



**DRAFT**

## **UTILITIES ADVISORY COMMISSION MEETING MINUTES OF DECEMBER 6, 2017 MEETING**

### **CALL TO ORDER**

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Chair Danaher called the meeting of the Utilities Advisory Commission (UAC) to order at 7:00 p.m.

Present: Chair Danaher, Commissioners Forssell, Schwartz, Segal, Johnston  
Absent: Vice Chair Ballantine, Commissioner Trumbull

### **ORAL COMMUNICATIONS**

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None

### **APPROVAL OF THE MINUTES**

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Commissioner Johnston moved to approve the minutes from the November 1, 2017 meeting. Commissioner Schwartz seconded the motion. The motion carried 5-0 with Chair Danaher and Commissioners Forssell, Schwartz, Segal, and Johnston voting yes, Vice Chair Ballantine and Commissioner Trumbull absent.

### **AGENDA REVIEW AND REVISIONS**

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None

### **REPORTS FROM COMMISSION MEETINGS/EVENTS**

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Commissioner Schwartz attended the annual meetings of the National Association of Regulatory Utility Commissioners (NARUC) and the National Association of State Utility Consumer Advocates (NASUCA) in November. These are good models for Commissioners to investigate in terms of educating themselves. At these meetings she heard discussions regarding millennials and how they approach communication and energy use and promoting partnerships between technology companies and utilities to provide more electric vehicle charging stations. The City of Palo Alto can and should play a leadership role in promoting partnerships to provide more charging stations. The fact that Palo Alto is a small municipal utility won't matter because of the high concentration of EVs in Palo Alto. Commissioner Schwartz also attended a low income energy issues forum, where she participated in a customer "journey mapping" exercise to map the decision-making process of low-income customers when they realize they need assistance. It's easy to forget that residents of Palo Alto struggle to make ends meet. A future agenda item on this topic would be worthwhile.

Commissioner Segal reported she and Commissioner Schwartz met with staff to discuss outreach to the community and mechanisms to reach different segments of the community. The discussion generated ideas for a column in the *Weekly*. A small group of community members are active, but they may not represent the general views of the community. Commissioner Schwartz added that outreach should be a combination of technology and standard approaches. Staff has to be proactive in targeting constituencies and inviting them to work with the City.

## UTILITIES GENERAL MANAGER REPORT

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Ed Shikada, Utilities General Manager, delivered the General Manager's Report.

**SunShares Update:** Registration for the Bay Area SunShares solar group-buy program ended on November 30. Palo Alto placed first among participating outreach-partner communities, with the highest number of signed PV contracts (12 as of most recent reporting from BC3, the organization administering the program). Palo Alto came in second to the City of San Francisco for number of people registered for the SunShares program, with 150 registrants. In order to be eligible for program discounts, residents must sign solar contracts by December 31. After that date, we will receive final numbers for PV capacity contracted for installation through the program.

**Transitioning NEM:** Due to widespread solar adoption in the City, we are approaching the end of the current Net Energy Metering (NEM) program in which customers receive retail credit for electricity their solar system exports to the grid. The City will transition to a NEM "Successor" program once Palo Alto reaches a capacity of 10.8 megawatts (MW) of cumulative solar installed for customers enrolled in the current NEM program. This is expected to occur in the month of December. To provide some certainty to people considering solar this year, staff is recommending that City Council extend current NEM program eligibility to all solar applicants through January 2, 2018 (the first business day after December 31, which falls on a Sunday), regardless of whether the 10.8 MW limit is reached before then. After January 2, all customers would be served by the NEM Successor program. This change would ensure that all customers currently evaluating solar can apply for the City's current NEM program this year, and it would also ensure a smooth transition to the NEM Successor program. Based on known potential applications, it would have a minimal impact on utility costs (\$2,000-\$5,000/yr.). Council will review staff's recommendations at the December 11 Council date.

**Georgetown University Energy Prize 10 Finalists Announced:** Throughout 2015-16 the City of Palo Alto, along with 49 other communities in the U.S., participated in the Georgetown University Energy Prize (GUEP) competition. The stated \$5M prize generated much enthusiasm, and Palo Alto worked to develop innovative programs such as outreach at schools and collaboration with the Cool Block neighborhood program, tracking and reporting on energy savings. In the end, the competition was a bit disappointing as Georgetown officials announced in April that the prize was not a \$5M cash prize but rather the opportunity to secure \$5M in financing. In November, a press release announced the top ten finalist communities as well as six additional communities, which includes Palo Alto, that received special recognition for their strong performance in the competition.

**"Carbon Offsets" from Forestry Project in Mexico:** On Monday, Dec. 4, the City Council adopted a resolution approving an agreement to purchase "carbon offsets" associated with a forest near its sister city, Oaxaca, Mexico, to help Palo Alto maintain its net zero carbon footprint. The City's investment of \$136,000 will offset about 10% of the annual emissions caused by natural gas use in the City and will support conservation and restoration activities within 5,900 acres of native forest as well as co-benefits for the Oaxacan community including fire protection, tree care, fresh water spring recharge, and transportation and equipment for local schools. The carbon offsets generated by the Oaxaca forestry project are similar to those contemplated by the Carbon Neutral Natural Gas Plan that was adopted by the City in 2016. The Mexican forestry project protocol was developed by Climate Action Reserve, one of the largest offset registries in North America used by the California Air Resources Board.

### Upcoming Events and Workshops

- **December 7** – Utilities is hosting a community workshop for the residents of Utilities Underground District 47, which spans parts of University South and Professorville neighborhoods. City Council adopted an ordinance establishing Underground District 47 in January 2013. Utilities undergrounding converts the utility lines from overhead to underground, removing poles and overhead structures. The City completed its substructure work to underground the utilities in this

area, and it is now time for residents and property owners to ready their existing services to be connected to the new underground distribution system. This community meeting is intended to help residents understand what is required to convert their utility services for completion of the final phase of this undergrounding project. The meeting will be held the following day at Addison Elementary School from 6 to 7:30 pm. Project details are available at [cityofpaloalto.org/utilityprojects](http://cityofpaloalto.org/utilityprojects).

**UAC Meeting:** The regularly scheduled meeting of January 3, 2018, has been cancelled. Staff will poll for a new date in January.

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**COMMISSIONER COMMENTS**

None.

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**UNFINISHED BUSINESS**

None.

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**NEW BUSINESS**

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**ITEM 1: DISCUSSION:** Discussion of the Joint Council and UAC Study Session

Chair Danaher heard the Council's interest in resiliency, fiber, and transportation. The Council is open to the UAC occasionally initiating topics of discussion with the Council. In addition, other modalities are available to communicate with the Council.

Commissioner Johnston concurred with Chair Danaher's comments. He heard the Council's interest in fiber, EVs, and resilience.

Commissioner Schwartz felt 45 minutes was not sufficient time to discuss necessary topics, particularly the workforce issue. The Council was generally receptive to the UAC's comments.

**ACTION:** No action

**ITEM 2. ACTION:** Staff Recommendation that the Utilities Advisory Commission Recommend Council Adopt a Resolution Amending Utilities Rules and Regulation 11 "Billing, Adjustments and Payment of Bills" to Update the City's Billing Adjustment Process

Tom Auzenne, Assistant Director of Utilities for Customer Support Services, presented revisions to Utilities Rules and Regulation 11, Billing, Adjustments and Payment of Bills. He read the proposed language for Section L.b.5, which no longer contains many of the bureaucratic requirements for proof of service and proof of completion. Staff will accept the customer's word that the issue has been resolved. Customers may continue to submit bills and paperwork if they wish. At the Commission's suggestion, staff retained the undetermined or general high water consumption as not eligible for adjustment because it's indeterminate as to how that occurred or where it occurred. Based on analysis, staff suggests a maximum adjustment of \$2,500, which will likely cover 95% of leaks that have occurred in the past. Excess water consumption will be billed at the Tier 1 rate of \$6.66 per ccf rather than the Tier 2 rate of \$9.16. The Utility Users Tax of 4.75% and any wastewater adjustment are not included in the \$2,500 cap. Auzenne read the proposed language for Section I.1, which corresponds to the current statute of limitations. Also, the proposed language will allow staff to review overcharges on a case-by-case basis and forgive overcharges that are not the fault of the customer. Staff does not have an anticipation of resulting financial impacts. Staff will review the issue in a year.

Chair Danaher advised that the proposed language is more concise and clear and reflects the UAC's prior discussion with staff.

Commissioner Johnston offered a hypothetical situation of average water usage of 100 ccf and in a particular period usage reached 300 ccf. In response to his question of how staff would calculate the 50% amount, Auzenne explained that higher than average consumption is defined as the volume of water greater than 100% of the customer's normal usage. Commissioner Johnston stated the higher than average consumption would be 200 ccf in the hypothetical case, and the amount forgiven would be based on 100 ccf. Chair Danaher added that the charge would be based on the Tier 1 rate. Auzenne concurred.

**ACTION:** Commissioner Johnston moved to recommend Council approval of the staff recommendation. Commissioner Schwartz seconded the motion. The motion passed (5-0) with Chair Danaher and Commissioners Forssell, Schwartz, Segal, and Johnston voting yes, Commissioner Trumbull and Vice Chair Ballantine absent.

**ITEM 3. DISCUSSION:** 2018 Utilities Strategic Plan

Ed Shikada, Utilities General Manager, presented the final component of the Strategic Plan and an overview of the entire Strategic Plan. After receiving Commissioners' feedback, staff will return in January with a recommendation for approval. Following UAC approval, staff will forward the Strategic Plan to City Council for review. A core planning team comprised of two dozen employees focused on various dimensions of the Strategic Plan and conferred with the larger staff along the way. Public meetings included check-ins with the UAC and meetings with key customers and community advocates. The proposed Strategic Plan focuses on key priority areas to reflect the needs of the organization and customers and to reflect the evolution of the utilities industry. The priority areas are Workforce, Collaboration, Technology, and Finances and Resources. The Mission Statement remains the same as in the prior Strategic Plan, and the Strategic Destination balances the vision for tomorrow with the needs of today.

Chair Danaher requested Shikada elaborate on ways adoption of the Strategic Plan will change the department's work.

Shikada referred to two strategies in the Workforce priority area. Employees will draft Individual Development Plans (IDP) to look at how the Utility supports and provides career paths for individuals and how the individual's interests and strengths impact the organization. The IDP is a framework to recognize the value of employees at different stages of their careers. Collaboration is a new focus for the department and is an opportunity to facilitate partnerships with the community, within departments, and across departments. Collaboration will allow staff to recognize the breadth of customers' circumstances and to design programs for all customers. The Finances and Resources priority area contains a significant work plan, including implementation of performance indicators and metrics within operations.

Commissioner Schwartz noted a major barrier for many utilities has been the tendency for operations to occur in silos and asked how the utility might break down silos. Shikada referred to the distributed energy resources strategy of seeking two-way communication with customers and the Sustainability and Climate Action Plan (S/CAP) where staff is working across departments. Taking a customer-focused approach in assisting customers with the decision-making process around sustainability efforts is another way to break down silos.

Commissioner Schwartz recommended using "journey-mapping" to help break down silos and to view services from the customer's standpoint.

Commissioner Forssell inquired about measurement of employee collaboration. Catherine Elvert, Communications Manager, reported collaboration with external stakeholders can be measured through customer participation or response to customer solicitation mechanisms. Employee satisfaction can be used to measure internal collaboration. A number of survey methodologies will be used to explore outreach with customers; assess customers' interest in and awareness of various technologies and

initiatives we offer; and explore customer interest in engaging with staff. Shikada clarified that a survey similar to a customer satisfaction survey but focused on employees may be used to measure collaboration.

Commissioner Johnston struggled with whether Priority 4, Finances and Resources, should be the last priority, but he understood the logic to the sequence.

Commissioner Segal inquired about staff adding numbers or percentages to the key performance indicators (KPI). Shikada explained that staff continues to develop KPIs. Data collected during the first year of implementation will be used to establish a baseline.

Chair Danaher felt the Strategic Plan was very thoughtful and would involve a lot of work for staff. In response to his question about staff presenting an annual report to the Commission regarding KPI, Shikada replied yes.

Commissioner Schwartz asked about benchmarking criteria and utilizing benchmarking criteria published by trade associations. Jonathan Abendschein, Assistant Director of Resource Management, indicated the criteria depends on the focus of a benchmarking study. Past UACs and Councils often requested benchmarking related to water utility rates and costs. Other forms of benchmarking center around performance or specific initiatives. A narrowly defined benchmarking study can be performed more quickly.

**ACTION:** No action

**ITEM 4. DISCUSSION:** Discussion of Sustainability and Climate Action Implementation Plan

Jonathan Abendschein, Assistant Director of Resource Management, presented the Sustainability and Climate Action Implementation Plan, which will be presented to the Council for adoption on December 11. The Plan focuses on four high profile areas, electric vehicles, water, mobility, and energy, for implementation over the next three years. Data learned and developed over the next three years will serve as a basis for achieving greater carbon reductions over the subsequent ten years. The City wants to be viewed as having one of the most comprehensive programs in the nation to make owning and adopting an EV as easy as possible. Greater adoption of EVs will require an enormous expansion of EV infrastructure.

Christine Tam, Senior Resource Planner, reported the goals in the energy area are to obtain all cost effective energy efficiencies and to shift energy usage from natural gas to cleaner energy resources. The City currently uses carbon offsets to compensate for the City's use of natural gas. To reduce the use of natural gas, Utilities and Development Services are collaborating on achieving higher building efficiency through voluntary incentive programs and mandates. Electrification's impact on electric supply and resilience will be addressed in strategic planning efforts.

Karla Dailey, Senior Resource Planner, advised that the top priority is continued efficient use of water. Staff wants to reduce reliance on imported water and move toward the concept of matching water quality with use. Activities will be focused on recycled water from the Regional Water Quality Control Plant and on nontraditional water sources.

Gil Friend, Chief Sustainability Officer, stated the strategy is to make not driving more convenient than driving and to shift vehicles from fossil-fuel power to electric power. Over the next few years, mobility will be carefully evaluated to understand options, costs, and impacts.

Abendschein reported the next steps are to talk with City Council on December 11 and in FY '19 return for an updated plan for the following ten years.

Commissioner Johnston questioned the utility's ability to meet load demands with non-fossil-fuel resources if electrification is successful. Abendschein remarked that the Integrated Resource Plan will consider that issue. The City's portfolio is diversified with solar comprising only 30%. Staff ensures incentive programs incentivize heat pump technologies that are more efficient than gas technologies. Friend added that energy storage will be another issue.

Commissioner Forssell inquired about the possibility of purchasing carbon offsets to neutralize greenhouse gas emissions caused by methane leakage at the wellhead. Dailey advised that the amount of leakage is extremely difficult to quantify. Abendschein added that the Cap and Trade system does not cover leakage to the wellhead.

Commissioner Schwartz stated the City's goals for carbon reduction are too aggressive and not practical. The City's energy usage has changed drastically since the baseline was taken in the 1990s. Building electrification is a distraction because it provides only a tiny amount of carbon reduction. To prioritize increased electrification before implementing a second transmission feeder is imprudent. The higher priority should be purchasing transformers and switch gears to restore power in a disaster. The City should focus on solar systems that provide some level of resiliency, can be paired with storage, or can be installed as part of a microgrid. She supports electrification of transportation but not providing incentive programs for EV purchases. Abendschein agreed that City efforts should focus on installation of residential infrastructure for EVs rather than incentive programs for purchasing an EV.

Commissioner Schwartz felt solar canopies that can become low-cost charging stations is a good direction to pursue. She had not heard any opinions that vehicle-to-grid solar power is viable.

In response to Council Member Filseth's inquiry of what prevents people from buying EVs, Ed Shikada, Utilities General Manager, reported staff will be exploring that issue in a survey. There are many opinions of why people don't purchase EVs, but his personal opinion is that the cost of infrastructure upgrades is problematic for residential renters. Friend added that charging infrastructure in multifamily housing should be a priority. Other barriers to EV purchases are price, performance, and public awareness. Commissioner Schwartz commented that not everyone in Palo Alto places a higher priority on being green than on comfort or cost.

Commissioner Forssell supported the emphasis on making charging infrastructure available for people who rent, who live in multifamily, and who commute into Palo Alto.

Chair Danaher referred to the greenhouse gas abatement cost curve in Exhibit E and recommended staff think about abatement measures with cost per unit of carbon. Not all abatement measures are contained in the list but are available to the City, such as building denser housing. Staff should also consider other goals that could be achieved with funds used to provide subsidies. If the City wants to be a model, it has to have cost-effective solutions.

Friend reported cost effectiveness is the overarching goal of the S/CAP even though it's not stated throughout the S/CAP and Implementation Plan. The City can deliver the best technology options available and educate the public about those options. To Commissioner Schwartz's comments, carbon reduction goals are reasonably aggressive goals. The S/CAP vetting exercise considers whether goals are achievable.

Commissioner Schwartz commented that the City has not adopted efficiency technologies that some other cities have; therefore, the City cannot surpass those cities. Palo Alto's goals are not realistic when it has not implemented the same technologies that other communities have.

Chair Danaher indicated cost efficiency has to be looked at cross-sector for everything. A goal of converting from gas to electricity may not be the most effective use of carbon reduction dollars. A deeper understanding of how carbon free the electrical load is at given points in time and how that drives policies

would be good. Staff should consider infrastructure for and barriers to alternative modes of electric transportation such as bikes and skateboards and consider charging networks and the utility's role in them.

Commissioner Segal noted a high percentage of children bike to school; yet, they stop biking once they graduate high school. As a bicyclist, she finds the lack of secure bike parking and crosstown connectivity to be small barriers to biking.

Commissioner Forssell appreciated the exploration of recycled water and non-potable sources of water. She recalled public comment regarding basement dewatering and requested an update. Shikada indicated the City Council has an item to codify requirements for basement dewatering on its agenda. Dailey noted the requirements focus on reducing the amount of water rather than putting the water to use.

**ACTION:** No action

**ITEM 5: ACTION: Staff Recommendation that the Utilities Advisory Commission Recommend Council Adopt a Hydroelectric Generation Variability Management Strategy**

Jim Stack, Senior Resource Planner, presented the Hydroelectric Generation Variability Management Strategy. In an average year, the utility receives about 50% of its total power supply from hydroelectric power, which is greater than the statewide average of 10% hydroelectric power. Hydroelectric supplies are highly sensitive to weather conditions. In 2014-15, the utility received approximately 25% of its supply from hydroelectric power. In 2017, hydroelectric power increased to approximately 85% of supply. The amount paid for hydroelectric resources does not vary based on the amount of precipitation or the amount of output. During a drought, the utility must purchase additional power supplies to fill the gap left by the lack of hydroelectric power. In wet years, the utility has excess power to sell. In 2014-15, market purchase costs totaled approximately \$15 million. In 2017, market purchase costs will likely be negative.

Staff has investigated four main options to manage this financial variability: physical hedging, financial reserves, a rate adjustment mechanism, and weather insurance. Physical hedging involves making physical trades in times of surplus or deficit supply. Another option is a long-term layoff where a portion of the utility's hydroelectric resources are sold or exchanged. The utility has a hydroelectric stabilization reserve as a cushion to financial swings caused by hydroelectric supply. Weather insurance is a fairly expensive approach, and staff does not recommend it.

Staff's recommendation is a rate adjustment mechanism, which is a slight surcharge or discount added to electric rates. It would appear as a separate line item on bills and would pass through additional hydroelectric costs incurred in dry years and refund excess revenue received in wet years. The goal is to maintain the rate stabilization reserve at a level between \$3 million and \$35 million and to mitigate severe swings. If the Council enacts a rate adjustment in the spring, staff will have a good forecast of the hydroelectric situation for the upcoming fiscal year. Staff proposes three levels of rate discounts and two levels of adders. The rate adjustment would remain in place for a year and then be reevaluated for the following year. If the UAC recommends approval, staff will present it to the Finance Committee in February and the City Council thereafter with the idea of implementing it July 1, 2018.

Chair Danaher understood that rates were set high enough to create a reserve fund, which is intended to stabilize rates. This adjustment mechanism will smooth fluctuations outside projections. In reply to his question of who would be affected and by how much, Jonathan Abendschein, Assistant Director of Resource Management, stated that the median residential bill would increase by \$2.50-\$5.00 per month with the largest adder in place. Staff may need to think about some customers more carefully. But if the adder is applied, a rate increase would have been needed as well. The adder is a temporary and transparent increase as opposed to a permanent rate increase that accumulates reserves.

Commissioner Schwartz asked if the utility has any control over the time of day it receives hydroelectric resources, particularly if the utility could receive more hydroelectric supply at night. Stack responded that the Northern California Power Agency (NCPA) schedules the utility's load and supplies. Staff could pursue nighttime supply if market signals indicate that is the most effective strategy. Outside of market signals, staff can pursue nighttime supply for environmental reasons if the Council directs. Abendschein clarified that Commissioner Schwartz was referring to dispatching for carbon reasons. A discussion should be had about whether dispatching resources at night actually saves carbon. Carbon dispatch, as Commissioner Schwartz is using the term, may not save any carbon and could lose ratepayer value.

Councilmember Filseth calculated the average value of the reserve at approximately \$16 million, the City's cost to capital as 4%, and the cost of the adjustment at approximately \$600,000. Abendschein noted that the rate adjustment mechanism would actually enable the City to reduce the size of its hydroelectric stabilization reserve, so the \$600,000 cost would actually be a savings from a cost-to-capital perspective. Filseth confirmed that the proposed reserve would be funded with existing funds rather than an additional \$16 million that cost ratepayers another \$600,000.

**ACTION:** Commissioner Segal moved to recommend Council approval of the staff recommendation. Commissioner Forssell seconded the motion. The motion passed (5-0) with Chair Danaher and Commissioners Forssell, Schwartz, Segal, and Johnston voting yes, Commissioner Trumbull and Vice Chair Ballantine absent.

**ITEM 6. DISCUSSION:** Renewable and Carbon Neutral Portfolio Strategy Discussion

Jim Stack, Senior Resource Planner, presented the Renewable and Carbon Neutral Portfolio Strategy (RPS). Staff will return to the Commission in March or April with analyses of the different portfolios for the Integrated Resource Plan (IRP) planning horizon, as first discussed at the September UAC meeting. Staff requests Commissioners' feedback regarding portfolios to consider and how to weigh them against each other. Stack reviewed the utility's and the state's targets for renewable energy purchases since 2002. In 2015, SB 350 increased the state's target to 50% by 2030. The state and the utility have the same standard for eligible renewable resources. The utility established a rate impact limit of 0.5¢ per kWh for its renewable purchases. Under SB 350, in years in which the utility receives more than 50% of supply from hydroelectric resources, the utility is exempt from the 50% RPS target. The utility now has five large solar resources, resulting in a projected RPS level of 58% for 2017.

Within the RPS planning horizon, the largest variable is whether to renew the Western Base Resource contract in 2025. Policy issues for discussion are the amount of the Base Resource in the portfolio beyond 2024; hydroelectric variability; solar concentration; seasonal exposure; potential load loss; and all current renewable resources are Bucket 1 (in-state delivered energy). Policy changes revolve around pursuit of a higher level of RPS or meeting carbon neutrality at the lowest cost and the value of resource diversity in the portfolio.

The first potential strategy change is raising the RPS level to match or exceed the state's requirement of 50%. Increasing the target should be considered with renewing the Western Base Resource contract.

Chair Danaher felt the chief consideration is reliability and availability of supply rather than carbon issues. In response to Chair Danaher's question regarding decisions the UAC needs to make in the next two years, Stack requested Commissioners' preference for hydroelectric versus renewables. Jonathan Abendschein, Assistant Director of Resource Management, clarified that staff is attempting to assess the market, potential long-term decisions, and the community's policy preferences. Staff is preparing to launch an analysis to develop a quantitative sense of different portfolios and risks and tradeoffs of those portfolios. Staff requests Commissioners' preferences, questions, and concerns so they may consider them in the quantitative analysis.



Stack requested feedback concerning surplus supplies. The utility could retain all renewables to maximize the RPS level and sell generic power or minimize supply costs by selling renewables. The current approach is to retain all renewables supplies, banking as much of them as possible. Staff has no direction regarding actions to take when the maximum amount of renewables is reached.

Chair Danaher preferred selling renewables for the best possible price. Abendschein reported that has not been the approach of past UACs or past Councils. There is a cost benefit to selling some of the renewables. Chair Danaher reiterated his preference for maximizing cash and retaining some RECs for future use.

Commissioner Johnston requested the rationale for large hydroelectric not being a part of the RPS portfolio. Stack explained that the distinction was a political decision made when the state first adopted an RPS. Commissioner Johnston felt the RPS standard is artificial, and the real goal is carbon neutrality. Abendschein added that utilities have raised the issue.

Commissioner Schwartz preferred exploring geothermal energy in order to obtain nighttime renewables instead of RECs. Carbon neutrality being equal among resources, she concurred with using less expensive resources.

Commissioner Segal concurred with the direction to staff to minimize costs and questioned whether funds from the sale of RECs could be used for energy storage or other power resources.

Chair Danaher reiterated the Commission's consensus to maintain carbon neutrality while obtaining resources at the lowest possible cost.

Commissioner Segal asked if exceeding 50% of hydroelectric resources would cause the utility to lose its exemption. Stack advised that establishing an RPS requirement above 50% could place the exemption at risk. However, maintaining a commitment to hydroelectric will not affect the exemption and will allow the utility to sell renewables.

Commissioner Forssell inquired about the potential amount of funds resulting from a sale of RECs and whether those funds could be used for other projects. Stack indicated the utility could meet state requirements for RPS and sell more renewables than stated in the staff report.

Commissioner Forssell requested clarification of banking RECs and buckets. Stack explained that the utility can reduce the RPS level and swap high-value bucket 1 resources for lower-value bucket 3 resources. The utility would sell bucket 1 RECs and energy and buy bucket 3 RECs with generic market power.

Commissioner Johnston asked if generic market power is hydroelectric or gas-fired. Abendschein advised that it would not be hydroelectric but resources that have been around for 20-30 years, and it would be carbon neutral assuming the utility purchases RECs as well.

Councilmember Filseth understood staff was saying hydroelectric is undervalued relative to other renewables. He supported taking a profit from the sale of high-value RECs.

In answer to Commissioner Johnston's question about the RPS strategy's relationship to the S/CAP strategy, Stack did not believe the utility has to maintain a higher than 50% RPS to meet the S/CAP strategy because the S/CAP concerns carbon.

Commissioner Forssell requested clarification of hydroelectric being least preferred when it is renewable and carbon free. Stack reported that bucket 3 is largely out-of-state resources. The state prefers in-state resources. Others argue that RECs are not as valuable environmentally as in-state generation of resources.

Commissioner Johnston inquired about strategies to reduce the amount of brown power purchased when resources do not meet demand. Commissioner Schwartz stated the utility would need to purchase geothermal energy or something that is renewable and deployed at night. Analyzing carbon content 24 hours a day is a different exercise. Abendschein added that the IRP analysis will include a discussion of the cost to supply renewables during a 24-hour period.

Commissioner Forssell inquired about the need to lower rates should RECs be sold at a profit. Abendschein advised that initiating new programs or reducing rates is a policy decision that will need to be considered.

Stack summarized the points of discussion. In procuring new resources, staff has opted to maximize value. In the future, the UAC may consider thresholds for maximum levels or minimum levels of each resource. Diversification could provide a hedge against changes in the market.

**ACTION:** No action

**ITEM 7. ACTION:** Selection of Potential Topic(s) for Discussion at Future UAC Meeting

Ed Shikada, Utilities General Manager, reported staff will set a new date for the January meeting, probably in late January. Future agenda items include resilience and an update on the cross bore program

Jonathan Abendschein, Assistant Director of Resource Management, advised that items for distribution systems assessment and recycled water project evaluation were postponed to March and February respectively.

Commissioner Schwartz requested a discussion of low-income programs and customer segmentation and surveys.

Chair Danaher requested a fiber discussion to address the Council's priority.

Commissioner Forssell requested an educational session regarding the existing fiber utility.

**ACTION:** No action

Meeting adjourned at 9:49 p.m.

Respectfully Submitted,  
Marites Ward  
City of Palo Alto Utilities