissions (CO₂e) from 2005 levels, and elimination of the remaining 10% of CO₂e through direct carbon removal measures.

¹ According to [County of San Mateo Sea Level Rise Vulnerability Assessment](#) p. 139, sea level rise of 3.3 feet will inundate Menlo Park real estate valued at \$1.288 billion and a rise of 6.6 feet will inundate \$1.621 billion in real estate.

² Griggs, G, Árvai, J, Cayan, D, DeConto, R, Fox, J, Fricker, HA, Kopp, RE, Tebaldi, C, Whiteman, EA (California Ocean Protection Council Science Advisory Team Working Group), [Rising Seas in California: An Update on Sea-Level Rise Science, California Ocean Science Trust, April 2017](#). Ranges shown are from the median (50th percentile) to the extreme (99.9th percentile) range of the projections.

³ [Public Draft Feasibility Report, SAFER Bay Project, Strategy to Advance Flood protection, Ecosystems and Recreation along San Francisco Bay, East Palo Alto and Menlo Park](#), October 2016, p. 37.

⁴ https://en.m.wikipedia.org/wiki/List_of_highest-income_counties_in_the_United_States

⁵ Supporting analysis available in PDF format in Appendix C and in Excel format upon request

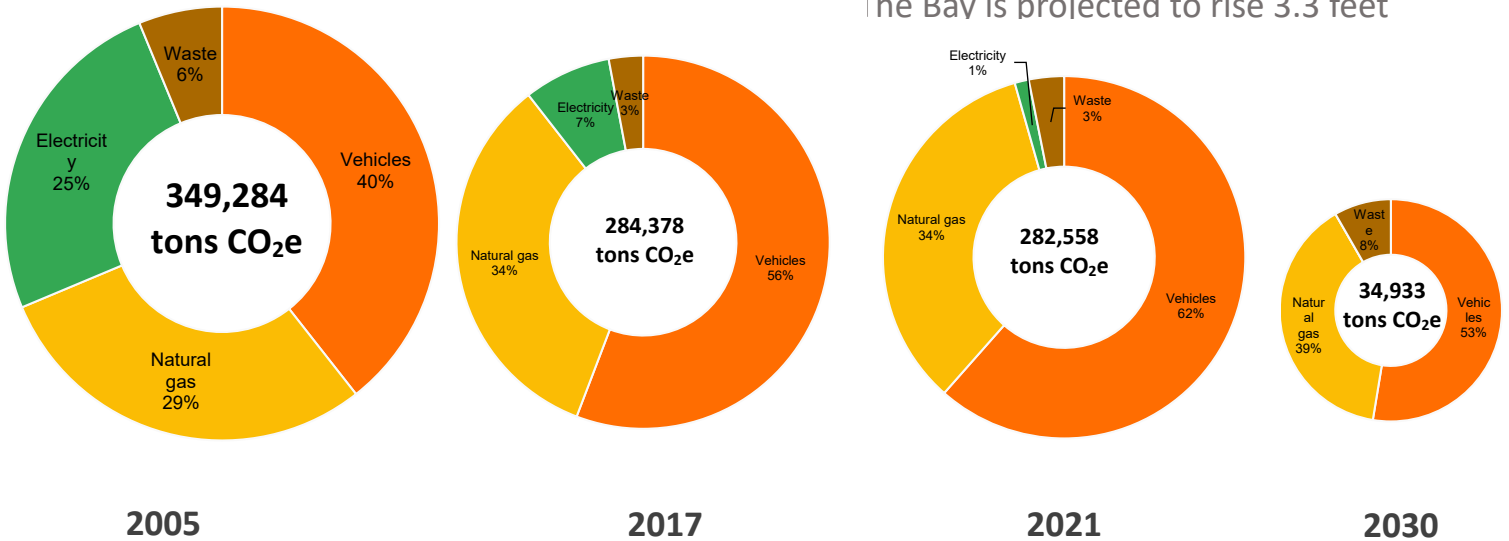
The 2021 greenhouse gas emissions inventory revealed that emissions in Menlo Park fell from 349,284 tons in 2005 to 282,558 tons of CO₂e in 2021, a reduction of 19%. The aim of this plan will be to reduce community-wide emissions by another 71% for a total reduction of 90% from 2005

emissions, leaving just 34,933 tons of CO₂e per year by 2030.

Source: <http://data.povtblue.org/apps/ooof/cms/index.php?page=flood-map>

YEAR: 2070-2100

The Bay is projected to rise 3.3 feet



Menlo Park Community Greenhouse Gas Emissions (metric tons of CO ₂ e)				
	2005	2017	2021	2030
Vehicles	137,628	158,686	<u>152,034</u>	18,373
Natural gas	102,295	95,742	<u>84,253</u>	13,656
Electricity	87,617	21,528	<u>3,111</u>	-
Waste	21,745	8,424	<u>7,749</u>	2,903
Total Emissions	349,285	284,380	<u>282,558*</u>	34,933

*The 2021 inventory included new categories not shown in this table, but included in total emissions (34,209 MTCO₂e from building energy stationary sources, 1,077 MTCO₂e from wastewater, and 124 MTCO₂e from water)

OPTIONS FOR ACTION

In order to achieve a goal of “Zero emissions by 2030,” Menlo Park must begin taking bold action immediately. Fortunately, the City has already decarbonized its electricity supply by joining with other cities in the County to create a joint powers authority (Peninsula Clean Energy) that sources power mainly from renewables and hydropower. This creates a clean energy stepping stone from which to decarbonize the rest of the City’s economy.

Our next step is to decarbonize all of our buildings and transportation. In an ideal world with more time, the City’s climate goals could be achieved simply by unleashing the power of free enterprise and relying on markets and educated consumers to transform our fossil-fuel dependent economy to one that stops emitting greenhouse gases in time to avert catastrophic climate change. Members of the Climate Action Plan (CAP) subcommittee of the Environmental Quality Commission (EQC), who prepared this plan, certainly would prefer this type of approach, as it limits the role of government and would reduce the likely opposition from some interest groups. However, no matter how carefully the subcommittee considered various incentive- and education-based laissez-faire approaches, none of them appears able to solve the climate problem in time to avert catastrophic change to our daily lives. In fact, the less action the City takes now, the costlier the government intervention will be later to deal with the resulting climate disasters.

The key reasons that market approaches alone cannot solve climate change are three-fold:

- 1) markets are currently distorted by the absence of accurate pricing for key externalities, such as the right to dump harmful greenhouse gas emissions into the atmosphere, which today is virtually free to any person or business who wishes to do it, leaving the rest of us bear the ever increasing cost,
- 2) powerful political interest groups such as the fossil fuel industry have successfully spread enough disinformation about climate change that Americans significantly

underestimate the problem and therefore underestimate the actions that must be taken to address it, and

- 3) polluting devices last far too long once installed and we simply do not have enough time for the typical market signals to trickle down to those who determine product offerings and today offer environmentally obsolete products to customers.

Just as the US government stepped in forcefully after the bombing of Pearl Harbor to require that much of America’s free market economy be transformed to support the war effort, so too must the government now step in forcefully and confidently to lead the American public away from the brink of climate disaster.

Thankfully, the actions required of every American citizen to forcefully combat climate change are much less onerous than the food rations or military conscription imposed on World War II-era Americans. We are fortunate that a robust private sector has already provided every technological solution and innovation necessary to almost completely retire fossil fuels as an energy source in America today.

PERSONAL ACTION

Below is a list of the personal actions that, if every citizen took them, would halt global warming in its tracks:

- Retire all gas vehicles immediately and replace them with electric vehicles, bikes, transit or another form of non-fossil transport
- Replace every gas appliance in a home (including furnace, water heater and stove) with an efficient electric version
- Power every home and car with 100% renewable electricity, either by installing solar panels or purchasing renewable energy from one’s utility
- Consider the greenhouse gas emissions associated with every purchase decision

and choose “low-carbon” products and services whenever possible

- Reduce weekly consumption of meat and animal products, a move which has significant ancillary health benefits.

GOVERNMENT ACTION

At the local government level, climate action must focus on eliminating the use of two categories of fossil fuels: 1) gasoline and diesel fuel in vehicles, and 2) natural gas in home appliances. Given the 25-year expected life of a typical gas furnace, it is critical for the City to begin prohibiting the installation of new replacement gas furnaces and water heaters as soon as possible.

In considering the wide-reaching actions and change required to meet the City’s proposed climate goals, researchers reviewed dozens of approaches employed by cities all over the world, including:

- A “5-minute city” approach to zoning implemented in Copenhagen, Denmark that drastically reduced vehicle miles traveled (VMT) and made the city more walkable
- A carbon fee on buildings recently implemented in New York City
- An announced plan to end the flow of natural gas in the City of Arcata, California and now being considered by Palo Alto.

After months of weighing each of the dozens of approaches, the CAP subcommittee identified three basic options for action: 1) a Bold Plan with 22 actions to be implemented over one year, 2) a Moderate Plan with 76 actions to be implemented over three years and 3) a Go Slow Plan with no specific actions other than to follow evolving state rules.

PLAN CHANGES DUE TO COVID-19 PANDEMIC

Shortly after the CAP subcommittee fleshed out the three different approaches to climate action described above, the world was gripped by the

global pandemic of COVID-19. The pandemic has significantly affected the context in which this plan is presented, namely:

- The time and attention of City Council and staff has understandably shifted almost entirely to managing the health risks and economic consequences of the pandemic
- Almost overnight, the country has gone from enjoying robust economic growth to experiencing one of the starkest economic recessions in US history
- Due to the economic recession, the City’s budget has shrunk dramatically, with a 2020-21 shortfall of \$12.7 million
- Layoffs of dozens of City staff as a result of the City’s budget shortfall
- City commissions, including the Environmental Quality Commission (EQC), unable to meet for 4 months, which means the CAP subcommittee has been delayed in vetting the CAP with the EQC

Despite disrupted City operations, the CAP subcommittee continued refining the Climate Action Plan and vetting it with the City Council’s CAP subcommittee (distinct from the EQC’s CAP subcommittee) to receive their input on what might be politically viable in Menlo Park. The result of that continued work is a significantly pared down plan, presented below. While the CAP subcommittee still believes that the original Bold or Moderate Plans (presented in Appendix B), with their 22 and 76 actions respectively, are in fact what the Climate Crisis requires, we have decided to propose a significantly pared down plan, with the thought that some action is better than no action. This plan includes only the highest impact actions. This does not mean it is the best plan. It means it is only a good subset of the best plan and future efforts should be made to expand it as our ability and the wisdom of doing so becomes ever more apparent.

THE PLAN

Strategies	#	Description	2030 GHG Reduction (tons/yr)	Estimated Initial Investment for FY 2020-2021
Explore policy/program options to convert 95% of existing buildings to all-electric by 2030	1	Two basic options: 1) Announce the “end of flow” of natural gas in the City by 2030 OR 2) Enact a “burn-out ordinance” requiring that when gas appliances expire, they must be replaced by electric (preferably high efficiency heat pump) alternatives; phase in for large commercial, small commercial, residential; may require follow-on compliance ordinance as current permit compliance for residential gas appliances is low; will require follow-up “cash-for-clunkers” program to achieve 2030 goal; relies on PCE subsidies to reduce or eliminate cost differential; may require use of UUT funds to cover additional cost differential for low-income residents. Extend burnout ordinance to expiring air conditioners, to be replaced with heat pumps, eliminating need for separate gas heating.	1) 86,465* OR 2) 51,636*	\$195,000 to \$275,000 *Initial investment to hire contract staff (building official, legal aid, energy analyst) and provide policy options that would lead to adoption of a policy, ordinance, and/or program
Set citywide goal for increasing EVs and decreasing gasoline sales	2	Announce and promote goals of 1) increasing the purchase of all new vehicles to be electric by 2025 and 2) reducing gasoline sales each year by 10%, based on the total reported in 2018. Track progress on both goals publicly on an annual basis.	<7,120*	\$0-\$20,000 to influence regional agency or organization to lead on behalf of the city
Expand access to EV charging for multifamily and commercial properties	3	Install or assist building owners in installing EV chargers throughout the City, siting them preferably where they will be used during daylight hours (when solar electricity is abundant on our grid) and also where residents of multi-family housing can access them. Current project to explore and evaluate policy options for existing multifamily properties.	7,370* <13,000* for multifamily	\$140,000 *Initial investment for contract analyst to evaluate multifamily properties
Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission	4	Reduce VMT, especially by gasoline vehicles, through a two-pronged approach: 1) Change zoning to encourage higher density (esp. for housing) near transit 2) Make the City easier to navigate without a car by accelerating implementation of the Transportation Master Plan with an emphasis on developing a clear network of protected pedestrian/bike paths throughout town Current projects underway that help achieve this goal: SB2 Housing grant, Transportation Management Plan, Transportation Management Association, and implementation of new VMT guidelines for new development	31,743*	Explore in 2021 or 2022 after current and complimentary projects are completed
Eliminate the use of fossil fuels from municipal operations	5	Replace 100% of the following municipal assets with efficient electric substitutes for: 1) Gas pool heating equipment 2) Gas and diesel municipal fleet vehicles 3) Gas furnaces 4) Gas hot water heaters 5) Gas-powered gardening equipment	879*	Currently budgeted for end of life assets/appliances, and new community center/library
Develop a climate adaptation plan to protect the community from sea level rise and flooding	6	Develop a climate adaptation plan focused on protecting areas of the community vulnerable to sea level rise and flooding, as forecasted by the National Oceanic and Atmospheric Administration (NOAA) and California State agencies. Consider requiring developers to fund efforts to protect the community.	0	Flood and Sea Level Rise Resiliency District to Lead
TOTAL (assumes option 2 is chosen in action #1)			98,748+	\$355,000 - \$435,000
*GHG emission reductions have been estimated and have not been verified				

You will notice that the plan, as presented, falls well short of the goal of reducing our greenhouse gas emissions by 249,447 tons/yr by 2030. In fact, the plan only addresses 40% of the sought-after reductions. This simplified six-strategy plan is significantly scaled back from the more comprehensive plans envisioned before COVID-19 struck, a compromise the CAP subcommittee felt was warranted, given the City's projected budget short-falls. The CAP subcommittee hopes that market momentum in the EV sector will make a significant contribution to the reduction of Menlo Park's greenhouse gas emissions, an effect not accounted for here. **The Environmental Quality Commission expects the significantly truncated six-strategy plan presented above to be completed within one year and strongly advises City Council to revisit the original, more comprehensive plan in July 2021, so that as the economy improves, those actions can be reincorporated into the plan.**

NATURAL GAS PHASE OUT

Ending the use of natural gas has multiple benefits, including the avoidance of failures in gas system operations, such as the one that destroyed homes and caused death in Brookline, Massachusetts in 2018 and the one that did even greater harm in San Bruno, California in 2010.

The normal operation of gas appliances in buildings has also been found to cause indoor air pollution that would be illegal outdoors due to its negative health impacts, according to a recent study from UCLA.¹¹ That study links chronic exposure to the NO₂ emitted from gas stoves to a range of health ailments, including: asthma, lung inflammation, increased risk of respiratory infection, lung and breast cancer and low birth weight in babies. Doctors in a January article in the New England Journal of Medicine wrote the following, "As physicians deeply concerned about climate change

and pollution and their consequences, we consider expansion of the natural gas infrastructure to be a grave hazard to human health." They continued, "We also recommend that new residential or commercial gas hookups not be permitted, new gas appliances be removed from the market, further gas exploration on federal lands be banned, and all new or planned construction of gas infrastructure be halted."¹² It is therefore within the City's normal powers, which are aimed at protecting the health and safety of its citizens, to seriously consider announcing the "End of Flow" (EOF) of natural gas.

This is similar to an approach proposed in the City of Arcata, California whereby the City would explore and pass an ordinance that sets an end date, for example 7/4/2030, for the flow of natural gas to all gas customers within the City limits. This sets a date certain by which community members would want to make any needed electrification updates to their homes for water heating, cooking and space heating. The City could then either stand back and let community members educate themselves on choices that would work for them, or the City could be an active partner to interested citizens, perhaps leading a helpful bulk buying program for: water heaters, heat pump HVAC units, EV chargers and installation services, or performing other joint effort transformation activities. There is already a local model for city-led bulk buying called Sunshares, which performs bulk buying for home solar systems and electric vehicles. While the idea of city-led bulk buying may sound new and different at first, we should realize that the City of Menlo Park already performs bulk buying of commodities and services for its citizens and businesses, including water supply, public safety services, street tree maintenance, roads and sidewalks, etc.

SOURCES OF FUNDS

¹¹ UCLA Fielding School of Public Health, "Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California," April 2020, <https://coeh.ph.ucla.edu/effects-residential-gas-appliances-indoor-and-outdoor-air-quality-and-public-health-california>

¹² New England Journal of Medicine, "The False Promise of Natural Gas," Philip J. Landrigan, M.D., Howard Frumkin, M.D., Dr.P.H., and Brita E. Lundberg, M.D., <https://www.nejm.org/doi/full/10.1056/NEJMp1913663>

Some of the six proposed strategies can most likely be implemented by existing staff with extra support from a contractor/consultants.

Other than the General Fund, there are two other potential sources of funds:

- 1) the \$400,000 presented in the 2020-21 Capital Improvement Plan (CIP) as earmarked for implementation of the Climate Action Plan and
- 2) issuing debt or borrowing money¹³.

Saving our community for future generations seems like one of the most prudent uses of borrowed funds one can imagine. Conversely, if we wait until extra City revenue is available to fund climate action, we will most certainly lose the climate fight.

There will be additional capital expenditures incurred as part of the Climate Action Plan, as well, including:

- Investment in EV charging infrastructure
- Street improvements related to the TMP implementation
- Investment in electric replacements for municipal gas and diesel assets

If funds for these capital expenditures have not already been allocated in the City's Capital Improvement Plan (CIP), an amendment would need to be made to the CIP for that purpose. The EQC's CAP subcommittee recommends **against** using funds currently earmarked in the CIP for climate action to pay for municipal greening projects. Such projects are good candidates for outside financing or borrowing, whereas the CAP funds in the CIP should be focused on high impact activities to reduce community-wide greenhouse gas reductions, such as policy development, programs, incentives, education and marketing.

PLAN METRICS

Climate Action Plans have a poor history of being effectively implemented and one reason for that is

that progress is typically only measured every five years and with staff turnover, well intentioned plans can go unexamined for years. In order to avoid such an outcome, the CAP subcommittee recommends that a short list of concrete metrics be adopted and that the City Council request quarterly, if not monthly, updates on those metrics.

Key metrics to track include:

1. Number of gas hot water heaters citywide that are replaced with electric versions (data source: Menlo Park Building Department)
2. Number of gas furnaces citywide that are replaced with electric versions (data source: Menlo Park Building Department)
3. Number of utility natural gas accounts terminated (data source: Peninsula Clean Energy or PG&E)
4. Number of new cars registered that are gas vs. EV (data source: DMV)
5. Number of total cars registered that are gas vs. EV (data source: DMV)
6. Gallons of gasoline sold in Menlo Park (data source: City sales tax reports)
7. Percentage of municipal assets converted from gas or diesel to electric (data source: Menlo Park Public Works Department)
8. Vehicle miles traveled, including trips inbound, outbound and within the City (Google Environmental Insights Explorer)
9. Number of other cities that query and/or copy Menlo Park's climate policies and programs (data source: outreach efforts and research by Menlo Park Sustainability staff)

While Sustainability staff and members of the CAP subcommittee question the value of conducting frequent high level greenhouse gas inventories, we do all agree that measurement is important and believe that tracking the specific items listed above will help staff and Council gain insight into the effectiveness of the climate actions that the City decides to undertake. County efforts to measure greenhouse gas emissions are expected to

their endowments in order to continue disbursements, <https://www.nytimes.com/2020/06/10/business/ford-foundation-bonds-coronavirus.html>.

¹³ An interesting model for borrowing against existing financial assets (such as the City's reserves) has been employed during the COVID recession by leading charitable Foundations who are borrowing at low interest rates against

continue and will hopefully reflect progress made by cities within the County.

METHOD FOR EVALUATING ACTIONS

The six strategies detailed above were selected from over 76 actions included in the original Bold and Moderate Plans, because they offer the City the most potential for Greenhouse Gas Reductions per dollar spent.

Dozens of potential climate actions were considered. Actions took many forms, including: city ordinances, city directives, programs and collaborations. Each action was evaluated for the following key criteria:

- Potential to reduce greenhouse gas (GHG) emissions
- City staff resources required to implement
- City cost to implement
- Out-of-pocket expenses for community members to implement (lifecycle economics for user)
- Political feasibility
- Potential for replication by other cities

The cost estimates above should be viewed as preliminary, requiring further thorough analysis by City staff prior to policy adoption.

THE TRUE COST OF CARBON

As mentioned above, there is in fact a societal cost to burning fossil fuels, sometimes referred to as the “cost of carbon.” There are debates today over how best to calculate that cost. Some say it should be based on the damages caused by those emissions. Others say it should be based on the cost to remove those carbon emissions from the atmosphere, once that becomes possible. In the absence of a global consensus, the EQC’s CAP subcommittee attempted to estimate the cost of carbon to Menlo Park by taking the projected losses from sea level rise in our city alone, \$1.3 billion, and dividing that by the tons of CO₂e we expect to emit over the next 40 years in a business as usual situation. Using this simple methodology, we arrived at a “cost of carbon” of \$130/ton for Menlo Park.

There are a number of ways the City could use this figure. We could consider levying a tax of \$130/ton

on fossil fuels, in order to cover future damages the City will incur, in essence internalizing the externalized “cost of carbon.” Another way to use this figure would be for the City to factor it in to all decisions concerning assets in the City that consume fossil fuels, for example in calculating the true cost to the City of a gasoline-powered police car or the true cost to citizens of a gas furnace.

NOTE ON LEADERSHIP

Saving our City from sea level rise will require collective global action, which Menlo Park can likely only influence through bold leadership. In evaluating the relative effectiveness of various climate actions, the CAP subcommittee noted the significant impact that replicability and demonstration of feasibility of a policy or program had on its potential to generate emissions reductions. If other cities can easily copy a policy or program, it is likely to **catalyze emissions reductions many times greater** than our City’s emissions reductions alone. Therefore, it is strongly advised that City staff favor simplicity and replicability in its design of climate policies and programs and it is further advised that the City invest resources in proactively sharing its climate policies and programs with other cities, counties and government entities.

We must also be nimble and ready to act on economic stimulus opportunities that may present themselves, as the Country attempts to pull itself out of a recession.

NOTE ON UTILITY PARTNERS

An analysis of community member economics for each action revealed that rebates can make or break the economics behind purchasing decisions for equipment like electric vehicles and electric heat pumps for space and water heating, all of which are essential for progress on climate action. The City can greatly increase the political feasibility of many climate actions included in this plan by calling on its local Community Choice Energy (CCE) provider to rapidly deploy the significant capital currently held on its balance sheet to fund rebates on electric replacements of gas appliances. Such rebates can make climate friendly replacements cost effective and that enables city councils like ours to pass ordinances requiring such replacements. In turn,

the new electric devices generate net revenue that rebuilds the CCE's financial reserves.

To this end, Peninsula Clean Energy's board recently signaled its support for local cities' efforts to electrify, voting on May 28, 2020 to invest \$6 million to electrify existing buildings in San Mateo County. This program will reportedly include substantial incentives for: 1) the installation of electric heat pump water heaters, 2) upgrades to electric service panels so they can handle the increased electric demands of all-electric homes, and 3) whole-home electric conversions for low income residents. Such programs are a promising signal that local CCEs intend to help ease the financial burden of converting homes from natural gas to all-electric, since it is not only essential for fighting climate change but also in their long-term financial interest to do so.

NOTE ON EQUITY

Climate change does not affect all members of society equally. Tragically it disproportionately affects low income people and people of color, as evidenced right here in Menlo Park, where sea level rise is expected to have a devastating impact on residents of our Belle Haven neighborhood. A similar pattern is observed all over the globe, where poor island nations are becoming the first to be wiped off the globe. Climate justice advocate Hop Hopkins illustrates the connection between climate change and racism by explaining how allowing climate change to occur requires that we accept that portions of our local and global communities are "sacrifice zones, and you can't have sacrifice zones without disposable people, and you can't have disposable people without racism."

Meanwhile wealthier segments of society go on emitting greenhouse gases at ten times the rate of poorer segments, unwilling to make even small changes to their purchasing decisions. The COVID crisis has shed a light on the shocking inequity in health outcomes for people of color, some of which can be attributed to well documented racial disparities in exposure to air pollution from fossil fuels. Menlo Park must ask itself whether it wishes to continue contributing to this global and local inequity, or whether it can strongly prioritize leadership in solving these interconnected problems.

Finally, although Menlo Park is situated in one of the wealthiest Counties in the country, that wealth is not equally distributed and some residents may find it difficult to afford at least the capital outlay for the changes recommended in this plan. To address issues of equity, there are a number of options for ensuring that low-income residents have the financial support they need to make the required changes to their homes and vehicles. Both the State and local CCEs have shown a willingness to provide financial subsidies specifically targeted at low income residents. Peninsula Clean Energy recently set aside \$2 million, out of a \$6 million program, just to assist low-income residents with all-electric retrofits of their homes. If the City wishes to further bolster that support, it could consider allowing the Utility User's Tax (UUT) on natural gas sales to increase from its current 1% level to the existing voter-approved level of 3.5%. That would provide an estimated \$500,000 in additional funding every year to low-income families converting gas appliances to all-electric. The City must take an active role in ensuring that low-income residents are not unfairly disadvantaged by the requirements of its Climate Action Plan.

ANOTHER NOTE ON COVID-19

Lastly, this Climate Action Plan is being presented to City leaders in the midst of a generation-defining event, namely the global COVID-19 pandemic. It is understandable and appropriate that City leaders would devote their immediate attention to protecting the health and wellbeing of our community, as we fight this deadly virus.

As the health emergency wanes, however, the CAP subcommittee hopes that Council members will view the proposed Climate Action Plan as an opportunity for Menlo Park. COVID-19 has jolted us all out of our routines and everyday existence, highlighting in a graphic way our vulnerability as a species. Climate change has the potential to do the same, only on an even greater scale. If we are able to take in the lessons presented to us by this current crisis, we will be better prepared to address the climate crisis that is coming. For example, we should ask ourselves: Do we want to be like South Korea and flatten the carbon "curve" by proactively investing in mitigating the carbon dioxide

“contagion”? Or will we delay, like Italy, and only take decisive action once the problem has ballooned? Is it still acceptable to stand by and watch one window of opportunity after another close before our eyes, leaving us with a much larger problem, the only response to which threatens to destroy our economy? Can we accept that this problem, like COVID, will ravage poor communities and people of color? The choice is ours. How will we act?

This Climate Action Plan presents us with economic opportunities as well. If enacted, this plan will jumpstart a new local market in electric appliance installation, injecting money into the economy and providing hundreds of new jobs, just when they are needed.

Finally, as medical professionals learn more about the adverse health impacts of burning fossil fuels in our homes, the Climate Action Plan offers Menlo Park an opportunity to set a new standard for health and safety in our homes and places of work by removing fossil fuels from our air completely.

Our future is in our hands. It is time to act.

APPENDIX A

ORIGINAL PLAN OPTIONS – BOLD, MODERATE AND GO SLOW

Dr. John Holdren, scientific advisor to President Obama, advised that humans have three basic choices when it comes to climate change: 1) mitigate the problem by reducing our emissions, 2) adapt to the problem and try to move out of harm's

way, or 3) suffer. What every civic leader must do today is pick the mix of those three options that they are willing to bring to their communities.

A summary of the benefits and drawbacks of each plan, from a City official's perspective, is offered below.

Bold Plan	Moderate Plan	Go Slow Plan
<ul style="list-style-type: none"> • A few bold actions • One-year implementation • Achieves goal of Zero by 2030 • Less \$ now (staff resources) • Less \$ later (lower sea walls) • Subject to opposition • Less human suffering • Regional leadership role 	<ul style="list-style-type: none"> • Many moderate actions • Three-year implementation • Makes progress toward goal of Zero by 2030 • More \$ now (staff resources) • Some \$ later (sea walls) • Subject to some opposition • Some human suffering • Regional leadership role 	<ul style="list-style-type: none"> • No proactive actions • No specific implementation time • Falls well short of Zero by 2030 goal • Less \$ now (staff resources) • More \$ later (high sea walls) • Subject to some opposition • More human suffering • No regional leadership role

THE MODERATE PLAN

The Moderate Plan is a set of 60+ actions (Appendix B), implemented over 3 years, that involve working with the community (residents, businesses and commuters) to assist and compel them to change, while simultaneously working with other cities, the County, the State and utilities to make such change easier. This would be accomplished by changing laws, capabilities and economics in a way that transforms standard practice, similar to the way that our all-electric Reach Codes are transforming standard practice in new construction. Menlo Park is gaining credibility in this area and therefore has a reasonable chance of catalyzing regional change through bold leadership and knowledge sharing.

The Moderate Plan would also seek an expanded vision and commitment from Community Choice Energy providers (CCEs), who will reap considerable benefit in the form of increased net revenue from electrification, just as oil companies will see diminishing revenue. According to this plan, the CCEs would be advised to rapidly deploy their net revenue, in order to quickly transform the market to support building electrification.

The Moderate Plan is the most time-intensive option of those presented, with significant staff resources deployed in the next three years to pass incremental ordinances that will drive needed behavior change. **Sustainability staff currently estimate that implementing the Moderate Plan would require approximately 6 incremental full time equivalent (FTE) staff for the first year and a similar or smaller number in the remaining two years included in the plan.** These incremental staff resources could be hired as consultants and would not be needed past the 3-year term of the plan.

While the action-intensive approach of the Moderate Plan may seem cumbersome, the CAP subcommittee suspects that the public requires incremental education and a piecemeal approach to rule changes, in order to have time to adjust to change. As such, the Moderate Plan also includes significant public outreach and education efforts to assist the public and businesses in understanding the benefits of mutual cooperation.

Finally, the Moderate Plan by itself would not guarantee that the City would reach its proposed climate goal of Zero emissions by 2030. Instead, this plan would put us on a path to achieve that goal in a later year or, alternatively, could be seen as laying the groundwork for implementation of additional measures, such as those outlined in the Bold Plan, starting in year 4 of climate action when the public may be more receptive to bolder action.

THE BOLD PLAN

The Bold Plan is much simpler (Appendix B) in that it involves far fewer actions and therefore fewer staff resources to implement. It also has the advantage of nearly guaranteeing achievement of the City's climate goals. It achieves this primarily by announcing to the community that the City will stop the flow of natural gas (a potent greenhouse gas) and restrict the use of gasoline vehicles within City limits by a certain date in the future, possibly by the year 2030. This approach gives community members time to make the needed adjustments to their homes and transportation, all of which are perfectly feasible, within an announced 10-year timeframe.

As for the elimination of gasoline and diesel (GAD) fuels from Menlo Park vehicles, the Bold Plan could include a normal health-and-safety powers type ordinance, requiring the phasing out of underground fuel tanks by 7/4/2030, for example. Any businesses that used underground fuel storage tanks would need to remove them for certain by that date. If climate preservation is being seriously pursued in the next decade and automobile makers follow their plans for electric vehicle production, there will be much lower need for GAD stations left in our area and those that remain will be selling a fraction of the volume of gasoline that they do now. This could mean that, regardless of which climate plan the City pursues, the number of local gasoline stations is likely to drop significantly within the next decade from the current 12 to as few as six. Some locations could be repurposed as EV charging stations with amenities such as a coffee shop, convenience store or car wash.

Another approach to eliminating GAD fuels would be for the City to pass a number of ordinances that reduce the subsidies currently offered to GAD-powered cars and trucks. Some of the subsidies

that could be reduced or eliminated for GAD vehicles include City-provided free parking in downtown lots and free parking on the side of public streets, a subsidy the City already limits overnight in Menlo Park. Both of these measures would encourage reductions in vehicle miles traveled (VMT) in the City, as well as conversions to electric vehicles (EVs). These shifts would also offer residents the ancillary benefits of reduced traffic congestion and/or reduced air pollution.

THE GO SLOW PLAN

The Go Slow Plan (GSP) would entail stepping back from climate leadership and following other entities, if and when they step forward to lead. The City would forgo the opportunity to carve out its own unique approach to problems, as we did with the recent Reach Codes, and would likely end up joining County efforts or copying other Cities' approaches. A Go Slow Plan would likely entail sitting quietly on the sidelines and following plans developed and offered by regional or state entities, as they emerge. The Go Slow Plan is by far the most risky of the plans in that it results in the highest likely damage cost to public and private property from sea level rise and would cause the most human suffering in vulnerable parts of our City. Gut-wrenching decisions will face City officials as they decide how much money to spend delaying the eventual loss of real estate valued at

over \$1 billion along our Bay shoreline. One can imagine weighty decisions about what neighborhoods to save resulting in heated disagreement among residents that would tear at the fabric of our community.

Although the Go Slow Plan may look "easy" in the short term, due to the lower staffing requirements and the slower pace of change required now, this approach may in fact prove to be penny wise and pound foolish. In reality, a Go Slow approach simply hands a growing problem to a future City Council, who would have even less time and resources at their disposal to battle climate change and oversee adaptation on multiple fronts.

We understand from the worldwide scientific body, the Intergovernmental Panel on Climate Change (IPCC), that time is of the essence and that in order to have a meaningful impact on climate change, any mitigation efforts must start immediately. This would render the Go Slow Plan scientifically imprudent, leaving the City Council to choose between: a) implementing the Moderate Plan immediately and simultaneously exploring the Bold Plan for later implementation if needed, b) cutting to the chase and just pursuing the Bold Plan immediately or c) developing a plan they feel would perform better.

APPENDIX B

2025 to 2030 Implementation Scope of Work

The updated CAP implementation scope of work outlines specific, feasible actions that the City will take between 2025 and 2030 to achieve carbon neutrality. The actions are organized by CAP strategy and identified by an action ID and a simplified name along with a more detailed description, the lead division(s) responsible for implementation, and estimated target timelines. Action items may shift depending on Council priorities, staffing, and other internal or external factors. Some actions involve policy decisions that would require further discussion and adoption by City Council. For the purposes of the table, the following definitions apply: short term is within one (1) year; medium term is within three (3) years, and long term is within five (5) years.

Interdepartmental collaboration will be crucial for the implementation of the scope of work outlined.

CAP Strategy No. 1: Explore policy/program options to convert 95% of existing buildings to all-electric by 2030					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
1.1	Building codes	Adopt pre-wiring requirements for existing buildings in the short term and evaluate performance requirements both new and existing buildings during the 2025 code cycle adoption	Building/ Planning/ Sustainability	Short term	Medium term
1.2	Multifamily electrification support	Support Peninsula Clean Energy (PCE) in the development of multifamily home electrification program	Sustainability	Medium term	Medium term
1.3	Community electrification	Develop additional program options to disperse California Energy Commission grant funds including opportunities for residents who are renting	Housing/ Sustainability	Short term	Short term
1.4	Outreach dashboard	Create a community outreach plan and measurement dashboard to track electrification progress, including data points for gas usage	Sustainability/ Information technology	Short term	Medium term
1.5	Permit streamlining	Continue to evaluate and enhance a permit streamlining program that: <ul style="list-style-type: none"> a. Provides a clear, fast, predictable, and interconnected process for permit applicants and staff b. Includes continuous improvement of permit and inspection process and monitoring best practices from other jurisdictions c. Solicits feedback from stakeholders who complete electrification projects (permit applicants, homeowners, contractors, and staff) 	Building/ Planning/ Sustainability	Ongoing	Ongoing
1.6	Affordable Housing	Require all-electric construction for affordable housing built on City owned land	Housing/ Planning/ Sustainability	Ongoing	Ongoing
1.7	Onsite energy generation	Complete a cost effectiveness study to activate Bayfront zoning green and sustainable building requirements (e.g. Municipal Code section 16.43.140(2)(A)) for onsite energy generation	Planning/ Building/ Sustainability	Medium term	Medium term
1.8	Online electrification education hub	Enhance outreach and education on electrification including presenting the benefits, available incentives, and permit process by improving the website and linking the sustainability, building and online permit websites. Create additional outreach materials and a strategic communications plan to direct community members to the resources online.	Building/ Sustainability	Short term	Medium term

CAP Strategy No. 2: Set citywide goal for increasing EVs and decreasing gasoline sales; and No. 3: Expand access to EV charging for multifamily and commercial properties					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
2/3.1	Existing EV program promotion	Inform stakeholders of current incentives and benefits by: a. Promoting existing information on EVs, affordability, and emphasizing current incentives b. Evaluating potential partners for L1 & L2 charging	Sustainability	Short term	Long term
2/3.2	EV charging network expansion	Focus on expanding EV charging network by: a. Leveraging partners who are already promoting EVs widely to prompt resident EV purchases b. Promoting focus on L1 & L2 chargers, not DC Fast Chargers, and evaluating future tech as it evolves / can scale c. Continuing to identify public lots for EV charging infrastructure d. Considering removal of other fees from City owned charging and identifying alternative funding to support operation, maintenance, replacement and/or additional chargers e. Explore building code policies to increase EV charging in new multifamily and commercial developments including the City of San Jose's EV charging building code f. Continue to adopt the City's current EV building code amendments with each code cycle	Public works/ Sustainability	Medium term	Long term
2/3.3	Increase EV access	Increase EV charging access in multifamily, small businesses, and city-owned buildings through partnerships, policy, and programs by: a. Exploring the creation of an inventory of installation opportunities in current buildings and future developments b. Partnering with public agencies and private property owners to install EV charging c. Shifting focus to private residences after completing target group above and utilizing lessons learned d. Exploring incentive-based rules (e.g. direct install programs) and building codes for existing buildings	Building/ Sustainability	Medium term	Long term

CAP Strategy No. 4: Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
4.1	Multi-modal networks	Continue to implement the Transportation Master Plan to build connected and safer multimodal transportation networks that make walking, bicycling and transit viable for more trips locally and regionally	Public works	Ongoing	Ongoing
4.2	TDM requirements	Apply and update transportation demand management (TDM) requirements to help produce development that is not dependent on single occupant vehicles	Public works/ Planning	Ongoing	Ongoing

4.3	Shuttle study	Complete a shuttle study to evaluate and optimize shuttle service and implement findings	Public works	Medium term	Medium term
4.4	Infrastructure coordination	Coordinate bike/pedestrian improvements with planned street resurfacing	Public works	Ongoing	Ongoing
4.5	GIS dashboard updates	Update the Transportation Master Plan GIS dashboard to quantify GHG impacts of planned and completed VMT reduction projects (bike lanes, sidewalks)	Public works/ Information Technology/ Sustainability	Short term	Short term
4.6	TDM programs	Continue to operate programs, including the shuttle program and Safe Routes to School, to enhance transportation options for students, commuters and transit dependent populations	Public works	Ongoing	Ongoing
4.7	Bicyclist engagement	Provide educational and engagement opportunities to support cyclists of all ages	Public works /Sustainability	Ongoing	Ongoing
4.8	Housing Element TOD	Continue to implement Housing Element policies that support transit oriented development	Housing/ Planning/ Public works	Short term	Ongoing
4.9	C/CAG coordination	Coordinate with C/CAG to remove cross-jurisdictional barriers to regional active transportation planning and infrastructure projects	Public works	Short term	Ongoing

CAP Strategy No. 5: Eliminate the use of fossil fuels from municipal operations					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
5.1	Leverage grants	Continue monitoring grant opportunities and prioritize capital projects that leverage grant funding	Sustainability	Ongoing	Long term
5.2	Creative financing	Explore electrification project financing options beyond Capital Improvement Program (CIP) allocations	Public works/Finance/ Sustainability	Short term	Long term
5.3	Fleet right sizing	Conduct a fleet rightsizing study to identify the number and type of vehicles needed for fleet operations and zero-emission alternatives	Public works/Police/ Sustainability	Short term	Short term
5.4	Utility dashboard	Develop or purchase an energy management software/dashboard that integrates utility billing/usage data with existing City asset management software	Information technology/ Sustainability	Short term	Short term
5.5	Facility electrification	Establish facility electrification prioritization criteria and continue to develop and complete projects to electrify all city-owned buildings by 2030	Public works/ Sustainability	Short term	Ongoing
5.6	Fleet decarbonization	Continue to use renewable diesel and replace vehicles with zero-emission options to decarbonize the fleet by 2030 based on mileage, age, downtime for repairs, mandated emission regulations and an assessment of all vehicles and equipment with readily available EVs	Public works/ Sustainability	Ongoing	Long term
5.7	Municipal GHG inventory	Update the municipal GHG inventory	Sustainability	Short term	Short term

5.8	Landfill flare	Capture emissions from Bedwell Bayfront landfill flare	Public works/ Sustainability	Short term	Medium term
5.9	CAP5 dashboard	Make data accessible to show the City's ability to reach its goal by 2030 (e.g. countdown to carbon neutrality, showing percentage of equipment electrified)	Information technology/ Sustainability	Short term	Ongoing
5.10	Microgrids	Explore creating additional microgrid opportunities to enhance community resiliency and preparedness	Public works/ Sustainability	Short term	Long term
5.11	Battery storage	Explore battery storage utility programs to shift peak loads and lower operational costs for city facilities	Sustainability	Medium term	Long term
5.12	V2B charging	Explore and install equipment for vehicle-to-building (V2B) bidirectional fleet charging	Public works/ Sustainability	Short term	Medium term
5.13	Remaining emissions	Develop programs and projects to eliminate the remaining greenhouse gas (GHG) emissions from the municipal inventory beyond building and fleet electrification including implementing programs in compliance with Senate Bill 1383 to increase organic collection services, establish food recovery programs, and purchase recycled organics products.	Sustainability/ Public works	Short term	Long term
5.14	ZELE for City crews	Continue to purchase and deploy zero-emission landscape equipment (ZELE) used by city staff and contractors	Public works/ Sustainability	Ongoing	Ongoing
5.15	Leave-the-leaves pilot	Explore a leave-the-leaves/blower-free park pilot	Public works/ Sustainability	Medium term	Medium term
5.16	Green Business Certification	Explore Green Business Certification for fleet and/or facilities	Public works/ Sustainability	Medium term	Long term

CAP Strategy No. 6: Develop a climate adaptation plan to protect the community from sea level rise and flooding					
Action ID	Action name	Description	Lead	Timeline for initiation	Timeline for completion
6.1	Planning and identifying funding	Engage the community in the areas of the city most vulnerable to the impacts of climate change to develop a climate adaptation plan beyond sea-level rise and flooding supporting implementation of the Environmental Justice Element programs and aligning with the four goals from the State of California framework (to tap into federal and state funding sources): 1) Build awareness and notification 2) Strengthen community services/response 3) Increase resilience of the built environment 4) Utilize nature-based solutions	Sustainability	Short term	Medium term
6.2	Urban forest management plan	Develop an urban forest management plan and lead an early action tree planting effort	Public works/ Sustainability	Short term	Short term