2030 CLIMATE ACTION PLAN

Prepared by the Environmental Quality Commission
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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 billion[1] 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 Francisquito Creek 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 costs[5] 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.

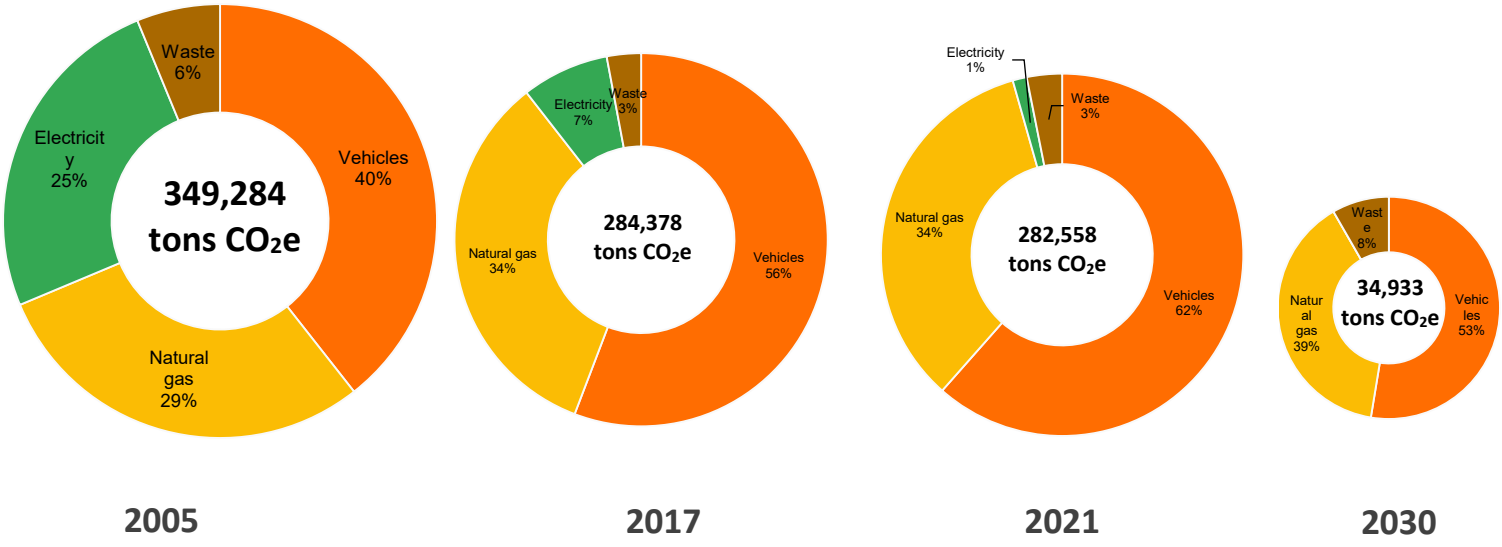
[4] https://en.m.wikipedia.org/wiki/List_of_highest-income_counties_in_the_United_States

[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 (CO_2e) from 2005 levels, and elimination of the remaining 10% of CO_2e 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 CO_2e 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 CO_2e per year by 2030.



Menlo Park Community Greenhouse Gas Emissions (metric tons of CO_2e)				
	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 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 NO_2 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 money[8].

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

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

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 CO_2e 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
• 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	• 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	• 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: 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 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 (including public, charter and private schools) 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
4.10	Bike, scooter, and car sharing	Explore opportunities for bike, scooter, and car sharing including City led programs and opportunities at large multifamily and commercial developments	Public works/Sustainability	Medium 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,	Public works/ Sustainability	Ongoing	Long term

		downtime for repairs, mandated emission regulations and an assessment of all vehicles and equipment with readily available EVs			
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