Environmental Quality Commission

REGULAR MEETING AGENDA

Date: 11/17/2021
Time: 6:00 p.m.
Regular Meeting Location: Zoom.us/join – ID# 915 4675 0502

NOVEL CORONAVIRUS, COVID-19, EMERGENCY ADVISORY NOTICE
On March 19, 2020, the Governor ordered a statewide stay-at-home order calling on all individuals living in the State of California to stay at home or at their place of residence to slow the spread of the COVID-19 virus. Additionally, the Governor has temporarily suspended certain requirements of the Brown Act. For the duration of the shelter in place order, the following public meeting protocols will apply.

Teleconference meeting: All members of the Environmental Quality Commission, city staff, applicants, and members of the public will be participating by teleconference. To promote social distancing while allowing essential governmental functions to continue, the Governor has temporarily waived portions of the open meetings act and rules pertaining to teleconference meetings. This meeting is conducted in compliance with the Governor Executive Order N-25-20 issued March 12, 2020, and supplemental Executive Order N-29-20 issued March 17, 2020.

- How to participate in the meeting
  - Access the meeting real-time online at:
    Zoom.us/join –Meeting ID 915 4675 0502
  - Access the meeting real-time via telephone at:
    (669) 900-6833
    Meeting ID 915 4675 0502
    Press *9 to raise hand to speak

Subject to Change: Given the current public health emergency and the rapidly evolving federal, state, county and local orders, the format of this meeting may be altered or the meeting may be canceled. You may check on the status of the meeting by visiting the City's website www.menlopark.org. The instructions for logging on to the Zoom webinar and/or the access code is subject to change. If you have difficulty accessing the Zoom webinar, please check the latest online edition of the posted agenda for updated information (https://www.menlopark.org/AgendaCenter/Environmental-Quality-Commission-4).

Regular Session (Zoom.us/join – ID# 915 4675 0502)

A. Call To Order

B. Roll Call – Elkins, Evans, Gaillard, Kabat, London, Payne, Price

C. Public Comment

The public may address the Environmental Quality Commission (EQC) on any subject not listed on the agenda. Each speaker can make public comment for a limit of three minutes once. The EQC cannot act on items not listed on the agenda other than to provide general information.

D. Regular Business

D1. Approve September 22 2021 and October 20 2021 minutes (Attachment)

D2. Informational presentation from BayREN demonstrating a tool that can evaluate various electrification policy options for existing single family residential buildings policy (Attachment)

D3 Review and discuss presentation on proposed implementation of CAP Goal No.3- electric vehicle infrastructure based on city council approved 2021 scope of work

E. Reports and Announcements

E1. Reports and Announcements from staff and commissioners

F. Adjournment

At every Regular Meeting of the Commission, in addition to the Public Comment period where the public shall have the right to address the Commission on any matters of public interest not listed on the agenda, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during the Commission's consideration of the item.

At every Special Meeting of the Commission, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during consideration of the item.

For appeal hearings, appellant and applicant shall each have 10 minutes for presentations.

If you challenge any of the items listed on this agenda in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Menlo Park at, or prior to, the public hearing.

Any writing that is distributed to a majority of the Commission by any person in connection with an agenda item is a public record (subject to any exemption under the Public Records Act) and is available by request by emailing the city clerk at jaherren@menlopark.org. Persons with disabilities, who require auxiliary aids or services in attending or participating in Commission meetings, may call the City Clerk's Office at 650-330-6620.

Agendas are posted in accordance with Government Code §54954.2(a) or §54956. Members of the public can view electronic agendas and staff reports by accessing the City website at menlopark.org/agenda and can receive email notification of agenda and staff report postings by subscribing to the "Notify Me" service at menlopark.org/notifyme. Agendas and staff reports may also be obtained by contacting City Clerk at 650-330-6620. (Posted:11/12/2021)

Environmental Quality Commission

SPECIAL MEETING MINUTES – DRAFT
Date: **9/22/2021**
Time: **6:00 p.m.**
Special Meeting Location: Zoom.us/join – ID# 890 8487 9938

A. Call To Order

Chair Payne called the meeting to order at 6:04 p.m.

B. Roll Call

Present: Elkins, Evans (Vice Chair), Gaillard, Kabat, and Payne (Chair)
Absent: London and Price
Staff: Rebecca Lucky- Sustainability Manager

C. Regular Business

C1. Approve August 18, 2021 minutes (Attachment)

Chair Payne introduced item.

- Peter Edmonds identified a mistake with the May 19, 2021 and July 21, 2021 meeting minutes.

ACTION: Motion and second (Elkins/ Kabat) to approve the August 18, 2021 meeting minutes with the correction indicating the word "coloration" should be "negotiation" in May 19, 2021 and July 21, 2021, passed 5-0 (London and Price absent).

C2. Review and discuss Commissioner Elkins recommendation to City Council on gas powered leaf blower ban (Attachment)

Chair Payne introduced the item.

Commissioner Elkins made the presentation (Attachment).

- Clouse spoke in support of a gas powered leaf blower ban.
- Scott Marshall spoke in support of a gas powered leaf blower ban.
- Katie Hadrovic spoke in support of a gas powered leaf blower ban.
- Peter Edmonds spoke in support of a gas powered leaf blower ban.

The Environmental Quality Commission directed the subcommittee, consisting of Commissioner Elkins, to add language to the report about the climate versus health impacts of gas power leaf blowers.

ACTION: Motion and second (Evans/ Kabat), at City Council direction, the EQC has examined the impacts of gas-powered leaf blowers (GLBs) and found that, while impacts on climate are likely to be far less than 1% of total impacts, there are significant impacts of GLBs on human health, safety, and well-being. EQC recommends that City Council consider bans on GLBs done by neighboring cities to avoid reinventing the wheel. As such, the EQC recommends that City Council explore this idea as a health and safety issue, to be handled by the appropriate department. Time and resources spent on this issue by staff and City Council

should not detract from those resources already dedicated to CAP implementation. The updated memo by Commissioner Elkins will be presented to City Council, passed 5-0 (London and Price absent).

The Environmental Quality Commission took a recess at 7:47 p.m.

The Environmental Quality Commission reconvened at 7:54 p.m.

C3. Informational presentation on modification of the 2030 Climate Action Plan progress reporting methodology and clarification of the goals (Attachment)

Sustainability Manager Rebecca Lucky introduced the item.

Sustainability Manager Rebecca Lucky and MuniPC consultant Candise Almendral made the presentation (Attachment).

C4. Review and discuss Commissioner Gaillard, Kabat, and Chair Payne recommendations on Climate Action Plan tracking metrics (Attachment)

Chair Payne introduced the item.

Commissioner Kabat made the presentation (Attachment).

- Scott Marshall requested information about the climate benefits of developing an urban forest master plan be included.

ACTION: Motion and second (Gaillard/ Evans), to recommend reporting for climate action plan action no.1 be changed to reflect the annotated presentation (Attachment), passed 5-0 (London and Price absent).

ACTION: Motion and second (Gaillard/ Evans), to recommend reporting for climate action plan action no. 2 be changed to reflect the annotated presentation (Attachment), passed 5-0 (London and Price absent).

ACTION: Motion and second (Gaillard/ Evans), to recommend reporting for climate action plan action no. 4 be changed to reflect the annotated presentation (Attachment), passed 5-0 (London and Price absent).

ACTION: Motion and second (Gaillard/ Kabat), to recommend reporting for climate action plan action no. 5 be changed to reflect the annotated presentation (Attachment), passed 5-0 (London and Price absent).

ACTION: Motion and second (Gaillard/ Elkins), to recommend the subcommittee memorandum about climate action plan metrics be forwarded to the City Council, passed 5-0 (London and Price absent).

C5. Review and discuss Commissioner Gaillard, Kabat, and Chair Payne recommendations on post-crisis implementation of the 2020 Climate Action Plan

Chair Payne introduced the item.

Commissioner Gaillard introduced the memorandum.

ACTION: Motion and second (Kabat/ Elkins), to approve the subcommittee memorandum (Attachment) with a modification to goal no. 5, adding a bullet point to protect the community from risks associated with groundwater table rise and liquefaction and forward to the City Council, passed 5-0 (London and Price

absent).

D. Reports and Announcements

D1. Reports and Announcements from staff and commissioners

Sustainability Manager Rebecca Lucky provided updates on ongoing climate action plan implementation and sustainability efforts:

- Outlined the informational report about the climate action plan progress to be submitted to the City Council at its October 12, 2021 meeting
- Climate action plan action no.1 work is ongoing
- Status of renewable microgrid for the Menlo Park Community Campus Project
- A consultant has been hired to implement climate action plan action no. 5
- A consultant will be kicking off a multifamily incentive program for climate action plan action no. 3
- Shared direction from August 31, 2021 City Council study session regarding existing building electrification
- Staff to follow up with ICLEI high impact analysis tool

Commissioner Gaillard provided updates on climate action plan no. 1:

- Staff has followed up with the climate action plan no. 1 subcommittee to discuss reducing barriers

E. Adjournment

Chair Payne adjourned the meeting at 10:00 p.m.

Sustainability Contractor Candise Almendral

Report on Gas Leaf Blowers in Menlo Park
EQC Sub-Committee
Sept. 22, 2021

Overview

Issues raised by Menlo Park Citizens Around Gas Leaf Blower Use

- Noise
  - Why Existing Ordinance Fails to Address Citizen Complaints
  - Physics of Leaf Blower Noise
  - Health Impacts
- Environmental Pollution
  - Statistics
  - Health Impacts of Pollution

Alternatives to Gas

How to Implement a Ban

- What to Consider
- Cost of Operating Gas vs Electric

Conclusions

Noise

Existing Ordinance Fails to Address Citizen Complaints

- Menlo Park is an urban environment
- Many substandard lots
- The dB level is therefore often greater than 65
- Hence, the ordinance is not working

Noise

Physics of Leaf Blower Noise

- GLBs emit low frequency sound
- Low frequency travels farther and penetrates buildings more effectively than higher frequency
- A single GLB can negatively impact up to **90** surrounding homes in typical suburban densities
- A powerful electric blower emits higher frequencies but impacts only **6** homes

Noise
Health Impacts

- Prolonged exposure above 85dB can lead to hearing loss and tinnitus
    - Operators are at the highest risk for noise related impacts
- Others nearby suffer lost productivity/poorer task performance
- School children: lower test scores
- Ambient noise over 55dB has shown to increase stress hormone levels leading to:

High blood pressure
Heart disease
Obesity
Abnormal glucose metabolism
Sleep disruption
Stroke
Mental Stress

Environmental Pollution

Statistics

- Gas garden equipment in the US annually consumes 1.2 billion gallons of fuel - producing approximately 30 billion pounds or 15 million tons of CO_2 per year
- According to CARB:

  By 2020, Small Off-Road Engines (of which garden tools are a major component) will produce as much smog-forming pollution as the state's passenger cars

  By 2031, SORE smog-forming emissions projected to be twice those from passenger cars
- The hydrocarbon emissions from a half-hour of yard work with a gas leaf blower are about the same as produced during a 3,900-mile drive from Texas to Alaska in a Ford F-150 Raptor truck.

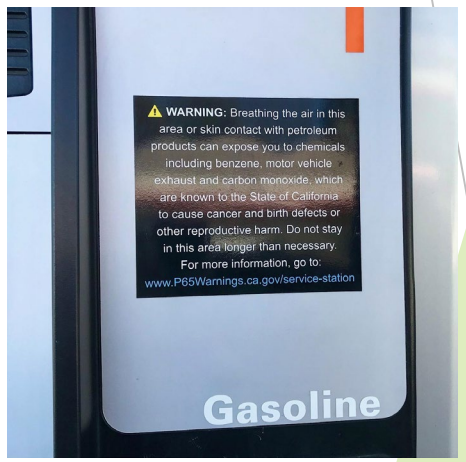
Environmental Pollution

Health Impacts

Inhaling incompletely burned GLB fuels can cause damage lasting years, even leading to death

Benzene,
Acetaldehyde
Formaldehyde

Listed among the top four cancer-causing compounds



Ground level ozone and fine PM cause or contribute to:

Early death, heart attack, stroke, congestive heart failure, asthma, chronic obstructive pulmonary disease, and cancer

These pollutants may also contribute to developmental and neurological disorders, including autism

Environmental Pollution
Health Impacts cont....

- Additional Operator Health Impacts:

  Prolonged vibration exposure can cause injuries known as Hand-Arm Vibration Syndrome.

  which results in changes in the sensation of the fingers and can lead to permanent numbness of fingers and muscle weakness.

Health risks are disproportionately highest among operators.

Alternatives to Gas

Electric commercial and residential lithium-ion battery leaf blowers

- except for the most difficult of jobs, electric blowers are just as effective as gas models

Rakes and brooms

although considered more time consuming by homeowners and gardeners - the equitable solution would be to pay more for more time worked.

Considerations in Implementing a Ban

- Stakeholder Equity:

The upfront cost of a commercial electric leaf blower is higher than its gas equivalent, however

City/State incentive programs can mitigate part of the upfront cost, or

Employers can pay gardeners for additional time required to complete the job.

A phase in period will help alleviate the financial burden.

. . . considerations

- Education/Outreach:
  - Over time electric leaf blowers cost less than GLBs (*see next slide*)
  - Outreach on where, when, and how leaf blowers are most effectively utilized
  - Battery maintenance and conservation techniques
  - Health/environmental benefits of switching to electric

- Enforcement:
  - Minimized if education is prioritized
  - Fines , if any, should be preceded by effective education and multiple documented warnings
  - Fining the employer rather than the worker as an option

Cost Analysis

Cost of Operation Gas vs Electric

	Gas Leaf Blower	Electric Leaf Blower
Fuel + Oil + Maintenance	$1.25/hr	24cents/hr
Operation Hours Per Year	450	450
Operation Cost Per Year	$562	$108

After 2 years, an annual savings from switching to electric is approximately $454

- Source: https://www.youtube.com/watch?v=HJMBCGHND1s
- Dan Mabe - AGZA "All Electric Yard Care - Ditch the Gas" on 6/23/2021

Conclusions

- **The attempt to address leaf blower complaints via the existing ordinance has failed.**
- The science shows unequivocally that gas leaf blowers are bad for the environment and for public health, with operators suffering the greatest harms.
- **Equitable solutions via rebate programs will help landscape professionals transition from gas to electric with minimal financial impact.**
- The state has budgeted $30 Million to help small business and sole proprietor gardeners switch to cleaner greener equipment.
- **Menlo Park can protect landscapers who live and/or work in our city and discourage the purchase of new gas equipment through an informational campaign about the dangers of SOREs. The added benefit to the public at large and to the planet are well worth the resources the city will need to expend to implement a ban**.
- Without a ban, GLBs will continue to operate in our city for years to come.

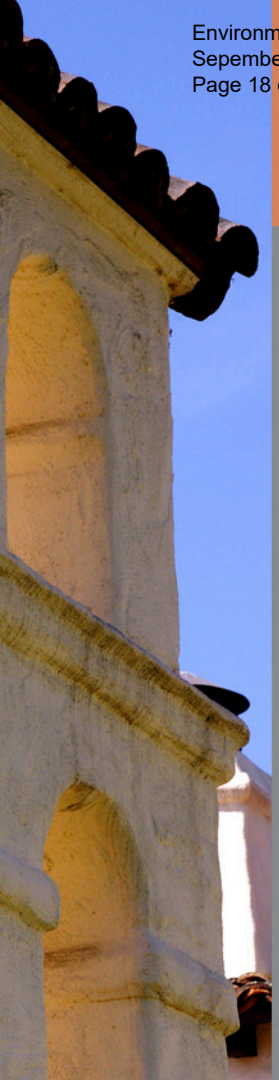
Recommendation

The Subcommittee urges the Commission to adopt the subcommittee report and forward it to the City Council with the recommendation that it direct city staff to study a ban on gas-powered leaf blowers in Menlo Park.

C3-PRESENTATION

MODIFICATION OF 2030 CAP PROGRESS REPORTING METHODOLOGY AND CLARIFICATION OF GOALS

Rebecca Lucky, Sustainability Manager
Candise Almendral, MuniPC Sustainability

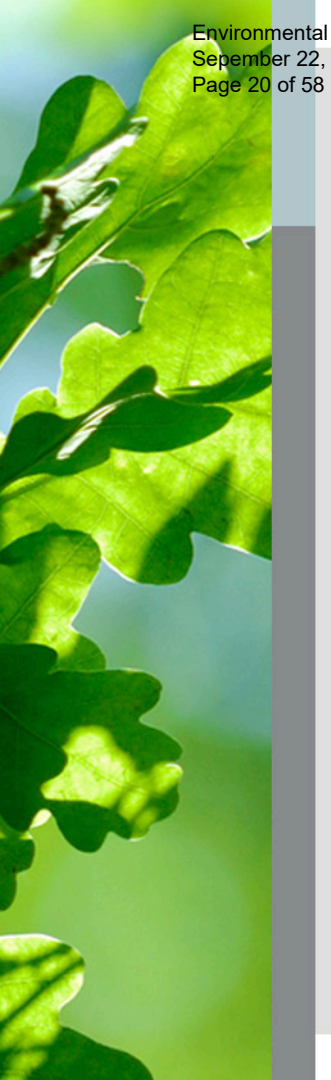


BACKGROUND

- Environmental Quality Commission reviewed draft progress report in July
- Staff proposed to return with recommendations on improving reporting methodology for future reports based on first year reporting experience
- EQC deferred to the climate action plan subcommittee consisting of Commissioner Gaillard, Kabat, and Chair Payne to provide feedback

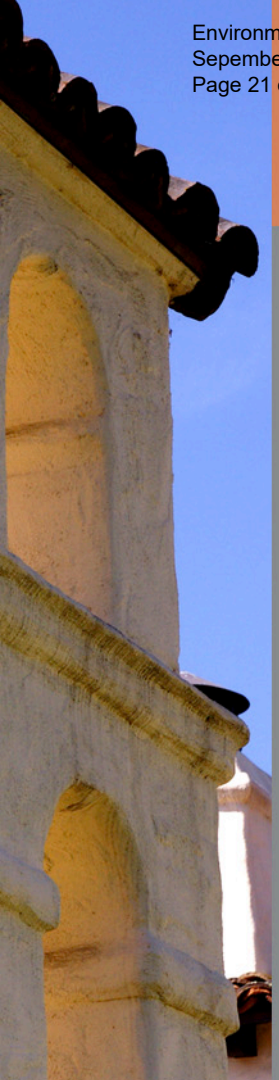
CHALLENGES AND OPPORTUNITIES IDENTIFIED

- Some metrics identified in the CAP were challenging to obtain or not well suited for annual reporting at this time
- Challenges in aligning metrics with progress on the six adopted CAP goals
- Need for clarity on the goals as it relates to current and future work
- Better alignment with showing progress at a local/city level for the six adopted CAP goals
- Helped to understand opportunities and constraints through department/division narratives
- Helped to identify potential areas where additional resources and support is needed (e.g., CAP No.5 and No.6)



CRITERIA FOR PROGRESS REPORTING

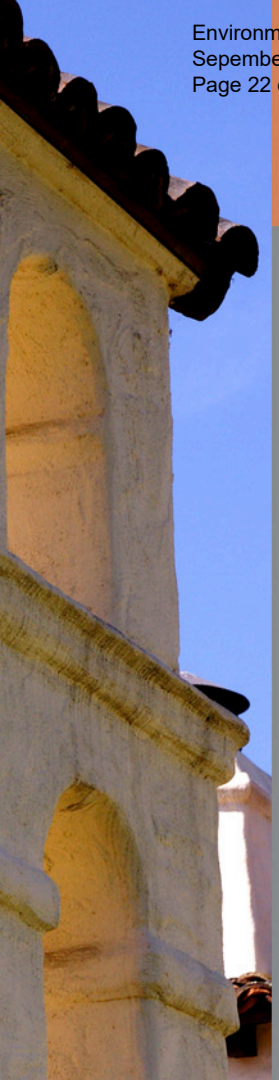
- Capture progress in the form of emissions reduced/increased as it relates to achieving carbon neutrality goal
- Accurate, easy to obtain, publicly available, and can be done on an annual basis
- Ability to communicate at a high level the current state at the local level while also providing context on progress constraints or opportunities
- Incorporation of 2030 Climate Action Plan metrics to the greatest extent possible



MODIFICATIONS AND CLARIFICATIONS

- Strategy no. 1 (existing buildings electrification):
  - Total therms of natural gas consumed in Menlo Park
  - Report out on any special programs or polices implemented by the city and/or its partners (education and outreach, permit streamlining, etc.)

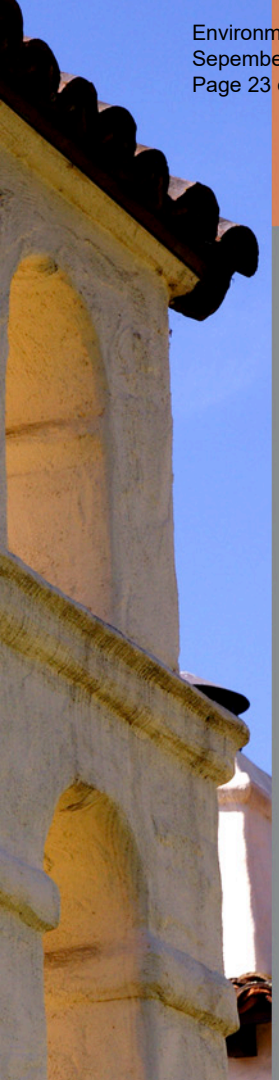
- Strategy no. 2 (increase electric vehicles and decrease gasoline sales)
  - Reframe goal with the intent to drive/capture increases in the total community fleet
  - Total light-duty vehicles registered that are fossil fuel (gasoline/diesel) vs. electric
  - Gallons of fossil fuel (gasoline/diesel) sold in Menlo Park
  - Report out on any related programs and policies implemented by the city and/or its partners such as the Beyond Gas Initiative



MODIFICATIONS AND CLARIFICATIONS CONT.

- Strategy no. 3 (expand access to electric vehicle (EV) charging):
  - Total available electric vehicle charging stations/spaces accessible to multifamily and commercial properties
  - Report out on any related programs and policies implemented by the city and/or its partners such as Peninsula Clean Energy incentive programs

- Strategy no. 4 (reduce vehicle miles traveled):
  - Reframe the goal with the intent to expand and enhance multimodal opportunities and infrastructure to reduce community dependence/reliance on personal vehicle travel
  - Mode share (methods of travel used by community)
  - Miles of multimodal infrastructure improved and/or installed
  - Report out on any related programs and policies implemented by the city and/or its partners



MODIFICATIONS AND CLARIFICATIONS CONT.

- Strategy no. 5 (eliminate the use of fossil fuels from municipal operations):
  - GHG inventory
    - Total therms of natural gas consumed to be reported by municipal building/facility
    - Report out on any related programs and policies implemented by the city

- Strategy no. 6 (climate adaption):
  - Reframe the goal with the intent to address climate resiliency beyond sea level rise
  - Report out on any related programs and policies implemented by the city and/or its partners, such as:
    - Adoption and implementation of Local Hazard Mitigation Plan (LHMP)
    - Adoption and implementation of Safety and Environmental Justice (General Plan) Element
    - SAFER Bay construction implementation progress/status
    - Partnerships with other agencies to complete flood protection and ecosystem restoration projects along the bay shoreline to comply with new construction building reach codes.

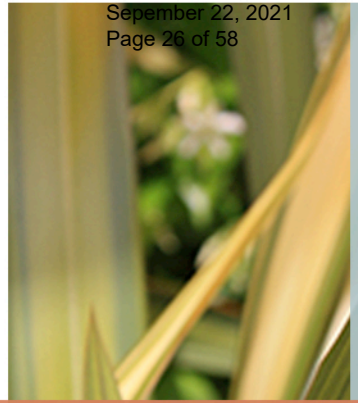
GREENHOUSE GAS INVENTORY

- Both the communitywide and municipal greenhouse gas inventories to be updated annually
- Municipal inventory provides holistic review of all operations related emissions
  - Can capture all department/division programs to reduce emissions (waste reduction, employee commuter programs, remote work policy, etc.) that may not be captured in fossil fuel consumption
- Due to the impact of external factors to tracking communitywide GHG emissions year-to-year, emissions will be considered on a rolling average (e.g., the most recent three reporting years)

NEXT STEPS

- Informational item to City Council to present final progress report and inform the city council on reporting methodology and goal clarification going forward

- These modifications and clarifications would be incorporated when the City Council directs a formal review/update or amendment to the CAP goals or annual scope of work



THANK YOU

Climate Action Plan Metrics

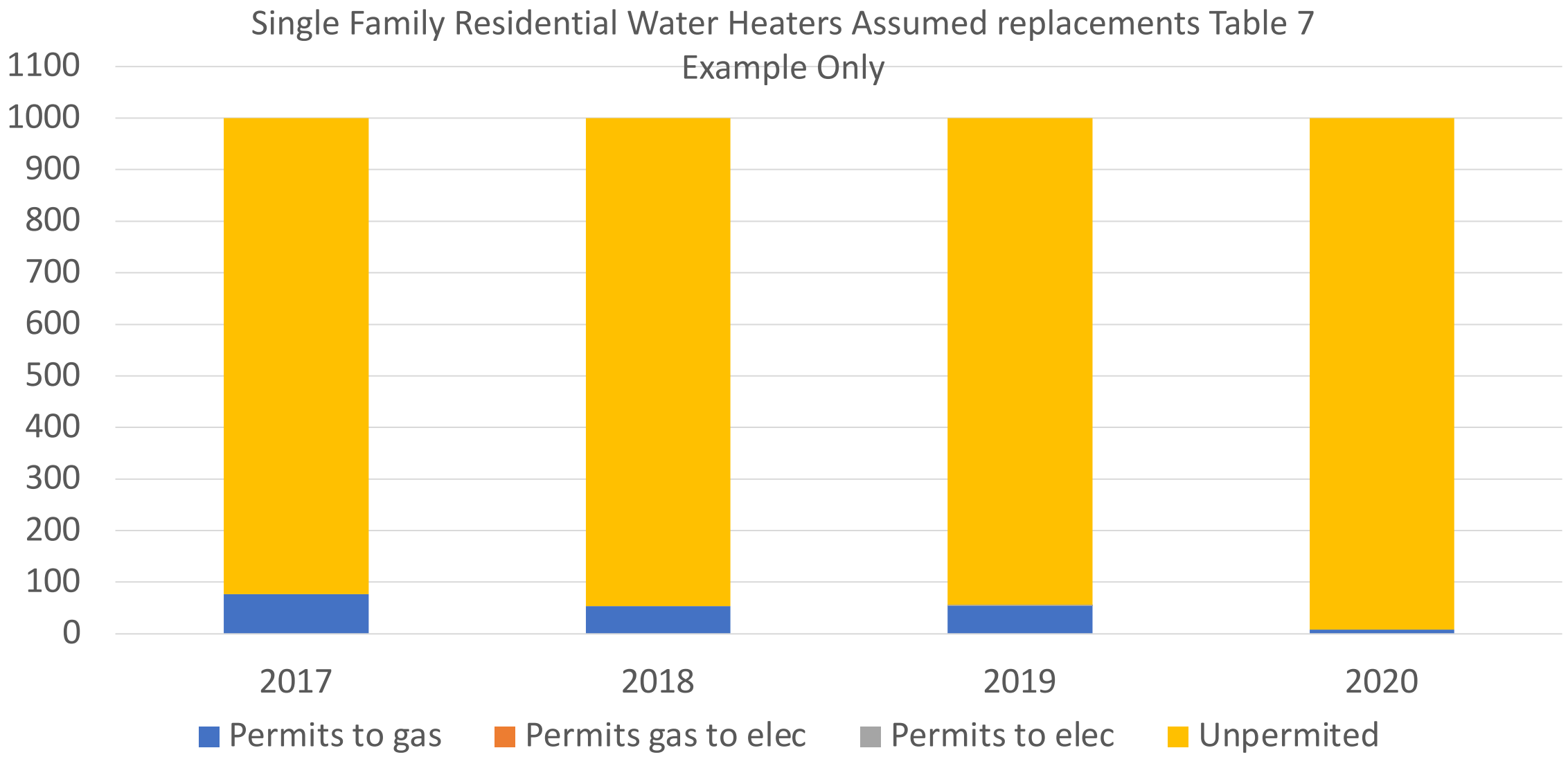
Measuring and reporting
So that course corrections can be made and staffing committed
To get up to the required speed

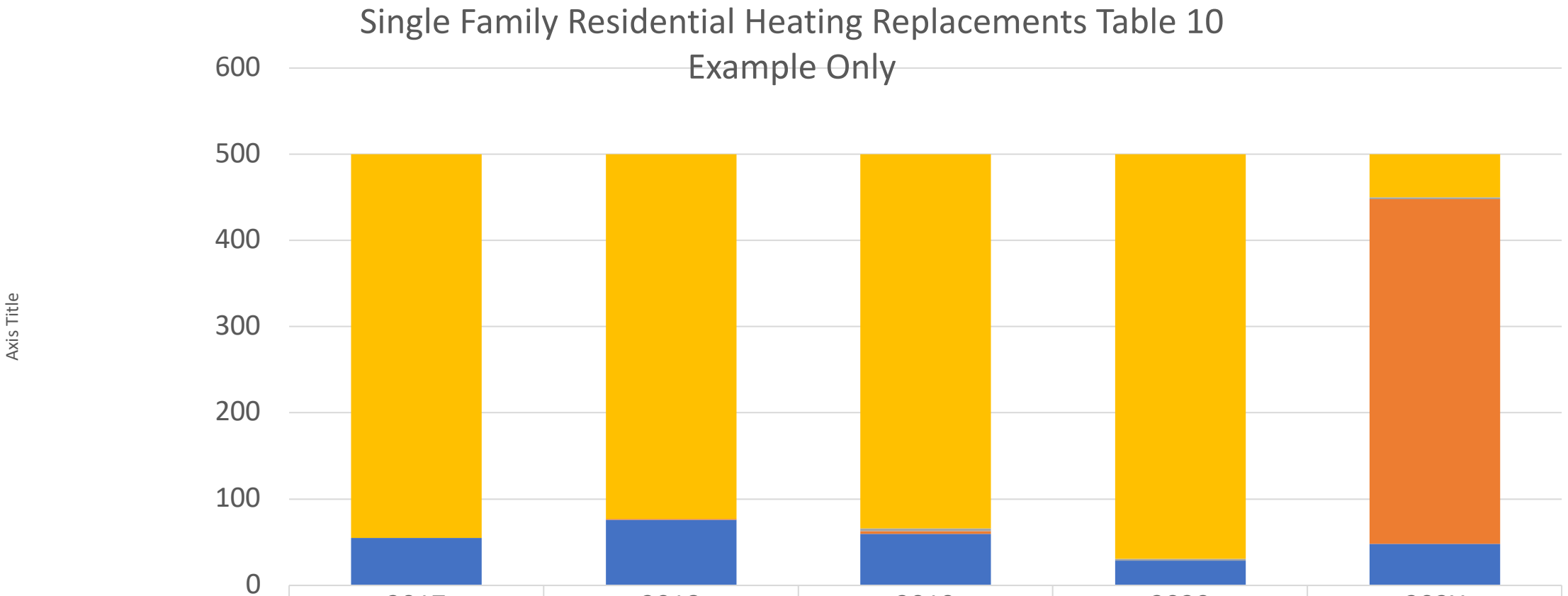
Types of metrics

- **Activity Metrics.** (Leading Indicator)
  - Actions staff and council take to influence equipment commitments or usage
    - Programs started Financings offered Ordinances adopted Simplifications made

- **Equipment Commitment Metrics**. (Recency Indicator)
  - Equipment that community commits to that results in solving or contributing to climate change
    - Permits for electric and permits for gas
    - New vehicle registrations. Whole fleet registrations by vehicle type

- **GHG Inventory** Tons of emissions results. (Lagging Indicator)
  - The tail pipe results from the whole fleet of old and new equipment

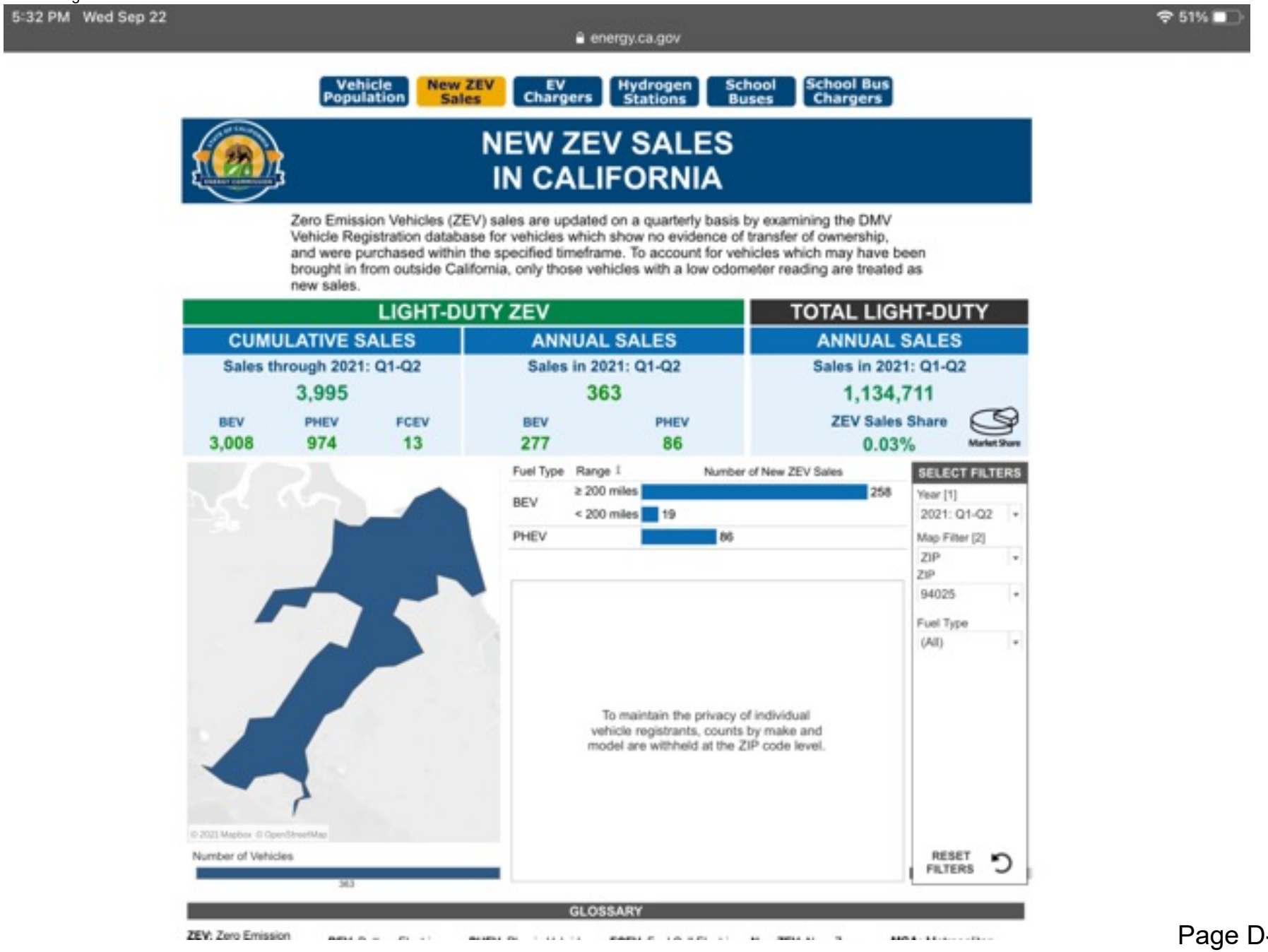

Single Family Residential Water Heaters Assumed replacements Table 7
Example Only
1100
1000
900
800
700
600
500
400
300
200
100
0
2017
2018
2019
2020
Permits to gas
Permits gas to elec
Permits to elec
Unpermited



	2017	2018	2019	2020	202X
Unpermited	445	423	434	469	50
Permits to elec	0		3	2	2
Permits gas to elec	0	1	3	0	400
Permits to gas	55	76	60	29	48

Example Results for 1000 Water Heater Burnouts/year

		Uptake %	Devices
0	Number of machine types effected by new ordinances	10%	0
0	Number of machine types effected by new assistance activities	5%	0
0	Number of machine types effected by new finance offerings	5%	0
1	Number of machine types effected by new incentives	1%	10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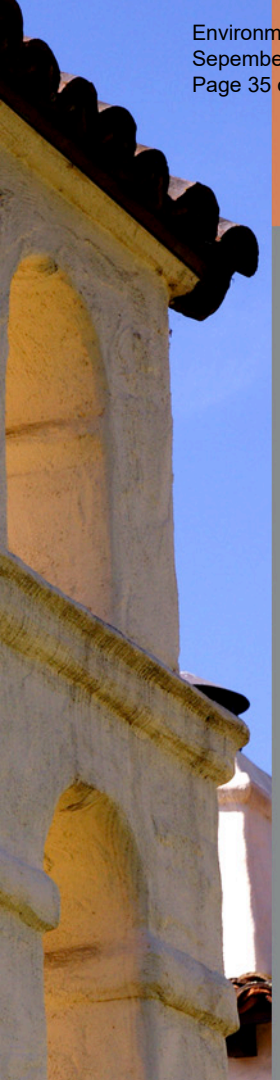
energy.ca.gov
51%
Vehicle Population
New ZEV Sales
EV Chargers
Hydrogen Stations
School Buses
School Bus Chargers
NEW ZEV SALES IN CALIFORNIA
Zero Emission Vehicles (ZEV) sales are updated on a quarterly basis by examining the DMV Vehicle Registration database for vehicles which show no evidence of transfer of ownership, and were purchased within the specified timeframe. To account for vehicles which may have been brought in from outside California, only those vehicles with a low odometer reading are treated as new sales.
LIGHT-DUTY ZEV
CUMULATIVE SALES
Sales through 2021: Q1-Q2
3,995
BEV 3,008
PHEV 974
FCEV 13
ANNUAL SALES
Sales in 2021: Q1-Q2
363
BEV 277
PHEV 86
TOTAL LIGHT-DUTY
ANNUAL SALES
Sales in 2021: Q1-Q2
1,134,711
ZEV Sales Share
0.03%
Market Share
Fuel Type Range
Number of New ZEV Sales
BEV ≥ 200 miles 258
< 200 miles 19
PHEV 86
To maintain the privacy of individual vehicle registrants, counts by make and model are withheld at the ZIP code level.
SELECT FILTERS
Year [1]
2021: Q1-Q2
Map Filter [2]
ZIP
ZIP
94025
Fuel Type
(All)
RESET FILTERS
Number of Vehicles
383
GLOSSARY
ZEV: Zero Emission

- The Environmental Quality Commission received the following informational presentation on September 22, 2021

- Blue text reflects the Environmental Quality Commission recommendations

MODIFICATION OF 2030 CAP PROGRESS REPORTING METHODOLOGY AND CLARIFICATION OF GOALS

Rebecca Lucky, Sustainability Manager
Candise Almendral, MuniPC Sustainability



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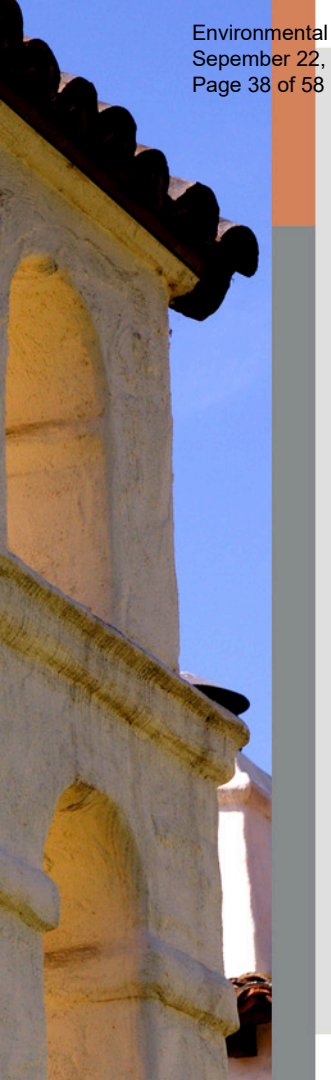
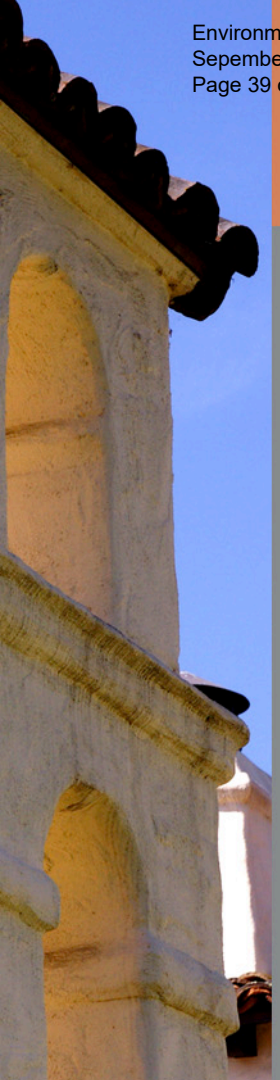


MODIFICATIONS AND CLARIFICATIONS

- Strategy (change to action for all strategies) no. 1 (existing buildings electrification):
  - Total therms of natural gas consumed in Menlo Park
  - Include CAP metrics 1-3
  - Report out on any special programs or polices implemented by the city and/or its partners (education and outreach, permit streamlining, etc.)

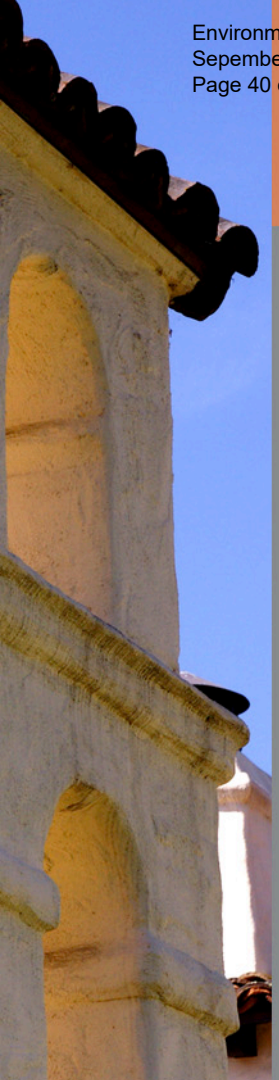
- Strategy no. 2 (increase electric vehicles and decrease gasoline sales)
  - Reframe goal with the intent to drive/capture increases in the total community fleet- (only change to “achieve” rather than “set” and if council decides to set a goal for total vehicles instead of new then 100% should be achieved by no later than 2030)
  - Total light-duty vehicles registered that are fossil fuel (gasoline/diesel) vs. electric
  - Include CAP metrics 4 and 5
  - Gallons of fossil fuel (gasoline/diesel) sold in Menlo Park
  - Report out on any related programs and policies implemented by the city and/or its partners such as the Beyond Gas Initiative



MODIFICATIONS AND CLARIFICATIONS CONT.

- Strategy no. 3 (expand access to electric vehicle (EV) charging):
  - Total available electric vehicle charging stations/spaces accessible to multifamily and commercial properties
  - Report out on any related programs and policies implemented by the city and/or its partners such as Peninsula Clean Energy incentive programs

- Strategy no. 4 (reduce vehicle miles traveled):
  - ~~Reframe the goal with the intent to expand and enhance multimodal opportunities and infrastructure to reduce community dependence/reliance on personal vehicle travel~~ (do not change)
  - Mode share (methods of travel used by community)
  - Revert to CAP metric No.8
  - Miles of multimodal infrastructure improved and/or installed
  - Report out on any related programs and policies implemented by the city and/or its partners



MODIFICATIONS AND CLARIFICATIONS CONT.

- Strategy no. 5 (eliminate the use of fossil fuels from municipal operations):
  - GHG inventory
    - Total therms of natural gas consumed to be reported by municipal building/facility
    - Report out on any related programs and policies implemented by the city
    - Tracking conversions of fossil fuel equipment to electric and also tracking any new fossil fuel equipment

- Strategy no. 6 (climate adaption):
  - Reframe the goal with the intent to address climate resiliency beyond sea level rise
  - Report out on any related programs and policies implemented by the city and/or its partners, such as:
    - Adoption and implementation of Local Hazard Mitigation Plan (LHMP)
    - Adoption and implementation of Safety and Environmental Justice (General Plan) Element
    - SAFER Bay construction implementation progress/status
    - Partnerships with other agencies to complete flood protection and ecosystem restoration projects along the bay shoreline to comply with new construction building reach codes.

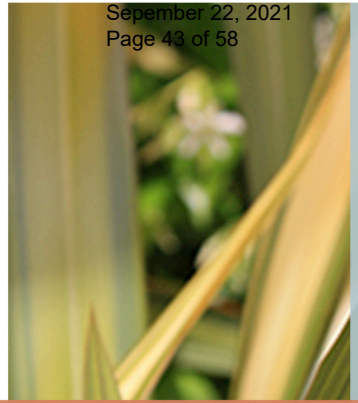
GREENHOUSE GAS INVENTORY

- Both the communitywide and municipal greenhouse gas inventories to be updated annually
- Municipal inventory provides holistic review of all operations related emissions
  - Can capture all department/division programs to reduce emissions (waste reduction, employee commuter programs, remote work policy, etc.) that may not be captured in fossil fuel consumption
- Due to the impact of external factors to tracking communitywide GHG emissions year-to-year, emissions will be considered on a rolling average (e.g., the most recent three reporting years)

NEXT STEPS

- Informational item to City Council to present final progress report and inform the city council on reporting methodology and goal clarification going forward

- These modifications and clarifications would be incorporated when the City Council directs a formal review/update or amendment to the CAP goals or annual scope of work



THANK YOU

UPDATED MEMORANDUM

Date: 5/11/2021
Revised 9/15/2021
From: EQC CAP Subcommittee
(Commissioner Gaillard, Kabat, and Chair Payne)
To: EQC
Re: Post-Crisis Implementation of the 2020 Climate Action Plan

Attached please find the EQC CAP Subcommittee's recommendations for implementation of the city's 2020 Climate Action Plan, following resolution of the city's COVID-related budget crisis. This memo has been revised to provide better context for our recommendations and updated to reflect current events.

Special note: City staff resources have not been appropriated to review/analyze the proposed recommendations at this time. The city council would review the Environmental Quality Commission's recommendations and provide further direction on next steps to city staff.

Implementing the 2020 Climate Action Plan

Introduction

In July of last year, Menlo Park set a net-zero carbon emissions target of 2030 and initiated a few unique initiatives to inspire action among other cites in an effort to magnify our climate preservation efforts. Those initiatives were presented as part of Menlo Park's Climate Action Plan (CAP), and outlined the first six core actions the city would take on the road to reaching its net-zero carbon emissions target. **These actions were never intended to encompass all activity on the CAP, but were merely the first in a yearly set of actions intended to be taken up by the city in order to achieve the goals approved in the CAP.** In fact, the CAP authors acknowledged that the first six actions proposed would only achieve 40% of the required emissions reductions:

"In fact, the plan only addresses 40% of the sought-after reductions. This simplified 6-action 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" (Menlo Park Climate Action Plan Adopted by City Council July 2020, p. 7).

When the CAP was approved in July 2020, the City Council authorized budget and resources to work on three of the six CAP goals above. This included CAP #1 (existing building electrification), CAP #3 (electric vehicle charging infrastructure), and CAP #5 (eliminating fossil fuel use from city operations). On April 6 2021, the City Council further refined the scope of work for implementation in 2021. It is important to note that CAP implementation for 2022 and beyond will be discussed during the annual CAP updates provided to the City Council every summer. Progress on each CAP goal should be discussed during the annual CAP update and additionally through quarterly reports regarding the City Council's work plan. The current slate of CAP Measures for 2021 Includes the following:

1. Explore policy/program options to convert 95% of existing buildings to all-electric by 2030
2. Set citywide goal for increasing EVs and decreasing gasoline sales
3. Expand access to EV charging for multifamily and commercial properties
4. Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission
5. Eliminate the use of fossil fuels from municipal operations
6. Develop a climate adaptation plan to protect the community from sea level rise and flooding

If fully implemented, the six core measures above would collectively reduce almost 100,000 tons of GHG per year, equal to roughly 40% of the carbon reductions needed to meet. **However, there is much work to do to complete these measures, as well as defining the next slate of measures to address the remaining 60% of reductions necessary and agreed to.**

Because of the COVID-19 crisis, fast developing at that time, these first six actions were limited by uncertainty surrounding city resources. Now, one year later, we are thankful to be on our way out of, rather than into, the COVID-19 crisis and recommend that the city organize its CAP activities and resources in such a way to more fully address the entirely of the CAP None of this should come as a surprise as it was clearly laid out in the approved CAP. The first six actions were intended to be begun and completed within the first year and to be followed by another fuller set of recommendations in July 2021 as described here:

"The Environmental Quality Commission expects the significantly truncated six-action 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" (Menlo Park Climate Action Plan Adopted by City Council July 2020, p. 7).

The full set of actions considered by the CAP Subcommittee prior to COVID were listed in Appendix B of the Council -approved 2020 CAP and are attached to the end of this memo for reference. This memo recommends 6 high-level strategic goals for organizing resources effectively to implement the full 2020 CAP and includes our view of staffing requirements critical to successful execution of the CAP. Unfortunately, while COVID raged across the globe and our attention was focused there, the problem of climate change has continued its steady march of increasing destruction, marked by ever greater wildfires, devastating drought, deadly hurricanes, polar vortex events and the documented acceleration in melting of earth's ice caps. The US recently reaffirmed its commitment to the Paris Climate Agreement, which sets a goal of keeping global temperatures under 2°C, preferably 1.5°C; **however, Menlo Park is currently not on track to lower emissions to hit either goal**. According to a study published in the respected scientific journal Nature, **we must retire all existing fossil fuel equipment at the end of its life in order to stay under 2°C**. If we wish to stay under the much preferred 1.5°C, **we must retire all existing fossil fuel equipment early, starting immediately.**[1]

In August, the Intergovernmental Panel on Climate Change (IPCC) issued a stunning report that is directly relevant to Menlo Park's CAP. It is the IPCC's 6th Assessment on climate change and is described by United Nations Secretary-General Antonio Guterres in the following way:

"Today's IPCC ... report is a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable: greenhouse gas emissions from fossil fuel burning and deforestation are choking our planet and putting billions of people at immediate risk. Global heating is affecting every region on Earth, with many of the changes becoming irreversible."

Thankfully, responding appropriately to the climate crisis will not upend our lives like the COVID-19 crisis did, if we listen now to the clear messages our scientists are giving us about what is required. However, we can not afford to delay. Every moment of delay exponentially increases the sacrifices or acceleration that will have to be made tomorrow. Had decisive action on climate been taken in the 1990s, when the United Nations Framework Convention on Climate Change and the Kyoto Protocol were first established, even less disruption to our lives would have been required now. If we wait another decade to take decisive action, a far greater disruption to our lives will be required and far more climate damage and suffering will be locked in for our offspring, who are now too young to make the needed policy moves we adults face.

We have examined the landscape that Menlo Park finds itself in today, on its way out of the COVID-19 crisis, and attempted to determine the most impactful actions our city can take in 2021 to begin to confront the climate crisis. Our city faces unique threats from climate change – many of our residents and businesses are located mere feet above sea level – but also possesses unique strengths that will serve us well in this fight. The major challenge we face involves our energy sources, pivoting from dirty fossil fuels to clean electric devices that provide the same or better services. Thankfully, our electricity from Peninsula Clean Energy is now 100% carbon free, making our path forward clear: by electrifying our infrastructure currently powered by fossil fuels, we will be powering it with 100% clean energy. The bold leadership that Menlo Park showed on building electrification with the passage of the Reach Codes in 2019 has already rippled to dozens of additional cities and has even influenced the State of California to

[1] "Committed Emissions from Existing Energy Infrastructure Jeopardize 1.5°C Climate Target," Nature, July 2019, https://www.nature.com/articles/s41586-019-1364-3.

slightly accelerate the normalization of all-electric construction in the 2022 energy code. The sooner we act, the more impactful our leadership will be.

Menlo Park stands to benefit in significantly from early action to reduce fossil fuel use and address the climate crisis, not just setting a great example for our neighbors but directly prospering from the actions. The U.S. EPA asserts that **near-term action to mitigate GHG emissions can significantly reduce and avoid impacts** such as extreme weather, heat, wildfires, and draught. Reducing our use of fossil fuels will dramatically improve our air quality. For example, transitioning from gas use to all-electric homes and buildings in California is estimated to reduce unhealthy smog and soot pollution, preventing 1,500 premature deaths and saving $17 billion, according to a recent Harvard School of Public study.

Addressing Some Recent Misunderstandings about the CAP

Now that the city's target of net zero carbon by 2030 has been official for nearly a year, we have heard overwhelming support from community members, and polling data shows that the vast majority of Americans want to see more local climate action. However, several concerns have emerged from a few community members about the actions that will be required to meet this goal and these are important to address. Before describing the actions we propose for 2021, we will briefly respond to some of the concerns raised.

1. Is this too expensive?

The truth is that the cost of inaction on climate change is far higher than the cost of acting. Building a seawall 10 feet high to protect Menlo Park from just three feet of sea level rise is estimated to cost $100 million[2], and since a seawall two times higher requires four times as much material, twice as much land and extends much further up our once shallow creeks, the costs of a seawall to protect Menlo Park from the, at minimum, 20 feet of sea level rise it will experience at our current level of action will be far, far higher. Sea walls built this high also raise the risk of quake breach and catastrophe.

Next, we must compare the cost of combatting climate change to the costs we already face today combatting public health problems brought on by fossil fuel use. A recent study estimated that outdoor air pollution from natural gas appliances costs California $3.5 billion a year[3] (to say nothing of indoor air pollution, or outdoor pollution from gasoline-powered vehicles), while another study determined that use of a gas stove in a house is as detrimental to a child's health as secondhand tobacco smoke[4].

The best way to keep climate-related costs down isn't inaction, or delayed action, but rapid action. Every furnace installed this year leads to enormous costs borne by all of us today and in the future: higher seas and the higher seawalls we will be forced to build; more asthma in our children; more COPD and bronchitis in our citizens. Ultimately a gas furnace will also cost the owner dearly, when the device must be torn out early due to the accelerating climate crisis and the increasingly drastic actions society will take in response. By installing a heat pump today instead of a furnace, or a heat pump water heater instead of a gas water heater, an induction

[2] 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.

[3] 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

[4] Kicking the Gas Habit: How Gas is Harming Our Health, https://www.climatecouncil.org.au/wp-content/uploads/2021/05/Kicking-the-Gas-Habit-How-Gas-is-Harming-our-Health.pdf.

stovetop instead of a gas range, an EV (or a bike) instead of a gasoline-powered car, we are paying a small premium today that will pay for itself many times over in avoided climate damage. Even oil companies tell us we should plan to spend $200 per ton to remove the carbon we emit using their products today, making that gas furnace look more like a frivolous and deadly extravagance than like a prudent choice, when all costs are considered. The upfront cost to replace natural gas equipment with electric heat pump equipment is higher. However, incentives can greatly reduce the cost making it cost effective when using high efficiency equipment. Incentives are currently offered in Menlo Park for high efficiency heat pumps for residential space and water heating.

The bill impact for heat pump water heating is nominal with monthly bill increases in the first year ($1) or in some cases no increases depending on a building's age. On average, there will monthly savings between $6 and $8 over the life of heat pump water heaters due to changes in future energy prices. The bill impact for space heating is mixed depending on type of equipment used and age of the building. For high efficiency space heating equipment there are nominal bill increases in the first year between $3 and $6 per month, but over the life of the equipment there will be monthly bill savings between $7 and $18.

For space and water heating, using heat pumps are cost effective when considering time of use energy pricing and the societal costs of climate change for all types of buildings and heat pump equipment regardless of energy efficiency rating.

When heat pumps are combined with solar on buildings, it can yield even greater savings and protect against bill cost increases.

2. Can't we just use "carrots" (incentives) instead of "sticks" (ordinances)?

Three major electric providers around us (Peninsula Clean Energy, Silicon Valley Clean Energy and Palo Alto Utilities have been offering large incentives for heat pump water heaters for about 6, 24 and 48 months respectively. They marketed incentives of $1,500 to $2,500 for heat pump water heater replacements of gas water heaters. They were able to attract voluntary participation equaling on average only 1% of the targeted water heaters, as estimated by the number of water heaters burning out during their program offering periods.

While it may feel tempting for Menlo Park leaders to follow in the footsteps of these energy providers, using all "carrots" and no "sticks", the collective experience of these neighboring agencies calls into question whether incentives are a significant motivator (compared to inertia) for those in our relatively affluent communities. It is possible that we simply cannot provide big enough carrots to motivate the changes we need to make on the timescale that is required. Ordinances prohibiting new fossil fuel devices are necessary if we want to meet the Paris Agreement commitments. While a voluntary incentive program might slowly transform the market over a 15-20 year timeframe, the climate crisis requires that we make this transition in a much shorter timeframe to keep global temperatures below 2°C (Paris limit, with a goal of 1.5°C). Incentives may play a role in some programs, but we urge decision-makers to focus our limited resources on aiding disadvantaged groups to help them transition to clean, safe appliances, and not squander precious resources on those who can already afford it.

3. Is the public ready?

The Paris Climate Agreement is supported by nearly 70% of American voters, and likely an even higher percentage of Menlo Park residents. The policies we are suggesting are merely

those necessary to fulfill the Paris Climate Agreement's goal of limiting global warming to 2°C.[5] It is true that many residents may not realize the scale of action needed to meet that goal. The job of leaders is to lead the public, explaining clearly what is required and removing as many barriers as possible. As was done with COVID, leaders must listen to scientists and technical experts and translate that advice into policy, even when the public is not yet fully aware or informed of what policies are needed to avert disaster.

4. Should the city government stick to repairing potholes?

While several levels of government are involved in making sure that appliances are safe and efficient, the only entity that directly controls, through permits, what type of heating appliances are installed in your house is the city – not the county, not the state, not the federal government. The city has the means and the responsibility to only allow appliances in buildings that are safe, not only for the occupants, but for members of the community at large, and for the community's continued survival.

5. Can low-income families afford this?

Mirroring our response to "it's too expensive" above, the members of our community who struggle the most economically can even less afford inaction on climate change. Low-income residents disproportionately and unjustly suffer the greatest costs from climate change – both to their health and from climate disasters such as sea level rise – and they have the fewest resources to handle these crises. Recognizing that these residents also have the fewest resources to spend updating their appliances, we must design our policies with this in mind, making the best use of limited city resources to assist those most in need with making these transitions necessary for the survival of our city.

While it is true that some members of our community have raised concerns about climate action, we also see that there is broad agreement on several core issues:

- the need to take action on climate change
- the need to listen to scientists
- support for the goals of the Paris Climate Agreement
- and the responsibility of the city to protect its most vulnerable and disadvantaged residents.

After studying the science, assessing the economic feasibility of various options and weighing community readiness, we present what we believe is the most effective way for Menlo Park to meet the goals set forth in the Paris Climate Agreement, aimed at keeping global warming under 2°C, and in so doing, protecting our most vulnerable and disadvantaged residents.

This way forward started years ago, with the establishment of Peninsula Clean Energy (PCE) and the passage of the Reach Codes being two major milestones, and the city's 2020 Climate Action Plan building on those with its goal of achieving zero carbon by 2030. We now turn to the actions we believe would be most effective at propelling the city forward to a cleaner, safer future for all residents.

[5] "Committed Emissions from Existing Energy Infrastructure Jeopardize 1.5°C Climate Target," Nature, July 2019, https://www.nature.com/articles/s41586-019-1364-3.

High-Level CAP Goals & Proposed 2021 Priorities

Following are six high-level CAP goals that, if all accomplished, would achieve Menlo Park's established 2030 target of **a 90% reduction in greenhouse gas (GHG) emissions and sequestration of the remaining 10%**, thus resulting in net-zero emissions by 2030. It is important to note that ***the initial six core measures*** of the CAP lay a strong foundation for achieving the CAP target, but much more needs to be done, not just in implementing the six core measures – a significant undertaking – but also in evaluating additional measures to continue progress.

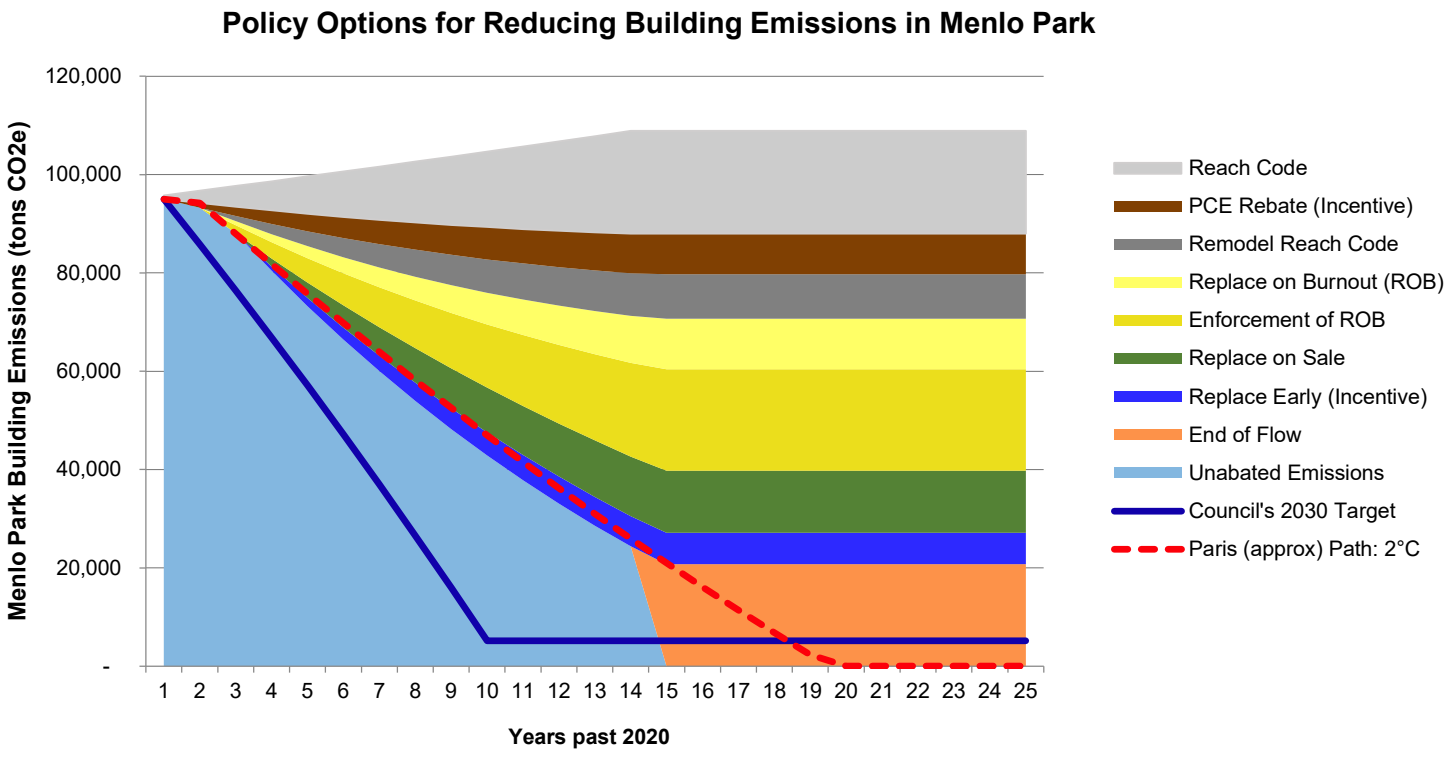
In order to accomplish an overall 90% reduction, we could achieve a 90% reduction in each of the sectors of emissions the city produces – the goals have been written in that format. Conversely, if a heavier lift is accomplished in one sector, a proportionately smaller lift is needed in others. Included underneath each goal are the proposed priorities for 2021 that would work toward that goal, along with graphs showing the potential impact of various policy options for the two biggest emissions categories: buildings and vehicles.

Goal #1: Reduce emissions from buildings by 90% by 2030

Note: this goal has overlap with two existing 2020 CAP goals – "Explore policy/program options to convert 95% of existing buildings to all-electric by 2030" and "Eliminate the use of fossil fuels from municipal operations", as well as the Reach Codes passed in 2020. We recommend continuing with these core measures, "CAP #1" and "CAP #5", as well as continuing implementation of the Reach Code. We recommend enhancing these current commitments, through the following improvements that will lead to greater efficacy and success of the measures.

Proposed 2021 Priorities:

- Conduct community outreach for CAP #1 policies
- Draft policies, i.e. Burnout Ordinance, and related code language
- Develop plan for enforcing CAP #1 policies
- Simplify permit application and process for electrification
- Create and begin implementing electrification plan for all municipal buildings



The EQC's CAP subcommittee quantified the impact of various policy and program options in the graph. The graph shows that a combination of decisive policies will be required to meet the CAP and Paris targets. The chart also shows how a few years of delayed action can make the current targets exceedingly difficult to achieve.

Goal #2: Reduce emissions from vehicles by 90% by 2030

Note: this goal has overlap with four existing 2020 CAP goals – "Set citywide goals for increasing electric vehicles to 100% of new vehicles by 2025 and decreasing gasoline sales 10% a year from a 2018 baseline", "Expand access to electric vehicle (EV) charging for multifamily and commercial properties", "Reduce vehicle miles traveled (VMT) by 25% or an amount recommended by the Complete Streets Commission", and "Eliminate the use of fossil fuels from municipal operations". The city has two main levers for achieving this goal: electrifying transportation and reducing miles traveled, with the second lever including many possible options: bicycle/pedestrian infrastructure, public transportation, increasing housing near public transit and amenities, increasing amenities near housing, etc. We considered splitting this goal into separate goals, electrification and VMT reduction, but having them unified in a single goal provides opportunities to see how these strategies interact with one another.

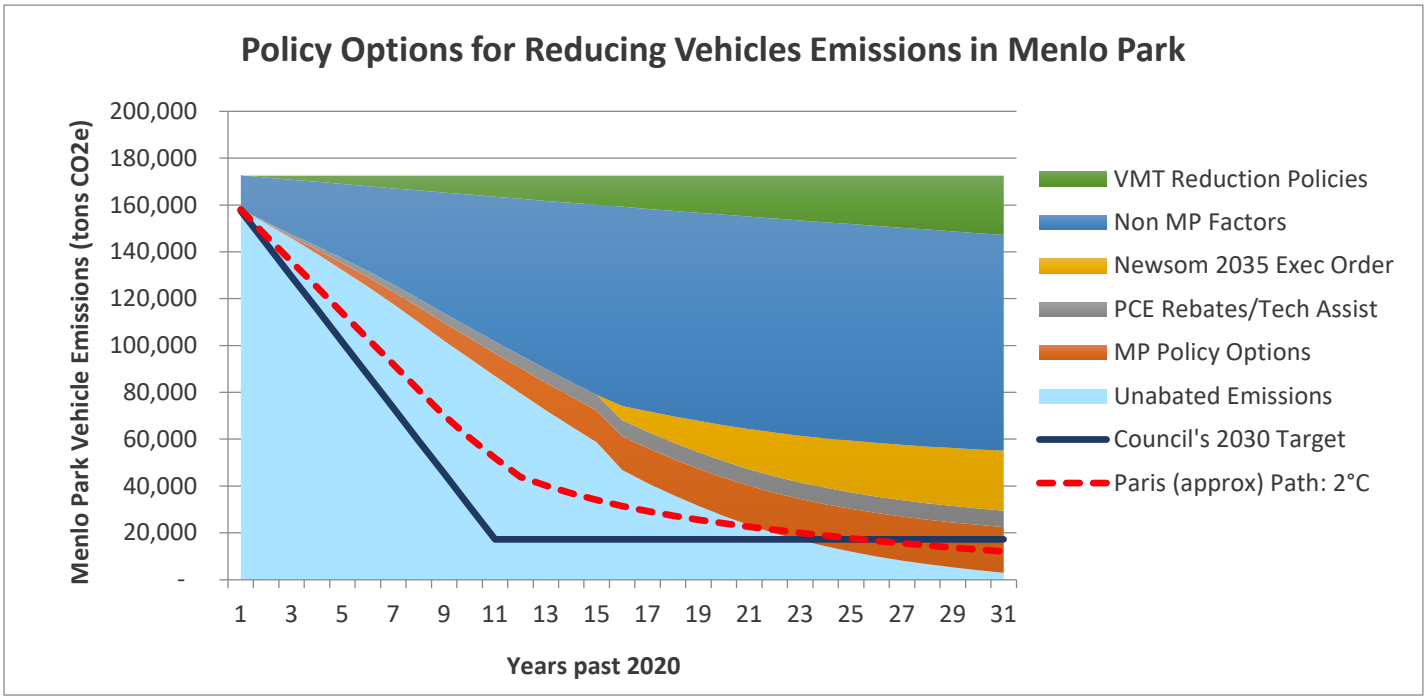
We recommend continuing with these core measures, "CAP #2," "CAP #3" and "CAP #4", and enhancing them through the following improvements that will lead to greater efficacy and success of the measures.

Proposed 2021 Priorities:

- Explore and implement policies/programs to increase employer-based EV charging
- Explore and implement policies/programs to increase EV charging at multi-family buildings

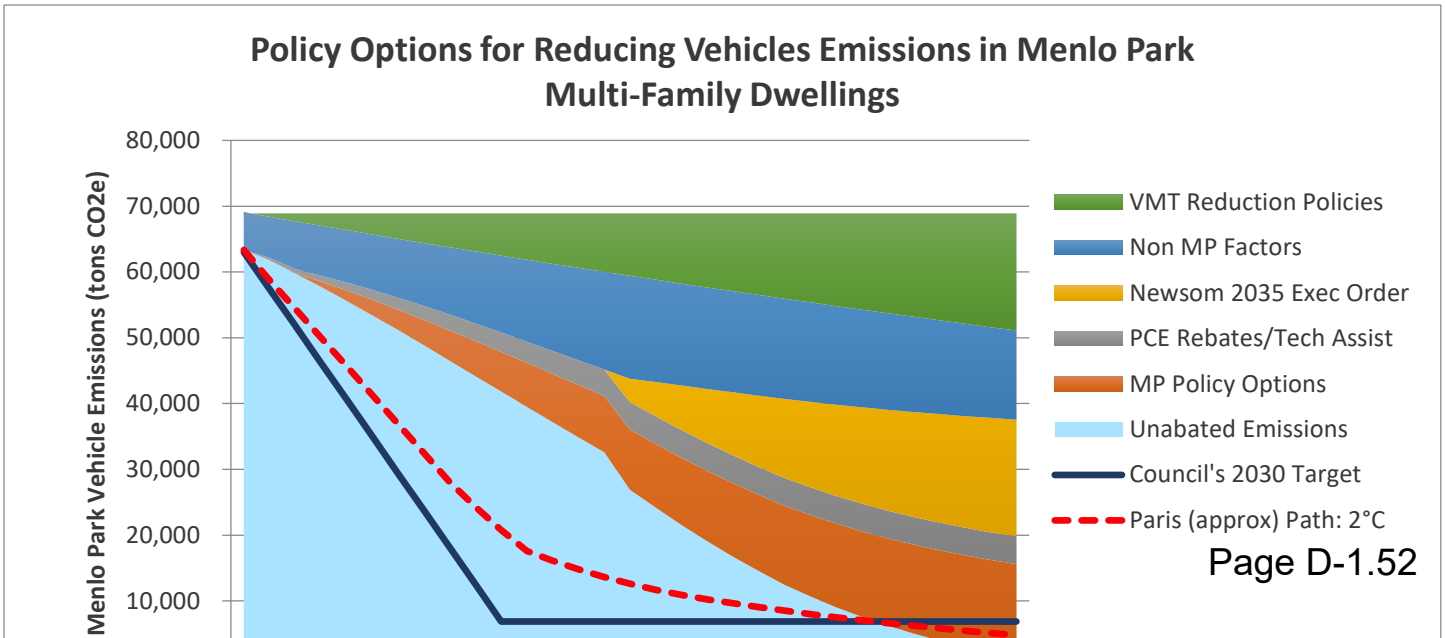
- Explore and implement policies to both concentrate, and increase the density of, development near transit in order to reduce VMT
- Explore other policies/programs to reduce gasoline sales and usage
- Implement the current municipal fleet vehicle electrification plan that was adopted by resolution in April 2020

Graph of impact of proposed 2021 priorities:



The graph above shows that market developments and other factors (depicted in dark blue above and not specific to Menlo Park), are projected to drive the bulk of vehicle conversions. However, the city does have an opportunity to adopt policies that support accelerated EV adoption and thereby increase our chances of achieving the Paris goals.

One notable finding was that city policies directed at vehicles owners (in orange) had a much higher impact among residents living in multi-family housing than among those living in single-family dwellings. In other words, the city can make a bigger impact on vehicle emissions by focusing on policies that support multi-family dwelling residents.



Goal #3: Reduce emissions from waste by 90% by 2030

Note: this goal has overlap with the community zero waste plan passed in 2017. This category accounts for roughly 3% of the total GHG inventory in Menlo Park. Therefore, staff and city resources should be allocated proportionally, recognizing the minor role that waste plays in achieving carbon neutrality.

Proposed 2021 Priorities:

- Continue implementation of the city's adopted Zero Waste Plan

Goal #4: Implement programs to sequester remaining emissions in 2030, equivalent to 10% of 2005 emissions Note: this goal has potential overlap with goal 1, if emissions associated with construction are included in that goal, and goal 6, as building materials are a potential opportunity for negative emissions.

Proposed 2021 Priorities:

- Explore and implement policies/programs to sequester 35,000 tons/year of CO2e by 2030

Goal #5: Develop climate adaptation plans to protect portions of Menlo Park that are threatened by climate change

Note: this goal has overlap with one existing 2020 CAP goal – "Develop a climate adaption plan to protect the community from sea level rise and flooding". In addition to sea level rise, the city should also explore adaptations to defend against increased fire risk, drought and extreme heat We recommend continuing with the core measure, "CAP #6," and enhancing it through the following improvements that will lead to greater efficacy and success of the measures. .

Proposed 2021 Priorities:

- Develop plan for protecting community from sea level rise
- Develop plan for protecting community from drought, extreme heat and wildfires
- Develop plan for adapting urban forest to changing climate
- Propose a risk-limiting building moratorium or other policy to indemnify City against increased climate related damages on or near future developments on flood-prone property near the Bay, including release of any obligation to maintain critical infrastructure: roads, sewers, etc. for future developed at-risk properties.
- Develop plan for protecting community from risks associated with groundwater table rise and liquefaction.

Goal #6: Reduce emissions from construction 90% by 2030

Note: this goal addresses industrial emissions from construction materials such as concrete and steel, which are significant and not currently included in Menlo Park's GHG inventory because they occur outside of the city's boundaries

Proposed 2021 Priorities:

- Explore policies/programs requiring low embodied carbon building materials for new construction and remodels

Proposed Staffing Requirements to Achieve CAP Goals

Menlo Park's ability to achieve its climate goals will be determined in large measure by the creativity, skill and technical expertise of staff working on the problem. Climate change is somewhat unique among issues that cities typically face in its breadth, technical complexity, and urgency, requiring high levels of cross-functional collaboration across departments and even with other agencies. Fortunately Menlo Park is not alone in setting bold goals for climate action. Neighboring cities, Palo Alto and Mountain View, have done the same and may already be a few steps ahead of us in staffing these effort to match the scope and scale of the problem. As Menlo Park considers its staffing options, there may be a benefit in looking to these neighboring cities for lessons learned and guidance on how to staff appropriately.

Given both the climate-related technical expertise and the professional resource planning skills maintained by members of the EQC's CAP Subcommittee, it is possible that the subcommittee is uniquely positioned to identify staffing challenges and opportunities that could either threaten or enhance successful implementation of the city's CAP. In an effort to transfer as much knowledge as possible to key decision makers, the subcommittee has attempted to document its knowledge about key staffing requirements in the following staffing matrix, entitled "Staffing Requirements to Achieve CAP Goals." This is intended to assist the critical conversation between staff, community and council as to the best response to the unfolding climate emergency.

Staffing Requirements to Achieve CAP Goals

				Skills Required																City Department											
CAP Goal	Actions	#	Staff Skills Required	Policy	Legal	Engineering	Building Science	Building Codes	Energy Analytics	Urban Planning/Aboriculture	Finance	Economics	Climate Damage Analysis	Public Relations	Marketing	Stakeholder Engagement	Organizational Design	Process Improvement	Information Technology	Dept	Sustainability	Legal	Public Works	Planning	Public Engagement	Information Technology	Skills Gaps	2020-21	2021-22	Beyond 2022	CAP Goal #
#1 Reduce emissions from buildings by 90% by 2030	Research and analyze CAP #1 policy options	1	Policy, engineering, building science, quantitative analysis, finance	x		x	x		x		x									Sustainability	x						Engineering, building science, quantitative analysis, finance	x			1
	Analyze cost effectiveness of CAP #1 policies	2	Finance, economics, energy analytics, building science, climate damage analysis	x		x	x		x		x	x	x			x				Sustainability	x						Finance, economics, energy analytics, building science, climate damage analysis	x			1
	Analyze legal implications of policies	3	Legal, policy	x	x			x												Legal		x						x			1
	Conduct community outreach for CAP #1 policies	4	Public relations, marketing, market analysis, stakeholder engagement, engineering, finance			x					x			x	x	x				Public Engagement, Sustainability	x				x		Engineering, finance, market analysis		x		1
	Draft policies and related code language	5	Legal, policy, code enforcement, engineering, finance	x	x	x		x			x									Legal, Planning (Building Dept), Sustainability	x	x		x					x		1
	Develop plan for enforcing CAP #1 policies	6	Organizational design, change management, building codes expertise					x									x		x	Planning (Building Dept), Sustainability	x			x			Organizational design, change management		x		1
	Simplify permit application and process for electrification	7	Process improvement, change management, information technology (Accela system design), building codes expertise					x									x	x	x	Planning (Building Dept), Information Technology, Sustainability	x			x		x	Process improvement, change management		x		1
	Create and implement electrification plan for all municipal buildings	8	Engineering, finance, building science, energy analytics			x	x	x	x		x		x	x						Public Works, Sustainability	x		x				Energy analytics, climate damage analysis, economics		x		1
#2 Reduce emissions from vehicles by 90% by 2030	Explore and implement policies/programs to increase employer-based EV charging	9	Policy, legal, engineering, urban planning, energy analytics, finance, stakeholder engagement	x	x	x			x	x	x					x				Sustainability, Planning, Legal, Public Engagement	x	x		x	x		Engineering, energy analytics, finance		x		2
	Explore and implement policies/programs to increase EV charging at multi-family buildings	10	Policy, legal, engineering, urban planing, energy analytics, finance, stakeholder engagement	x	x	x			x	x	x					x				Sustainability, Planning, Legal, Public Engagement	x	x		x	x		Engineering, eergy analytics, finance		x		2
	Develop clear network of protected pedestrian/bike paths throughout town in order to reduce VMT	11	Engineering, urban planning, stakeholder engagement			x				x						x				Sustainability, Planning (Transportation), Public Works, Public Engagement	x		x	x	x		Multi-modal transportation engineer			x	2
	Explore and implement policies to both concentrate, and increase the density of, development near transit in order to reduce VMT	12	Engineering, urban planning, stakeholder engagement		x	x				x						x				Sustainability, Legal, Planning (Transportation), Public Engagement	x	x		x	x				x		2

Staffing Requirements to Achieve CAP Goals

				Skills Required																City Department											
CAP Goal	Actions	#	Staff Skills Required	Policy	Legal	Engineering	Building Science	Building Codes	Energy Analytics	Urban Planning/Aboriculture	Finance	Economics	Climate Damage Analysis	Public Relations	Marketing	Stakeholder Engagement	Organizational Design	Process Improvement	Information Technology	Dept	Sustainability	Legal	Public Works	Planning	Public Engagement	Information Technology	Skills Gaps	2020-21	2021-22	Beyond 2022	CAP Goal #
	Explore other policies/programs to reduce gasoline sales and usage	13	Policy, legal, engineering, finance, stakeholder engagement	x	x	x					x					x				Sustainability, Planning, Legal, Public Engagement	x	x		x	x		Engineering, Finance		x		2
	Explore policies/programs to convert commercial fleet vehicles to EV	14	Policy, legal, engineering, energy analytics, finance, stakeholder engagement	x	x	x			x		x					x				Sustainability, Planning (Transportation), Public Engagement	x			x	x		Engineering, energy analytics, finance			x	2
	Implement municipal fleet vehicle electrification plan	15	Engineering, energy analytics, finance			x			x		x									Public Works, Sustainability, Planning (Transportation)	x		x	x			Engineering, energy analytics, finance		x		2
#3 Reduce emissions from waste by 90% by 2030	Explore policies and programs to expand recycling and composting services to multi-family housing dwellers	16	Policy, legal, engineering, stakeholder engagement	x	x	x										x				Sustainability, Legal, Stakeholder Engagement	x	x								x	3
	Identify and tightly manage methane emissions from all local sources, inc. landfills, waste water treatment facility, etc.	17	Engineering, climate damage analysis, finance			x					x		x							Sustainability, Public Works	x		x				Engineering, finance, climate damage analysis			x	3
	Explore policies/programs to promote a circular economy	18	Policy, legal, engineering, finance, stakeholder engagement	x	x	x					x					x				Sustainability, Legal, Public Engagement	x	x			x		Engineering, Finance			x	3
	Explore policies/programs to reduce plastic waste	19	Policy, legal, stakeholder engagement	x	x						x					x				Sustainability, Legal, Public Engagement	x	x			x		Finance			x	3
	Adopt Foodware Ordinance to reduce/eliminate plastics and singl use disposable foodware	20	Policy, legal, stakeholder engagement	x	x						x					x				Sustainability, Legal, Public Engagement	x	x			x		Finance			x	3
	Update waste requirements in Construction and Demolition Ordinance	21	Policy, legal, stakeholder engagement	x	x						x					x				Sustainability, Legal, Public Engagement	x	x			x		Finance			x	3
#4 Implement programs to sequester 10% of emissions by 2030	Explore and implement policies/programs to sequester 35,000 tons/year of CO2e by 2030	22	Policy, engineering, climate damage analysis, finance	x		x					x		x							Sustainability, Public Works, Public Engagement	x		x		x		Engineering, finance, climate damage analysis		x		4
	Explore partnership w/ local land conservation trusts (e.g. POST) to sequester carbon on local lands with afforestation, regenerative agriculture	23	Policy, engineering, climate damage analysis, finance	x		x					x		x							Sustainability, Public Works, Public Engagement	x		x		x		Engineering, finance, climate damage analysis			x	4

Staffing Requirements to Achieve CAP Goals

CAP Goal	Actions	#	Staff Skills Required	Skills Required: Policy	Legal	Engineering	Building Science	Building Codes	Energy Analytics	Urban Planning/Aboriculture	Finance	Economics	Climate Damage Analysis	Public Relations	Marketing	Stakeholder Engagement	Organizational Design	Process Improvement	Information Technology	City Department: Dept	Sustainability	Legal	Public Works	Planning	Public Engagement	Information Technology	Skills Gaps	2020-21	2021-22	Beyond 2022	CAP Goal #
	Explore and implement policies/programs to sequester carbon in building materials, such as concrete	24	Policy, legal, engineering, building science, building codes, climate damage analysis, finance, stakeholder engagement, public relations, marketing, information technology	x	x	x		x			x			x	x	x			x	Sustainability, Legal, Planning, Public Engagement, Information Technology	x	x		x	x	x	Engineering, Finance			x	4
#5 Develop adaptation plans to protect people and property threatened by climate collapse	Develop plan for protecting community from sea level rise	25	Policy, legal, engineering, building codes, urban planning, climate damage analysis, stakeholder engagement	x	x	x		x		x			x			x				Sustainability, Legal, Planning Public Works, Public Engagement	x	x	x	x	x		Engineering, climate damage analysis		x		5
	Develop plan for protecting community from drought, extreme heat and wildfires	26	Policy, legal, engineering, building codes, urban planning, climate damage analysis, stakeholder engagement	x	x	x		x		x			x			x				Sustainability, Legal, Planning Public Works, Public Engagement	x	x	x	x	x		Engineering, climate damage analysis		x		5
	Develop plan for adapting urban forest to changing climate	27	Aboriculture, urban planning, climate damage analysis, hydrology, stakeholder engagement							x			x			x				Public Works, Public Engagement			x	x	x		Climate damage analysis		x		5
	Propose building moratorium or other policy to indemnify City against climate related damages on or near flood-prone property being developed on the Bay, inc. release of any obligation to maintain critical infrastructure: roads, sewers, etc.	28	Climate damage analysis, legal, engineering, urban planning, stakeholder engagement, policy	x	x	x				x	x		x			x				Planning, Legal, Public Engagement, Public Works, Finance		x	x	x	x		Engineering, climate damage analysis		x		5
#6 Substantially reduce emissions from construction by 2030	Explore policies/programs requiring low embodied carbon building materials for new construction and remodels	29	Policy, legal, engineering, building science, building codes, energy analytics, finance, climate damage analysis, marketing, stakeholder engagement, process improvement	x	x	x	x	x	x		x		x		x	x			x	Sustainability, Legal, Planning, Public Engagement, Information Technology	x	x	x	x	x	x	Engineering, building science, energy analytics, finance, climate damage analysis		x		6
	Explore policies/programs requiring zero emissions construction equipment for new construction and remodels	30	Policy, legal, engineering, building codes, finance, climate damage analysis, marketing, stakeholder engagement	x	x	x	x				x		x		x	x				Sustainability, Legal, Planning, Public Engagement	x	x	x	x	x		Engineering, building science, finance, climate damage analysis			x	6
			Totals	21	18	23	5	9	8	8	21	1	11	3	4	20	2	1	4		27	17	12	17	20	3		3	16	11	

CITY OF MENLO PARK

REGULAR MEETING MINUTES – DRAFT
Date: 10/20/2021
Time: 6:00 p.m.
Regular Meeting Location: Zoom.us/join **– ID# 915 4675 0502**

A. Call To Order

Chair Payne called the meeting to order at 6:03 p.m.

B. Roll Call

Present: Elkins, Evans (Vice Chair), Gaillard, Kabat, London, Payne (Chair), and Price (exited the meeting at 9:03 p.m.)
Absent: None.
Staff: Joanna Chen-Management Analyst, Brian Henry-Assistant Public Works Director, Rebecca Lucky- Sustainability Manager, David Norris-Police Chief, and Donald Weber-Public Works Supervisor-Fleet

C. Public Comment

None.

D. Regular Business

D1. Review and discuss upcoming city vehicle purchases as it relates to the city's sustainable fleet policy and Climate Action Plan strategy goal No.5 (eliminate fossil fuels from city operations)

Sustainability Manager Rebecca Lucky introduced item.

Police Chief David Norris and Sustainability contractor Chris Starkey made the presentation (Attachment).

ACTION: Motion and second (Price/ Kabat), to (1) approve the proposed vehicle purchase (2) recommend staff report the outcomes, opportunities, and challenges of pilot patrol electric vehicle (EV), and (3) if the pilot is successful, recommend accelerating the purchase of patrol EVs in fund year 2022 and increasing annual fossil fuel reduction to 10 percent in the sustainable fleet policy, passed 6-1 (Gaillard dissenting).

The Environmental Quality Commission took a recess at 8:25 p.m.

The Environmental Quality Commission reconvened at 8:32 p.m.

D2. Informational presentation on next steps and scope for Climate Action Plan strategy/goal No.1 to electrify existing buildings by 2030

Sustainability Manager Rebecca Lucky introduced the item and made a presentation (Attachment).

Vice Chair Evans made a presentation (Attachment).

- Diane Bailey inquired about increasing the utility user's tax (UUT) to fund low-income households to electrify.

Commissioner Price exited the meeting at 9:03 p.m.

D3. Review and discuss presentation on proposed additional staff resources for implementing the 2030 Climate Action Plan

Sustainability Manager Rebecca Lucky introduced the item and made a presentation (Attachment).

ACTION: Motion and second (Evans/ Gaillard), to approve staff resources requested, passed 6-0 (Price absent).

E. Reports and Announcements

E1. Reports and Announcements from staff and commissioners

Sustainability Manager Rebecca Lucky:
- Climate action plan progress report has been received and filed
- City Council has directed staff to pursue a direct purchase of Menlo Park Community Center microgrid and is working towards an award in early December 2021

Commissioner Gaillard:
- Along with Commissioner Kabat will be giving a library talk on November 30, 2021 about electrifying homes
- Has started a Next Door group (home electrifiers) as a resource for home electrification

Commissioner Kabat:
- Provided on update from the most recent C/CAG meeting about regional climate action progress

F. Adjournment

Chair Payne adjourned the meeting at 9:40 p.m.

Sustainability Contractor Candise Almendral

DECARBONIZING MUNICIPAL FLEET

Chris Starkey, Sustainability Consultant

Team members: Don Weber (Fleet Manager), Joanna Chen (Management Analyst), David Norris (Police Chief), Scott Mackdanz (Sergeant), Brian Henry (Assistant Public Works Director), Rebecca Lucky (Sustainability Manager)

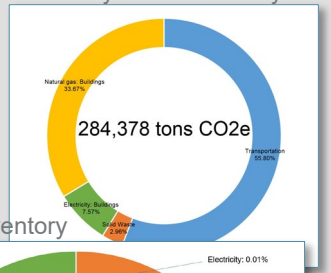
AGENDA

- CAP 5 Overview
- Sustainable Fleet policy
- Fleet Decarbonization Strategic Plan
- 2021-22 Vehicle Purchase

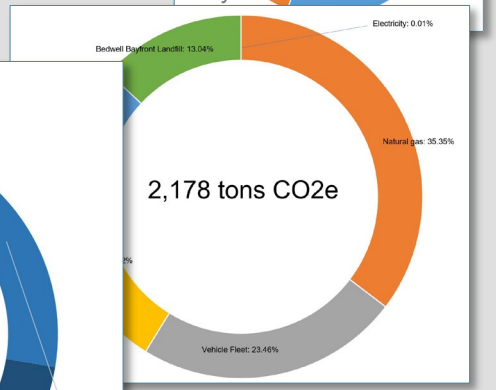
CAP 5: MUNICIPAL DECARBONIZATION

- A small but impactful CAP action
- Working toward a comprehensive municipal decarbonization plan
- Biggest impact areas:
  - Facilities
  - Procurement and waste
  - Fleet

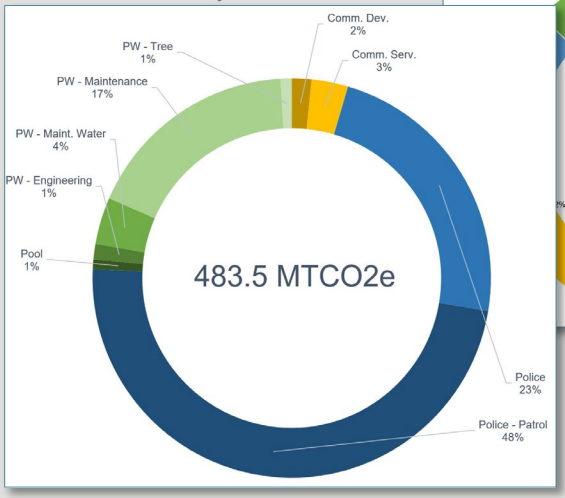
2017 City-Wide Inventory



2019 Muni Inventory



2019 Fleet Inventory



2020 SUSTAINABLE FLEET POLICY

A: "ZEV First" Policy

50% ZEV Purchases by 2025
75% ZEV Purchases by 2030

B: "ZEV First" Procurement Procedure

1) Deferral, 2) exemptions, then 3) choose most efficient option for procurement

C: Consumption

Reduce 5% Fuel Use Annually

D: Operation

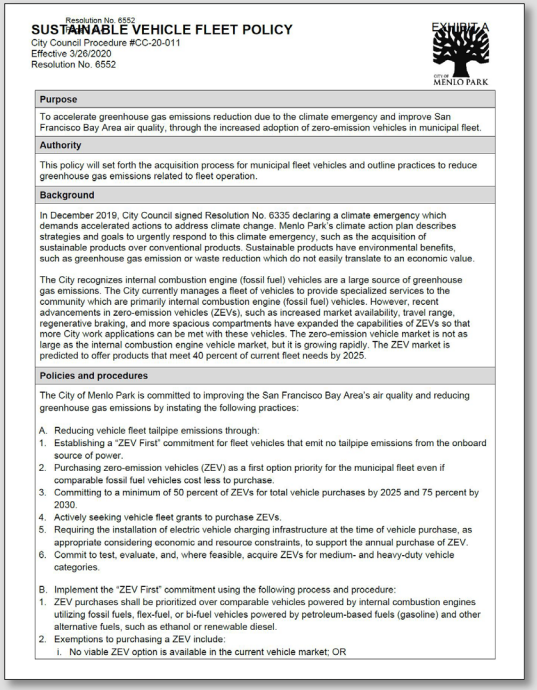
Reduce fleet size, inefficient operation (idling), and alternative forms transportation

E: Costs

Reduce costs by incentive seeking

F: Monitoring and Reporting

Report on goals with procurement



Resolution No. 6552

SUSTAINABLE VEHICLE FLEET POLICY

City Council Procedure #CC-20-011
Effective 3/26/2020
Resolution No. 6552

EXHIBIT A

Purpose

To accelerate greenhouse gas emissions reduction due to the climate emergency and improve San Francisco Bay Area air quality, through the increased adoption of zero-emission vehicles in municipal fleet.

Authority

This policy will set forth the acquisition process for municipal fleet vehicles and outline practices to reduce greenhouse gas emissions related to fleet operation.

Background

In December 2019, City Council signed Resolution No. 6335 declaring a climate emergency which demands accelerated actions to address climate change. Menlo Park's climate action plan describes strategies and goals to urgently respond to this climate emergency, such as the acquisition of sustainable products over conventional products. Sustainable products have environmental benefits, such as greenhouse gas emission or waste reduction which do not easily translate to an economic value.

The City recognizes internal combustion engine (fossil fuel) vehicles are a large source of greenhouse gas emissions. The City currently manages a fleet of vehicles to provide specialized services to the community which are primarily internal combustion engine (fossil fuel) vehicles. However, recent advancements in zero-emission vehicles (ZEVs), such as increased market availability, travel range, regenerative braking, and more spacious compartments have expanded the capabilities of ZEVs so that more City work applications can be met with these vehicles. The zero-emission vehicle market is not as large as the internal combustion engine vehicle market, but it is growing rapidly. The ZEV market is predicted to offer products that meet 40 percent of current fleet needs by 2025.

Policies and procedures

The City of Menlo Park is committed to improving the San Francisco Bay Area's air quality and reducing greenhouse gas emissions by instating the following practices:

A. Reducing vehicle fleet tailpipe emissions through:
1. Establishing a "ZEV First" commitment for fleet vehicles that emit no tailpipe emissions from the onboard source of power.
2. Purchasing zero-emission vehicles (ZEV) as a first option priority for the municipal fleet even if comparable fossil fuel vehicles cost less to purchase.
3. Committing to a minimum of 50 percent of ZEVs for total vehicle purchases by 2025 and 75 percent by 2030.
4. Actively seeking vehicle fleet grants to purchase ZEVs.
5. Requiring the installation of electric vehicle charging infrastructure at the time of vehicle purchase, as appropriate considering economic and resource constraints, to support the annual purchase of ZEV.
6. Commit to test, evaluate, and, where feasible, acquire ZEVs for medium- and heavy-duty vehicle categories.

B. Implement the "ZEV First" commitment using the following process and procedure:
1. ZEV purchases shall be prioritized over comparable vehicles powered by internal combustion engines utilizing fossil fuels, flex-fuel, or bi-fuel vehicles powered by petroleum-based fuels (gasoline) and other alternative fuels, such as ethanol or renewable diesel.
2. Exemptions to purchasing a ZEV include:
   i. No viable ZEV option is available in the current vehicle market; OR

SUSTAINABLE FLEET STRATEGIC PLANNING

CITY OF MENLO PARK

Challenging Questions

When and how do we build charging infrastructure to meet the needs of EV charging? How do we "future-proof" that infrastructure?

How do we plug-in a whole fleet of vehicles that charge overnight? How do we charge 24-hr use vehicles?

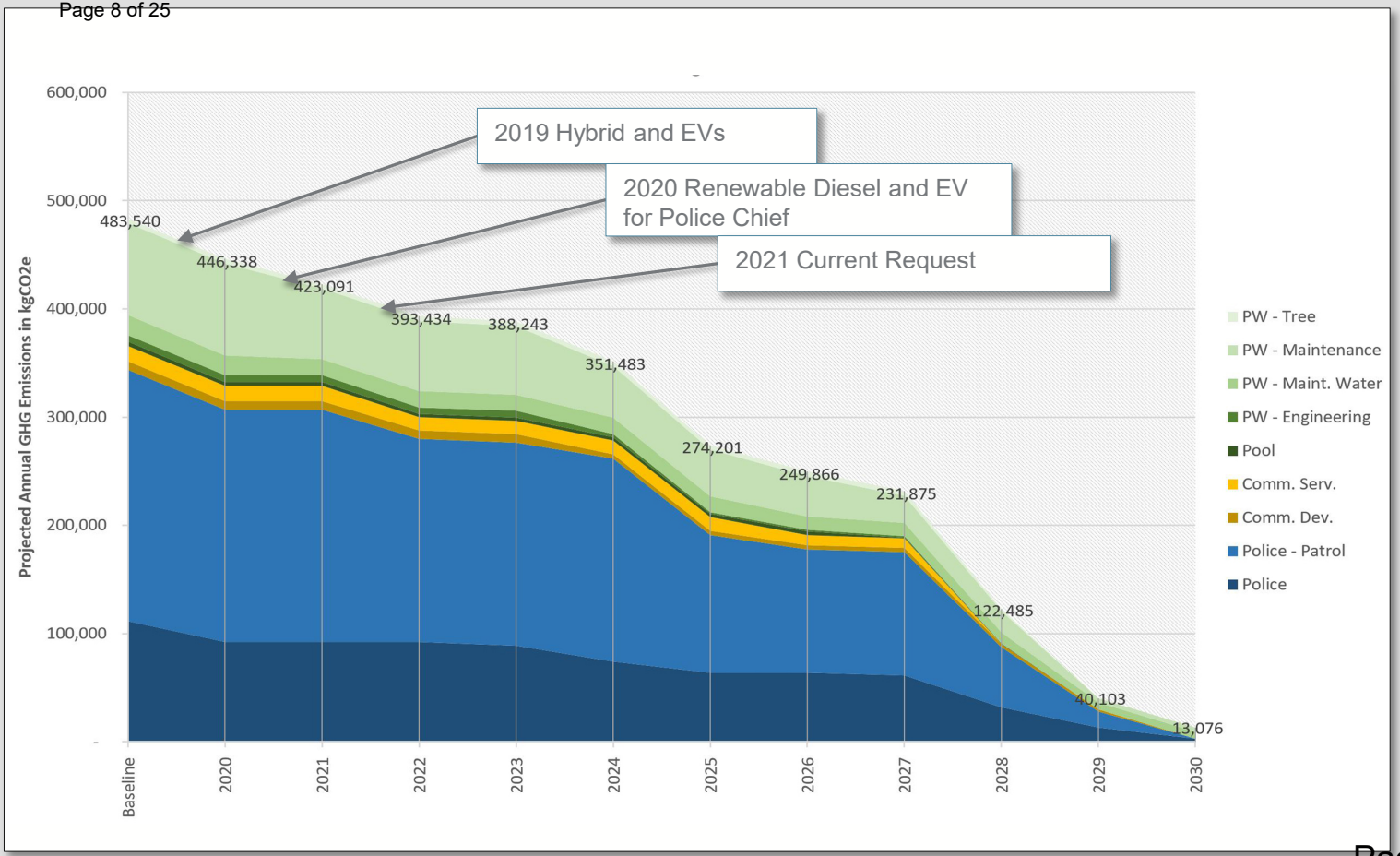
What is the lifecycle GHG impact of individual vehicle procurement decisions?

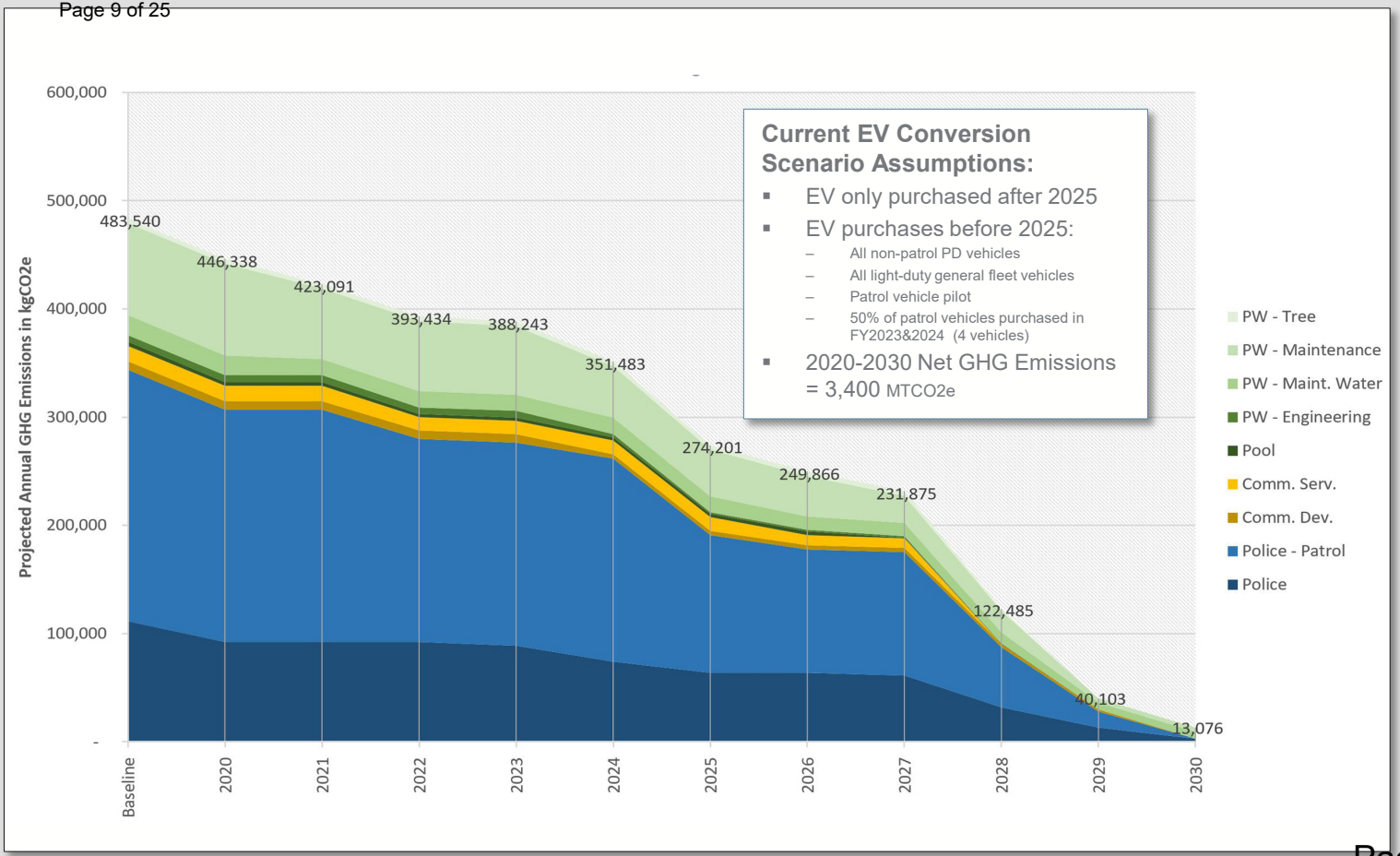
How do we navigate uncertainty in suitable ZEV availability over the next 10-years?

What incentives, consultants, and support can we capitalize on to help plan the transition to a decarbonized fleet?

2021 Progress:

- Funded capital improvement plan to expand charging infrastructure in the City Hall lot
- Piloting a Mach-E in Police Fleet
- Advance order of F-150 Lightnings
- Replace 100% of fossil diesel with renewable diesel in vehicles and equipment
- First, detailed, vehicle-by-vehicle emissions projection
- Vehicle-by-vehicle EV conversion scenario
- Working with PCE and PG&E programs to help with planning and costs


2019 Hybrid and EVs
2020 Renewable Diesel and EV for Police Chief
2021 Current Request
Projected Annual GHG Emissions in kgCO2e
600,000
500,000
400,000
300,000
200,000
100,000
-
483,540
446,338
423,091
393,434
388,243
351,483
274,201
249,866
231,875
122,485
40,103
13,076
Baseline
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
PW - Tree
PW - Maintenance
PW - Maint. Water
PW - Engineering
Pool
Comm. Serv.
Comm. Dev.
Police - Patrol
Police


Current EV Conversion Scenario Assumptions:
EV only purchased after 2025
EV purchases before 2025:
All non-patrol PD vehicles
All light-duty general fleet vehicles
Patrol vehicle pilot
50% of patrol vehicles purchased in FY2023&2024 (4 vehicles)
2020-2030 Net GHG Emissions = 3,400 MTCO2e
Projected Annual GHG Emissions in kgCO2e
600,000
500,000
400,000
300,000
200,000
100,000
-
483,540
446,338
423,091
393,434
388,243
351,483
274,201
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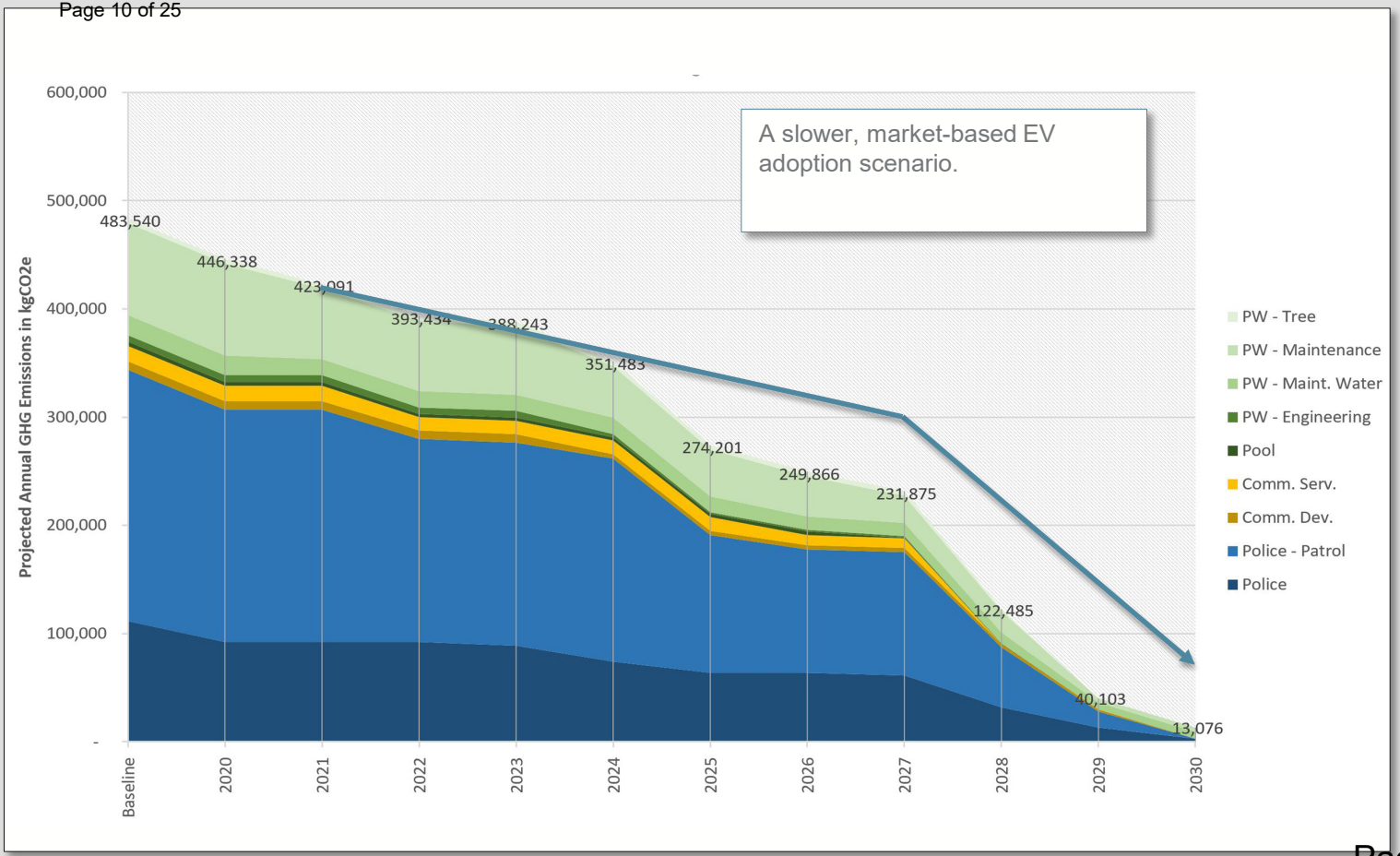
A slower, market-based EV adoption scenario.
Projected Annual GHG Emissions in kgCO2e
600,000
500,000
400,000
300,000
200,000
100,000
-
483,540
446,338
423,091
393,434
388,243
351,483
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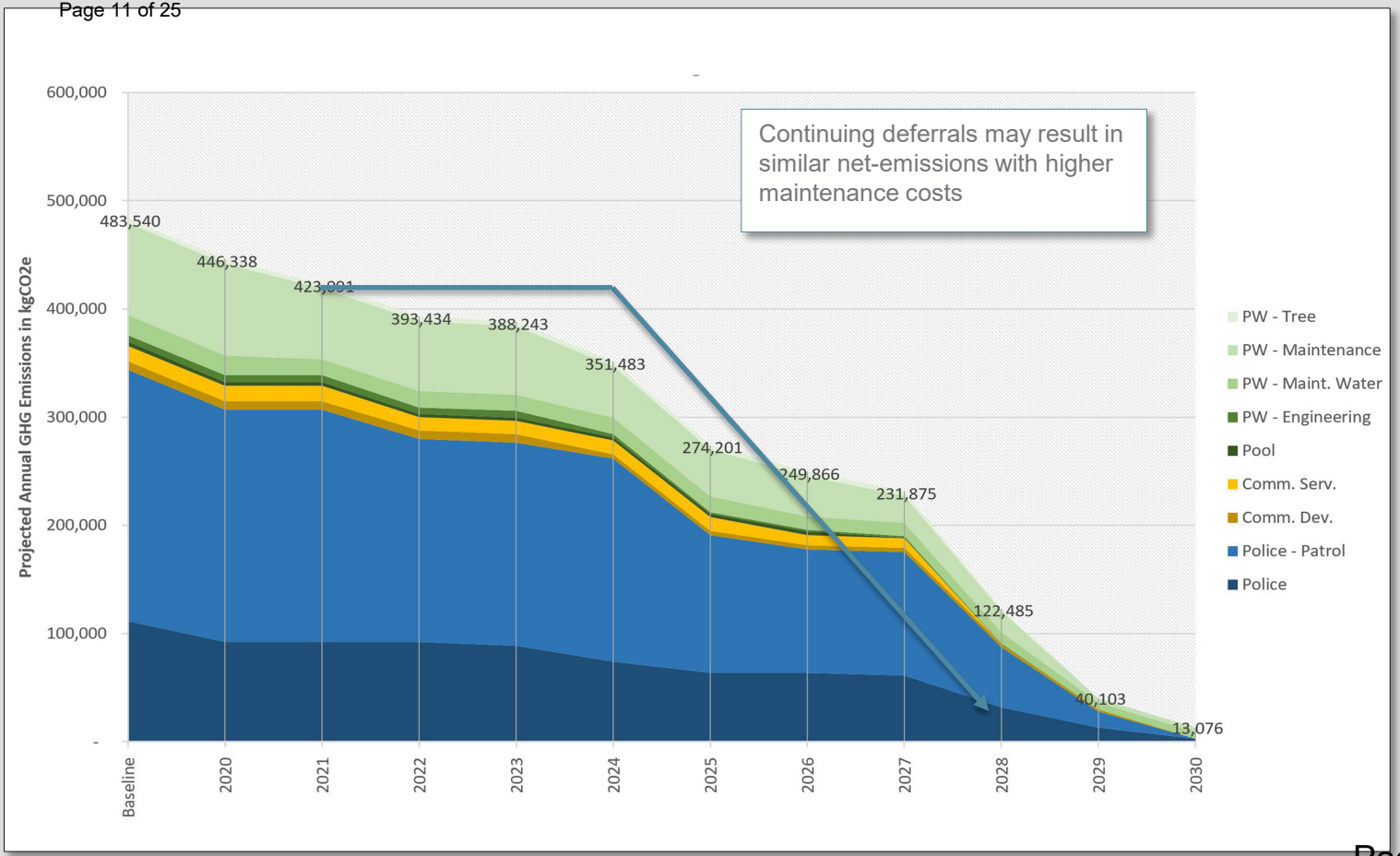
Continuing deferrals may result in similar net-emissions with higher maintenance costs
Projected Annual GHG Emissions in kgCO2e
600,000
500,000
400,000
300,000
200,000
100,000
-
483,540
446,338
423,991
393,434
388,243
351,483
274,201
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Baseline
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2029
2030
PW - Tree
PW - Maintenance
PW - Maint. Water
PW - Engineering
Pool
Comm. Serv.
Comm. Dev.
Police - Patrol
Police

CURRENT PURCHASE ORDER REQUEST TO COUNCIL

- 6 patrol vehicles (hybrid gasoline)
- 1 code enforcement (EV)
- 3 heavy-duty (renewable diesel)
- 1 heavy-duty (hybrid renewable diesel)
- 1 medium/heavy-duty F550 (gasoline)
- 1 patrol pilot vehicle (EV)
- towable compressor (renewable diesel)

Additional EVs on order

- (4) Ford F-150 Lightnings in (year)

Why Patrol Hybrids?

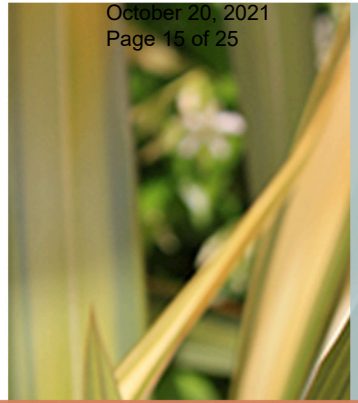
- Suitability, officer safety, and market availability
- Charging infrastructure and charging time for 24-hr vehicles
- Cannot continue deferrals
- 5-yr patrol fleet turnover
- Net Positive Impact:
  - >6% reduction in emissions from 2021
  - Hybrids almost twice as efficient in operation
  - Pilot supports PD internal buy-in and tests suitability for FY2023 EV order

SUMMARY

- City of Menlo Park Fleet has made huge strides from Baseline year 2018-2019. 13%
- Current purchase order keeps Fleet on-track for the 2025 and 2030 ZEV conversion targets while reducing annual GHG emissions >6%
- Committing to significant changes in the municipal fleet, meeting or exceeding the 2025 goals of the Sustainable Fleet Policy.
- More importantly, City of Menlo Park has undertaken a broad strategic planning effort that means a significant reorganization of operational processes with fleet decarbonization as a top priority.

EQC DISCUSSION

- Consider providing advice/feedback to the city council on the following proposed vehicle purchase:
  - 6 patrol vehicles (hybrid gasoline)
  - 1 code enforcement (EV)
  - 3 heavy-duty (renewable diesel)
  - 1 heavy-duty (hybrid renewable diesel)
  - 1 medium/heavy-duty F550 (gasoline)
  - 1 patrol pilot vehicle (EV)
  - towable compressor (renewable diesel)



THANK YOU

November Scope for CAP No.1			
Task/project	**City Council direction based on EQC recommendations**	**High Level Scope**	**November Milestones**
Electrify city owned below market rate (BMR) rentals and support PCE in launching the Home Upgrade Program in Menlo Park	Low income electrification related to EQC recommendation No.1- funding & No.2- turnkey program	The city currently owns 4 BMR rentals at 1177 and 1175 Willow Road (4 units). The city can launch a demo project to convert these city owned units to all electric and build experience within the community and obtain data/evidence for future policy and programs (e.g. direct install, addressing permit barriers, understanding bill impacts, designing a program for low to moderate income homeowners/rentals). Could be highly beneficial as it would directly reduce GHG emissions, position the city as leading by example, increase professional demand for electrification, and gain perspective to share with others. PCE has launched the Home Upgrade program that provides funding to low income homeowners to improve home health and safety as well as an electrification measure. The city can help provide referrals and stakeholder connections to support PCE in finding participants in Menlo Park.	Identify a project manager. Collaborate with PCE and BayREN to leverage any applicable programs, and support PCE with possible leads to participate in the Home Upgrade program (e.g. Habitat for Humanity San Francisco Grant).
Addressing barriers in the building permit process	Develop program proposals that reduce the hassle factor (EQC recommendation No.3)	Explore pathways and/or incentives for projects to incorporate electrification measures, such as expediting permits that include electrification measures. Could be highly beneficial as it would directly reduce GHG emissions and build contractor knowledge.	Research and develop a framework to address permit barriers and/or incentives that would support permit applications to include conversion of gas appliances to electric.
Outreach and education	Begin formal engagement immediately (EQC recommendation No.5)	Leverage opportunities to provide large scale education and outreach	Library October virtual forum on the city's climate action plan and November library forum on converting from a gas to electric lifestyle. Advertise the PCE programs on existing platforms. Provide education via the city's website.

Additional Sustainability Division work:

- Renewable microgrid procurement coordination (October through November)
- File the CAP progress report (Oct 12)
- Consider additional resources as result of the progress report findings (Oct 26)
- Launch multifamily EV charging incentive (October through December)
- CAP No.5 work (eliminate fossil fuels from city operations)
    - 10 year city fleet conversion plan
    - Launching BayREN preliminary energy analysis at city facilities
    - Drafting RFP for facilities master plan
    - Evaluating potential city procurement modifications that support the purchase of fossil fuel free services and products

Possible Partnerships:
BlocPower and Nonprofits with Menlo Park Presence
(Enabled by EQC, outside city staff work scope)

BlocPower provides turnkey retrofits with electrification for "all buildings on the block" (multi-family, single family, churches, schools, etc.): https://www.blocpower.io

Prioritizing cost-neutral, climate-forward retrofits for low income residences/services.

Began in Brooklyn, now has Oakland arm.

Founded by Donnel Baird: https://www.washingtonpost.com/climate-solutions/interactive/2021/donnel-baird-climate-change-green-energy/

Indicated interest in prioritizing Menlo Park due to our city's potential to set important precedents for the rest of the state/country.

Currently Three Partnerships with BlocPower in Pipeline

All are nonprofit organizations providing BMR housing or services to low income community in Menlo Park.

More partnerships possibly in the works.

One potential partner about to undergo free retrofit/energy audit by BlocPower to kick off next steps. The other two awaiting next meeting with BlocPower.

All designed for immediate cost neutrality or cost savings. No upfront costs, just monthly “offsets” on utility bills.

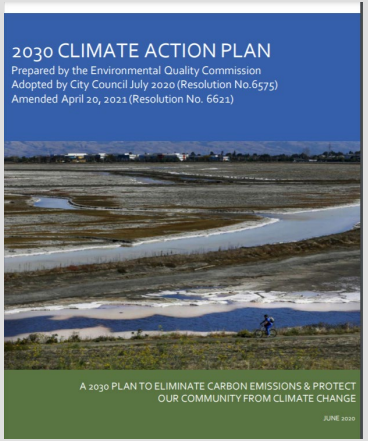
Oakland pilots receiving ~40% reduction in utility bills. Utility bill savings cover monthly costs to BlocPower.

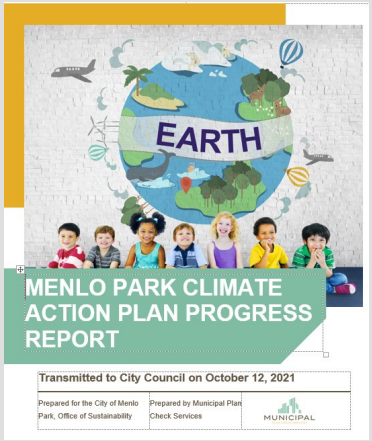
PROPOSED ADDITIONAL RESOURCES TO IMPLEMENT THE 2030 CAP

Rebecca Lucky, Sustainability Manager

2021 MILESTONES

- 2030 Climate Action Plan amendment included scope of work
- Budget approval, June 28
  - Council directed staff return with additional resource requests to support CAP implementation
  - Approved additional 1 FTE
- CAP #1, August 31
  - Cost effectiveness study presentation
  - Policy prioritization by City Council
- 2-month action plan for early wins
  - Internal
    - Demonstration project
    - Permit workflow improvements
  - External
    - Legislation
    - Education
- Progress report, Oct 12
  - Not on track to meet 2030 carbon neutrality
  - Additional resources are needed





CURRENT AND UPCOMING RESOURCES

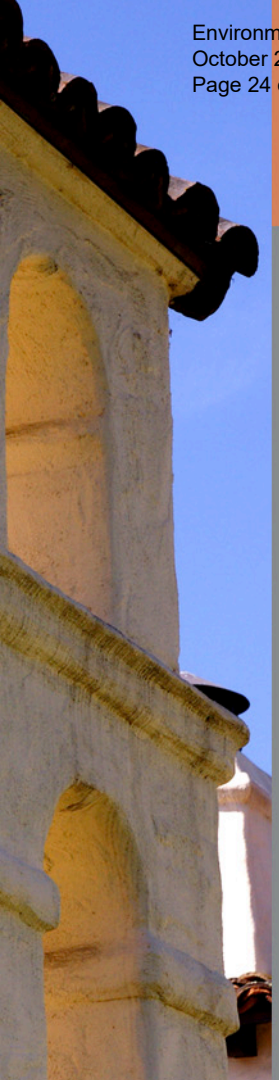
- Current:
  - Sustainability Manager
  - Two consultants to augment staff resources:
    - CAP No.3 (Increase EV infrastructure)
    - CAP No.5 (eliminate fossil fuels from city operations)

- Upcoming
  - Management Analyst anticipated to be hired in Q1/Q2 of 2022
    - Support Sustainability Manager with CAP implementation
    - Coordinate public outreach and engagement
    - Administrative tasks such as EQC meeting agendas and minutes

PROPOSED STAFF RESOURCES

- Climate adaptation and resiliency position
  - Provide additional support to address sea level rise
  - Weave together existing plans that address climate adaptation and resiliency
    - Local Hazard Mitigation Plan
    - Update Safety Element in the General Plan
  - Support general education and outreach on climate adaptation
  - Coordinate resiliency efforts between departments, outside agencies, and non-profit organizations

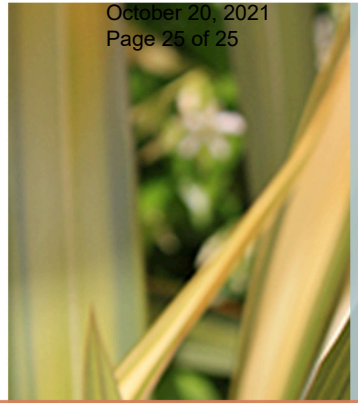
- Potential requests through goal setting and 22-23 budget
  - CAP No.1 -6, energy resiliency, support equity



REQUESTED EQC SUPPORT

- Recommendation to City Council on 10/26 or 11/9
  - 1.0 full-time equivalent personnel, Resiliency Manager
  - $100,000 additional contract services to support CAP projects

EQC recommendation: Approve the staff requested support for the 2030 CAP



THANK YOU

BAYREN

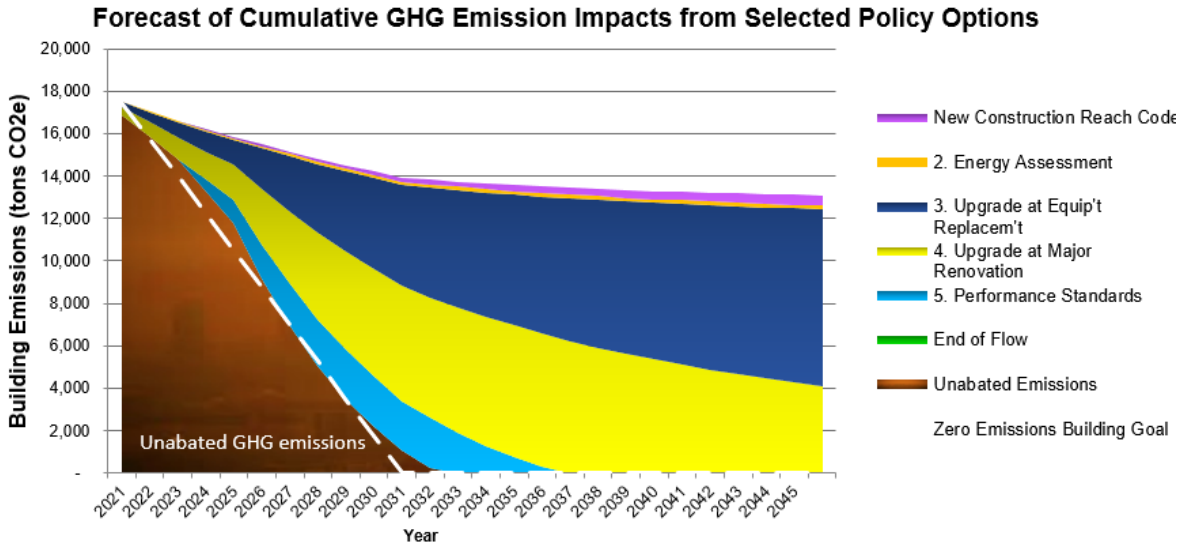
Local Governments Empowering Our Communities

Energy Efficiency & Electrification Policy Options for Existing Single Family Residential Buildings

October 21, 2021

Background of Tool

- Created by BayREN and Ardenna Energy
- Based on 2020 white paper about LG policy options to reduce GHGs in single-family residential buildings
- White paper included modeling the impacts of the policy options → wanted jurisdictions to be able to customize to their needs



Policy Options

- Permit Enforcement
- Energy Assessment and Disclosure Policies
- Replace on Burnout
- Time of Major Renovation Reach Code
- Building Performance Standards
- *New Construction Reach Code*
- *End of Gas Flow*

Customization Options

- Trigger points (time of sale, rental, remodel, etc.)
- What is required? (audit, HPWH, energy efficiency, etc.)
- Year policy passed
- Inspection or enforcement options
- Compliance rate
- Permit or application fees
- Housing stock affected

Policy Considerations & Comparisons

- When to pass policy?
  - Ultimate emissions goals, political climate, market-readiness, cumulative emissions
- What will compliance be like?
  - Potential for politically challenging policies to not have a large GHG impact w/o enforcement
- How to touch all housing?
  - It may take decades for every home to cycle through one trigger point, layering speeds up saturation
  - Cannot turn off gas flow until all homes retrofitted for electric

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Key Takeaways

- Cities care about more than just GHGs
  - Must acknowledge human element → Residential buildings provide shelter
  - Equity and cost issues are real, can't leave energy burdened behind on gas
- Enforcement is key to policy effectiveness
- Quality and comfort of housing needs building envelope improvements
- Health and resilience impacts, heightened importance with increased wildfire/smoke impacts
- How to balance climate emergency with human impacts?

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