UTILITIES ADVISORY COMMISSION
Regular Meeting
Wednesday, September 03, 2025
Council Chambers & Hybrid
6:00 PM
Amended Agenda
New Section added below in RED

Utilities Advisory Commission meetings will be held as "hybrid" meetings with the option to attend by teleconference/video conference or in person. To maximize public safety while still maintaining transparency and public access, members of the public can choose to participate from home or attend in person. Information on how the public may observe and participate in the meeting is located at the end of the agenda. Masks are strongly encouraged if attending in person. The meeting will be broadcast on Cable TV Channel 26, live on YouTube https://www.youtube.com/c/cityofpaloalto, and streamed to Midpen Media Center https://midpenmedia.org.

VIRTUAL PARTICIPATION **CLICK HERE TO JOIN** (https://cityofpaloalto.zoom.us/j/96691297246)
Meeting ID: 966 9129 7246 Phone: 1(669)900-6833

PUBLIC COMMENTS
Public comments will be accepted both in person and via Zoom for up to three minutes or an amount of time determined by the Chair. All requests to speak will be taken until 5 minutes after the staff's presentation. Written public comments can be submitted in advance to UAC@PaloAlto.gov and will be provided to the Council and available for inspection on the City's website. Please clearly indicate which agenda item you are referencing in your subject line.

PowerPoints, videos, or other media to be presented during public comment are accepted only by email to UAC@PaloAlto.gov at least 24 hours prior to the meeting. Once received, the Clerk will have them shared at public comment for the specified item. To uphold strong cybersecurity management practices, USB's or other physical electronic storage devices are not accepted.

Signs and symbolic materials less than 2 feet by 3 feet are permitted provided that: (1) sticks, posts, poles or similar/other type of handle objects are strictly prohibited; (2) the items do not create a facility, fire, or safety hazard; and (3) persons with such items remain seated when displaying them and must not raise the items above shoulder level, obstruct the view or passage of other attendees, or otherwise disturb the business of the meeting.

TIME ESTIMATES
Listed times are estimates only and are subject to change at any time, including while the meeting is in progress. The Commission reserves the right to use more or less time on any item, to change the order of items and/or to continue items to another meeting. Particular items may be heard before or after the time estimated on the agenda. This may occur in order to best manage the time at a meeting to adapt to the participation of the public, or for any other reason intended to facilitate the meeting.

CALL TO ORDER 6:00PM – 6:05PM

AGENDA CHANGES, ADDITIONS AND DELETIONS 6:05PM – 6:10PM

The Chair or Board majority may modify the agenda order to improve meeting management.

PUBLIC COMMENT 6:10PM – 6:25PM

Members of the public may speak to any item NOT on the agenda.

APPROVAL OF MINUTES 6:25PM – 6:35PM

1. Approval of the Minutes of the Utilities Advisory Commission Meeting Held on July 9, 2025

UTILITIES DIRECTOR REPORT 6:35PM – 6:50PM

NEW BUSINESS

2. Discussion of Gas Utility Transition Study Scoping; CEQA Status - Not a Project **DISCUSSION**: 6:50PM – 7:50PM

3. Recommend that the City Council Approve Amendment No. 1 to the Memorandum of Agreement Between California Alternative Energy and Advanced Transportation Financing Authority and City of Palo Alto to Extend the Term of the Agreement from Two Years to Five Years and Continue Offering the GoGreen Home Energy Financing Program for Palo Alto Residents **ACTION:** 7:50PM – 8:30PM

FUTURE TOPICS FOR UPCOMING MEETINGS

COMMISSIONER COMMENTS AND REPORTS FROM MEETINGS/EVENTS

ADJOURNMENT

SUPPLEMENTAL INFORMATION

The materials below are provided for informational purposes, not for action or discussion during UAC Meetings (Govt. Code Section 54954.2(a)(3)).

INFORMATIONAL REPORTS

12-Month Rolling Calendar

Public Letter(s to the UAC

PUBLIC COMMENT INSTRUCTIONS

Members of the Public may provide public comments to teleconference meetings via email, teleconference, or by phone.

1. **Written public comments** may be submitted by email to UAC@PaloAlto.gov.
2. **Spoken public comments using a computer** will be accepted through the teleconference meeting. To address the Council, click on the link below to access a Zoom-based meeting. Please read the following instructions carefully.
    - You may download the Zoom client or connect to the meeting in- browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30 , Firefox 27 , Microsoft Edge 12 , Safari 7 . Certain functionality may be disabled in older browsers including Internet Explorer.
    - You may be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
    - When you wish to speak on an Agenda Item, click on "raise hand." The Clerk will activate and unmute speakers in turn. Speakers will be notified shortly before they are called to speak.
    - When called, please limit your remarks to the time limit allotted. A timer will be shown on the computer to help keep track of your comments.
3. **Spoken public comments using a smart phone** will be accepted through the teleconference meeting. To address the Council, download the Zoom application onto your phone from the Apple App Store or Google Play Store and enter the Meeting ID below. Please follow the instructions B-E above.
4. **Spoken public comments using a phone** use the telephone number listed below. When you wish to speak on an agenda item hit *9 on your phone so we know that you wish to speak. You will be asked to provide your first and last name before addressing the Council. You will be advised how long you have to speak. When called please limit your remarks to the agenda item and time limit allotted.

CLICK HERE TO JOIN **Meeting ID: 966 9129 7246 Phone:1-669-900-6833**

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CITY OF PALO ALTO

Utilities Advisory Commission
Staff Report

From: Alan Kurotori, Director Utilities
Lead Department: Utilities

Meeting Date: September 3, 2025
Report #: 2508-5110

TITLE
Approval of the Minutes of the Utilities Advisory Commission Meeting Held on July 9, 2025

RECOMMENDATION
Staff recommends that the Utilities Advisory Commission review and approve July 9, 2025 minutes.

Commissioner _____ moved to approve the draft minutes of the July 9, 2025 meeting as submitted/amended.

Commissioner _____ seconded the motion

ATTACHMENTS
Attachment A: July 9, 2025 Draft Minutes
Attachment B: Commissioner Metz Comments on Item #5 From July 9, 2025 UAC Meeting

AUTHOR/TITLE:
Alan Kurotori, Director of Utilities
Staff: Kaylee Burton, Utilities Administrative Assistant

UTILITIES ADVISORY COMMISSION MEETING
MINUTES OF JULY 9, 2025 SPECIAL MEETING

CALL TO ORDER

Chair Scharff called the meeting of the Utilities Advisory Commission (UAC) to order at 6:02 p.m.

Present: Chair Scharff, Vice Chair Mauter, Commissioners Croft, Gupta, Metz, Phillips, and Tucher

Absent: None

AGENDA REVIEW AND REVISIONS

None

ORAL COMMUNICATIONS

Jeff Hoel asked if the permit had been granted for the hut going in at the Colorado Substation for the FTTP project, and if not, when will it be granted and what was causing the delay. Mr. Hoel visited the hut site and wondered who was responsible for moving the breakers, transformers, and canisters before the concrete slab is poured for the hut, when it will happen, and when the hut can be shipped from South Dakota.

Becky Sanders, Co-Chair of Palo Alto Neighborhoods (PAN) mentioned that she and other PAN members followed up on their emails sent to the paloalto.gov email address but discovered that the UAC did not receive the messages, which upon further investigation were found in the spam folder. Ms. Sanders wanted to know when this issue is resolved and would appreciate it if commissioners would check their spam folders to ensure they were not missing anything from the public.

Chair Scharff was unaware of any email issues and will check his spam folder.

APPROVAL OF MINUTES

ITEM 1: ACTION: Approval of the Minutes of the Utilities Advisory Commission Meeting Held on May 7, 2025

ACTION: Commissioner Croft moved to approve the UAC meeting minutes for May 7, 2025, as submitted.

Vice Chair Mauter seconded the motion.

The motion carried 7-0 with Chair Scharff, Vice Chair Mauter, and Commissioners Croft, Metz, Phillips, Gupta, and Tucher voting yes.

ITEM 2: ACTION: Approval of the Minutes of the Utilities Advisory Commission Meeting Held on June 4, 2025

ACTION: Commissioner Metz moved to approve the UAC meeting minutes for June 4, 2025.

Commissioner Croft seconded the motion.

Commissioner Gupta wanted the highlighting of the word "Daniel" removed from the minutes.

The motion carried 6-0-1 with Chair Scharff, Vice Chair Mauter, and Commissioners Croft, Metz, Gupta, and Tucher voting yes. Commissioner Phillips abstained.

UTILITIES DIRECTOR REPORT

Utilities Director Alan Kurotori announced the approval of an exchange agreement with Midpeninsula Open Space District allowing the City access to complete the utility undergrounding project in the foothills. Midpeninsula, AT&T, and the FAA are among the handful of customers remaining to be undergrounded in the foothills.

Staff and City Council have been looking to purchase a property within Palo Alto for storage. In the past, property was leased in Mountain View to store items for the AMI project. The Utility needed enclosed storage for transformers and other equipment for the upcoming grid modernization project.

Mr. Kurotori noted that the One Big Beautiful Bill Act passed by Congress would result in a significant impact to tax cuts, renewable energy and EV credits, and energy efficiency among other things. Staff will take this into account in addition to the impact of tariffs when considering future power purchase agreements.

The water utility is sending out its 2024 Consumer Confidence Report.

The MSC Open House will be held on Saturday, July 26. Mr. Kurotori was one of the judges for the 4th of July Chili Cook-Off and saw a good turnout for the event.

NEW BUSINESS

ITEM 3: Design Principles for Gas and Electric Rates

Karla Dailey, Assistant Director of Utilities Resource Management Division, sought the UAC's feedback on the proposed design principles meant to apply broadly to gas and electric rates. Ms. Dailey stated it was best practice to start with design principles but this step was skipped in the 2025 COSA. On June 16, Council took action to raise gas rates the same percentage for all customer classes effective July 1, which will serve as the baseline for this new analysis. COSAs allocate costs fairly and ensure the rates are defensible and there is no cross-subsidizing between customer classes. When talking about gas rates, this only applied to distribution rates. The gas commodity cost was passed through to all customer classes based on market prices each month. The cap-and-trade climate credit for the 2025 COSA was not part of tonight's discussion nor will staff propose a climate credit in the upcoming analysis but it was possible for the Council or UAC to consider a climate credit in the future.

Commissioner Tucher asked staff to comment on the rationale behind the Finance Committee's and Council's motions to remand this back to the UAC. Ms. Dailey mentioned that staff's and the UAC's proposal had been to accept the 2025 COSA and use some cap-and-trade funds to provide a climate credit to residential customers. The Finance Committee wanted to keep the current rate structure but use a climate credit for small and medium commercial customers to help offset the impact of not accepting the 2025 COSA. The Council agreed with the Finance Committee's recommendation regarding the rates but voted to not apply a climate credit to small and medium commercial customers. During Council's discussion, several council members voiced feeling uncomfortable with approving a climate credit based on the understanding that staff would obtain a new COSA in a relatively short timeline.

Utilities Director Alan Kurotori mentioned the Finance Committee wanted to use non-rate revenues first and then potentially supplement with cap-and-trade funds. As part of the direction from Council, staff's intent was to bring this report and expedite the work for a 2026 COSA to bring to the UAC and Council for action by the beginning of calendar year 2026.

Lisa Bilir, Utilities Senior Resource Planner, presented the 4 design principles for gas and electric rates:

Design Principle 1: Evaluate rates to ensure they are cost based. The goal of any COSA is to develop accurate and equitable allocation of costs. All other rate design considerations are subsidiary to Design Principle 1.

Design Principle 2: Evaluate rate schedules for continuation or redefinition. The 2026 Gas COSA will evaluate whether Utility Rate Schedule G-2 (small commercial and master-metered residential customers) should be subdivided or otherwise redefined to allocate costs within that customer class. Study the impacts on customers who use different amounts of energy or have different meter configurations or meter capacities.

Design Principle 3: Determine the proper allocation of fixed and variable costs and how those can be implemented in various rate designs. Gas and electric utilities incur costs for billing, metering, and system maintenance for each customer. Consider cost allocation and collection

among customer classes using the City's revenue requirements and industrywide best practices. Examine appropriate rate designs, including volumetric, tiered, flat, and demand-based charges, to determine which rate deign best recovered costs for each customer class.

Design Principle 4: Review non-rate revenue sources that may be available for rate discounts or rebates. Staff will work with the City's consultant to identify and evaluate available non-rate revenue sources for each of the utilities.

The proposed design principles for gas and electric rates will be presented to the Finance Committee on August 5, 2025, and to Council for acceptance on August 18, 2025. Staff planned to use the design principles accepted by the Council for the development of a gas COSA. The gas COSA study and proposed gas rate changes will be brought to the UAC in September of 2025, the Finance Committee in October of 2025, and the Council in November of 2025, for the rates to become effective January 1, 2026.

Public Comment:

1. Hamilton Hitchings believed that staff's July 9 draft of the design principles did not address the COSA's failure to deliver rate stability, transparency, and climate action. The Palo Alto Neighborhoods' June 22 letter to the UAC provided a detailed summary of the Council's concerns along with PAN's annotations of 5 points. (1) A proposed 49 percent increase in Tier 1 gas local distribution rates, despite an overall 8.7 percent distribution rate increase. (2) Lack of explanation of what asset allocation methodology changes were made, why, and how much was the impact. (3) Using cap and trade and LCFS funds for gas rebates instead of their intended purpose of permanent greenhouse gas reduction. (4) Shifting 54 percent of demand-related costs onto residential Tier 1 customers in the draft of the 2025 COSA moved the burden from high-usage Tier 2 households to basic users and penalized the City's most efficient gas customers. (5) Replacing the Net Plant methodology in place when voters approved Measure L. California Proposition 26 does not require utility rates to be based on the most accurate cost allocation (a subjective and unattainable standard), only that rates be reasonably related to the cost of providing service. Mr. Hitchings strongly urged the UAC to avoid creating winners and losers by shifting costs based on different theories about who should pay for past expenses, which would result in creating political problems for the City Council. Mr. Hitchings supported Commissioner Gupta's proposed revisions to staff's Design Principles 1 and 4.
2. Jeff Levinsky shared the concerns expressed by the Council about the recent gas rate proposal. Mr. Levinsky believed the 4 proposed design principles in tonight's staff report did not address some core issues and will lead to more controversy, wasted staff time, and overspending on consultants. It was not apparent why the 2025 gas COSA shifted cost from businesses to residents. Page 24 of the COSA offered 5 drivers for the shift but did not include the dollar amounts associated with each driver. The first driver stated distribution revenue had risen by 171 percent since 2019-2020 but that did not explain why residents should be charged more than businesses. The third driver said the shift of cost to residents stemmed from higher meter and billing costs. Mr. Levinsky could not

find enough details on the meter cost but he calculated the increase due to higher billing costs was $30,000/year to G-1, roughly $1/year per residential customer. Knowing which driver was responsible for most of the proposed cost shift would help in prioritizing them. Mr. Levinsky did not have time to explain his problems with Drivers 2 and 4. Driver 5 seemed to argue there should not be a rate shift to G-1 and G-3 customers. Levinsky urged the UAC to add a design principle on transparency and proposed the following elements a COSA should provide: (1) The reason for each proposed rate change. (2) The magnitude of that change in dollars. (3) Enough information to trace the calculations. (4) Alternatives.

Commissioner Gupta previously submitted his thoughts in a memo. Commissioner Gupta thought the UAC was at a disadvantage when the gas COSA first came before the Commission. The 2025 gas COSA yielded a 49 percent increase on Tier 1 residential distribution rates and penalized conservation. The significant methodological changes from the 2020 COSA were not detailed in the COSA report, discussion in the budget subcommittee, or the UAC meeting thereafter. The UAC was not made aware of the City's policies in Resolutions 9487 and 10077 that called for the use of cap-and-trade funds to reduce greenhouse gas emissions permanently rather than in the form of rebates. The UAC was under the mistaken impression that they had to approve the consultant's findings. In other Cities, COSAs were often revised, rejected, or repealed, especially when a COSA faced public opposition or if flaws were revealed in the COSA. Proposition 26 did not mandate a timeline in which to complete or approve a new COSA. Our current COSA was updated in 2022. The Finance Committee asked critical questions about the 2025 COSA that remain unanswered. Commissioner Gupta quoted Councilmember Burt's question on whether the rate hikes for some residents were due to a different consultant's viewpoint and Councilmember Reckdahl's comments about not understanding how the accounting could be so different and not being convinced the new COSA was correct. Commissioner Gupta cited Councilmember Reckdahl's and Councilmember Burt's hesitancy to use cap-and-trade funds for gas rebates.

The City Council remanded the COSA back to the UAC for detailed analysis but Commissioner Gupta noted the UAC was being asked to approve new design principles tonight that will start a new COSA process without having first done the work that the Council requested. There was not a clear understanding or justification of the methodological changes from the 2020 COSA. Commissioner Gupta urged transparency and to ensure any changes were justified and in line with the City's values. The City's decisions impact our residents and our climate goals. The proposed design principles contained essentially the same inputs as before, which would result in repeating the past mistakes. Commissioner Gupta proposed amendments to the design principles. The amendments were endorsed by Carbon Free Palo Alto, Palo Alto Neighborhoods, Friends of the Climate, and many residents. Commissioner Gupta stated his proposed changes would promote transparency, be climate-minded within the reasonable cost framework required by Proposition 26, and eliminated consideration of subsidizing gas using funds meant to reduce greenhouse gas emissions. Commissioner Gupta thought Carbon Free Palo Alto raised an interesting point about declining the proposed COSA and waiting about 2 years until the S/CAP Committee completed their study on the cost to end gas.

Commissioner Phillips said the COSA had enough information to figure out the reallocation of costs. Commissioner Phillips believed the average-and-excess methodology was applied to equipment in the general plant, which composed a large fraction of distribution cost, so that shifted cost from the relatively flat commercial to peaky residential. Since 2010, our gas usage had been declining, which meant our infrastructure was not being fully used. Therefore, using the excess or peak to allocate extra cost to a particular group was not justified. Commissioner Phillips noted these methodologies were usually applied in growth scenarios but did not make sense in a scenario where usage was shrinking. The proposed design principles included the idea that there was an accurate or best practice way of doing this when in reality it was a fundamentally judgmental allocation. Commissioner Phillips will not support a new COSA that uses an average-and-excess methodology to allocate costs because he felt the methodology was fundamentally flawed and unfairly penalized one group by assigning costs to customers that were not causing additional costs and the costs were incurred long ago. Commissioner Phillips did not feel strongly about the proposed design principles and thought some of them added a burden for staff.

Chair Scharff clarified that the Council wanted the UAC to comment on the design principles but he did not think the UAC could make the determination to not support the new COSA until design guidelines were set on how the COSA should be developed. Chair Scharff acknowledged the question of transparency and understanding of what goes into a COSA, and noted it had always been a black box.

Commissioner Croft's impression of the design principles was that they were very vague and it did not give her a lot of confidence that anything would come out differently. Commissioner Croft was in support of making the design principles more specific. Commissioner Croft voiced that she lacked a full understanding of the COSA methodology, what was different versus the last COSA, and there were no computations to support the various levers that were claimed to have been changed in the new COSA. The UAC was told that residential gas use was decreasing yet the Tier 1 estimate forecast was higher, so Commissioner Croft wondered if gas use was increasing, which seemed unlikely. With regard to the public commenter's 4 proposed elements, Commissioner Croft was happy to work on building in specific elements of transparency if her fellow commissioners were in support. Commissioner Croft liked the Design Principle that stated COSAs should examine all appropriate rate designs.

Vice Chair Mauter asked if the design principles in staff's proposal would lead to separate gas and electric rate COSAs or a joint COSA looking at gas and electric rates as a single energy basis for cost allocation.

Ms. Dailey answered the gas and electric COSAs were separate at this time; however, the guiding principles would apply to both processes. We are not undertaking an electric COSA now, only a gas COSA.

Chair Scharff felt that the design principles should only apply to gas. Chair Scharff thought electricity use was rising and there was less gas usage. In comparing against the 2017 COSA guiding principles, Chair Scharff did not believe the proposed guiding principles would make any difference because they were vague and Chair Scharff does not think that was what Council wanted. The Council requested the UAC to review the COSA and in the interest of transparency, Chair Scharff suggested that the UAC form a subcommittee to meet with the consultant, monitor, and report back to the full Commission to discuss inflection points.

Commissioner Tucher said Chair Scharff's idea was interesting but would be a months-long process to work iteratively with staff and the consultant. Staff had a tight timeline to deliver a COSA and proposed rates for Council adoption by the end of the year.

Chair Scharff stated the consultant could prepare the first draft and then meet with the subcommittee. Chair Scharff invited staff to suggest a process that worked for them and allowed UAC input.

Assistant City Attorney Amy Bartell explained that the design principles were vague and applied to gas and electric because Proposition 26 simply said rates needed to be cost-based. Proposition 26 did not provide guidance about cost allocation methodologies, how to divide customer classes, or what to do about climate change. Cities could have additional policy considerations but if their rates were challenged, a Court will determine if it was a cost-based rate structure. Adding new requirements added elements that were subject to interpretation, making it challenging for the ratemaking consultant and staff to comply with the law, which resulted in more money, time, and potential problems with defensibility.

Commissioner Phillips stated the UAC could recommend reverting back to our previous cost-based COSA if they desired.

Ms. Bartell pointed out the problem with using an old COSA was that things change over time, such as differences in customer characteristics, system characteristics, capital programs, and revenue requirements. COSAs reflected the current cost to serve and provided a reasonable estimate of the cost to provide service to customers from here on out, which shifts over time.

Commissioner Gupta noted COSAs do not have expiration dates nor was it mandated how often a COSA needed to be updated before it was considered too old. Generally, it was probably time for a new COSA if it had been more than 5 years or you had a big system change or a huge change in your load. Commissioner Gupta thought it may be fine to use the 2020 methodology if you could explain why it was still applicable based on today's scenario.

Commissioner Phillips wanted confirmation of his belief that the change was not inspired by any of the things Ms. Bartell mentioned, rather the change was inspired by the use of a different mathematical formula.

Ms. Bartell felt the best way to protect the City from Proposition 26 challenges was to update the COSA based on today's inputs and be able to explain it in a way that laypeople could understand.

Ms. Dailey noted a big reason why staff felt like we needed to do a new COSA was because of inflation and increased costs in the past 5 years, and the underlying costs in the different buckets increased at different rates; therefore, you cannot simply raise rates by the same amount across all customer classes.

Vice Chair Mauter believed there was a fundamental need to use different methodological approaches for the gas and electric utilities to reflect the status of gas shrinking and electrical growing. Vice Chair Mauter expressed her concern that the proposal of the UAC to form a subcommittee risked usurping staff's role in overseeing COSAs but she thought the UAC could clearly articulate to staff what the Committee wanted to explore as a series of methodological and value-based inputs to the process. Staff could then bring to the Budget Committee and the UAC a variety of scenarios and sensitivity analyses. Vice Chair Mauter wanted to explore the following: The need for greater tier differentiation, incentivizing lower gas usage from a climate perspective, and using a greenhouse gas subsidy allocation to offer rebates to customers who fully or almost fully electrify and were very low natural gas users. Vice Chair Mauter wanted the potential COSA to explore whether additional tiers could be added to reflect desired electrification such as heat pump water heater adoption, heat pump for space heating or thermal management.

Utilities Director Alan Kurotori reminded the UAC that the Budget Subcommittee typically dissolved at the end of the fiscal year. The UAC could form a subcommittee defined strictly toward this gas COSA. Chair Scharff agreed.

Commissioner Gupta thought it was a good idea to form a UAC subcommittee or have the budget subcommittee work on the COSA closely with staff, which would help promote transparency and understanding of the methodology.

Vice Chair Mauter questioned what preserving rate structures meant and if it was legally allowable.

Ms. Bartell explained that Proposition 26 talked about reasonable costs. In Design Principle 1, Commissioner Gupta proposed adding the following language: Evaluate rates to ensure they cover reasonable costs while preserving the rate structure. Ms. Bartell noted that preserving the rate structure could be interpreted as keeping what we have now. Ms. Bartell thought the UAC would want to evaluate the rates to ensure they recovered the reasonable cost to provide service and therefore would not want to be locked in a design principle that was wordier and more detailed.

Instead of a lengthy document, Vice Chair Mauter wanted concise, general design principles to avoid legal challenges.

Commissioner Gupta wanted to ensure that the language in the design principles was well defined, which was allowable as long as the language was compliant with Proposition 26. Commissioner Gupta clarified the red portions were his amendments, about 1 or 2 paragraphs. The black portions were proposed by staff. Commissioner Gupta pointed out that the staff proposal used the words "accurate and equitable" without definition but those words were not used by Proposition 26. Commissioner Gupta wanted to change the design principles because changing the inputs that go to the consultant will result in different outputs.

Assistant City Manager Kiely Nose thought it was fair for the UAC to request to see a reconciliation of the new allocation methodology compared to the prior but the design principles were not intended to be specifically for the prospective COSA.

Chair Scharff inquired which COSA would be kept. Chair Scharff wanted a list of what other Cities have put in their design principles.

Ms. Bartell said it was okay to use words such as equitable, reasonable, and fair. Palo Alto can add granular design principles but it will impact the length of the process, the restrictions on staff and the ratemaking consultant, and the City potentially having to defend the design principles if challenged. Ms. Bartell stated the design principles could include looking at various rate schedules (tiers, flat rate, TOU) as well as fixed and variable costs. Design principles that talk about conservation and efficiency have to comply with Proposition 26, which was difficult. Ms. Bartell had never seen another City do design principles, possibly due to concerns about attracting legal attention.

Mr. Kurotori felt it was beneficial for the UAC to describe the areas for the subcommittee to investigate. For example, consider being more granular on the customer classes for multifamily residential within the confines of cost-based rates.

Vice Chair Mauter reiterated her earlier comment about having a different class or tier and offering a carbon subsidy to help offset costs for ultra-low gas consumers with mostly electrified homes. Consumers may have an outdoor gas grill because they do not want to buy propane or may have a gas fireplace for backup heating during electric power outages. Vice Chair Mauter was concerned that large rate increases had the possibility of creating disincentives to electrification.

Ms. Dailey said staff can look at ultra-low gas users. Ms. Dailey wanted commissioners to keep in mind that many times the customers who use a lot of gas were low income and some customers have many people living in a household and therefore have higher energy use.

Commissioner Croft supported the addition of the following design principle: Any methodological change(s) must be explained and either shown side-by-side or computationally against what they were in the previous COSA.

Ms. Bartell pointed out the difficult position that the City Council would be put in if they were brought 3 different methodologies with 3 different rate structures, for example, and trying to explain why all the alternatives were reasonable and valid. In years past, the process focused on 1 methodology and 1 rate structure and its justification. Customers will not be satisfied with every alternative because there will be winners and losers. Ms. Bartell cautioned staff, the ratemaking consultant, and the Commission to be careful about bringing too many options. In theory, there should be 1 valid, reasonable option for the current scenario.

Ms. Nose noted that when staff brings forward multiple options on a policy matter before Council or the UAC, oftentimes the Commissioners or Council Members want to combine portions from each option to create a new option.

Staff recommends the UAC recommend that the Council accept the Design Principles for gas and electric rates in alignment with Proposition 26.

Design Principle 1: Evaluate rates to ensure they are cost-based.

Design Principle 2: Evaluate rate schedules for continuance or redefinition.

Design Principle 3: Determine the proper allocation of fixed and variable costs and how those can be implemented in various rate designs.

Design Principle 4: Review non-rate revenue sources that may be available for rate discounts or rebates.

ACTION: Vice Chair Mauter moved to approve the design principles as presented by staff, and that the UAC form a subcommittee to work with staff and the consultant to explore and ensure transparency around the implementation of those design principles in the calculation of a gas-specific COSA, and the subcommittee will have regular check-ins with the full UAC body.

Chair Scharff seconded the motion.

Commissioner Phillips preferred having no design principles because he did not think they added anything substantive to this process. Commissioner Phillips did not like the use of the wording “accurately and equitably” in the design principles, which were not in Proposition 26.

Chair Scharff and Commissioner Metz inquired if design principles were needed.

Ms. Bartell answered no further design principles were needed. It was the UAC’s decision to have or not have design principles, either way was legally okay. Proposition 26 was the main design principle.

Vice Chair Mauter wanted to change her motion.

Ms. Bartell said the proposed subcommittee could either be set up as a Brown Act body or a non-Brown Act body. A non-Brown Act body needed to be temporary, have a defined single purpose, and a limited time period.

Chair Scharff stated the subcommittee will be a non-Brown Act body composed of 3 commissioners who will have regular check-ins with the UAC. The subcommittee will work with the consultant and staff. The subcommittee will not make decisions. Decisions will be made transparently in public UAC meetings.

Commissioner Gupta suggested the first question for the subcommittee be whether or not a new COSA was needed. In 2 years, S/CAP will provide a report on the cost of retiring the gas utility and at that time it may make more sense to do a new COSA.

Vice Chair Mauter sought advice on if it was legally risky to ignore a more recent COSA.

Ms. Bartell stated Proposition 26 and the court cases do not give an answer on what to do if you have 2 COSAs. Ms. Bartell recommended updating the COSA, which was the best way to protect the City against Proposition 26 challenges. It had been 6 years since the last COSA, so it was time to take a fresh look.

Ms. Nose mentioned it was Council's direction to relook at the assumptions in the 2025 data-driven COSA and make sure the assumptions were most accurately aligned. Council did not say to shelve the 2025 COSA. Council wanted new rates effective in January because of the time and associated risks. If nothing was done, rates would be based on the 2020 COSA with general cost escalations associated with the system.

ACTION: Vice Chair Mauter motioned to move forward with Proposition 26 as our design principle, and to form a non-Brown Act subcommittee to work with staff and the consultant to develop a new 2026 gas COSA and provide regular report-outs to the full UAC.

Commissioner Phillips seconded the motion.

Commissioner Gupta emphasized that this motion did not address Council's request for the UAC to figure out what went wrong with the old process, and make adjustments to the COSA design process and ensure it is more climate friendly before starting a new consultant process. Commissioner Gupta said the UAC had the opportunity to guide the next COSA design process by changing the design principles to consider climate effects, ensure cap-and-trade funds do not subsidize gas, and consider including the 4 principles suggested during public comment.

Motion carried 6-1 with Chair Scharff, Vice Chair Mauter, and Commissioners Croft, Metz, Phillips, and Tucher voting yes. Commissioner Gupta voted no.

Chair Scharff asked who would like to be on the subcommittee.

Part of the reason Commissioner Tucher was willing to be on the subcommittee was to ensure transparency and an explanation for the numbers the COSA gives. Commissioner Phillips, Croft and Commissioner Gupta wanted to be on the subcommittee. Chair Scharff will select the subcommittee members.

Ms. Bartell left the meeting.

Chair Scharff expressed his appreciation for Commissioner Gupta's memo.

ITEM 4: Approval of a Third Phase Agreement with Northern California Power Agency for the Purchase of Battery Energy Storage Capacity from Trolley Pass Project LLC, Over a Term of up to 20 Years for a Total Not-to-Exceed Amount of $161.7 Million; CEQA Status: Not a Project Under CEQA Guidelines Section 15378(a)

Utilities Director Alan Kurotori mentioned it was staff's intent to bring two contracts to the UAC but unfortunately the project with solar and battery did not go through, as mentioned in detail in the staff report.

Jim Stack, Senior Resource Planner, delivered a presentation. If approved, the Trolley contract will be the City's first energy storage agreement. In 2024, Northern California Power Agency (NCPA) issued an RFP for renewable energy and storage contracts, resulting in almost 30 proposals for solar and/or storage resources but no baseload renewables or wind as Staff had hoped to see. After the evaluation process, Palo Alto considered 3 proposals but 2 fell away. Palo Alto has had a 12 percent electric load growth since hitting the bottom during COVID from 2022 through 2024. Palo Alto has had some data centers come in. Staff projected the load to continue increasing due to electrification and additional data center projects. Some legacy contracts signed between 2005 and 2010 will expire in the coming years. The Independent System Operator has an extensive backlog of resources trying to get onto the grid. The interconnection timeline takes 5 to 6 years from when a project joins the interconnection queue to coming on line and beginning operation, which was creating challenges for the industry. The federal budget bill passed last week created challenges especially for solar and wind resources by eliminating available tax credits within the next year and adding uncertainty for other resources around provisions that affect whether tax credits can be utilized by projects. A lot of solar and storage components come from countries heavily impacted by tariffs.

Commissioner Tucher questioned if the interconnection timeline was trending worse and if it impacted whether or not Palo Alto wanted to lean more toward battery storage, if federal policy changes would result in more expensive pricing, and if Palo Alto sought out the RFPs. Commissioner Tucher was confused by the link in the staff report to a 2017 or 2019 study that was unfavorable on battery storage.

Mr. Stack explained that all the proposals came into NCPA and were available to all NCPA members to pursue. Palo Alto was almost at the end of contract negotiations on a solar and

storage project but Palo Alto and other NCPA members were not willing to accept the terms that were proposed about 2 weeks ago to share risk due to federal uncertainty, interconnection delays creating uncertainty about when the project will come online, and the little remaining available tax incentives created uncertainty for the sellers to obtain financing. Mr. Stack thought Commissioner Tucher was referring to the 2018 Integrated Resource Plan that recommended adding storage to the portfolio in the late 2030s or early 2040s. At the time the study was done, storage prices were not very competitive and market prices were less favorable because there was less solar on the grid. A lot more solar has come on the grid in the last few years, which has exacerbated the duck curve and made storage more financially attractive.

Mr. Kurotori noted that utilities were now finding it favorable to enter into storage agreements because the economies have changed. All the major NCPA members were joining into this Trolley storage project because they found it favorable.

Mr. Stack displayed load growth projections through 2045. The actual load roughly matched the load growth projections presented during the IRP process in 2023.

Commissioner Gupta recalled staff previously presented other load growth projections with wide error bars and the maximum load growth projection went off the chart, and he wondered if today's projection was staff's revised understanding of load growth.

Mr. Stack stated that a high-load scenario was evaluated when pursuing the second transmission line to show ISO that Palo Alto's potential for significant load growth justified the new transmission project, so the UAC might have seen a higher projection in that presentation. The higher load line was a sensitivity case that reflected the possibility of getting a significant amount of new data center growth and more aggressive electrification whereas the load growth projections on today's slide depicted the expected case. There was a lot of uncertainty about what the load will be in 2030 or 2040, so staff was tracking this very closely and continuing to revise the projections.

Mr. Stack said the Trolley storage project was an energy storage agreement between Aypa and NCPA for ~320 MW BESS. Trolley was one of several storage resources that Aypa was developing in Southern California. Trolley will be a ~400 MW project consisting of 4-hour energy storage. The NCPA members that proposed signing up for shares included Palo Alto for 50 MW, Santa Clara will be the majority stake in the project at about 200 MW, and Lodi, Redding, and Alameda will also receive shares. It was a 20-year contract term projected to start in June of 2029. The negotiated contract price was $12.71/kW-month. Aypa (as most sellers in the market) negotiated flexibility with the contract price. If Aypa's costs increase due to tax law changes, supply chain issues, or tariffs, Aypa has until July 2026 to come back and receive a 6 percent price increase after going through an audit process by an independent evaluator to verify the cost increases were attributable to the allowed reasons in the contract (tax law changes, supply chain issues, or tariffs).

The contract will allow Palo Alto to cycle the battery up to 1½ times per day as long as it averages no more than 1 cycle per day over the course of the year. The battery can be charged up to 4 hours and discharged up to 4 hours but does not have to be all 4 hours at once. Storage resources and RA capacity resources were expressed typically in dollars per kilowatt-month because they do not charge on the energy going in our out. It can be thought of as leasing the battery. Palo Alto would pay a flat rate per month based on the capacity we signed up to lease from the seller. Palo Alto decides how much of our contracted capacity we use, then we pay for the energy we charge the battery with, and receive revenue for the energy we discharge to the grid.

Commissioner Metz wanted to confirm if this contract meant that Palo Alto would pay $12.71/kW-month multiplied by 50,000 kW, pay for the energy we put into storage, and pay transmission charges to get the energy from storage in Southern California to Palo Alto. Commissioner Metz wondered if there was any concern about congestion with the battery being located far away.

Mr. Stack confirmed that Palo Alto would pay $12.71/kW-month multiplied by 50,000 kW under the proposed contract terms. Palo Alto pays transmission costs on the load we bring in through our Citygate connection. Palo Alto does not pay transmission for any of its resources on the grid. This storage resource will help alleviate congestion because it is located in San Bernardino County where there is a lot of solar development, which results in very low prices during the middle of the day and much higher prices at the end of the day.

Commissioner Croft asked if the proposed battery was available now or in the future, if the City or someone else will decide when the battery is charged and discharged, and if this battery storage project had any effect on the way the City purchases its power from the market. Commissioner Croft viewed this contract as an investment in a battery or an arbitrage opportunity. Palo Alto is investing for additional storage to be put on the grid but not to discharge the battery for local power needs. Commissioner Croft inquired if tariffs and taxes could result in more than a 6 percent price risk.

Mr. Stack said NCPA was the scheduling coordinator for this resource, meaning NCPA will make the charging and discharging decisions. This contract was like a hedge against market price risk and an investment in a resource that will be beneficial to the grid and help mitigate the City's price exposure to low midday prices and high evening prices because our portfolio is full of solar resources. Power purchase decisions were independent of battery storage. There will not be a physical connection between this battery resource and the City. This project is 4 years into the future. Aypa has not made any big purchases yet but will probably buy the hardware within the next 2 years. There was still a significant risk around prices. Prices could possibly increase by the time Aypa purchases everything and the 6 percent contract price increase will not be financially feasible for Aypa, and if that is the case, Aypa will come back to NCPA and the participating members to potentially renegotiate a higher rate or walk away.

Commissioner Gupta questioned what the City's financial risk was if Aypa started construction but it failed for some reason or if the organizer defaults.

Mr. Stack replied that Aypa was required to put down a significant deposit, which Mr. Stack thought was about $20 million for NCPA's share of this resource. If Aypa defaulted, Palo Alto could keep their portion of the deposit and use it to sign up for another resource.

Mr. Stack continued his slide presentation. At $12.71/kW-month, a 50 MW share would cost Palo Alto about $7.6 million annually. Staff estimates that this resource would generate an energy value of about $11-13/kW-month by buying at low prices and selling at high prices. This is a fully deliverable resource, meaning it counts toward our Resource Adequacy (RA) compliance needs and has an expected system RA value of $4-11/kW-month. Adding those value streams together and based on the current price, the analysis showed this resource will provide an estimated net value of ~$8/kW-month ($2.8 million per year) to the City.

Mr. Stack displayed a graph of the City's annual load-resource balance for energy through 2045 that depicted the projected load and a higher scenario. Some of the City's contracts for older resources will start expiring and a gap begins to form around 2029 and the gap grows over time. NCPA will issue an RFP for renewable and storage resources probably early next year and Palo Alto will actively participate in that process. Staff learned about other projects that might be available to the City through NCPA members who have contracted for more than they may need, so staff will have discussions with those members. Staff was actively pursuing discussions with some existing suppliers around extending contracts that were slated to expire.

Mr. Stack showed a graph on Average System Capacity Balance (RA balance). Palo Alto has a surplus of RA capacity in its portfolio, although potentially that could change and was one of the reasons this 50 MW slice of the battery project was recommended. Palo Alto might lose RA capacity from its existing portfolio starting in 2027 due to risks from regulatory changes, ISO's day-ahead market structure expanding, and rule changes that might take place with resources that are currently outside the ISO but might become part of the ISO.

Mr. Stack showed a chart of California's projected energy market dynamics through 2050, depicting RA market price projections for a 4-hour battery and a 24-hour resource such as a gas plant or geothermal plant, solar PPA prices, and 4-hour battery storage prices. The slide was created before the recent legislation that impacted solar resources and available tax credits, so the solar prices probably needed to be revised upwards.

The NCPA Commission approved the contract in June of 2025. Participating members were going through their respective approval processes to get this contract signed. Staff will take this to the Finance Committee for their review in August or September of 2025, then to City Council for review in mid-September 2025.

Public Comment: None.

Commissioner Phillips inquired if there was an inflation increase or any other price escalators in the $12.71/kW-month other than the 6 percent potential contract price increase. Commissioner Phillips was in favor of moving forward with this contract.

Mr. Stack responded there was no inflation increase. It was a flat price over the 20-year contract term with the 6 percent being the only potential increase in the contract price.

Commissioner Gupta wondered how this price compared to other battery storage projects and what the rate impact was to CPAU customers if the City agreed to this storage project.

Mr. Stack had seen prices for similar resources typically in the range of $15/kW-month, so this contract compared very favorably to other storage proposals. If the projections were correct, this contract will result in a net benefit of a little less than $3 million to the City and a rate reduction of about 1 percent to 1½ percent.

Commissioner Tucher wanted to hear about how this fits into our battery and storage strategy, will the City do more, and why not invest 10 times as much in battery capacity. Commissioner Tucher wondered if battery storage was in the City's grid modernization plan within the next 5 years. This battery project is far away but grid-scale batteries can be deployed in Palo Alto on our grid.

Mr. Stack said that staff had evaluated storage proposals in the past but had not found them attractive enough or they fell through. Mr. Stack thought this was a big first step in the water, so the City would probably want to see how this played out before jumping further in. If Palo Alto signed up to buy a great amount of storage more than the portfolio needed, it carried the risk of it being seen as speculating.

Mr. Kurotori mentioned that Commissioner Tucher's question will be addressed during the Reliability and Resiliency Plan discussion on looking at local commercial or residential batteries.

Understanding there was capacity available and not wanting to speculate, Chair Scharff wondered why staff chose 50 MW instead of a smaller or larger amount, and what the risks were over the next 5 years. To see if Palo Alto was being too conservative, Chair Scharff wanted to know how Santa Clara's 200 MW compared to Palo Alto's 50 MW on a percentage basis given the size of the Utilities. Chair Scharff inquired when the loss of tax credits will occur, and if this project was likely to get tax credits and thus be cheaper than future projects that will not have tax credits. Chair Scharff asked how much this battery storage would offset the potential loss of RA for hydro.

The contract was not signed yet, so there was flexibility on the total volume the City could commit to. Mr. Stack stated the reason staff recommended 50 MW was because anytime you have a large investment in something where the value is speculative and the future costs of the asset are unknown, you run the risk of prices coming down significantly in 2 or 3 years. Some of the City's early solar PPAs looked like amazing deals but prices dropped in half a few years later.

Another risk is that the City signs this contract and foregoes other opportunities but the resource does not materialize, although the security deposit provides protection it might not be enough to fully replace it with another resource if contract prices for storage have significant increased. Based on Mr. Stack's initial reading of the recently passed legislation, it was highly punitive toward solar and wind but other resources largely kept their tax credits. Mr. Stack thought storage resources were spared from tax credit cutbacks through 2033; however, the legislation included language around foreign entities of concern, which meant the tax credits were in jeopardy if the resources for this project came from China or Russia or certain other countries. Storage resources were heavily involved in the Chinese market. Mr. Stack said the City was estimated to lose about 50 MW of RA from hydro, so this battery storage was a one-to-one replacement based on current RA rules.

Mr. Kurotori stated that Santa Clara's peak was around 760. Santa Clara's RA needs were different than Palo Alto. Santa Clara was much more invested in wind. Palo Alto was heavy in hydro. Santa Clara was heavy in geothermal, which provided 24-hour RA similar to a gas plant. Palo Alto's entire demand was roughly 200 MW. NCPA looks at contracts all the time. A number of NCPA members have selected this project, so Palo Alto was not just leveraging its own expertise but also that of NCPA, Santa Clara, Roseville, Redding, and others. Because of Palo Alto's need to have additional carbon-neutral resources, staff was looking for other solar contracts and anticipated more solar and storage projects coming forward in the next RFP.

Commissioner Croft did a quick search for the biggest battery projects and the results showed Moss Landing at 400 MW and the next biggest was in Australia, so this was a big project. Moss Landing had a high-profile fire recently but Commissioner Croft believed they were back online. Generally, Commissioner Croft supported batteries and believed a lot more battery storage needed to be built. Commissioner Croft questioned who was responsible for the financial risk if something like a fire occurred. Regarding the $2.8 million net value per year, Commissioner Croft asked if staff did sensitivity on the high/low net value.

Mr. Stack stated this contract insulated the City from the risk of fire because the City only paid for capacity that was available to use. If there was a fire and the battery was offline, the City did not have to pay for the period it was offline. Over time, storage resources lose their effectiveness, so we are allowed to run a test of the battery anytime to assess the usable portion of the battery. The contract price applied to the usable portion of the overall capacity, not the full 50 MW share. Regarding sensitivity analysis, staff had ranges on estimates of energy value and RA value with wide error bars. On an expected basis, this contract looked very attractive but there was potential for it to turn upside down.

Vice Chair Mauter commented that we should be thoughtful about the price arbitrage and carbon arbitrage opportunities being misaligned and therefore some of the operational principles of the battery itself.

ACTION: Vice Chair Mauter moved for the UAC to recommend that City Council:

1. Authorize the City Manager, or their designee, to execute a Third Phase Agreement with NCPA to purchase the output of a 50 MW share of a battery energy storage system (BESS) owned by Aypa, over a period of 20 years, at a total cost not to exceed $161.7 million;
2. Authorize the City Manager, or their designee, to execute on behalf of the City all related documents or agreements necessary to administer the Third Phase Agreement that are consistent with the Palo Alto Municipal Code and City Council approved policies, and take all actions to administer the Third Phase Agreement; and
3. Authorize the City Manager, or their designee, to approve and execute amendments to the Third Phase Agreement, as may be required from time to time, so long as the contract price and length of the agreement remain unchanged.

Commissioner Metz seconded the motion.

Motion carried 7-0.

ITEM 5: Status Update on Studies Related to the Electric Utility's Reliability and Resiliency Strategic Plan (RRSP) Strategies 4 and 5 and Request for Feedback on Draft Proposals for Implementation. CEQA Status: Not a Project.

Jonathan Abendschein, Assistant Director for Climate Action, delivered a presentation. This update on the implementation of Strategies 4 and 5 of the Reliability and Resiliency Strategic Plan involved a cost-benefit analysis of the different ways that flexible technologies can provide value and developing programs for consideration. Staff was seeking guidance from the UAC on what programs, if any, to include in the final report on Strategies 4 and 5. The analysis performed to date showed 1 technology package had benefits exceeding costs based on supply and short-term resiliency. Based on the preliminary analysis, there were not strong opportunities to use these technologies to defer distribution investment. Given that the Utility benefits for solar and storage do not exceed the cost, which will worsen as the ITC expires, staff wanted clear guidance on whether and how to pursue solar and storage for long-term resiliency purposes. The preliminary results from the airport microgrid analysis did not look great, so staff was seeking guidance on how and whether to continue pursuing Utility partnership. The study provided insights on when neighborhood-level microgrids might be useful and staff wanted the UAC's feedback on those policies.

Mr. Abendschein reviewed the technologies being studied, which were divided into the following 5 categories. Time of Use (TOU) rates (residential and commercial) can reduce Utility supply cost, have some tangential distribution benefits, and little or no overhead cost. Demand response can reduce utility supply cost but had a lot of overhead cost. Standalone batteries (e.g., ESS, V2G) can reduce utility supply cost, provide short-term resiliency, could defer distribution investment but did not provide long-term resiliency because there was no attached generation. Battery and solar microgrids can reduce utility supply cost, provide short-term resiliency, could defer distribution investment, and provide long-term resiliency. Efficient electrification could defer distribution investment and provides maybe some ancillary benefit in

supply cost savings in peak demand periods. Efficient electrification was usually electrical infrastructure within the home to reduce peak loads and panel sizes, such as circuit sharing, circuit pausers, and smart panels.

Commissioner Gupta asked if the technologies studied were available to the City now or in the future.

Mr. Abendschein answered vehicle to grid (V2G) was assessed in this study and could be available in the near future.

Commissioner Tucher wanted clarification on the difference between short-term and long-term resiliency.

Mr. Abendschein replied short-term resiliency was a few hours, usually within a day. Long- term resiliency was multi-day and multi-week outages such as from natural disasters.

Mr. Abendschein stated the UAC had asked staff to include evaluation of TOU in the scope of this study to understand the potential impact of TOU. The consultant reviewed literature on TOU rate programs and their results but did not model TOU for Palo Alto. Shiva Swaminathan had been working on this and was present in the audience. The consultant (Buro Happold) and their subcontractor (AESC) were available online to answer questions about these studies. In the Buro Happold and AESC research, the literature they reviewed found that TOU resulted in 1 percent to 6 percent peak demand reduction for residential and 1.5 percent to 5 percent reduction in peak demand for commercial. Peak demand reduction was not energy reduction. Energy reduction was typically a lot lower with TOU rates. Some literature specific to California investor-owned utilities (IOU) showed a 4.6 percent peak period load reduction. Most of the population served by IOUs was in the Central Valley or Southern California and therefore had a lot of air conditioning use, so the peak period load reduction was not expected to be as high for Palo Alto. A large differential between on-peak and off-peak rates can drive greater reductions.

Buro Happold analyzed the cost and benefits of the following programs: 250 residential demand response projects, 75 commercial demand response projects, 100 residential battery-only projects, 100 residential V2G projects, 35 commercial V2G projects, 35 commercial thermal storage projects, 35 commercial battery projects, 100 residential solar + battery projects, and 35 commercial solar + battery projects. A chart was shown of the community-level cost versus the supply savings and short-term resiliency benefit for each program type. Only the commercial solar + battery program was found to have benefits that exceeded the cost; however, the cost of solar was expected to rise after the ITC expires.

Since commercial solar + battery was a public-private partnership, Commissioner Phillips asked if it was evaluated as being partly sponsored by the City and partly sponsored by the company.

Mr. Abendschein explained that the charts did not prescribe a specific program design. This was an evaluation of the cost and benefits for the technology from a societal perspective, which

meant it addressed whether the technology would result in a net benefit for the community as a whole. This community perspective was calculated based on the cost of the technology and the savings realized by the entire community in energy supply, including transmission and capacity, as well as short-term resiliency benefits. The evaluation did not include factors that affect only the Utility or the program participants, such as rate designs, incentives, and program costs. The final report will include those other perspectives.

The 2 technologies looked at for deferring distribution investment were residential standalone batteries and residential solar + batteries. The 2 technologies evaluated for long-term resiliency were residential and commercial solar + batteries. Building large-scale commercial solar + batteries in Palo Alto was considered but the challenge was that a commercial property owner would not want to make the investment because of the very long payback period for the cost-benefit ratio, so a public-private partnership was needed. The City may want to pull back on public-private partnership due to the recent passage of changes in federal policy.

Commissioner Metz questioned what was meant by the cost of residential batteries and residential V2G. Commissioner Metz did not think it was the right way to do the math because the battery is in the home and people were buying cars that will eventually be V2G, so it should be an input to the analysis, not a cost.

Mr. Abendschein explained a residential battery had a total capital cost of putting a battery in a home and the benefits were the supply cost savings. Strategy 3 of the RRSP says that when people want to put in V2G, the City will encourage it and make it easier for them, remove barriers, and educate them in ways they can manage that technology to be most compatible with the grid. Staff had been asked to see whether it made sense to provide incentives or spend money on consultants to provide technical assistance, so that was taken into consideration in the evaluation presented tonight. Staff was happy with Strategy 3 but thought that maybe the City should not go further than that.

Since the final report will include the perspective of the consumer and CPAU, Vice Chair Mauter wondered if a graph could depict the provision of very small incentives for residential batteries.

Mr. Abendschein clarified that the implication of the chart presented was that any incentive for residential batteries will raise rates for people broadly and you will not get benefits to repay those incentives. The participant can get a positive cost benefit but everyone else will have to pay for it. A technology may possibly have a free, positive benefit for the Utility but have an extremely negative benefit for the customer who paid a lot of money. A customer who values short-term resiliency can install a residential battery, as long as they operate the battery in a way that is favorable for the Utility, the Utility could see a positive benefit but the customer will never get paid back for their investment.

Commissioner Metz thought the graph looked at reliability and resiliency for CPAU incorrectly. Commissioner Metz believed the correct way to look at benefits was to ask what was CPAU's objectives in reliability and resiliency and how to leverage the homes in Palo Alto that have EVs

with 70 kWh batteries. Commissioner Metz was concerned that people who look at this chart will conclude that things with a low cost benefit were bad ideas but some of them were good ideas if the analysis had correctly assessed their value to achieve CPAU's reliability and resiliency goals and the math was done using cost benefits that accrue to CPAU instead of the community. For example, if V2G provided several tens of megawatts of storage, CPAU could use some of that energy to reduce its peak load and peak capacity, increase reliability, and reduce the duration and frequency of short-term outages. Commissioner Metz felt the information was hard to evaluate because it was very high level and the appendices were high-level summaries, and not enough analysis was provided to know what was being concluded.

Mr. Abendschein explained that the vehicle analysis did not include the cost of the vehicle; it looked at the benefits achieved from installing equipment needed for V2G and getting people to respond to price signals. The analysis found there was not a positive cost benefit. The amount of work to install the V2G equipment and run the program was not worth the effort, so the recommendation was to not act on V2G now. V2G was a very early technology, so staff will monitor it very closely and will act on it in the future if a positive cost benefit is seen. Staff was vetting the results from this study.

Mr. Abendschein continued his presentation. The analysis looked at whether residential V2G or residential solar + storage could defer distribution investment such as transformer upgrade costs for grid modernization. A complex analysis would be expensive because the distribution system varied widely. Therefore, a small, low-cost, preliminary analysis was performed to evaluate whether a more expensive, in-depth analysis was warranted. Based on the preliminary findings, staff recommended against doing further analysis of distribution deferral. The 4 kV to 12 kV upgrade required a different transformer type, so transformers less than 20 years old and not in a 4 kV to 12 kV upgrade area were assessed for deferral. Out of about 1750 transformers, 362 transformers met the criteria for consideration. Most transformers had between 4 and 13 homes connected. The more homes that were on a transformer made it harder to defer an upgrade because of transformer overload as people electrify, regardless of the number of batteries or efficient electrification. About 95 of the 362 transformers had 6 or fewer homes. If 362 transformer replacements were deferred at no additional cost, it would avoid financing about $16 million in up-front capital investment, which was about $1 million per year in avoided debt service (0.55% avoided rate increase). An in-depth analysis may find more savings on feeders or substation equipment but staff did not think the savings would be much.

Over 2400 batteries at a cost of about $1.3 million per year were needed to avoid 362 transformer replacements. Therefore, the cost exceeded the savings, not including program expenses, the cost of microgrid controllers needed to operate the batteries to track distribution transformer loads, and ongoing operational costs to manage those systems; and those systems were not generally in use by Utilities although some may be running pilots. The risk of operational failure was challenging for a small utility. If you defer distribution investment but construction costs increase faster than inflation, then you risk greater cost in the future. The batteries considered in this analysis were the size of a Powerwall battery. Efficient electrification might lower cost but was not anticipated to save enough, was complicated, and

had to be in every home to have an effect, although more analysis was needed. Staff believed it was important to encourage efficient electrification and batteries adopted voluntarily without incentives but staff recommended against committing $150,000 to $200,000 to do a more in-depth analysis of a distribution investment deferral program.

Commissioner Metz inquired if the analysis included the possibility of incentivizing people to restrict their total peak, which can be done by agreeing to limit their main panel size.

Mr. Abendschein said Commissioner Metz' suggestion was efficient electrification, which was not analyzed in depth but thought to be challenging, and not likely to provide enough peak savings and enough people to follow through on those practices to defer transformer investment. Efficient electrification did not seem to be a huge opportunity considering the amount of staff time and effort to run an efficient electrification program and the small potential net benefit.

Commissioner Gupta asked if there was consideration of potential cost saving in avoiding 4 kV to 12 kV upgrades.

Mr. Abendschein replied that the 4 kV to 12 kV upgrade was being done for a different reason other than electrification upgrades, so he was not sure that any of the strategies studied could avoid those upgrades.

Utilities Director Alan Kurotori mentioned that Terry Crowley, Assistant Director of Electric Engineering and Operations, was present to answer the UAC's questions.

Mr. Abendschein presented a slide on solar + storage microgrids. A microgrid provides power generation. You can value a microgrid by comparing the avoided costs of non-local power and a diesel generator. The amount of generation from a solar + storage microgrid is limited by the amount of roof space, the season, and weather. Because the Utility does not have to buy as much power when people install solar + battery microgrids, the City's current policy is to pass on that value to the customer installing the microgrid via Net Energy Metering and the Palo Alto CLEAN feed-in-tariff program but it is not enough to cover the customer's cost of the microgrid. The City does backup power planning for its facilities. The Office of Emergency Services (OES) identifies gaps for critical City services. Sometimes grants are available for putting microgrids in prisons, fire stations, and community centers, for example, but those grants are often targeted toward remote or low-income communities or are funded by Utilities in areas subject to frequent shutoffs to reduce wildfire risk.

The UAC needs to inform staff if there is a desire to include evaluation of potential policy alternatives to provide technical assistance, subsidize, and/or facilitate local solar + batteries. Mr. Abendschein presented the following options of who may participate. Option 1, everybody can participate but this will raise electric rates. Option 2, critical community facilities (e.g. grocery stores) can participate in order to have power in an emergency. Option 3, limited funding for first come first served but this creates an equity issue. Option 4, have a policy for

income-qualified participants. Option 5, customers willing to pay for their solar + battery (reflects current practice). In the past, the Palo Alto CLEAN program paid a higher rate for local generation, which was justified by the savings from lower power and was subsidized by the rest of the community.

Mr. Abendschein stated the consultant performed a high-level analysis on whether an airport microgrid had a positive cost benefit. The preliminary results of the study found very high costs for a power purchase agreement (PPA). The water quality control plant and the airport would need to value resiliency at about $2.5 million per year with the ITC or $5 million per year without the ITC. There were cheaper options for long-term resiliency at the treatment plant. The Utility would not need to do a lot more work on this project. It was up to Public Works to determine their resiliency planning and alternatives but it was very unlikely this project would pencil out.

With the Utility buying power from the airport's microgrid, Commissioner Tucher wondered if the water treatment plant would buy power from the Utility or the airport's microgrid.

Mr. Abendschein explained that when the microgrid is up, the Utility buys the power at an agreed-upon price. The people receiving resiliency services use power from the microgrid when the grid goes down but have to pay an ongoing amount to fund the microgrid. Therefore, the treatment plant would have to pay regardless if the grid is on or off.

Vice Chair Mauter queried if the Regional Water Quality Control Plant had biogas.

Mr. Abendschein answered the Regional Water Quality Control Plant does not have biogas from their treatment processes because they do not have a digester but he thought they were looking at pulling biogas from the landfill.

Vice Chair Mauter noted these analyses were sensitive to the size of the battery but maxing out the size of the battery drove the value down to zero because of the expense of the battery. Vice Chair Mauter did not want to spend a lot of money on consultants to study something that was not likely to pencil out. In Vice Chair Mauter's professional experience, small batteries at wastewater plants can make a lot of financial sense.

Mr. Abendschein mentioned that a secondary consultant was looking at smaller, targeted projects that could make sense for energy arbitrage.

Commissioner Croft went to see the electric planes at the airport. Commissioner Croft asked what was the airport's financial situation, was the airport its own entity or what the airport's relationship was with the City, and did the staff report say the airport might put in a microgrid regardless of whether the Utility participates.

Mr. Abendschein answered the City owns the airport. Kiely Nose, Assistant City Manager, remarked the airport was run through an enterprise fund, similar to a utility. For significant

capital improvement such as the investment in apron repairs, the airport enterprise fund obtained a loan from the General Fund that the airport enterprise fund pays back on a repayment schedule. Chair Scharff stated the airport enterprise fund was run by the City Manager's Office. Ms. Nose said the airport was a City entity, the City was responsible for the airport, and the City managed the airport and its operations. The revenues associated with activities at the airport (rental fees, tie-down fees, hangar fees, etc.) help support the operations at the airport but there was not a large margin. Mr. Abendschein clarified that if the large airport microgrid does not go forward, the airport was doing a separate analysis (not a Utility-driven analysis) to determine whether a small microgrid made financial sense, and then the airport would have to go through the City approval process.

Commissioner Croft asked if the commercial batteries in the cost benefit chart were assumed to be hooked up with an existing commercial solar array. Commissioner Croft noted big solar arrays were visible around town at schools and she saw other solar arrays when she looked aerially but did not know who the companies were. Commissioner Croft wondered if there was an opportunity for the City to put a battery on somebody's existing solar array to achieve the City's reliability and resiliency goal.

Mr. Abendschein pointed out that Slide 6 differentiated commercial standalone battery (without solar) and solar + battery. Rather than have a systematic program, Mr. Abendschein said there may be targeted opportunities to take advantage of existing solar to create resiliency but if the City was making an investment it had to meet the criteria of providing a communitywide benefit. There may be opportunities to put in solar and storage when rebuilding the Cubberley Community Center.

Mr. Kurotori mentioned that staff has had internal discussions about the potential to add storage on parking garages with solar and have resiliency charging.

Public Comment:

1. Bob Lenox, President of the Airport Association, spoke in support of a microgrid at the airport. Mr. Lenox flew the electric airplane a couple weeks ago and noted it flies like a regular airplane. Mr. Lenox thought the community will benefit from a larger microgrid. Under the previous federal administration, the airport was looking at a grant for a microgrid but now it was unknown. Infrastructure work had been done at the airport for a grid. Conduit was laid underneath the ramp. There was a lot of space for solar panels on top of hangars and solar panels could provide shade for aircraft in open hangars. Chair Scharff asked Mr. Lenox why he wanted a microgrid and what the advantage was to the airport. Mr. Lenox replied that having a microgrid and available storage would provide resiliency and reliability by having power available during power outages. The most recent outage 2 weeks ago affected everything east of the Bayshore and lasted about 4 hours. In response to Commissioner Phillips asking if the airport had backup power with a diesel generator, Mr. Lenox answered no. It was Mr. Lenox's understanding that the tower had backup power but not the rest of the airport. Chair Scharff inquired if Mr. Lenox was willing to pay more in electricity costs. Mr. Lenox

cannot speak for airport management but as a renter at the airport, he paid a monthly fee that goes up every July 1 and he believed everyone would be paying more for everything.

2. Esme Lopez-Landeck is a representative of the Clean Coalition, a technical nonprofit with the mission to accelerate the transition to renewable energy and a modern grid. The Clean Coalition strongly supported efforts to promote reliability and resilience. Clean, local energy was viewed as a critical component of a sustainable future, especially as the community electrifies. The environmental benefits of deploying blocks of community-scale solar and storage included optimized grid citizenship by reducing peak usage of the grid at the most stressed times and eliminating energy loss associated with traversing transmissions and distribution grids. Typically, 15 percent of remotely generated energy was lost due to resistance and congestion, which was exacerbated by distance. The environmental impact of central generation was the open space consumed for generation and transmission areas. The economic impacts of deploying blocks of community-scale solar and storage included electric cost savings compared to buying electricity from a utility, the value of resilience compared to implementing and operating a fossil fuel generator, providing a fixed cost of electricity compared to rising utility costs, and reduced the total amount of Palo Alto's transmission spending. The Clean Coalition found that deploying blocks of 10 MW solar and 20 MWh storage would net $17.3 million of economic stimulation. The amount of savings obtainable by deploying community-scale solar and storage was an example from 2020 in the Santa Barbara region. The Clean Coalition urged moving forward with Strategies 3 and 5, which would provide long-lasting economic, environmental, and resilience benefits.
3. Johnny, Program Engineer for the Clean Coalition, stated that properly identifying essential community facilities and valuing the resilience they gain from retaining power during grid outages was a critical step toward planning for community resilience and benefitted the entire community. The Clean Coalition developed a methodology called the Value of Resilience 1, 2, 3. The Clean Coalition's Resilient Energy Subscription allowed a community to fairly determine which facilities and loads will be prioritized during an outage and use the subscription to fund scalable community microgrids. Community resilience would be drastically improved by installing solar microgrids onsite at critical facilities and resilience would be further elevated with a community microgrid, with the added benefit of reducing or eliminating the City's reliance on the delivery of fossil fuels during an emergency. Clean Coalition strongly supported developing a solar microgrid to provide resilience at the airport and the Regional Water Quality Control Plant. Johnny encouraged exploring the total solar generation potential at the airport because once the critical loads for those facilities were covered, the additional solar energy could be used to charge the City's electric vehicle fleet and provide the City the ability to manage energy supply and demand with vehicle-to-grid technology.
4. Sam Andre is an Associate Program Engineer for the Clean Coalition. The Clean Coalition had over a dozen community microgrid projects moving forward across the country, including 2 in California under the microgrid incentive program in Marin County with PG&E and in East Los Angeles with Southern California Edison. In Buro Happold's cost-benefit analysis results in Attachment A of the agenda packet, commercial solar and

BESS projects had a benefit-to-cost ratio of 1.07 without factoring in long-term resilience benefits. A pilot-scale community microgrid of 2 MW of solar and 4 MW hours of storage offered in a single Tesla Megapack had a total cost of about $7 million based on Clean Coalition's experience with the Tomales West community grid and other community microgrid projects. A pilot-scale Palo Alto Airport community microgrid would give CPAU an opportunity to evaluate the economic and resilience benefits and then decide to extend it and have additional community microgrids in Palo Alto. The Clean Coalition urged the UAC to move forward with a solar and storage buildout at the Palo Alto Airport and Regional Water Quality Control Plant.

5. Caleb, Palo Alto resident and former Clean Coalition employee, had professional expertise in economic analysis. Caleb highlighted the benefits of community microgrids including avoided transmission cost, avoided congestion cost of 10 to 15 percent, and resiliency benefits during long-term grid outages. The airport microgrid feasibility study noted an airport microgrid can provide long-term power to the Regional Water Quality Control Plant up to 45 days in September. The Clean Coalition's Resilient Energy Subscription was a mechanism to finance community microgrids by allowing any facility within the footprint of a community microgrid to pay a monthly kWh fee (in addition to its normal electricity tariff) for guaranteed daily delivery of locally generated renewable energy during grid outages. Each facility can decide what percentage of its total electric load to include in its Resilient Energy Subscription and perform behind-the-meter load management to stay within its daily load budget during grid outages. The Clean Coalition's Value of Resilience 1, 2, 3 can estimate an average value of resilience of 25 percent of a subscriber's typical energy costs. PG&E's transmission access charge averaged 3 cents/kWh in January of 2023 and had risen sharply since then but could be avoided via community microgrids. A Resilient Energy Subscription could alleviate some PPA costs. Community microgrid owners could potentially reap significant value through energy pricing arbitrage and/or reducing daytime rates. Based on the locational marginal pricing analysis conducted last year for Clean Coalition's West Marin Community Microgrid, the average value of solar alone averaged 4⅕ cents/kWh over the course of a year and the value of time shifting averaged 6½ cents/kWh with the standard solar-driven community microgrid ratio of 2 kWh of BESS to 1 kW of solar power capacity.

Staff's straw proposal for UAC feedback:

1. Promote ways community members can save money by reducing peak period load (helping the electric grid) under TOU rates once those rates are launched.
2. Monitor demand response technologies for positive benefit-cost opportunities but continue existing City practice of not pursuing demand response (unless benefit-to-cost ratios change in the future).
3. Promote residential solar and battery adoption, standalone batteries, and thermal storage but continue the City's current policies of not providing technical assistance programs or incentives due to costs exceeding benefits.

4. Promote electric vehicle to home/grid as it becomes more available but continue the City's current policies of not providing technical assistance or incentives (unless benefit-to-cost ratios change in the future).
5. Further explore the cost effectiveness of local larger-scale commercial solar + battery programs and bring to the UAC and City Council for consideration as part of the report on Strategies 4 and 5 if cost-effective options can be identified, while continuing to pursue utility-scale solar and storage and other renewables in parallel.
6. Monitor opportunities for distribution investment deferral using flexible technologies and efficient electrification but do not pursue additional analysis or new policies or programs at this time.
7. Maintain City's current policies on microgrids and backup power (long-term resiliency).
8. Explore electric utility-treatment plant partnership on airport microgrid.

Commissioner Metz needed to see a more detailed analysis to provide feedback on specific projects. Commissioner Metz wanted to know what costs were included, whose costs were they, and how the costs were calculated and integrated. Commissioner Metz would like to understand what was included in reliability and resiliency. Rather than start with a discrete project, Commissioner Metz thought it was valuable to start with CPAU's objectives for reliability and resilience when the grid was working and when it was not. An example of a specific goal was to reduce outage duration and frequency 50 percent in 5 years; then ask what technology or programs achieve that goal and what it would cost. Commissioner Metz viewed it as an important core competency and thus recommended that CPAU build the internal capability to conduct this analysis.

Commissioner Tucher agreed this was a core competency that one would want to have internally. Commissioner Tucher thought CPAU needed to promote and expand microgrids, virtual power plants, solar and storage, batteries in the garage and at the grid, and batteries connected to shopping mall and parking lot solar systems; come up with ways to show they will work and pick one to start first. Vehicle to grid would not be the first. Commissioner Tucher liked the way staff showed the methodology for finding the 360 transformers and it would be great to defer the upgrades, so he would tie in some of this work with grid modernization. Commissioner Tucher wanted to know where the transformers were failing in order to identify the substations or transformer areas of most concern, and ideally where we could best prove the benefits of storage and solar. Commissioner Tucher did not see how the cost-benefit ratios were determined for projects.

Commissioner Croft generally supported staff's straw proposal 1-8. Commissioner Croft thought there should be a plan for a longer-term emergency. Commissioner Croft wondered if the airport microgrid could be a shared investment with a shared benefit. It would be valuable to the City to have a renewable resource for the City's emergency electric vehicles when greenhouse gas resources are hard to find.

Chair Scharff supported staff's straw proposal 1-8. Chair Scharff encouraged staff to look for a targeted project to move forward with. Chair Scharff reminded staff to mention that the second interconnect will make a big difference in long-term resilience issues.

Vice Chair Mauter echoed Chair Scharff's comments. Vice Chair Mauter believed there should be a discussion with community input on raising rates to more fully weight resiliency or local generation. Vice Chair Mauter felt it would be helpful if the presentation highlighted the individual, household, or business investments with the highest payback. Vice Chair Mauter thought that good resilience and carbon benefits would accelerate voluntary investments. In general, Vice Chair Mauter strongly supported the set of staff's recommendations. Even if the cost-benefit ratio was not quite there, Vice Chair Mauter recommended looking for an opportunity for a program with a single, large commercial entity because she assumed it was much easier to roll out and required less staff effort, and staff could learn from it. Because this is a period of tremendous volatility in policy and rates, Vice Chair Mauter wanted to see tornado plots in the final set of analyses to better understand the sensitivity analysis and some of the risks to the financial assumptions. Emergency long-term planning was in the UAC's strategic plan this year, which will provide an opportunity for the Commission to talk more about how we want to value long-term electric power resiliency or longer-duration storage, so Vice Chair Mauter encouraged staff to schedule that discussion soon for the UAC to provide timely feedback.

Commissioner Gupta will email his comments after the meeting as a public comment. At a high level, Commissioner Gupta supported the principles in staff's recommendation. Commissioner Gupta wondered if it was beneficial to have a formal collaboration with OES to have a lens toward disaster and emergency preparedness when designing resiliency programs. Commissioner Gupta did not agree with staff's Straw Proposal 3 because he thought the City should at least provide technical assistance to residents who were interested in solar and battery adoption, particularly if they were concerned about disaster preparedness, maybe a vulnerable person who relied on medical devices. Commissioner Gupta suggested adding "unless benefit-to-cost ratios change in the future" to Straw Proposal 3. Regarding Straw Proposal 6, Commissioner Gupta thought we should look for opportunities to reduce the $300 million cost of the grid modernization project. In addition to staff's 8 straw proposals, Commissioner Gupta wanted to consider equity principles. Commissioner Gupta was interested in studying the success of voluntary tariffs mentioned in public comment to buy battery storage for a certain percentage of load, which would enhance resiliency.

Commissioner Phillips did not want to raise everybody's rates to help somebody buy solar. When this is done and rolled out, Commissioner Phillips encouraged staff to provide careful communication to the community on why the City will not do certain things. Anything we say we will look more into meant it will take more of staff's time away from other more important things and the additional cost to hire consultants to perform studies. Commissioner Phillips loved this exercise and recommended repeating and updating it at an appropriate cadence such as annually or every other year because the economics and overall situation will change, which could lead to different decisions. Staff's Straw Proposal 1, tell people now how to reduce peak

period loads to help the grid as good citizens instead of waiting until TOU rates are launched. Regarding staff's Straw Proposal 5, Commissioner Phillips thought a commercial entity would not consider it at 1.07, so maybe a public-private partnership. For staff's Straw Proposal 8, Commissioner Phillips asked if the Utility was planning to do more work on the airport microgrid.

Mr. Abendschein replied it was up to Public Works to consider their options for long-term resiliency, one of them being a solar microgrid, what those options cost, and how much resiliency they provide in a major emergency. Work had been done on valuing the PPA. If there was an opportunity for an airport microgrid, it will be brought back but Mr. Abendschein did not think it was likely.

Vice Chair Mauter pointed out that the Regional Water Quality Control Plant's value of a microgrid was highly dependent on the tariff structure we set. The City or Utility could value the grid peak load reduction significantly and apply a TOU tariff structure that makes a microgrid pencil out whereas flat rates would provide no benefit. For Staff's Straw Proposal 8, instead of passing it to Public Works, Vice Chair Mauter believed there should be collaboration between the Utility and Public Works.

Mr. Abendschein explained that you need a partnership when you think about the airport microgrid as a behind-the-meter project where the rates matter, which is why it was analyzed as a PPA because you can value the resiliency and value the PPA price against our existing PPA price, and you do not have to worry about rates and tariffs. With that approach, Mr. Abendschein thought it can be given entirely to Public Works with some support and Utilities would stay involved.

Mr. Kurotori mentioned the work that Public Works did for Utilities. Mr. Abendschein was in Public Works. Public Works was leading on exploring an airport microgrid and Utilities was a supportive department.

FUTURE TOPICS FOR UPCOMING MEETINGS

Utilities Director Alan Kurotori referred commissioners to the 12-month calendar. The next UAC meeting will be held on September 3, 2025.

COMMISSIONER COMMENTS and REPORTS from MEETINGS/EVENTS

Regarding the public commenter who spoke of having trouble with the UAC's public comments email address, Commissioner Gupta's theory was it had something to do with the domain name shift. Commissioner Gupta wondered if staff could follow up, maybe reach out to IT to resolve the apparent issue with the City's software identifying certain messages as spam and not coming from safe senders. Utilities Director Alan Kurotori said that multiple staff made a note about this and will see how to ensure the public comments get through.

Commissioner Croft shared an interesting fact she heard at the Climate Working Group meeting on June 11. Two-thirds of new construction was all electric. A question was raised on why one-

third of new construction had a gas hookup and the reason was for stoves, so there was a need to convince people they do not need gas stoves.

ADJOURNMENT

Chair Scharff adjourned the meeting and reminded commissioners that the UAC will not have a meeting in August.

Meeting adjourned at 10:04 p.m.

Phil Metz Feedback for Item 5. Status Update on Studies Related to the Electric Utility's Reliability and Resiliency Strategic Plan (RRSP) Strategies 4 and 5 and Request for Feedback on Draft Proposals for Implementation. July 9,2025 UAC.

#1. Feedback on project next steps: To provide feedback on the projects presented, I would need to see a much more detailed analysis. The information presented is very high level; even the appendices are just high-level summaries. (So is the 2/5/25 "Reliability & Resiliency Strategic Plan: Update on Studies") To provide feedback on these projects, I would need to see:

- What costs are included? And whose costs are they?
- How are these calculated?
- How are they integrated (e.g., interest rates, discount rates, durations)?
- Benefits: Same questions.

If CPAU can provide that information I would be willing to review it and provide detailed feedback on next steps, as requested.

#2. Feedback on inputs vs. outputs: The analysis conflates exogenous forces with CPAU (and community) outcomes. VTG *will* happen. Solar + batteries *will* happen. New data centers *will* happen. Etc. These and other exogenous forces should be treated as *inputs* to CPAU's strategy – not as outputs. The CPAU questions should be: Given those forces, what are CPAU's objectives? What should CPAU's strategy and actions be for addressing them?

#3 Feedback on the analytical approach: I think this analysis has "started at wrong end of the elephant". Instead of starting with possible technology "solutions", I recommend:

1) Start with "aspirational goals": "What does CPAU want to achieve?" Examples: Lower peak electricity demand, less CO2, grid cost reduction, higher reliability & resilience (when things are operating "normally" and during emergencies), better emergency preparedness & response. These should be quantitative, for example, "Over the next 5 years reduce short term outage average duration and frequency 50%.", "During a 1-2 week emergency (as called out in the CPA EOP) provide adequate electricity and water to enable residents to stay in their homes." It would be valuable to obtain inputs from City Council and residents in setting these goals.

Phil Metz Feedback for Item 5. Status Update on Studies Related to the Electric Utility's Reliability and Resiliency Strategic Plan (RRSP) Strategies 4 and 5 and Request for Feedback on Draft Proposals for Implementation. July 9,2025 UAC.

2) Then identify potential initiatives for achieving those goals. (e.g., microgrids, or solar + storage, etc.)

3) Quantify the performance of each option against the goals in a transparent way that non-experts can follow. CPAU has unique capabilities to do this.

4) Get the results in front of decision-makers – City Council and residents – so that they can conduct an informed discussion and decide what to do. This might involve CPAU technical programs, or rates or subsidies, or education.

#4. Feedback on consulting studies: Reliability and resilience, and Grid Mod more broadly, are strategic, large, and long-term challenges for CPAU. Multiple City Council members have expressed concern about how CPAU navigates these. For deciding whether to outsource or insource a given business problem, core competency business thinking says, "Insource if the problem is strategic, big, and long term. Outsource if it's less strategic, or a small one-off. So, based on that logic, I think CPAU should be building and maintaining competencies in reliability and resilience, and in Grid Mod strategy more broadly – not outsourcing its strategic planning to consultants.

CITY OF PALO ALTO

Utilities Advisory Commission
Staff Report

From: Alan Kurotori, Director Utilities
Lead Department: Utilities

Meeting Date: September 3, 2025
Report #: 2507-4922

TITLE Discussion of Gas Utility Transition Study Scoping; CEQA Status - Not a Project

RECOMMENDATION
This is a discussion item and no recommendation is being presented to the Utilities Advisory Commission (UAC) at this time. Staff is seeking UAC feedback on the scope for a study of the financial and operational impacts of electrification on the gas utility.

EXECUTIVE SUMMARY
Achieving the community's greenhouse gas emissions reductions goals requires options including deep reductions in building emissions. Regardless of how quickly the community reaches these goals, impacts on the gas utility's financial structure and physical operations are expected if community members participate in electrification efforts sufficiently to achieve adopted City Council emissions reduction goals. Staff is beginning a study of those impacts and is seeking feedback on its approach.

The study will simulate different patterns of electrification throughout Palo Alto; identify opportunities for gas main and service abandonment which may include operational efficiencies; and estimate abandonment costs, changes in operational costs, and customer class cost allocations. The study will prioritize continuing to operate the gas system safely and identify portions of the gas system that should be retained for operational reasons even after substantial parts of the system have electrified.

BACKGROUND
Gas utilities throughout California are planning for the possible impacts of widespread building electrification. The California Public Utilities Commission (CPUC) has a gas transition proceeding for the investor-owned utilities (IOUs), but many of the issues IOUs face differ from Palo Alto. IOUs have a different capital structure, service territories with different characteristics, and different system designs. City staff monitors the CPUC proceeding to learn potential lessons and

participated in an early workshop that led to the proceeding, however analysis specific to Palo Alto is also needed.

The UAC received preliminary high-level staff analyses of the potential cost of abandoning the gas utility, staffing impacts, and rate impacts on November 4, 2020[1] and January 2021,[2] but additional study is still needed. Abandonment costs are likely significantly higher than the prior studies showed because they did not sufficiently account for the physical system constraints or the difference in rate impacts by customer classes.

ANALYSIS

The objective of the Gas Transition Study is to assess the potential financial and physical impacts of large-scale building electrification on the gas system and identify strategies to manage those impacts. The study will be conducted primarily in-house, with consultants assisting in physical gas system modeling and rate modeling.

Staff will simulate four electrification scenarios for single-family, multi-family, and nonresidential sectors, simulating 20%, 40%, 60%, and 80% reductions in gas sales (see Attachment A for full scenario definition). Gas usage will be modeled down to the meter level. For each scenario, staff will estimate the number of gas main segments that could be retired and the resulting abandonment costs and changes in operational costs. Staff will then estimate rate impacts by customer class.

Safety will remain the top priority throughout the hypothetical transition, and the study will analyze resulting cost impacts. Due to the complexity of electrification for some commercial customers (e.g. restaurants), and for larger industrial and medical users, a core network of gas lines is expected to be preserved to serve these users. The analysis will assume that retiring entire blocks of gas mains is more cost-effective than retiring individual services.

Abandoning gas infrastructure at the block level is more efficient than retiring individual services, primarily because it significantly reduces the number of excavation events. Block-level abandonment involves digging into the street to cut and cap the main at each end of a block and removing all associated meters in one operation. This contrasts with the more labor-intensive process of retiring services one at a time, which also requires much more excavation and pavement restoration to abandon each customer service lateral. The study will look at the cost of both block-level and service-level abandonment as strategies and a range of estimates for the total associated costs.

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[1] Staff Report ID#11639, November 4, 2020, Discussion of Electrification Cost and Staffing Impacts on the City of Palo Alto's Electric and Gas Distribution Systems, http://cityofpaloalto.org/civicax/filebank/blobdload.aspx?BlobID=78897

[2] Staff Report ID#11751, January 6, 2021, Discussion of Projected Electrification Impacts on Gas Utility System Average Rates, https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/agendasminutes/utilities-advisory-commission/archived-agenda-and-minutes/agendas-and-minutes-2021/01-06-2021special/01-06-21-uac-item-1.pdf

Operational costs that may vary during the transition will also be evaluated, such as customer service, leak monitoring and repair, meter investigation, and overhead allocations. Many of these functions are shared across utilities, and their costs are allocated based on factors such as the number of meters served or total revenues. As gas sales decline and parts of the system are retired, both actual workload and allocation factors will shift—though not always simultaneously. Operational costs may decrease in increments as work reductions reach critical thresholds. The study will analyze these patterns, assess positive and negative impacts on other utilities, and identify strategies on cost management and secondary impacts on other utilities.

Key output metrics will include:

- Number of gas mains with low or no usage
- Estimated abandonment costs
- Changes in operational costs
- Financial impacts on other utilities
- Effect of reduced natural gas on natural gas cap-and-trade revenues
- Effects on General Fund revenue reduction (18% General fund transfer, utility user tax, cost allocation).

The study will model different likelihoods of residential customers disconnecting gas service after electrifying space and water heating. This will help assess the influence of disconnection rates on system outcomes. Staff will also evaluate strategies including funding needed to encourage disconnection, including incentive programs, rate design, and block-level electrification initiatives. Commercial buildings will be assumed to retain gas service . Assumptions like these are only for modeling and do not represent an assessment of whether this level of electrification is feasible.

The study will also examine the physical layout of the gas network under various electrification scenarios. Unlike many regional systems, the City's gas infrastructure is highly networked, allowing for block-level disconnections. However, not all unused mains can be removed without affecting system capacity and functionality. For example, a medium-diameter main with no active services might still be needed to maintain pressure or flow. The study will analyze these constraints and explore targeted main upsizing and replace to enable other residential main retirements.

FISCAL/RESOURCE IMPACT

The study is expected to require about $150,000 in consulting costs ($60,000 for building a gas model and $90,000 for rate analysis and scenario simulation) funded by the Utilities Gas Engineering and Resource Management Division budgets and about 0.3 FTE in staff time (0.15 FTE from Utilities Water-Gas-Wastewater Engineering and 0.15 FTE from the Utilities Resource Management Division and the Climate Action Team combined).

The gas utility fiscal and resource impact of widespread electrification on the gas utility and the costs of gas system abandonment will be assessed in this study.

STAKEHOLDER ENGAGEMENT

This topic was discussed by the UAC at its November 2020 and January 2021 meetings, as noted above, and since then the need to more carefully assess the costs of transitioning the gas utility has been raised in several meetings of the UAC, S/CAP climate stakeholders, the Council subcommittees focused on climate contexts, and at City Council. Staff also discussed this topic with the City Council's Climate Action and Sustainability Committee on June 13, 2025 and the Climate Action and Sustainability Working Group prior to that meeting. There was support for the general direction of the analysis. There was also interest in exploring ways to increase the likelihood customers choose gas disconnection after electrifying space and water heating. Staff clarified that this will be the subject of subsequent policy discussion through 2026 and 2027 after the initial analysis. The Committee also recommended looking at the studies and pilots of other gas utilities doing similar work while acknowledging there are a limited number of utilities pursuing this type of analysis.

ENVIRONMENTAL REVIEW

The UAC's discussion of this topic does not meet the California Environmental Quality Act's definition of a project, pursuant to Public Resources Code Section 21065, and no environmental review is required.

ATTACHMENTS

Attachment A: Draft Scenario Design for Gas Transition Study
Attachment B: Staff Presentation

AUTHOR/TITLE:

Alan Kurotori, Director of Utilities
Staff: Jonathan Abendschein, Assistant Director, Climate Action

Attachment A

Draft Scenario Design for Gas Transition Study

Scenario	Gas Sales Reduction	Residential Space and Water Heating Electrification	Small and Medium Non-Residential Space and Water Heating Electrification	Medical and Industrial Electrification*
1	20%	25%	25%	0%
2	40%	50%	50%	0%
3	60%	75%	75%	0%
4	80%	100%	100%	0%
** In practice, some electrification will occur in this sector, but staff does not have good visibility on the potential for electrification in this space due to the prevalence of unique / process loads*				

Methodology:

- For each scenario staff will run a large number of random iterations assigning space and water heating electrification to different meters / gas mains. A sensitivity will be run for each scenario varying the likelihood of resident gas meter disconnection.
- For each scenario staff will calculate the range of gas mains with low or no gas usage resulting from all the iterations for that scenario.
- Staff or the City's consultant will add one or two sample iterations for each scenario to its gas system model and identify how many mains noted for removal by the simulation could not actually be physically removed. Scenario results will be adjusted accordingly.
- Staff will estimate the average abandonment costs for each scenario including sensitivity analyses between higher costs of individual services abandonment versus larger block abandonment costs.
- Staff will estimate changes in operational costs, allocations between utilities, and reductions in General Fund revenues resulting from the decreased gas sales and gas main abandonment.
- Staff and the City's consultant will estimate the customer class average rates for each scenario based on the estimated abandonment costs, reduced gas sales by customer class, and changes in operational costs.

Based on these results staff will identify physical and financial issues and develop feasible strategies to mitigate them.

CITY OF PALO ALTO

Why Study the Gas Transition?

- City, State, and Regional policies drive building electrification
- If successful, gas use will decline significantly
- The City must plan for financial, physical, and safety impacts
- Goal is a safe, smooth, equitable transition

Council 2025 Priority Objective #32: Share preliminary analysis of strategies for a physical and financial transition of the gas utility to relevant policymakers and stakeholders

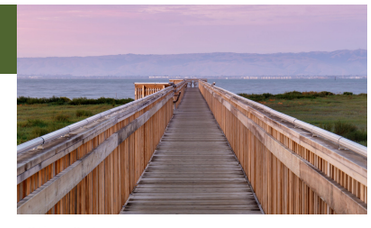
Study Goals

- Understand physical impacts of electrification on gas infrastructure
- Quantify physical, operational, and financial impacts
- Estimate cost of gas main and service abandonment
- Develop strategies to:
  - facilitate abandonment
  - mitigate physical and financial impacts

Study Outputs

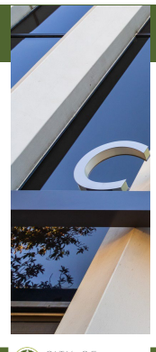
For the Gas Utility

- Cost of gas main/service abandonment
- Operational cost impact
- System average rate changes by class
- How much funding would be needed from some other source to keep gas rates in line with current forecasts
- Cap and Trade cost and revenue impacts



Other Outputs

- Cost impacts to other utilities
- General Fund transfer and UUT impacts



Electrification Scenarios to Model

Scenario	Reduction in Gas Sales	Water and Space Heating Electrification	
		Residential	Commercial
1	20%	25%	25%
2	40%	50%	50%
3	60%	75%	75%
4	80%	100%	100%

- Medical/industrial, commercial cooking excluded
- Gas disconnection likelihood evaluated for buildings with water and space heating already electrified

CITY OF PALO ALTO

5

Impacts on Gas Infrastructure

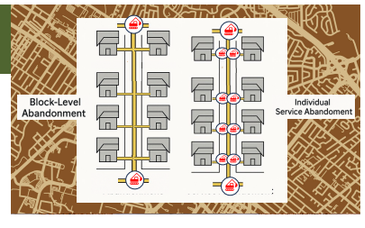
Impacts on Gas Infrastructure

- Fewer customers using the system
- Result: underused or unused gas mains
- Opportunity to retire entire blocks

Potential Opportunities and Constraints

- Mains of certain sizes may need to be retained for operational purposes
- Need to maintain service for key users (e.g. medical, industrial, restaurants)
- Retirement of certain mains (e.g. PVC, steel) may yield more savings

Cost-Efficiency of Block-Level Gas System Retirement



Block Level Retirement Benefits

- Standard practice: dig & abandon unused lines for safety, avoided maintenance
- Abandoning by block cheaper than by service – fewer excavations, less labor, less street repair.

Drawbacks and Challenges

- Requires all homeowners to remove all gas appliances before it can be accomplished
- A single person with a single appliance can hold up gas main abandonment
- May be forced to do service by service abandonment – unsafe to leave unused gas services in place for long durations

Changing Utility Costs with Electrification

Gas Utility Impacts

- Declining gas use, gas abandonment reduces workload
- Workload may not decline enough to enable staff attrition – this could increase per-unit gas cost for remaining customers

Other Utility Impacts

- Shift fixed shared costs between utilities (e.g. as gas customers disconnect customer service cost may shift to other utilities)

General Fund Impacts

- Reductions in General Fund transfer, UUT
- Potential for increased City gas utility bills

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Next Steps

- Summer 2025: Advance study with the goal of having preliminary results by Fall 2025, if feasible
- Fall 2025:
  - Preliminary study results to UAC and CASC
  - Results can be used to inform 2026-2027 S/CAP strategies
- Late 2025 / Early 2026: Final report

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Utilities Advisory Commission
Staff Report

From: Alan Kurotori, Director Utilities
Lead Department: Utilities

Meeting Date: September 3, 2025
Report #: 2507-5008

TITLE

Recommend that the City Council Approve Amendment No. 1 to the Memorandum of Agreement Between California Alternative Energy and Advanced Transportation Financing Authority and City of Palo Alto to Extend the Term of the Agreement from Two Years to Five Years and Continue Offering the GoGreen Home Energy Financing Program for Palo Alto Residents. CEQA Status – Not a Project.

RECOMMENDATION

Staff recommends that the Utilities Advisory Commission (UAC) recommend that Council Approve Amendment No. 1 to the Memorandum of Agreement between California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) and City of Palo Alto to extend the term of the agreement from two years to five years and continue offering the GoGreen Home Energy Financing Program to Palo Alto residents.

Due to the urgency of needing to extend the MOA before the two-year expiration of September 11, 2025, the item has been agendized for Council approval on September 8, 2025. Upon UAC action on this recommendation, Staff will inform Council about UAC's action via a supplemental memo before Council acts on September 8, 2025.

EXECUTIVE SUMMARY

To meet Palo Alto's ambitious greenhouse gas reduction goals, residents will need to implement energy efficiency and electrification projects at their homes. These projects may need thousands of dollars in capital expenditure. The GoGreen Home Program is a long-standing State-run[1]

[1] Description of GoGreen Financing Program: https://gogreenfinancing.com/residential

financing program with participating financing companies (PFCs) to provide consumer financing for these types of projects at competitive rates.[3]

Since Palo Alto is not served by any investor-owned energy utilities, a separate agreement with the State was required to enable participation of Palo Alto residents. In September 2023, the Council approved a $300,000 agreement with CAEATFA for a two-year term (Staff Report: 2212-0475[4]). This program was intended to support single-family electrification, with the understanding that it would be most helpful for space heating rather than water heating projects. The first loan for this program came after incentives for space heating electrification were launched in January 2025. The first loan, for a space heating project, was issued in May 2025 for $25,000 at an interest of 3.98% for a 30 month term. As more space heating projects are completed more loans are expected.

During the past two years, the Palo Alto program incurred an administrative expense of $4,757 to start the program and a few hundred dollars in administrative fees since the first loan was processed in May 2025. Additionally, $50,000 is being held by CAEATFA to fund the Loan Loss Reserve (LLR), which enables Palo Alto residents to receive lower interest rates.

Since there remains a strong need for competitive consumer loans to support energy efficiency and electrification projects, and the administrative cost is minimal (few hundred dollars/month), staff recommends that the Council approve Amendment No. 1 to the MOA, extending the Agreement for an additional three years with no change to the previously approved $300,000 budget. The cost of the Program will continue to be covered by the natural gas City's Cap-and-Trade Reserve funds.

BACKGROUND

The California Hub for Energy Efficiency Financing (CHEEF) was formed as a public-private partnership between the State and California's investor-owned utilities (IOUs). It was authorized by the California Public Utilities Commission (CPUC) in 2013 and is administered by CAEATFA, an agency under the State's Treasury Department. The GoGreen Home Program issued its first loan in 2016.

The objective of the GoGreen Home Financing Program is to offer residential customers alternative financing options, through participating financial institutions, for energy efficiency and decarbonization projects by providing a 'credit enhancement' to lenders in the form of a loan loss reserve (LLR), funded by the IOUs and other participating entities (e.g., TECH Clean

[3] Current interest rates range from 4% to 9.75% depending on the term of the loan and the credit rating of the borrower. In January 2025, the average interest rate for the 415 loans processed statewide was 6.48%, with an average term of 139 months. The first participant from Palo Alto enrolled in the program in May 2025.

[4] September 2023 Staff Report: https://portal.laserfiche.com/Portal/DocView.aspx?id=67742&repo=r-704298fc

California). CPAU's participation to facilitate Palo Alto customer access to GoGreen Home was the first credit enhancement funded by a municipal utility.

Current participating financing companies operating in Santa Clara County are Matadors Community Credit Union, California Coast Credit Union, Travis Credit Union, and Self-Help Federal Credit Union[7]. The loans fund the following Eligible Energy Efficiency Measures: appliances (including electrified appliances such as heat pumps), building envelope, demand response, HVAC, lighting, pool products, water heating. The Program also funds Solar Photo-Voltaic, Battery Energy Storage and EV charger installation projects[8].

The benefits to residential homeowners participating in the Program include:

- No lien on property (unsecured consumer loan)
- Available to borrowers with a wide range of credit scores and incomes
- Loans of up to $50,000 per unit receiving upgrades, up to $75,000 for solar + battery projects
- A term of up to 15 years, up to 20 years for solar + battery projects
- Finance 100% of the project cost, including required related upgrades (e.g. electrical upgrades)
- Up to 30% of loan amount can be used toward non-energy improvements (e.g. home remodels, drought tolerant landscaping)
- No prepayment penalties
- Currently no closing costs or origination fees (may change in the future)
- No contractor fees (lenders often charge contractors thousands of dollars to finance projects)
- Below-market interest rates and extended payback periods (due to credit enhancement provided to lender)

ANALYSIS

Staff recommend that the City continue enabling the GoGreen Program for Palo Alto residents to finance higher-cost electrification projects. The program requires minimal staff time to implement, and the administrative cost is low. The City's electrification program in 2023-24 period was focused on heat pump water heaters which were lower costs (thousands of dollars) compared to the higher cost (tens of thousands of dollars) whole home electrification projects the City started promoting in 2025. Staff anticipate the financing needs for these higher cost projects in 2025 and beyond will increase in the coming years.

[7] Financing Companies Serving Santa Clara County: https://www.gogreenfinancing.com/energy-efficiency-home-loans-california/finance-options/?_counties_filter=santa-clara%2Call&zip_code=94301

[8] Energy Efficiency Measures: https://www.gogreenfinancing.com/wp-content/uploads/2025/04/reel_eeemsList.pdf

Cost of Participating in the Program and Funding Needs

The administrative cost charged to Palo Alto has been on an incremental cost basis, with start-up administrative cost of $4,757 already incurred. There will be variable administrative costs the City will incur for each loan processed. The contract provides for a monthly fee to cover administrative expenses. Since the issuance of the first loan to a Palo Alto resident in May 2025, a few hundred dollars per month in administrative costs expenses have been incurred. A budget of $140,000 was allocated to cover administrative cost in the Agreement, but the actual expenditure is anticipated to be well below this amount in the next 3 years.

In addition, City will have to contribute ~8% of the underlying loan amounts to the loan loss reserve (LLR)[11]. The currently approved $160,000 budget for LLR funding will support $2 million in loans by Palo Altans. This amount is expected to support around 100 loans, assuming loan sizes in Palo Alto match the statewide average of about $19,900 per loan. A large part of this LLR would be returned if the loan portfolio does not suffer large delinquencies. The overall loss rate since the program's inception in 2016 is 1.42%, or 153 loans out of 10,755 loans enrolled. The loss incurred to date is $1.42million (out of $168 million loan portfolio). The LLR currently has a balance of $16 million, most of it funded by the IOUs[12], but will also be funded by the City as Palo Altans continue to enroll in the program.

If the total expenses (administrative and loan loss reserve funding) are projected to increase beyond $300,000 staff will return to Council for additional authorization. Staff recommends continuing funding all administrative and loan loss reserve costs from revenues gained from the auction of allowances allocated the City as part of its participation in the State's Cap and Trade program.

Demand for Financing Energy Efficiency and Electrification Projects in Palo Alto

The level of demand for the GoGreen Home financing products in Palo Alto is difficult to gauge. As a relatively affluent community, City residents have a wide array of options to finance projects. Staff anticipate the GoGreen Home financing product (unsecured consumer loan) will be a unique and useful product for residents as they embark on larger investments to electrify their homes, for residents with lower credit scores, or for residents who do not want to tap into the equity in their home or who have limited equity available.

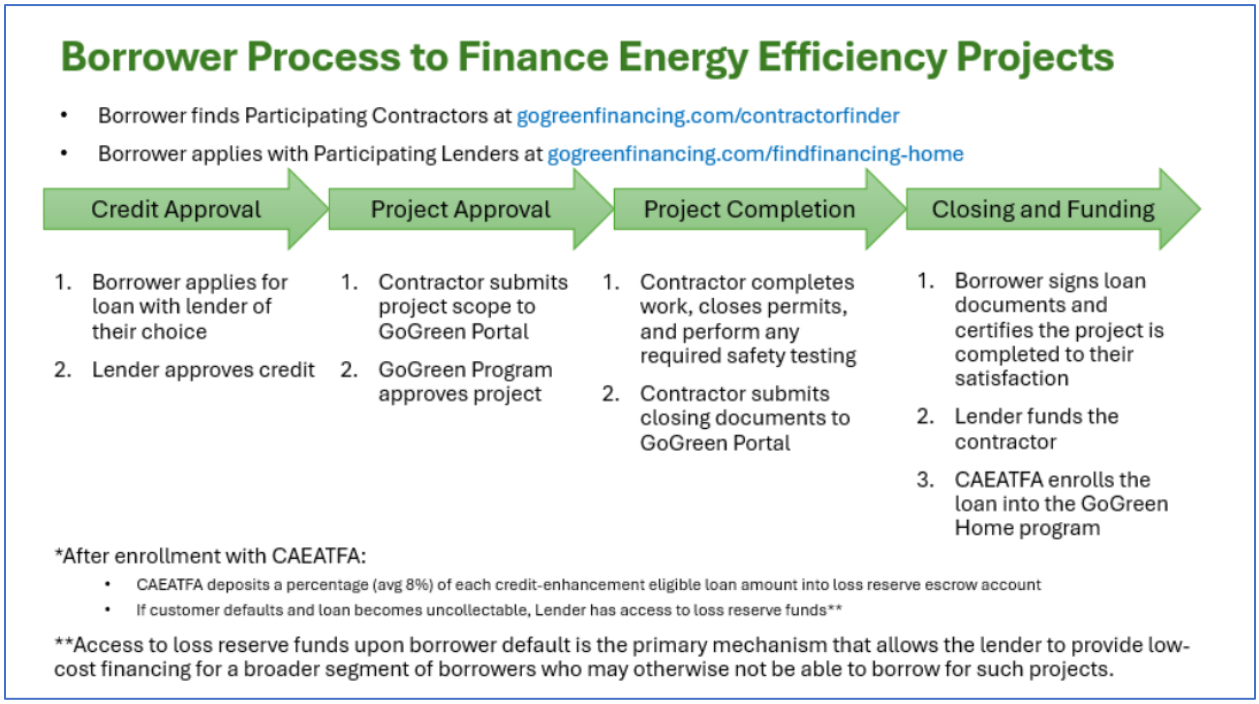
[11] The LLR will be assessed at 5% for loan provided to applicants with a FICO score of > 700, and assessed at 20% of loans provided to applicants with a FICO score of < 700; the average assessment for the statewide program todate is 8%. Palo Alto's first loan processed in May 2025 for $25,000 required a 5% LLR funding, for an amount $1,250 from Palo Alto, because the borrower had a FICO score > 700.

[12] GoGreen Program Performance Report: https://www.treasurer.ca.gov/caeatfa/cheef/monthlyreel/2025/01.pdf

In the current climate of economic uncertainty and high interest rates, GoGreen Home's relatively low interest rates may be compelling for interested Palo Altans.

Process to Select Contractor, Apply for Loan & Pay for the Home Improvement Project

The process for implementing a project is illustrated below. It is designed to be simple and efficient, with minimal need for intervention (and thus, few delays) by Palo Alto Program staff.



FISCAL/RESOURCE IMPACT

Since $300,000 was previously approved for this Agreement in September 2023, no additional funding is needed at this time. Extending the Agreement by three years does not result in increased resource requirements. Administrative costs of $4,757 to cover initial start-up costs and a few hundred dollars in monthly ongoing administrative fees have been paid to date. Since the approval of the $25,000 loan, 5% of the loan amount or $1,250 has been provided in LLR funding.

If the loans approved exceed $2 million, meaning that the budgeted $160,000 for LLR is depleted, staff will seek Council approval for additional funding.

The loan loss reserve (LLR) is maintained in an escrow account between the state and lender. The State will track the LLR status and report to the City on a quarterly basis. The City will stop budgeting additional funding for the LLR if the State ends the GoGreen program, and any remaining LLR funding will be returned to the City after each loan is repaid and fully returned (less any default loan funding paid to lender). The LLR is funded at 5% of the underlying loan (for borrowers with a credit score > 700) and at 20% (for borrowers with credit score <700), with an average rate of ~8% for all loans issued in the state to date.

STAKEHOLDER ENGAGEMENT

Through the S/CAP community engagement process and via the promotion of City's electrification and energy efficiency programs, Palo Alto residents are aware of CPAU's participation in the GoGreen Home Financing program and the availability of this financing option for the residents.

ENVIRONMENTAL REVIEW

Approval of the attached agreement described in this staff report does not meet the definition of a project under the California Environmental Quality Act (CEQA), pursuant to the California Public Resources Code Section 21065, because it is not an activity that will cause a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.

POLICY IMPLICATIONS

The MOA to facilitate energy efficiency and electrification project loans for Palo Alto residents supports the community's climate goals as embodied in the S/CAP, the Council-approved Utilities Ten-Year Energy Efficiency Goals, and Comprehensive Plan Goals N4.2.1 (educate customers on efficient water use), N7.4.2 (implement cost effective energy efficiency programs for all customers) and N7.7.2 (explore the transition of existing buildings from gas to electric or solar water and space heating).

ATTACHMENTS

Attachment A: Amendment #1 of the Memorandum of Agreement (MOA) between CAEATFA and Palo Alto
Attachment B: Presentation

APPROVED BY:

Alan Kurotori, Director of Utilities
Staff: Jonathan Abendschein, Assistant Director, Climate Action, Public Works
Staff: Shiva Swaminathan, Senior Resource Planner

AMENDMENT NO. 1

This Amendment No. 1 (“Amendment”), dated as of September 8, 2025, (“Effective Date”) amends the Memorandum of Agreement (“MOA” or “Agreement”) dated September 11, 2023 by and between the California Alternative Energy and Advanced Transportation Financing Authority, a public instrumentality of the State of California created pursuant to Division 16 (commencing with Section 26000) of the California Public Resources Code ("CAEATFA"), and the City of Palo Alto (“City of Palo Alto”). CAEATFA and City of Palo Alto are sometimes referred to in this Agreement individually as a “Party” and together as the “Parties.”

Recitals

A. In Decision D.21-08-006, the California Public Utilities Commission upholds CAEATFA’s broad implementation authority over the California Hub for Energy Efficiency Financing (CHEEF) pilots and programs and conditionally allows for the incorporation of non IOU ratepayer funds to expand the reach of the CHEEF programs.
B. In accordance with Decision D.21-08-006 and Title 4, Business Regulations Division 13, Article 5, Section 10091.17 of the California Code of Regulations (“GoGreen Home Energy Financing Program Regulations” or “Program Regulations”), City of Palto Alto and CAEATFA desires to amend the Agreement to extend the duration of the MOA for three years as stipulated in the Term of the MOA (Section 5, page 7).

IT IS AGREED as follows:

1. **AMENDMENTS TO THE AGREEMENT**
    a. In accordance with Section 5 of this Agreement which provides for, among other things, an extension pursuant to mutual agreement, the Parties hereto agree to extend the term of this Agreement through September 10, 2028.

    b. City’s funding of administrative and credit enhancement cost under the MOA would remain unchanged at an amount not to exceed $300,000, according to Section 3 of the Agreement.

2. **GENERAL PROVISIONS**
    a. Further Assurances: The Parties shall work together in good faith to revise all applicable documentation and alert all relevant lenders and contractors as to the project and measure eligibility revisions contemplated by this Agreement.
    b. Miscellaneous. Other than as specifically modified above, the Agreement shall remain in full force and effect and is hereby ratified, approved, and confirmed. This Amendment is subject to all of the terms and conditions of the Agreement as if it were a part thereof, including, without limitation, any provision with respect to choice of law, venue, and/or jurisdiction.

AUTHORIZED REPRESENTATIVE SIGNATURES

City of Palo Alto

By: _____

Printed Name: Ed Shikada

Title: City Manager

By: _____

Printed Name: Madeleine Salah

Title: City Attorney or Designee

California Alternative Energy and Advanced Transportation Financing Authority

By: _____

Printed Name: Christina Sarron

Title: Executive Director

CITY OF PALO ALTO

Extension of GoGreen Financing Program

Utilities Advisory Commission

September 3, 2025

PaloAlto.gov

Background

- Access to consumer financing critical for Palo Alto residents undertaking electrification and efficiency projects
- July 5, 2023, UAC recommended and September 2023, City Council approved 2-Year Agreement with California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA*)
  - Enabled Palo Alto residents to participate in the GoGreen Home Financing Program
  - Provided access to consumer financing for efficiency and electrification projects
- To date one loan for $25,000 has been processed for a Palo Alto resident

* *CAEATFA created by the state to help finance public and private energy and transportation projects*

Recommendation

- Extend CAEATFA Agreement for to 5-Years (3 additional years)
- $300,000 budget unchanged
  - $140,000 to cover administrative cost
  - $160,000 to cover loan loss reserve (LLR)
    - Could provide loan guarantees for ~$2 million in loans

Recommended Motion

Staff recommends that the Utilities Advisory Commission (UAC) recommend that Council Approve Amendment No. 1 to the Memorandum of Agreement between California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) and City of Palo Alto to extend the term of the agreement from two years to five years and continue offering the GoGreen Home Energy Financing Program to Palo Alto residents.