



City of Palo Alto

City Council Staff Report

(ID # 13765)

Meeting Date: 12/13/2021

Council Priority: Climate/Sustainability and Climate Action Plan

Title: Progress Report on the Sustainability and Climate Action Plan Update and S/CAP Ad Hoc Committee Work, and Acceptance of the S/CAP Three-Year Work Plan

From: City Manager

Lead Department: Public Works

Recommendation

The Sustainability/Climate Action Plan (S/CAP) Ad Hoc Committee recommends that Council:

1. Review the progress report and feedback from the S/CAP Ad Hoc Committee's work to date;
2. Accept the draft S/CAP 3-Year Work Plan that incorporates the Council directives from April 2021 (Attachment A); and
3. Direct staff to propose necessary staffing in the Electric Fund and the General Fund during the mid-year budget update, in order to implement the near-term activities in the draft S/CAP 3-Year Work Plan.

Executive Summary

On April 19, 2021, following its review of progress on the S/CAP Update Report, Council directed the Mayor to form an S/CAP Ad Hoc Committee, and directed staff to pursue near-term actions in parallel to the S/CAP Update while further developing a number of existing and new elements. This report describes the work completed to date by the S/CAP Ad Hoc Committee and some of the key community feedback received during the Ad Hoc meetings and other engagement efforts. The report also includes a message from the Ad Hoc Committee members, Vice Mayor Burt and Councilmember Cormack, describing what has been achieved and learned so far, and providing their immediate recommendations to the Council.

Background

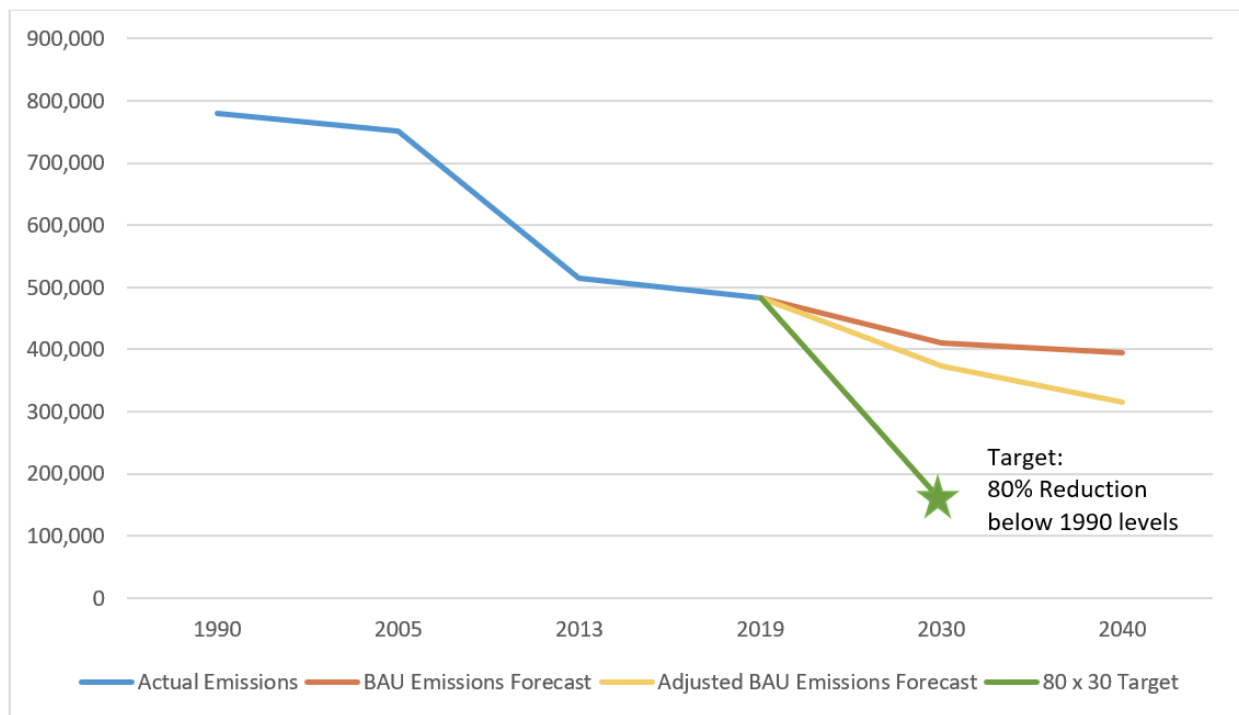
In April 2016, City Council adopted the ambitious goal of [reducing GHG emissions to 80 percent below 1990 levels by 2030](#)¹ (the "80 x 30" goal) - 20 years ahead of the State of California 80 x 50 target, and an interim step towards California's new aspirational statewide goal of achieving

¹ <https://www.cityofpaloalto.org/news/displaynews.asp?NewsID=3534&TargetID=268>

carbon neutrality by 2045². In November 2016, the Council adopted the [S/CAP Framework](#)³, which has served as the road map for achieving Palo Alto’s sustainability goals. In December 2017, Council accepted the [2018-2020 Sustainability Implementation Plan “Key Actions” as a summary of the City’s work program](#)⁴.

In early 2020, the City launched an S/CAP Update to determine the goals and key actions needed to meet its sustainability goals, including the 80 x 30 goal. While GHG emissions reduction is not the only goal of the S/CAP, it is the major one. Over the next nine years, if the City only implements City Council approved plans, policies, and ordinances that were approved on or before 2019, and considering demographic changes, Palo Alto’s emissions are projected to be 47.4 percent below 1990 levels in 2030 (410,435 MTCO₂e) – a “business-as-usual” (BAU) scenario. To achieve the 80 x 30 goal, Palo Alto must meet a GHG emissions target of 156,024 MT CO₂e. Palo Alto will need to reduce total emissions by about 326,303 MT CO₂e, or an additional 254,411 MT CO₂e beyond “Business-as-usual” projections, at a rate of 3.8 percent per year, significantly increasing the scale and speed of reductions.

Figure 1. Business as Usual Emissions Forecast



² In September 2018, Governor Brown signed California Executive Order B-55-18, setting the goal of achieving carbon neutrality as soon as possible, and no later than 2045. The state is to maintain net negative net emissions after 2045, meaning that GHG sinks must exceed GHG sources. The Executive Order explains that the carbon neutrality goal is layered on top of the state’s existing commitments to reduce greenhouse gas emissions 40% below 1990 levels by 2030 (as codified in SB 32), and 80% below 1990 levels by 2050.

³ <https://www.cityofpaloalto.org/civicax/filebank/documents/60858>

⁴ <https://www.cityofpaloalto.org/civicax/filebank/documents/63141>

As a result of various City-led initiatives, programs, and activities focused on climate change and sustainability, by the end of 2019 Palo Alto reduced GHG emissions by an estimated 38.2 percent from the 1990 baseline, despite a population increase of 23.6 percent during that same time period. This equates to 7 metric tons of carbon dioxide equivalent (MT CO₂e) per Palo Alto resident in 2019 compared to 14 MT CO₂e per Palo Alto resident in 1990. The California Air Resources Board 2017 Scoping Plan Update recommends local government goals of 6 MT CO₂e per capita by 2030, which Palo Alto is on track to meet well before 2030.

On April 19, 2021, Council reviewed the S/CAP Update Report, provided feedback on policy tools, directed the Mayor to form an S/CAP Ad Hoc Committee, and directed staff to pursue near-term actions in parallel to the S/CAP Update and further develop various elements of the S/CAP ([CMR 12009](#))⁵.

The purpose of the S/CAP Ad Hoc Committee is to engage with community stakeholders, domain experts, and activists to complement existing efforts on this important priority. The new Ad Hoc committee, which meets monthly on the second Thursday at 9 a.m., helps guide the development, implementation, communication, and future community engagement of the S/CAP process. This work supports finalizing the development of the S/CAP Update, which is slated for Council adoption in early 2022.

Other Council actions related to the S/CAP Update at the April 19 Council meeting included supporting the [policy framework](#)⁶ as presented and asking staff to pursue the actions that are listed from 2021–2024. Council direction also included further developing other related changes as noted in the [specific motion](#)⁷.

Discussion

When Palo Alto City Council adopted the 80 x 30 goal in 2016, many considered it aspirational. However, 80 x 30 has been confirmed by ICLEI (The Local Governments for Sustainability) to be our science-based target - the level of emissions Palo Alto must reduce to achieve our fair share of the 2015 Paris Climate Accord goal of 50% global GHG emissions reductions by 2030. It is more important than ever that we commit to achieving our 80 x 30 goal and ensure that S/CAP Implementation is successful.

April 19, 2021 Council Action and S/CAP Ad Hoc Committee Formation

In April, City Council unanimously passed the following motion:

⁵ <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/2021/id-12009.pdf>

⁶ <https://www.cityofpaloalto.org/files/assets/public/sustainability/earth-day-reports/id-12009-scap-report-with-attachment-d.pdf>

⁷ <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/agendas-minutes/city-council-agendas-minutes/2021/04-19-21-ccm-action-minutes.pdf>

- A. Direct the Mayor to appoint two or more Council Members to an ad hoc climate action committee that would engage with community stakeholders, domain experts, and community activists; and that the committee would periodically report back to Council;
- B. Support the policy framework in Attachment A and ask Staff to pursue the actions that are listed from 2021-2024 and further develop and return to Council as needed with the following changes:
 - i. A plan for an earlier adoption of commercial electrification retrofits
 - ii. Evaluation of the sale of gasoline within the city limits as a key metric
 - iii. Evaluation of a best practice standard for low carbon construction materials
 - iv. A proposal for a Palo Alto Green equivalent voluntary surcharge program on power utilities to help fund electrification initiatives
 - v. An evaluation of public health and public safety risk and benefits from climate protection
 - vi. Move forward with an on-bill financing program for residential building electrification
 - vii. Evaluate a supplemental carbon neutrality goal
 - viii. Return with recommended electric utility capital and personnel investments required to enhance reliability and staffing resources necessary for the Climate Action Plan
 - ix. Evaluate income qualified incentives to support low-income households
 - x. Evaluate land use, zoning, and development changes that would reduce greenhouse gas emissions
 - xi. Integrate urban forestry into the S/CAP policy framework.

Mayor DuBois appointed Vice Mayor Burt and Councilmember Cormack to the S/CAP Ad Hoc Committee, with Mayor DuBois serving as an Alternate. The S/CAP Ad Hoc Committee meets on the second Thursday of every month and dives deeply into various issues of the S/CAP Update. The full S/CAP Ad Hoc proposed schedule and topics can be found [here](#)⁸.

Staff Efforts Related to Council's April 2021 Direction

Staff updated the [Draft S/CAP Goals and Key Actions](#)⁹ to incorporate elements from Council Motion B i, ii, iii, iv, vi, ix, x, and xi. Staff created a [Draft S/CAP Three-Year Work Plan](#)¹⁰ to address the 4/19/21 Council motion to begin implementation of near-term programs before the S/CAP Update is finalized. The Draft S/CAP Three-Year Work Plan incorporates elements from Council Motion B i, iii, iv, vi, vii, viii, ix, x, and xi. The current draft of the Three-Year Work Plan envisions one potential way to implement the S/CAP that involves two phases:

⁸ <https://www.cityofpaloalto.org/files/assets/public/sustainability/reports/proposed-scrap-ad-hoc-committee-meeting-schedule.pdf>

⁹ <https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/2021-scrap-goals-and-key-actions-draft.pdf>

¹⁰ <https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/draft-scrap-3-year-work-plan.pdf>

- Phase 1 (2-3 years): Raise awareness, launch voluntary programs that can be scaled up later and that can generate some successes, pass some mandates (e.g. end of life replacement and all-electric construction updates to the Energy Code), plan for full-scale implementation, including identifying funding.
- Phase 2 (full scale implementation): Funding available for any needed incentives is now available for the entire community (may require ballot measure), new business processes and programs established to minimize impacts to City operations, general awareness of the need to electrify has been established.

The Draft S/CAP Three-Year Work Plan is provided in Attachment A. The Work Plan will be discussed in further detail at the January 2022 S/CAP Ad Hoc Committee meeting, and may undergo further revision.

In planning topics for discussion at the S/CAP Ad Hoc Committee meetings, staff included elements from the Council Motion B i, iii, iv, v, vi, vii, viii, ix, and x.

The S/CAP Ad Hoc Committee has worked in partnership with staff on securing speakers, developing content, and coordinating the S/CAP Ad Hoc Committee meetings. The S/CAP Ad Hoc Committee formed a S/CAP Ad Hoc Committee Working Group to draw upon the expertise of community members. Working Group members are individuals who commit to attending multiple S/CAP Ad Hoc Committee meetings and to working on discrete projects outside the meetings. The role of the working group is not to make policies or request tasks, but to provide feedback and discussion on proposed policies. Currently, the Working Group members are:

- Diane Bailey, Executive Director, Menlo Spark
- Lincoln Bleavens, Stanford, Executive Director of Sustainability and Energy Management
- Justine Burt, Sustainability Consultant
- Debbie Mytels, 350 Silicon Valley Palo Alto
- Julia Zeitlin, Silicon Valley Sunrise Hub

The S/CAP Ad Hoc Committee has also recruited several members of the community as Domain Advisors. More than twenty community members have volunteered as Domain Advisors in a variety of topics and will be engaged in the near future.

In addition, staff have updated multiple pages of the City's website to better reflect the ongoing work on the S/CAP Update. Staff have also created an [S/CAP Ad Hoc Committee Webpage](#)¹¹, launched a monthly Climate Action Blog Series, published a monthly Sustainability Newsletter, launched an [on-line survey](#)¹² to help inform climate and sustainability conversations taking place with the S/CAP Ad Hoc Committee and City Council, and participated in an S/CAP Residential Building Electrification Workshop. Staff work continues and includes the

¹¹ <https://www.cityofpaloalto.org/Departments/City-Clerk/City-Council-Committees/Sustainability-and-Climate-Action-Plan-Ad-Hoc-Committee>

¹² https://www.opentownhall.com/portals/5/Issue_11175

efforts of city employees from four divisions of three City departments who meet and collaborate regularly on the S/CAP Update.

S/CAP Ad Hoc Committee Meetings to Date

On August 12, 2021, 86 participants (including 9 high school students) joined the inaugural meeting of the S/CAP Ad Hoc Committee meeting, which includes members Vice Mayor Burt and Councilmember Cormack. During the public comment period, 40 participants discussed various themes to help further the sustainability planning work that is underway including:

- The importance of taking action on climate change without delay
- The need to devote resources and develop a financing plan for implementation
- The need to work on S/CAP implementation in parallel to S/CAP Update completion
- The need to prioritize issues such as renewable energy, resilience, electrification, sea level rise, and housing
- The possibility of forgoing CEQA review of the S/CAP Update

A summary of the public comments can be found [here](#)¹³.

A more in-depth summary of the meeting can be found in Attachment B: Climate Action Blog Series: [New Ad Hoc Committee Advances Council's Sustainability & Climate Action Planning Blog](#)¹⁴.

On September 9, 2021, 73 participants joined the S/CAP Ad Hoc Committee meeting, which covered the following topics: [residential building electrification options](#)¹⁵, [impact analysis study](#)¹⁶, revised [S/CAP goals and key actions](#)¹⁷, and the [draft Three-Year Work Plan](#)¹⁸. During the public comment period, 11 participants discussed issues related to residential building electrification, and 31 participants asked questions.

Some of the barriers to residential building electrification identified by meeting participants and community members include:

- Cost of conversion (this came up several times and was the number one barrier)
- Belief that technology will get a lot better in just a few years
- Unwillingness to toss out a perfectly good appliance

¹³ <https://www.cityofpaloalto.org/files/assets/public/sustainability/questions-and-answers/2021.08.12-scacp-ad-hoc-committee-public-comment-summary.pdf>

¹⁴ <https://medium.com/paloaltoconnect/climate-action-blog-series-new-ad-hoc-committee-advances-councils-sustainability-climate-action-81ab1ff2c3f8>

¹⁵ <https://www.cityofpaloalto.org/files/assets/public/sustainability/reports/residential-building-electrification-overview.pdf>

¹⁶ https://www.cityofpaloalto.org/files/assets/public/sustainability/reports/aecom-palo-alto-action-impact-memo_final_rev-210607.pdf

¹⁷ <https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/2021-scacp-goals-and-key-actions-draft.pdf>

¹⁸ <https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/draft-scacp-3-year-work-plan.pdf>

- Unfamiliarity of what residential electrification conversion means
- Lack of time to research electrical appliance options
- The need to upgrade a home's electrical panel

Themes for additional feedback include:

- More outreach is necessary
- Group-Buy program for electric appliances is needed

A summary of the Questions and Answers can be found [here](#)¹⁹.

A more in-depth summary of the meeting can be found in Attachment C: Climate Action Blog Series: [How Electric Appliances Can Help us Meet our Climate Goals](#)²⁰.

On October 14, 2021, 64 participants joined the S/CAP Ad Hoc Committee meeting, which covered the following topics: non-residential building electrification, multi-family building electrification, an electrification assessment of City facilities, building electrification permitting, and a summary of near-term funding and resources for the S/CAP effort. Six participants provided public comments, 14 participants asked questions, and 10 participants provided suggestions. Community members and meeting participants shared input on the following topics:

- The need for a community microgrid
- Making sure equity issues are addressed when electrification scales up
- Establishing a carbon pricing program
- Regional collaboration and sharing of resources
- Investing in carbon offsets to achieve our 80 x 30 goal
- The need to consider waste management as electrification scales up

A summary of the Questions and Answers can be found [here](#)²¹.

A more in-depth summary of the meeting can be found in Attachment D: Climate Action Blog Series: [The Role of Non-Residential Building Electrification](#)²².

On November 4, 2021, 74 participants joined the S/CAP Ad Hoc Committee meeting, which covered the following topics: electrifying vehicle travel, building out EV charging infrastructure, municipal fleet electrification, and a brief history of PaloAltoGreen. Six participants provided

¹⁹ <https://www.cityofpaloalto.org/files/assets/public/sustainability/questions-and-answers/2021.09.09-scap-ad-hoc-committee-questions-and-answers.pdf>

²⁰ <https://medium.com/paloaltoconnect/climate-action-plan-blog-series-how-electric-appliances-can-help-us-meet-our-climate-goals-e60f6cdca1bf>

²¹ <https://www.cityofpaloalto.org/files/assets/public/sustainability/questions-and-answers/2021.10.14-scap-ad-hoc-committee-questions-and-answers.pdf>

²² <https://medium.com/paloaltoconnect/climate-action-plan-blog-series-the-role-of-non-residential-building-electrification-efd572f4e64a>

public comments, 27 participants asked questions, and 13 participants provided suggestions. Community members and meeting participants shared input on the following topics:

- Education on electric vehicles
- Ensuring access to EV charging for multi-family buildings and renters
- Pollution from gas-powered gardening equipment
- Embracing all zero emissions vehicles solutions
- Encouraging commuters to take public transit

A more in-depth summary of the meeting can be found in Attachment E: Climate Action Blog Series: [Electric Vehicles Move Forward Climate Goals](#)²³.

The tentative schedule for the remaining S/CAP Ad Hoc Committee Meetings is as follows:

- December 9, 2021 – **Transportation:** Mobility and Land Use
- January 13, 2022 - **Climate Impacts:** Health Impacts of Wildfires, Wildfire Protection, and Sea Level Rise; **S/CAP:** Finalize Draft Goals and Key Actions, Three-Year Work Plan
- February 10, 2022 – **Funding and Resources:** Long-term Funding and Financing Options; **S/CAP:** Finalize S/CAP Report
- March 10, 2022 – **Funding and Resources:** Costs and Resources Needed to Achieve 80 x 30
- April 14, 2022 – **Carbon Reduction / Capture:** Carbon Neutrality, Low-Carbon Construction materials, New Climate Goal for after 80 x 30

On November 19, 2021, the S/CAP Ad Hoc Committee, along with the S/CAP Ad Hoc Committee Working Group and City Staff, participated in a Residential Building Electrification Design Thinking Workshop. The group discussed concrete steps for ramping up and scaling up our residential building electrification efforts for the Sustainability and Climate Action Plan. Multiple teams identified innovative roadmaps for reaching the S/CAP's residential electrification goals, and an upcoming step will be additional discussion of these ideas and how they may lead to updates to the Goals and Key Actions and 3-Year Work Plan items related to residential electrification.

Work Can Begin Quickly

Staff has heard from community members that Palo Alto cannot delay action on climate change. Fortunately, we do not have to wait until the S/CAP is adopted by Council and CEQA review is completed before and work can start on the S/CAP goals. There are five broad areas of effort that the City needs to focus on right away: building consensus among advocates and policy makers, engaging stakeholders for S/CAP input, partnering with the community to raise awareness and promoting services, building compelling services and tools and recruiting users, and creating an electrification road map.

²³ <https://medium.com/paloaltoconnect/climate-action-plan-blog-series-electric-vehicles-move-forward-climate-goals-d991f697a372>

External Collaboration Already Underway

Addressing climate change is also not an issue that is confined to Palo Alto's geographic borders. Staff has been working closely with other agencies, local governments, counties, non-profits, and regional efforts to discuss issues and share resources around climate action. For example, for issues such as building electrification, reducing vehicles miles traveled, increasing electric vehicle adoption and EV charging infrastructure, water conservation, climate adaptation, and zero waste, staff has worked with groups such as the Urban Sustainability Directors Network, Green Cities California, ICLEI, CALeVIP, GreenWaste, Valley Transportation Authority (VTA), Valley Water, the Bay Area Water Supply and Conservation Agency (BAWSCA), Santa Clara County Office of Sustainability, San Mateo County Office of Sustainability, the Regionally Integrated Climate Action Planning Suite (RICAPS), Public Sector Climate Task Force, Joint Venture Silicon Valley, Silicon Valley Green Team Network, Climate Mayors, Valley Water, and Stanford University.

Discussions Needed on Resources Required to Meet 80 x 30

What still needs more discussion is how Palo Alto will fund S/CAP implementation and what staffing and resources are needed to meet the 80 x 30 goal. 2030 is only 9 years away. Under a BAU scenario, Palo Alto's emissions are projected to be 47.4 percent below 1990 levels in 2030. To achieve the 80 x 30 goal, Palo Alto will need to reduce total emissions by about 326,303 MT CO₂e, or an additional 254,411 MT CO₂e beyond "Business-as-usual" projections, at a rate of 3.8 percent per year, significantly increasing the scale and speed of reductions. Our near-term S/CAP implementation work relies heavily on education and voluntary adoption of S/CAP strategies. However, in order to scale-up emission reductions to achieve 80 x 30, we will need to consider higher levels of intervention and the resources required to achieve those levels.

Message From the Ad Hoc Committee on What has Been Achieved and Learned So Far

First, we have created a format that allows members of the public to engage with staff and Councilmembers informally and in detail. The conversations are in depth and back and forth, which is improving understanding on all sides. The newly formed Working Group of five strategic advisors has added another dimension to our process as we leverage outside resources to build, implement, and share our programs with other jurisdictions and utilities.

Second, senior staff believes that our 80 by 30 goal is achievable, although challenging, and they see a path to implementation. We sincerely appreciate the effort that staff is putting into this crucial plan and their willingness to think through how the community will use energy in the future and what it will take to achieve our goals.

Third, the sense of urgency to address climate change is rising. We also anticipate rapid cost reductions and technology advancements over the next few years in the green energy and building electrification fields. With initial costs being the biggest barrier to change today (e.g., buying an electric car or heat pump water heater or using battery storage for resiliency),

experts project that the costs of our transitions will decline significantly during the S/CAP time horizon.

Fourth, we have three challenges to work on simultaneously -- building community momentum to switch to electricity, building reliable and resilient capacity to meet additional needs of electric appliances and cars, and building a funding strategy for these changes.

Actions the Ad Hoc committee recommends to Council

- Accept the draft S/CAP 3-Year Work Plan that incorporates the Council directives from April (Attachment A)
- Direct staff to propose necessary staffing in the Electric Fund and the General Fund during the mid-year budget update, in order to implement the near-term activities in the S/CAP 3-Year Work Plan

Outstanding needs

We need to reassure people and businesses that there will be sufficient, low cost energy and that our electric utility will be able to provide the high levels of reliability and resilience we need and expect.

Describe costs incorporating life cycle expenses, adjusted for any future declining cost curves, and compare our costs to PG&E's projected costs.

The assumptions in the current SCAP plan are based on the current state of technology, which we expect will increase in efficacy and decrease in cost (e.g., cost of solar kWh, battery storage for resiliency), so how can we factor these changes in capacity and technical improvements in over the next nine years?

What will be the best way to fund the residential electrification work required? Some options include, and are not mutually exclusive:

- We could include programs in our electric rates to cover some of these costs while still being significantly less expensive than PG&E
- A climate bond or climate parcel tax or climate Utility Users Tax
- General funds used for part of the effort
- On bill financing
- A new voluntary program for residential customers like the former Palo Alto Green
- Philanthropic contributions and/or venture investments

Finally, the Ad Hoc committee wishes to thank the core staff team, the new Ad Hoc working group, and all of the members of the public who have participated in our workshops to date. We look forward to continuing this important work with you.

Stakeholder Engagement

Stakeholder engagement on the S/CAP Update is wide-reaching and was not deterred by the COVID-19 pandemic. Efforts include direct engagement, webinars, social media outreach, website updates, Ad Hoc meeting participation, leveraging the City Manager's communication platforms, and more.

Staff developed, and is implementing, a 2021 S/CAP Engagement Plan which identifies relevant stakeholders, proposed materials, and desired meeting milestones and outcomes. Stakeholder engagement is an integral part of the S/CAP Ad Hoc Committee's mission, and is described above in the Discussion section.

On October 8, 2021, the City launched an [on-line survey](#) to help inform the S/CAP Update conversations currently underway. To date, the survey has had 78 visitors, and 35 responses. The following are some examples of the responses received to-date:

- The City's top three priorities for Climate Action should be: accelerate GHG reductions through mandates or price signals, provide building and transportation emissions consultations for residents, and develop major employer custom emissions reduction plans.
- The City's top three priorities for building electrification should be: launch residential programs and incentives for voluntary electrification, launch non-residential programs and incentives for electrification, and develop electric rate options that support electrification.
- The top three barriers to electrifying a home are all related to cost: upfront cost of conversion, the need to upgrade a home's electrical panel, and the cost of electricity is more expensive than the cost of gas.
- The City's top three priorities for advancing residential building electrification should be: reduce upfront costs or otherwise provide meaningful financial incentives, ensure that everyone, regardless of income, can electrify their homes, and a strong price signal for carbon e.g., a carbon tax on natural gas usage.
- The City's top three priorities for mobility should be: expand bicycle and pedestrian infrastructure, expand transport options, and disincentivize sole occupant vehicle trips
- The City's top three priorities for water should be: maximize water conservation and efficiency, implement green stormwater infrastructure, and provide rebates and incentives for home and landscape water conservation
- The City's top three priorities for Climate Adaptation should be: implement a Sea Level Rise Adaptation Plan, conduct a Sea Level Rise Vulnerability Assessment, and implement the Foothills Fire Management Plan

- The City’s top three priorities for natural environment should be: maximize biodiversity and soil health, reduce pesticide use in parks and open space preserves, and enhance pollinator habitats.

Other Key steps to date have been a March 31 – April 14, 2020 Community Engagement Virtual Workshop; Council Study Sessions on April 13, 2020 and June 16, 2020; a Utilities Advisory Commission Study Session on May 20, 2020; June 2020 Study sessions with the Utilities Advisory Commission, Planning and Transportation Commission, and Parks and Recreation Commission; and a Fall 2020 S/CAP Webinar series to highlight various topics addressed in the 2021 S/CAP. Topics covered in the Fall 2020 S/CAP Webinar series included: an overview of the Sustainability and Climate Action Plan, Sea Level Rise, All-Electric Homes, Transportation, and the Natural Environment. The webinar recordings, PowerPoint presentations, and questions and answers can be found on the [S/CAP Website](#)²⁴. The webinars were generally well received, with an average of 90 participants at each webinar.

Resource Impact

Initiatives are across departments and funds. Some are funded in current budgets, others will be recommended as part of the FY 2022 Mid-year Budget Update or FY 2023 Proposed Budget, while most will need to be prioritized in consideration of competing priorities. Funding and resources will be discussed in greater detail at the February and March 2022 S/CAP Ad Hoc Committee Meetings.

Policy Implications

The Sustainability and Climate Action Plan Update aligns with one of the top four Council Priorities for CY 2021: “Climate Change – Protection and Adaptation”

Timeline

- August 2021 – April 2022: S/CAP Ad Hoc Committee Meetings
- January 2022: Finalize draft S/CAP Goals and Key Actions, Three-Year Work Plan
- February 2022: California Environmental Quality Act (CEQA) evaluation commences
- March / April 2022: draft S/CAP presented to Council
- September 2022: CEQA evaluation completed
- By December 2022: S/CAP with CEQA Review presented to Council for approval

Environmental Review

Council’s review of this progress report is not a project under Section 21065 for purposes of the California Environmental Quality Act (CEQA). The final S/CAP Report will be evaluated consistent with CEQA prior to approval by the City.




Attachments:




















- Attachment A - DRAFT SCAP Three-Year Work Plan







²⁴

https://www.cityofpaloalto.org/services/sustainability/sustainability_and_climate_action_plan/community_engagement/default.asp











- Attachment B - Climate Action Blog Series - New Ad Hoc Committee Advances Council's Sustainability & Climate Action Planning Blog
- Attachment C - Climate Action Blog Series - How Electric Appliances Can Help us Meet our Climate Goals
- Attachment D - Climate Action Blog Series - The Role of Non-Residential Building Electrification
- Attachment E - Climate Action Blog Series - Electric Vehicles Move Forward Climate Goals









S/CAP Adoption			
Work Item / Key Action	Funding	Staffing	Carbon Impact
	\$ = lowest cost \$\$\$\$ = highest cost	@ = Existing staffing @@@ = need many addtl contract/perm/temp staff	 (low CO ₂ impact)  (high impact)
A1 Build consensus among advocates and policy makers about what needs to be done to fight climate change. Work items include: Coordinate on-going S/CAP development, implementation and collaboration with the S/CAP Ad Hoc Committee, City Department, advocates, and experts; Coordinate S/CAP Plan Development and Adoption; Coordinate 3-Year Work Plan Development and Council Approval; Review the S/CAP Impact Analysis and Co-Benefits Analysis	Funding: \$	Staffing: @	n/a
A1 Finalize models and technical memos to make them usable by the community and for future staff work	Funding: \$	Staffing: @	n/a
A2 Engage stakeholders throughout the community to receive and incorporate feedback on the S/CAP	Funding: \$	Staffing: @	n/a
A3 Build community awareness of the need to fight climate change and what services and tools are available, partner with the community to build awareness & promote services. Work items include: Develop a major community engagement and communications plan to raise awareness of the S/CAP Adoption Process and planned programs, Launch a public outreach campaign	Funding: \$\$	Staffing: @@	
A4 Coordinate CEQA Review of the S/CAP	Funding: \$	Staffing: @	n/a

Work Item / Key Action		Funding \$ = lowest cost \$\$\$\$ = highest cost	Staffing @ = Existing staffing @@@ = need many addtl contract/perm/temp staff	Carbon Impact  (low CO ₂ impact)    (high impact)
<i>Climate Action Programs and Other Emissions Reduction Actions and Outreach</i>				
C1	Enable any resident or business to receive guidance on reducing their building and transportation emissions via phone consultations, interactive web applications, or other communications platforms. They may receive a consultation and/or sign up for City programs and services (also see Energy Key Actions E1 and E2, EV Key Action EV1, and Mobility action M1)	Funding: \$\$\$	Staffing: @@	  
C2	Work with major employers to develop custom emissions reduction plans that address commute, building and other emissions on an employer by employer basis	Funding: \$	Staffing: @@@	 
E1	Launch comprehensive residential program services and incentives to promote voluntary electrification of water heating, space heating, cooking, clothes drying, and other appliances that use natural gas, as well as single-family residence panel upgrades and EV charger installation (also see Key Action EV2, Multi-family EV Charging program). Services may include technical assistance, vetted contractor lists, on-bill financing, and/or direct install services.	Funding: \$\$\$\$	Staffing: @@@	  
E2	Launch non-residential program services and incentives for electrification of non-residential mixed-fuel rooftop packaged HVAC units, cooking equipment, and small non-residential gas appliances (as well as workplace EV charging). Services may include technical assistance, vetted contractor lists, on-bill financing, and/or direct install services.	Funding: \$\$\$\$	Staffing: @	  
E4	Develop electric rate options for electrified homes, EV charging, and solar + storage microgrid customers	Funding: \$	Staffing: @	n/a
E5A	Adopt an All-Electric Reach Code for non-residential new construction projects, if feasible, through the established process for Energy Code updates	Funding: \$\$	Staffing: @@	
E5B	Adopt an All-Electric Reach Code or gas ban for new detached ADUs, if feasible, through the established process for Energy Code updates	Funding: \$\$	Staffing: @@	
E5C	Adopt a definition for substantial remodel project that triggers all-electric reach code requirements, if feasible, through the established process for Energy Code updates	Funding: \$\$	Staffing: @@	
E8	Evaluate City ordinance to require energy benchmarking for commercial and multifamily buildings over 25,000 sf	Funding: \$\$	Staffing: @@	 

Work Item / Key Action		Funding \$ = lowest cost \$\$\$\$ = highest cost	Staffing @ = Existing staffing @@@@ = need many addtl contract/perm/temp staff	Carbon Impact  (low CO ₂ impact)  (high impact)
EV1	Raise awareness of emission savings of alternative transportation modes, micromobility (such as e-bikes and e-scooters), EVs, the economics of these transportation modes compared to gasoline vehicles, and available incentives. Collaborate with regional partners, other agencies, and local nonprofit partners in promotional efforts. Provide information and access to City and partner programs via phone consultations, interactive web applications, or other communications platforms.	Funding: \$\$\$	Staffing: @@	
EV2	Enhance multi-family and workplace EV charging program as needed to create high levels of participation and expand it to include bike facility evaluation and alternative commute promotion. Evaluate financing and direct installation program features.	Funding: \$	Staffing: @	
EV7	Convert all compact sedan Palo Alto municipal vehicles to EVs when an e-bike is not an operationally acceptable replacement	Funding: \$\$	Staffing: @@	
M1A	Launch bike/scooter shared micro-mobility service to provide last-mile connection	Funding: \$\$	Staffing: @@	 (rating represents combined impact of all Mobility actions)
M1B	Launch on-demand transit service pilot	Funding: \$ (grant funded pilot)	Staffing: @	
M1C	Pilot Neighborhood Mobility Hubs at activity centers, based on Mobility Needs Assessment in M4	Funding: \$\$	Staffing: @@	
M1D	Bundle Mobility options into one program/platform (Maas, Mobility Wallet) if technology allows	Funding: \$\$\$	Staffing: @@	
M2A	Allocate funding for TMA and expand scope to entire City to help scale up TDM programming	Funding: \$\$\$	Staffing: @@	
M2B	Adopt telecommuting policy for local employers to align with regional targets.	Funding: \$\$	Staffing: @@	
M2C	Adopt a TDM Ordinance	Funding: \$\$	Staffing: @@	
M2D	Establish a Safe Routes for Older Adults/Aging in Place program based on M4	Funding: \$\$	Staffing: @@	
M3A	Implement proposals for Council to price parking in business districts	Funding: \$\$\$	Staffing: @	
M3B	Implement smart parking infrastructure in public garages	Funding: \$\$\$\$	Staffing: @	

Work Item / Key Action		Funding	Staffing	Carbon Impact
		\$ = lowest cost \$\$\$\$ = highest cost	@ = Existing staffing @@@ = need many addtl contract/perm/temp staff	 (low CO ₂ impact)   (high impact)
M3C	Review and recommend adjustments to development parking requirements.	Funding: \$\$	Staffing: @@	
M4B	Develop proposals for Council for policies to discourage vehicle use and encourage alternative modes for all trip types. Alternatives to evaluate include vehicle-free streets and other recommendations	Funding: \$\$	Staffing: @	
M5B	Implement Bicycle and Pedestrian Transportation Plan (also see M5, below, under Climate Action Studies, for Bicycle and Pedestrian Plan and Vision Zero Update)	Funding: \$\$\$\$	Staffing: @@	
<i>Climate Action Studies and Supporting Efforts</i>				
C3	Complete study to identify any additional Energy, EV, or Mobility key actions needed to achieve 80% reduction in greenhouse gas emissions from 1990 levels by 2030	Funding: \$\$	Staffing: @@	
C4	Complete a study, including legal analysis, of the staffing and funding needed to operate programs, services, and related City processes at a high enough capacity to accommodate all necessary emissions reduction activities through 2030	Funding: \$\$	Staffing: @@	 (rating represents potential effect of actions to be identified)
C5	Present options for Council consideration to accelerate EV, Mobility, and Energy emissions reduction activities identified in this Plan through mandates or price signals, such as buildings emissions performance standard, carbon pricing, on-sale or replace-on-burnout ordinances, parking rules in public and private spaces, and withdrawal of gas by a date certain	Funding: \$\$	Staffing: @@	
C6	Complete a technical and legal study of alternatives available to fund post-2025 key actions, such as a carbon tax, parcel taxes, or other community funding mechanisms	Funding: \$	Staffing: @	
C7	Complete an affordability study to identify vulnerable populations and businesses who may need help with electrification	Funding: \$	Staffing: @	n/a
C8	Complete a study of carbon neutrality options with completion planned for year-end 2022. Consider the contribution of the Palo Alto urban canopy in achieving carbon neutrality goals	Funding: \$\$	Staffing: @@	 (rating represents potential effect of actions to be identified)

Work Item / Key Action		Funding \$ = lowest cost \$\$\$\$ = highest cost	Staffing @ = Existing staffing @@@@ = need many addtl contract/perm/temp staff	Carbon Impact  (low CO ₂ impact)  (high impact)
E6	Conduct an Electrification and Planning Assessment of City Facilities, which will be used to develop a plan for electrification that results in an 80% reduction in natural gas usage at City facilities by 2030	Funding: \$\$	Staffing: @@	 (rating represents potential effect of actions to be identified)
E7	Complete a study of reliability and resiliency needs in an electrified community	Funding: \$\$	Staffing: @@	n/a
E7	Develop a plan to preserve and enhance community electric system emergency reliability and resiliency, including evaluating the role of solar, storage, and other flexible energy technologies.	Funding: \$\$	Staffing: @@	n/a
EV3	Study incentives available for small EVs like e-bikes and e-scooters and develop incentive recommendations if needed. Promote new and existing incentives.	Funding: \$	Staffing: @@	
EV4 E3	Study EV affordability and other barriers for low-income residents and develop plan for EV and charger promotion to this group	Funding: \$\$	Staffing: @	
EV5	Evaluate a residential EV credit or rate mechanism that creates an electric bill discount for registered EVs	Funding: \$	Staffing: @	
EV6	Evaluate mandates or other mechanisms to ensure EV charging capacity needed to support EV growth	Funding: \$\$	Staffing: @	 (rating represents potential effect of actions to be identified)
M4A	Conduct a land use and transportation study to identify scenarios, changes, services, and programs that would reduce greenhouse gas emissions and accommodate projected housing growth without increasing transportation sector emissions	Funding: \$\$	Staffing: @@	 (rating represents combined impact of all Mobility actions)
M5A	Update Bicycle and Pedestrian Transportation Plan	Funding: \$ (grant funded)	Staffing: @	 (rating represents combined impact of all Mobility actions)
M5C	Establish a Vision Zero data collection and analysis program based on M4	Funding: \$\$	Staffing: @@@	 (rating represents combined impact of all Mobility actions)

Work Item / Key Action		Funding	Staffing	Carbon Impact
		\$ = lowest cost \$\$\$\$ = highest cost	@ = Existing staffing @@@@ = need many addtl contract/perm/temp staff	 (low CO ₂ impact)    (high impact)
<i>Sustainability</i>				
S1	Complete the Sea Level Rise Vulnerability Assessment	Funding: \$\$	Staffing: @@	n/a
S2	Complete the Sea Level Rise Adaptation Plan	Funding: \$\$	Staffing: @@	n/a
S4	Implement Foothills Fire Management Plan	Funding: \$	Staffing: @	
W5	Develop a "One Water" Portfolio for Palo Alto ¹	Funding: \$\$	Staffing: @	n/a
N1 N10	Develop programs to plant trees to increase Palo Alto's tree canopy and establish a baseline and Key Performance Indicator for carbon storage of tree canopy	Funding: \$\$	Staffing: @	n/a
ZW2	Eliminate single-use disposable cups and containers by expanding the Disposable Foodware Ordinance	Funding: \$	Staffing: @	
ZW3	Require edible food recovery for human consumption from commercial food generators	Funding: \$	Staffing: @	
ZW4	Create a new campaign to promote residential food waste reduction	Funding: \$	Staffing: @	n/a
ZW5	Provide waste prevention technical assistance to the commercial sector	Funding: \$	Staffing: @	
ZW7	Evaluate a best practice standard for low carbon construction materials, beginning with concrete (including review of the Marin County Low Carbon Concrete Ordinance)	Funding: \$	Staffing: @	n/a
W6 N5	By 2023, establish a baseline and Key Performance Indicator for treatment of impacts from impervious surfaces to support the Green Stormwater Infrastructure Plan	Funding: \$	Staffing: @	n/a

¹ A "One Water" approach envisions managing all water in an integrated, inclusive, and sustainable manner that is more resilient to the impacts of climate change. The One Water approach recognizes that water must be managed in ways that respect and respond to the natural flows of watersheds and the natural ecosystem, geology, and hydrology of an area. projects and programs focus on achieving multiple benefits—economic, environmental, and social.

Climate Action Blog Series: New Ad Hoc Committee Advances Council's Sustainability & Climate Action Planning



[City of Palo Alto](#)

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Aug 19 · 8 min read

Learn more about the City's plans to enhance community engagement on proposed sustainability goals and actions and ways to join the conversation



In early 2020, the City of Palo Alto launched an update to the Sustainability and Climate Action Plan (S/CAP) to develop the strategies needed to meet our goal to reduce greenhouse gas emissions 80% by 2030 and other community-wide sustainability goals. On April 19, 2021, a [Sustainability and Climate Action Plan Ad Hoc Committee](#) was [formed by the City Council](#) to engage with community stakeholders, domain experts, and activists and complement existing efforts on this important priority. The new ad hoc committee, which meets monthly on the second Thursday at 9 a.m., will help guide the development, implementation, communication, and future community engagement of

the S/CAP process. This work will support finalizing the development of the S/CAP update, which is slated for Council adoption in early 2022. Read on to learn more about the Ad Hoc kickoff meeting, their workplan over the next several months, and ways to share input on this important community priority.

INAUGURAL AD HOC MEETING



The City Council established the Ad Hoc in April to engage with community stakeholders, domain experts, and community activists. Other Council actions at the same meeting that related to the S/CAP update included supporting the policy framework as presented (go [here](#)) and asking staff to pursue the actions that are listed from 2021–2024. Council direction also included further developing other related changes as noted in the specific motion [here](#).

On August 12, 2021, 86 participants joined the inaugural meeting of the S/CAP Ad Hoc Committee meeting, which includes members Vice Mayor Burt and Council Member Cormack. During the public comment period, 40 participants discussed various themes to help further the sustainability planning work that is underway including:

- taking action on climate change without delay
- devoting resources and developing a financing plan for S/CAP implementation
- focusing on key issues such as renewable energy, resilience, electrification, sea level rise, and housing
- having a California Environmental Quality Act (CEQA) review of the S/CAP update
- increasing outreach, partnerships, and collaboration

Two main themes discussed by community members attending the meeting include the S/CAP adoption timeline and the necessary environmental review. Both of these topics are expanded on below.

S/CAP Timeline: Several community members commented on the need to expedite the S/CAP adoption. The S/CAP update seeks to provide a roadmap to meet the City’s aggressive sustainability goals, including reducing GHG emissions 80 percent below 1990 levels by 2030 (the “80 x 30” goal). It’s important to note that while development of the S/CAP update is underway, implementation and financing planning have begun on certain items already approved by the City Council.

In addition, several items are in development or about to be launched, such as: residential program services and incentives to promote voluntary electrification of water heating; space heating; cooking; clothes drying and other appliances that use natural gas; expanding bicycle and pedestrian infrastructure; promoting incentives for electric vehicles (EVs) and EV chargers; developing a “One Water” portfolio for Palo Alto; completing a Sea Level Rise Vulnerability Assessment; developing programs to increase Palo Alto’s tree canopy; and expanding the Disposable Foodware Ordinance to eliminate single-use disposable cups and containers.

California Environmental Quality Act (CEQA) Review Requirements:

Several community members provided input about the required California Environmental Quality Act process. CEQA is a California statute that requires state and local agencies to analyze the potential environmental impacts of their actions, determine and disclose if those impacts are significant, and avoid or minimize impacts, as applicable and feasible. CEQA review of the S/CAP will establish it as a CEQA-reviewed

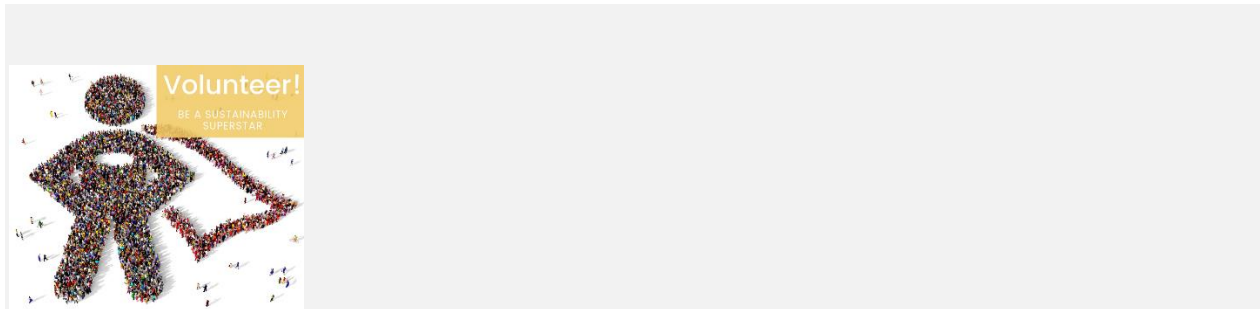
GHG emissions reduction plan, on which future priority projects considered by the City can rely. This will help streamline the environmental analysis and ensure cost savings and more rapid implementation of future S/CAP-related projects.

It should be noted that the CEQA review of the S/CAP update does not necessarily delay early S/CAP implementation. There are several S/CAP update-related programs, projects and initiatives that were planned as part of the 2018–2020 Sustainability Implementation Plan, and as such have components already in progress, with Council approval. Those select early implementation steps can proceed in parallel with CEQA review.

The recording of the meeting can be found [here](#) and the PowerPoint presentation can be found [here](#). All Ad Hoc meeting materials will be posted [here](#).

HARNESSING THE POWER OF THE COMMUNITY TO REACH SUSTAINABILITY GOALS

The City recognizes the urgency and importance of strong action on climate change and is committed to reaching our goal of reducing GHG emissions 80 percent below 1990 levels by 2030 (the “80 x 30” goal). To do that, we need the community’s help from stakeholders, domain experts and activists. The City is seeking community members to participate actively in the S/CAP update process. Read more in this section and sign-up for a topic you are passionate about.



Volunteering with the City

An important aspect of the work underway is engaging the community and offering ways for them to volunteer to help move the plan forward.

Areas of volunteer focus include:

Emissions Reductions

- Buildings (Commercial and Residential): focus areas include Energy Efficiency, Natural Gas Reduction and Electrification, and Sustainable Buildings.

- Transportation: focus areas include Electrification of Vehicles, Transit/Trip Reduction and Micro Mobility
- Land Use (including Urban Design)

Climate Adaptation

- Sea level rise
- Wildland fires mitigation and response
- Resilient electric utility, including microgrids, local generation, and storage

Policy Collaborations (local, state, federal and international levels)

Advocacy and Implementation

Metrics and dashboards, other partners, etc.

If you are interested in volunteering to be an S/CAP Domain Advisor e-mail City staff at sustainability@cityofpaloalto.org and note your area of interest from the list above.

Making An Impact At Home

While the S/CAP update is underway, there are several things you can do to act to further the community's sustainability goals.

SWITCH TO ELECTRIC APPLIANCES: Do you want to learn more about how to switch to electric appliances in your home? Are you ready to take the next step in efficiency and electrification upgrades in your home? The Home Efficiency Genie can help. *To learn more about the Home Efficiency Genie and get information about efficiency and electrification upgrades and programs, visit [here](#).*

BIKE AND WALK MORE: Road transportation represents the largest percentage of Palo Alto's existing carbon footprint — and a congestion headache. Reducing emissions from the transportation sector requires addressing three things: reducing the carbon intensity of fuels, increasing vehicle efficiency, and reducing the number of miles travelled in a vehicle. *To learn more about reducing the number of miles you drive by switching to bicycling and walking in Palo Alto, visit [here](#).*

OPT FOR AN ELECTRIC VEHICLE: President Biden recently announced a target of 50% of new vehicles sold in the US to be electric by 2030. Our city ranks as one of the top in the nation to embrace this clean technology. Electric Vehicles (EVs) now account for more than 30% of new

car sales in Palo Alto — the highest adoption rate in the country. Driving and charging an EV in Palo Alto especially makes sense given the City’s carbon neutral electricity supply and low electric retail rates. *To learn more about EVs, EV Chargers, and available rebates, visit [here](#).*

SAVE WATER YEAR-ROUND: As of late April 2021, parts of the Bay Area, including Palo Alto, are considered to have entered an extreme drought phase. Fragile local water supplies are stressed by decreased precipitation associated with climate change in some areas of the state. *To learn more about actions you can take to save water year-round, visit [here](#).*

PREPARE FOR WILDFIRES: Whether you live in the Foothills of Palo Alto or the flatlands closer to the Bay, preparing for wildfires makes a lot of sense. The City of Palo Alto works every year to minimize the risk; we have a multi-functional team that works on our wildfire risk reduction programs. *To learn more about steps you can take to prepare for wildfires, visit [here](#).*

CCARE FOR OUR URBAN FOREST: Sustainability is not only about mitigation, adaptation, and resilience, but also regeneration — identifying opportunities for renewal, restoration, carbon sequestration, and growth of our natural environment. *To learn more about Palo Alto’s Urban Forest and available tree care resources, visit [here](#).*

REDUCE WASTE: Zero Waste is sustainable materials management — seeking to eliminate waste wherever possible first and foremost, and then managing the discards we do have through reuse and recycling/composting. *To learn more about upcoming Zero Waste Events and how you can reduce waste, visit [here](#).*

For the City’s sustainability website to learn more, go [here](#).

JOIN THE CONVERSATION AT THE NEXT AD HOC MEETING



The Ad Hoc meetings are open to the public and are ways to hear from the community on specific sustainability related goals and actions. The next Ad Hoc meeting is set for September 9, with a focus on residential building electrification. Join the discussion by registering below and logging in from 9:00–11:30 a.m.

The September meeting topics include:

- Residential building electrification, including electrification retrofits, low-income programs, and financing programs.
- An overview of the third draft of the S/CAP Goals and Key Actions
- A review of the draft 3-Year Implementation Plan
- A summary of the [AECOM Impact Analysis Memo](#)

Registration is required in advance of the meeting. Register [here](#).

MORE ONLINE RESOURCES



- For the April 19, 2021 staff report on sustainability, go [here](#) and here for the meeting [minutes](#) and [meeting recording](#).
- For details on the City's Sustainability and Climate Action Plan process go here: www.cityofpaloalto.org/climateaction
- For the City's Sea Level Rise Website: www.cityofpaloalto.org/sealevelrise
- For more on the City's Electrification programs, go here: www.cityofpaloalto.org/electrification
- For more on programs focused on Electric Vehicles and Chargers: www.cityofpaloalto.org/electricvehicle
- For details related to Home Composting, go [here](#).
- For more on Zero Waste programs, including tools to avoid food waste, go [here](#).
- For more on the City's Green Building Program including Trainings, go [here](#).
- For the City's Safe Routes to School programs, go [here](#).

Climate Action Plan Blog Series: How Electric Appliances Can Help us Meet our Climate Goals



City of Palo Alto

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Sep 16 · 9 min read



Learn more about the City's proposals to encourage electrification of appliances in single-family homes and the opportunities for residential building electrification to help us meet sustainability goals and actions

Each month, the Sustainability and Climate Action Plan (S/CAP) Ad Hoc Committee will delve into various topics related to the S/CAP update — the City's roadmap of strategies needed to meet the City's goals to reduce greenhouse gas (GHG) emissions 80% by 2030 and other community-wide sustainability goals. Read on to learn more about the September Ad Hoc meeting, focusing on

residential building electrification and ways to share input on this important community priority. Read the [first blog](#) in this series to learn more about the S/CAP Ad Hoc Committee, City sustainability programs and more.

SEPTEMBER 2021 AD HOC MEETING RECAP



On September 9, 2021, 73 participants joined the S/CAP Ad Hoc Committee meeting, which included Vice Mayor Burt and Council Member Cormack. The meeting covered several topics including residential building electrification options, impact analysis study, revised S/CAP goals and key actions, and the draft Three-Year Work Plan.

The recording of the meeting can be found [here](#), and the PowerPoint presentation can be found [here](#). All Ad Hoc meeting materials are posted [here](#).

Residential Building Electrification Overview

Single-family residential building electrification represents one of the largest and most cost-effective opportunities to reduce emissions available to the Palo Alto community. Palo Alto's electricity is sourced from renewable and hydroelectric resources, but natural gas is a fossil fuel that will always produce greenhouse gas emissions. Technologies exist to electrify virtually all appliances in single-family homes. By far the most cost-effective retrofits for existing homes are heat pumps to replace gas furnaces in homes with central heating with or without air conditioning and heat pump water heaters to replace gas tank water heaters. Despite benefits of converting homes to all-electric, there are barriers to conversion.



Some of the barriers to residential building electrification identified by meeting participants and community members include:

- Cost of conversion (this came up several times and was the number one barrier)
- Belief that technology will get a lot better in just a few years
- Unwillingness to toss out a perfectly good appliance
- Unfamiliarity of what residential electrification conversion means
- Lack of time to research electrical appliance options
- The need to upgrade a home's electrical panel

Learn more about residential building electrification benefits, barriers, and available services/resources [here](#).

Impact Analysis Memo Summary Prepared by AECOM



The City and AECOM, the City's consultant, collaborated to model key action impact results in three categories of GHG reduction actions: Energy, Mobility, and Electric Vehicles. The [AECOM Impact Analysis Memo](#) describes the modeling approach to estimate emissions reductions from various policies; lists the package of S/CAP key actions that can reduce emissions to 71% below 1990 levels by 2030 through local action; and shows that the vast majority of the proposed S/CAP key actions have somewhat positive or very positive co-benefits, with three proposed S/CAP key actions having negative impacts on cost of living, and one key action having a negative impact on equity. The memo concludes with recommendations for how to achieve the remaining 9% emissions reductions needed to meet the 80 x 30 goal.

Read the memo, with recommendations starting on page 15, [here](#).

Revised S/CAP Goals and Key Actions Overview

Upon completion of the impact analysis, staff updated the [S/CAP Goals and Key Actions](#) to better reflect the outcomes needed to achieve the 80 x 30 goal. The updated S/CAP Goals and Key Actions includes a new Climate Action area with 8 Key Actions. The goals and key actions in Energy, Mobility, and Electric Vehicles were reworked, but the outcomes are the same. Minor changes were made to the goals and key actions in Water, Climate Adaptation and Sea Level Rise, Natural Environment, and Zero Waste, with one significant change in the addition of goals and key actions addressing wildfire protection.

Draft Three-Year Work Plan Review



The [draft Three-Year Work Plan](#) details the actions reflected in the Policy Framework from the April 19, 2021 Council Meeting (see Attachment A [here](#)), and includes estimates of staff and funding needs for implementation and potential greenhouse gas reductions. These are actions that can be implemented concurrently while the S/CAP Update is in progress.

For the most part, meeting participants agreed that the draft Three-Year Work Plan addresses the barriers to electrification, but noted that more outreach is necessary and a group-buy program for electric appliances is needed.

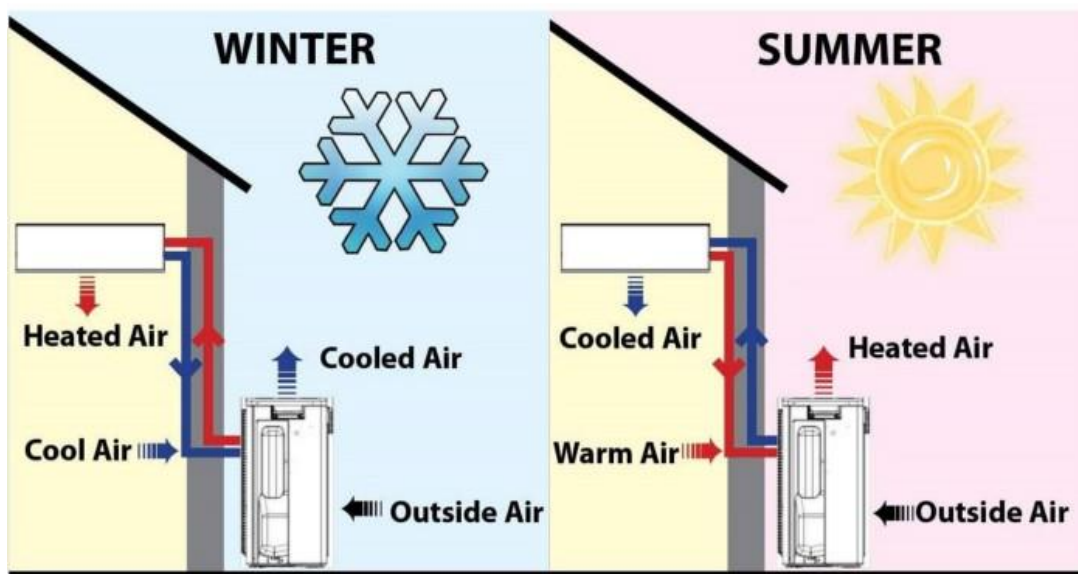
September meeting participants identified the following priorities the City needs to explore:

- Reduce upfront costs (this came up several times)
- A strong price signal for carbon
- Foster neighbor-to-neighbor conversations
- Pilot programs
- Make the process smoother
- Ensure that everyone, regardless of income, can electrify their homes
- Reduce the incentives for non-electric appliances
- On-bill financing
- Plan for recycling appliances as they are replaced
- Pursue multi-family building electrification
- Stop this effort and redirect time and money towards actually solving problems
- Let the market dictate a move towards (or away) from electrification
- Invest your efforts in programs to reduce vehicular traffic where the climate impact can be much larger
- The process should be voluntary
- Provide back-up power to residents

Read the draft Three-Year Work Plan [here](#).

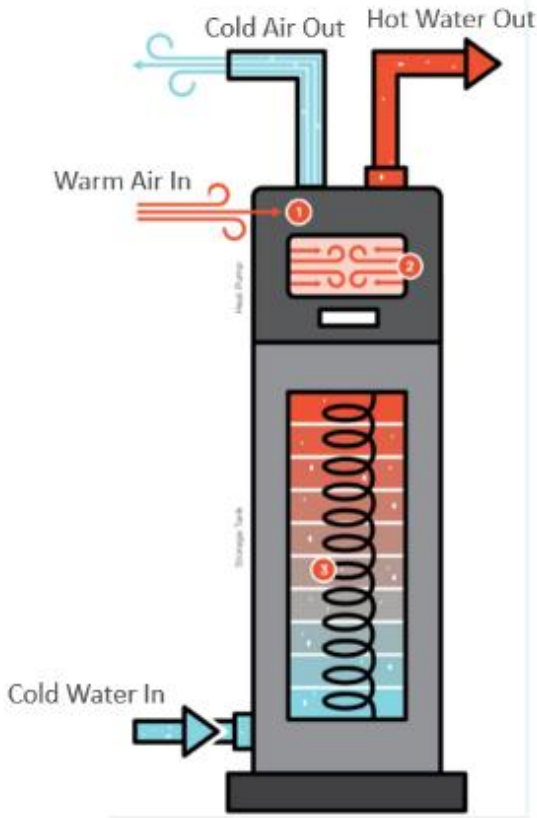
Electric Panel Upgrade and Heat Pump Water Heater

To meet the goals of the Sustainability and Climate Action Plan (S/CAP), the City is taking actions to support driving electric and shifting away from natural gas use. For many City of Palo Alto Utilities customers, this may require an electric panel upgrade. The [Electric Panel Upgrade page](#) provides information to help you understand how to determine whether or not your project will require an electric panel upgrade and the best way to proceed. Redwood Energy has a resource that may help residents with a “Watt Diet” to possibly avoid an electric panel upgrade. That Watt Diet section starts on page 19 of this [Pocket Guide](#).



Heat pump technologies can be used to improve efficiency, safety and performance by replacing their gas fueled counterparts. The core of heat pump technology is quite simple and commonly used throughout your home. It is the same technology that is in your kitchen refrigerator but in reverse. Essentially, heat pumps move heat from one place to another. This process is extremely efficient, typically yielding about 300% efficiency, so for every unit of energy used, the heat pump will move three unit of heat energy. For climates with moderate heating and cooling needs, heat pumps offer an energy-efficient alternative to furnaces and air conditioners.

Heat pump space heating and cooling can be very similar in application to your typical forced air furnace with an air conditioner.



- 1 Heat Pump pulls warmth from the air
- 2 Warm air is compressed, increasing its temperature
- 3 Condenser coils transfer heat to the water

A heat pump water heater (HWPH) closely resembles a gas tank water heater, but uses the heat pump to move heat from the air around it to heat the water.

More information about heat pump water heaters and available rebates can be found [here](#).

MAKING AN IMPACT AT HOME

While the S/CAP update is underway, there are several things community members can do now to further the community's sustainability goals.

Switch to Electric Appliances



HOME EFFICIENCY GENIE

Do you want to learn more about how to switch to electric appliances in your home? Are you ready to take the next step in efficiency and electrification upgrades in your home? The Home Efficiency Genie can help. City of Palo Alto's Utility Department offers a Home Efficiency Genie program to residents providing help over the phone to understand their energy and water bills, evaluate new energy technology, and electrify their homes. Residents can then follow up with a virtual home assessment via video call or in-person house call. The Genie can provide efficiency and electrification recommendations and help with contractor selection.

To learn more about the Home Efficiency Genie and get information about efficiency and electrification upgrades and programs, go [here](#).

Induction Cooktop Loaner Program



Are you curious about induction cooktops, but not quite sure if they are right for you? The City partners with Acterra on an Induction Cooktop Loaner Program, which allows people to borrow a counter-top induction cooktop for up to three weeks.

Learn more about induction cooktops and how to sign up for the induction cooktop loaner program [here](#).

OTHER PROGRAMS TO FURTHER SUSTAINABILITY EFFORTS

Join us for Coastal Cleanup Day 2021



Are you interested in helping keep trash out of our local creeks and the San Francisco Bay? Join us on Saturday, September 18, 2021 from 9 a.m. to noon for Coastal Cleanup Day 2021. The City is hosting in-person cleanup sites at Matadero and Adobe Creeks. Choose to pick up trash at our in-person event or independently in your own neighborhood.

To learn more about how to sign up, or to get assistance with cleanup supplies, go [here](#).

Participate in National Drive Electric Week

Are you considering purchasing an electric vehicle? Is the idea of charging an electric vehicle (EV) mysterious or confusing? On Tuesday, September 28 from 7 to 8 p.m., the City is sponsoring a free EV Charging Workshop presented by Acterra. This event is part of National Drive Electric Week (NDEW), Sept. 25 — Oct. 3, 2021, a nationwide celebration to raise awareness of the many benefits of all-electric and plug-in hybrid cars, trucks, motorcycles, and more.

To register for the free Charging Workshop, go [here](#). To learn more about other online and in-person events happening during NDEW, go [here](#).

Save Water Year-Round



You can save water year-round by following some basic tips like water your landscapes in early morning (before 10 a.m.) or evening (after 6 p.m.) and only as needed; turn off the water when brushing your teeth or shaving; and, add mulch to your landscaped areas to conserve water outside. To learn more actions you can take to save water year-round, go [here](#).

For the City's sustainability website, go [here](#).

PARTICIPATE IN THE NEXT S/CAP AD HOC MEETING

The Ad Hoc meetings are open to the public and a good way for staff to hear from the community on specific sustainability related goals and actions. The next Ad Hoc meeting is scheduled for October 14 with a focus on permitting related to building electrification and commercial building electrification. Provide your input by submitting comments or questions to sustainability@cityofpaloalto.org. Register [here](#) and log in from 9–11:30 a.m.

October meeting topics include:

- Permitting for building electrification
- Commercial building electrification
- An overview of near-term funding and financing options

Registration is required in advance of the meeting. Register [here](#).

MORE ONLINE RESOURCES



- A summary of the public comments received at the August S/CAP Ad Hoc Committee Meeting can be found [here](#).
- For details on the City's Sustainability and Climate Action Plan process, go [here](#).
- For the City's Sea Level Rise Website, go [here](#).
- For more on the City's Electrification programs, go [here](#).
- For more on the City's Green Building Program including Trainings, go [here](#).
- For more on programs focused on Electric Vehicles and Chargers, go [here](#).
- For the City's Safe Routes to School programs, go [here](#).
- For more on water resources, go [here](#).
- For details related to Home Composting, go [here](#).
- For more on Zero Waste programs, including tools to avoid food waste, go [here](#).
- For Frequently Asked Questions, go [here](#).

Climate Action Plan Blog Series: The Role of Non-Residential Building Electrification

Learn more about non-residential building electrification, City proposals to encourage electrification and the opportunities it can provide.



[City of Palo Alto](#)
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Oct 21 · 9 min read



Each month, the Sustainability and Climate Action Plan (S/CAP) Ad Hoc Committee will delve into various topics related to the [S/CAP update](#) — the City’s roadmap of strategies needed to reduce greenhouse gas (GHG) emissions 80% by 2030 and other community-wide sustainability goals. Read on in this third blog to learn more about the October 14 S/CAP Ad Hoc meeting, which focused on non-residential building electrification and ways to share input. Read the [second blog](#) in the series to learn more about electrifying appliances in single-family residential buildings, and read the [first blog](#) to learn more about the S/CAP Ad Hoc Committee and other sustainability programs available to the community today.

OCTOBER S/CAP AD HOC MEETING



On October 14, 2021, members of the community joined the S/CAP Ad Hoc Committee meeting, which included Vice Mayor Burt and Council Member Cormack. The meeting covered the following topics: non-residential building electrification, multi-family building electrification, an electrification assessment of City facilities, building

electrification permitting, and a summary of near-term funding and resources for the S/CAP effort. Details on all of these items are summarized below.

NON-RESIDENTIAL BUILDING ELECTRIFICATION

Non-residential buildings electrification encompasses commercial buildings, school buildings, restaurants, hotels, and City of Palo Alto facilities switching away from utilizing natural gas to electricity. There are significant decarbonization opportunities for the non-residential building sector, especially in buildings with mixed-fuel rooftop packaged units (RTUs). The most cost-effective way to reduce GHG emissions in non-residential buildings is through the adoption of a reach code to mandate all-electric new construction projects. However, each year new construction projects represent less than 1% of the total commercial floor area. To mitigate this, the City will launch new initiatives to facilitate voluntary electrification efforts in existing buildings and address electrification challenges over the next six months. In addition, the Utilities Department will launch a Commercial Electrification Assistance Program to provide technical assistance to building owners and facility managers conducting electrification projects. Staff will also engage key account customers to receive their input on the City's S/CAP Update. The City will also explore policy options that can effectively curb GHG emissions; such policies will serve as a backstop to ensure that the City will meet its aggressive GHG emissions reduction goals.

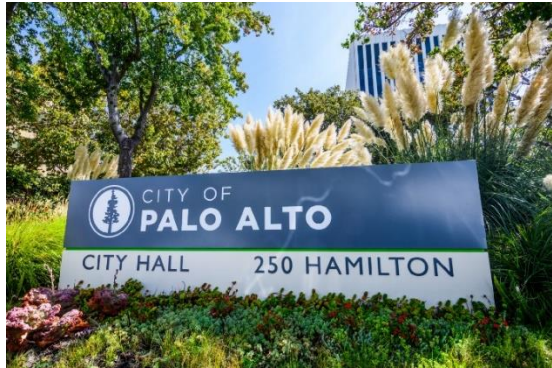
For more information and the full Non-Residential Building Electrification white paper, go [here](#).



Multi-Family Building Electrification

There are 11,000 households in Palo Alto that live in multi-family buildings. The challenges for electrifying appliances and space heating in multi-family buildings are similar to those for single-family homes: high upfront cost, challenges related to permitting, and challenges related to electrical upgrades. As a way to learn more and better address these challenges, the City applied for and received funding from the Bay Area Air Quality Management District to implement a pilot project that will replace gas furnaces with heat pump systems at Page Mill Court Apartments, a 24-unit apartment building. The pilot project is scheduled to be complete at the end of 2021. The objectives of the pilot are to document the costs and challenges, use lessons learned to streamline the City's permitting process, and develop a multi-family electrification program.

Electrification Assessment of City Facilities



The City is preparing to perform a Citywide facility and electrification assessment that will be used to develop a plan to reduce natural gas use in City facilities 80% by 2030. The City began making progress to reduce municipal energy consumption through actions such as the sewage sludge incinerators at the Regional Water Quality Control Plant, the facility that was the largest user of natural gas, were replaced with the more environmentally friendly Sludge Dewatering and Truck Loadout

Facility. The updated treatment process reduces GHG emissions by approximately 15,000 metric tons of carbon dioxide equivalent per year — equivalent to carbon dioxide emissions for 3,000 passenger cars. The City facilities that now have the largest natural gas use are the Municipal Service Center, City Hall Civic Center Office Building and Parking Garage, Cubberley Community Center, and the Rinconada buildings. The plan developed as part of the citywide electrification assessment, which is expected to be presented to the City Council in November 2022, will include specific ways these buildings can reduce natural gas usage.

Permitting for Building Electrification

There are many variables that influence electrification policy, including but not limited to: state mandates (e.g. Energy Reach Codes), cost effectiveness studies, incentive programs and local mandates, infrastructure capacity, building readiness, and permit processing. In Palo Alto, electrification permits currently account for 7% of all permit activity, and those permits have been steadily increasing. The City has completed or started many initiatives to streamline the permitting process, such as prioritizing electrification reviews, comparing Palo Alto requirements to other jurisdictions, updating checklists, meeting with trade professionals, and exploring technological solutions.

As staff prepare for scaling up building electrification, exploring a wide variety of strategies needs to happen; this includes:

- A technical assistance program to support preparation and submission of permits
- Direct installation (working with a single contractor for new installations)
- A vetted contractor's list
- Contractor training
- “Plug and Play” permit options and/or appliances
- A flat fee for panel upgrades
- Ongoing studies of how to ensure our distribution grid can handle increased electrification as gas appliances are switched out

- Work ahead, or as capacity allows, upgrading transformers (using City funds)
- Enhanced online permitting options

For more information and to find building permit forms, go [here](#).

Near-Term (2021–2022) Funding and Resources for the entire S/CAP effort

As work continues on the S/CAP Update, several programs are already underway using existing resources, while other programs proceed slowly due to limited staff capacity. Impacts to City operations are a critical limiting factor in achieving near-term S/CAP goals.

Staff identified several potential funding sources to apply toward the S/CAP work such as grants, Low Carbon Fuel Standard revenues, Electric Special Projects reserve, and a Palo Alto Green equivalent voluntary surcharge.

Staff is exploring potential sources, reviewing limitations and evaluating if they can be applied to the S/CAP efforts. The Ad Hoc Committee will discuss funding and resources at their February and March 2022 meetings. Register to join [here](#).

Other Meeting Input

In addition to hearing presentations from non-residential building electrification experts, community members and meeting participants at the October Ad Hoc meeting also shared input on the following topics:

- The need for a community microgrid
- Making sure equity issues are addressed when electrification scales up
- Establishing a carbon pricing program
- Regional collaboration and sharing of resources
- Investing in carbon offsets to achieve our 80 x 30 goal
- The need to consider waste management as electrification scales up

The recording of the October 14 meeting can be found [here](#), and the presentation can be found [here](#). All Ad Hoc meeting materials are posted [here](#).

NEW SUSTAINABILITY AND CLIMATE ACTION SURVEY

Sustainability and Climate Action Plan Update

Sustainability and Climate Action Plan Update

No deadline is currently set

[Introduction](#)[Feedback](#)[Your Response](#)[Outcome](#)

An [online survey](#) was recently launched to help inform climate and sustainability conversations taking place with the S/CAP Ad Hoc Committee and City Council. We welcome your input through the [Sustainability and Climate Action Plan Update Survey](#).

The survey should take about 5 minutes to complete, and we invite you to return to the survey as you learn more through the Ad Hoc Committee meetings. The survey is open through April 2022.

[Take the survey today!](#)

PARTICIPATE IN THE NEXT S/CAP AD HOC MEETING ON NOVEMBER 4



The Ad Hoc meetings are open to the public and a good way for staff to hear from the community on specific sustainability related goals and actions.

The next Ad Hoc meeting is scheduled for November 4 from 9–11:30 a.m. and will focus on electric vehicles and charging infrastructure. Provide your input by [taking the S/CAP survey](#) or submitting comments/questions to sustainability@cityofpaloalto.org.

Registration is required in advance of the meeting. Register [here](#). View past meetings and materials by visiting www.cityofpaloalto.org/climateaction.

MAKE AN IMPACT AT HOME

Make an Impact**@ HOME**

While the S/CAP update is underway, there are several things community members can do now to further the community's sustainability goals. This section provides some tools to make a local impact now! Chat with your neighbors and community networks about what they are considering or have recently accomplished to further climate action and sustainability efforts at home.

Help Find a Contractor for Your Home Upgrade & Resources to Switch to Electric: [An all-electric lifestyle](#) is cleaner and healthier than using fossil fuels and can also be more affordable. Through the *Switch is On* campaign, you can [connect directly with trusted contractors](#) and compare quotes to pick the right professional for your electrification project. Ready to make the switch? [Apply online](#) for a rebate of up to \$1,500 to switch your existing water heater with an efficient, electric heat pump water heater. The Utilities Department offers a Home Efficiency Genie program to residents providing help over the phone to understand their energy and water bills, evaluate new energy technology, and electrify their homes.

Learn more about the Switch is On campaign [here](#). Learn more about the Home Efficiency Genie and get information about efficiency and electrification upgrades and programs [here](#).



Power Up Your Savings with Limited-Time

Discounts: Energy efficiency and solar go together like peanut butter and jelly. Investing in energy efficiency before installing solar will allow you to have a smaller, less expensive solar system. If you're ready to go solar, sign up for the [SunShares](#) discount program by November 30 to receive a 15% discount on solar and 10% discount on battery storage installations. Attend the upcoming CPAU-hosted [webinar on October 26 from 6:30–7:30 p.m.](#) to learn

how to register for the discount and more.

Learn more about the SunShares discount program [here](#).

Hot Water, Cool Rebates & Savings: If your water heater is more than 12 years old, don't wait for it to leak or stop working. Replace it with a highly efficient heat pump water heater (HPWH). HPWHs are 300% more efficient than a typical gas water heater. Plus, you can receive up to [\\$1,500 with a HPWH rebate](#) for replacing your existing water heater.

Learn more about heat pump water heater rebates [here](#).



Save Water Year-Round: You can save water year-round by following some basic tips like water your landscapes in early morning (before 10 a.m.) or evening (after 6 p.m.) and only as needed; turn off the water when brushing your teeth or shaving; and, add mulch to your landscaped areas to conserve water outside.

Learn more actions you can take to save water year-round [here](#).
Read a recent blog post about tools to conserving water that are available to community members [here](#).

Refrigerator recycling: Back by popular demand! Contact City of Palo Alto Utilities to recycle an old refrigerator or freezer and receive a \$50 rebate.

To learn more about refrigerator recycling, go [here](#).

For the City's sustainability website, go [here](#).

MORE ONLINE RESOURCES



- A summary of the questions and answers from the September S/CAP Ad Hoc Committee Meeting can be found [here](#).
- For details on the City's Sustainability and Climate Action Plan process go to: www.cityofpaloalto.org/climateaction
- The City's Sea Level Rise Website can be found here: www.cityofpaloalto.org/sealevelrise
- For more on the City's Electrification programs, go here: www.cityofpaloalto.org/electrification
- For more on the City's Green Building Program including Trainings, go [here](#).
- For more on programs focused on Electric Vehicles and Chargers: www.cityofpaloalto.org/electricvehicle
- For the City's Safe Routes to School programs, go [here](#).
- For more on water resources, go [here](#).
- For details related to Home Composting, go [here](#).
- For more on Zero Waste programs, including tools to avoid food waste, go [here](#).

Climate Action Plan Blog Series: Electric Vehicles Move Forward Climate Goals



City of Palo Alto
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Nov 10 · 9 min read

Learn about electric vehicles (EVs), building EV charging infrastructure, and potential opportunities to encourage transportation electrification

Electric Vehicles Move Forward Climate Goals



Each month, the Sustainability and Climate Action Plan (S/CAP) Ad Hoc Committee will do a deep dive into various topics related to the [S/CAP Update](#) — the City’s roadmap of strategies to address climate change and specifically to reduce greenhouse gas (GHG) emissions 80% by 2030 and other community-wide sustainability goals. Read on in this blog series to learn more about transportation electrification opportunities, and ways to make an impact and share input.

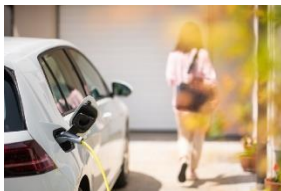
NOVEMBER S/CAP AD HOC COMMITTEE MEETING



At the November 4 Ad Hoc meeting, Committee members, staff and the public discussed electrifying vehicle travel, building out EV charging infrastructure, municipal fleet electrification, and heard a brief history of PaloAltoGreen. Brief updates on each of these areas are listed below.

ELECTRIFYING VEHICLE TRAVEL

Electric Vehicles & Benefits in Addressing Climate Change



Road transportation is Palo Alto’s largest remaining source of GHG emissions. Roughly 65% of our remaining emissions come from transportation — people driving their cars into, out of, and around Palo Alto. There are three ways to reduce vehicle emissions:

1. **Reduce vehicle miles traveled.** Travel demand can be reduced by encouraging telework, transit-oriented development, and encouraging non-vehicle travel like walking, biking, taking public transit, and carpooling.
2. **Electrify vehicle travel.** If driving is necessary, do so in an electric vehicle! In Palo Alto, electricity is carbon-neutral and is sourced mostly from renewable electricity, so switching to an EV reduces emissions drastically. To

reach our goals, the estimated number of registered EVs in Palo Alto needs to increase from 5,000 in 2020 to 25,000 in 2030.

- 3. Improve Internal Combustion Engine (ICE) vehicle efficiency.** Improving an ICE vehicle's miles per gallon reduces the amount of GHG per mile. Ultimately, a vehicle's fuel efficiency is determined by the car manufacturer, but there are several things you can consistently do to help improve your fuel efficiency, including clear out extra clutter in your car or trunk, limit idling, keep a steady speed and stay within the speed limit, make sure your tire pressure is at the right level, and perform regular maintenance.

Since the City of Palo Alto has little control over ICE vehicle efficiency, current programs focus on reducing vehicle miles traveled and electrifying vehicle travel. At the [December S/CAP Ad Hoc Meeting](#), mobility and how to reduce vehicle miles traveled will be discussed more in depth. As we look at the overall cost of emissions reductions needed to meet our 80 x 30 goal, transitioning to EVs is one of the more cost-effective strategies available.

In Palo Alto, 1 in 6 households drive an EV — the highest adoption rate in the country. There are more models to choose from than ever before with improved range and at various price points. With lower maintenance and fueling costs, in the long run EVs are cheaper to own than a fossil fuel vehicle. By 2030, the goal is that EVs constitute 44% of all registered vehicles in Palo Alto and 85% of all new vehicle sales. In order to accelerate the transition to EVs, we need to raise awareness, build more EV charging infrastructure, and provide incentives for the community — not only for vehicles, but e-Bikes and e-Scooters as well.

For more information about EVs, a cost calculator and current incentives, visit www.cityofpaloalto.org/ev.

Building EV Charging Infrastructure



To support the growing number of EVs registered in Palo Alto, we will need to build more EV charging infrastructure. Focus needs to be on multi-family buildings and non-profit properties. There are 11,000 households in Palo Alto that live in multi-family buildings, and there are many challenges to installing EV infrastructure in these buildings. To address the challenge, the City has several incentive opportunities that include [an EV Charging Rebate Program](#), [EV Charging Technical Assistance Program](#), and [Transformer Upgrade program](#).

The City is also piloting a curbside EV charging program and has installed 120 City-owned charging ports available to the public, where residents can charge their EVs overnight in public garages. Find a map of all EV charging stations in the City by visiting www.cityofpaloalto.org/ev and navigating to the accordion titled “No Charging at Home? No Problem!” With [California Clean Fuel Reward](#) incentive, the City provides funding to this State-run program to provide point of sale EV incentives at local

dealerships. The California Energy Commission's California Electric Vehicle Infrastructure Project ([CALeVIP](#)) is a partnership among regional energy providers to offer a workplace and public charging incentive program for San Mateo and Santa Clara Counties.

Fleet Electrification



The City is assessing the potential to electrify the City Fleet through a Fleet Electrification Study. To date, a total of 352 vehicles were assessed, including 240 light duty vehicles, 66 medium duty vehicles, and 46 heavy duty vehicles. The initial data from the study estimates that approximately half of the City's fleet can be replaced with equivalent electric vehicles that are commercially available and likely to be cost-effective. With equivalent EV's in the market today, and following current replacement schedules, Palo Alto could electrify 40% of its light-duty vehicles by 2030, and 74% by 2040.

While not a part of the City's Fleet, Palo Alto is electrifying its refuse collection trucks. In 2016, Palo Alto purchased the first fully automated all-electric side loader refuse vehicle for residential refuse collection in the United States through its refuse collection contract with GreenWaste of Palo Alto. This particular vehicle saves approximately 6,000 gallons of diesel per year and reduces emissions by about 78 metric tons of carbon dioxide equivalents per year. The City is planning to systematically electrify the refuse collection fleet, which currently includes four all-electric vehicles, shown below. There are plans to obtain three additional EVs in the next few years.

GREENWASTE OF PALO ALTO'S ALL-ELECTRIC TRUCKS



For more information on Electric Vehicles and EV Chargers, visit www.cityofpaloalto.org/EV.

PaloAltoGreen

As work continues on the S/CAP Update, the City Council asked that staff look into a PaloAltoGreen equivalent program to fund the City's programs. Staff identified several potential funding sources such as grants, Low Carbon Fuel Standard revenues, Electric Special Projects reserve, and a PaloAltoGreen equivalent voluntary surcharge. PaloAltoGreen Electric was a voluntary program established in 2003 that allowed electricity customers to purchase 100% renewable electricity for an additional surcharge. It ended in 2013 and was replaced with the Carbon Neutral Electricity program. The PaloAltoGreen Electric program accrued a net revenue of about \$706,000 in 2012 and cost just over \$400,000 to administer.

PaloAltoGreen Gas was a voluntary program established in 2014 that allowed natural gas customers to purchase carbon offsets to mitigate carbon impacts. It ended in 2017 and was replaced with the Carbon Neutral Natural Gas Program.

Staff identified several potential funding sources such as grants, Low Carbon Fuel Standard revenues, Electric Special Projects reserve, and a PaloAltoGreen equivalent voluntary surcharge. Staff continue to explore potential funding sources for S/CAP Implementation.

Watch the full November 4 meeting on YouTube [here](#); the presentation can be found [here](#). All Ad Hoc Committee meeting materials are posted [here](#).

SUSTAINABILITY AND CLIMATE ACTION PLAN UPDATE SURVEY



Sustainability and Climate Action Plan Update

Sustainability and Climate Action Plan Update

No deadline is currently set

An [online survey](#) was recently launched to help inform climate and sustainability conversations taking place with the S/CAP Ad Hoc Committee and City Council. We welcome your input through the [Sustainability and Climate Action Plan Update Survey](#).



The survey should take about 5 minutes to complete, and the City invites the community to share additional thoughts as you learn more through the Ad Hoc Committee meetings. The survey is open through April 2022.

[Take the survey today!](#)

PARTICIPATE IN THE NEXT S/CAP AD HOC MEETING ON DECEMBER 9



The Ad Hoc meetings are open to the public and a good way for staff to hear from the community on specific sustainability related goals, City programs and actions.

The next Ad Hoc meeting is scheduled for December 9 from 9–11:30 a.m. and will continue the discussion on transportation, this time focusing on how the City can help reduce transportation emissions through mobility programs and land use decisions. In the short term, we hope to reduce transportation emissions by reducing vehicle miles traveled through mobility programs that encourage and incentivize reducing solo trips in vehicles and increasing other modes of transportation, like carpooling, bicycling, walking, and taking public transit. In the long term, we will need to examine how land use decisions could potentially reduce vehicle miles traveled even more. Provide your input by [taking the S/CAP survey](#) or submitting comments/questions to sustainability@cityofpaloalto.org.

Learn more about mobility ahead of the coming meeting [here](#).

Registration is required in advance of the meeting. Register [here](#). View past meetings and materials by visiting www.cityofpaloalto.org/climateaction.

MAKE AN IMPACT AT HOME



While the S/CAP update is underway, there are several things community members can do now to further the community's sustainability goals. This section provides tools to make a local impact now! Chat with your neighbors and community networks about what they are considering or have recently accomplished to further climate action and sustainability efforts at home.

Opt for an Electric Vehicle

President Biden recently announced a target of 50% of new vehicles sold in the US to be electric by 2030. Our city ranks as one of the top in the nation to embrace this clean technology. Electric vehicles now account for more than 30% of new car sales in Palo Alto

— the highest adoption rate in the country. Driving and charging an EV in Palo Alto especially makes sense given the City’s carbon neutral electricity supply and low electric retail rates. *To learn more about EVs, EV Chargers, and available rebates, go [here](#).*

Bike and Walk More

Road transportation represents the largest percentage of Palo Alto’s existing carbon footprint — and a congestion headache. Reducing emissions from the transportation sector requires addressing three things: reducing the carbon intensity of fuels, increasing vehicle efficiency, and reducing the number of miles travelled in a vehicle. *To learn more about reducing the number of miles you drive by switching to bicycling and walking in Palo Alto, go [here](#).*

For the City’s sustainability website to learn more, visit www.cityofpaloalto.org/sustainability.

MORE ONLINE RESOURCES

- Read the [first blog](#) to learn more about the S/CAP Ad Hoc Committee and other sustainability programs available to the community today
- Read the [second blog](#) in the series to learn about electrifying appliances in single-family residential buildings
- Read the [third blog](#) in the series to learn about non-residential building electrification
- A summary of the questions and answers from the October S/CAP Ad Hoc Committee Meeting can be found [here](#)
- For details on the City’s Sustainability and Climate Action Plan process go to: www.cityofpaloalto.org/climateaction
- The City’s Sea Level Rise Website can be found here: www.cityofpaloalto.org/sealevelrise
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