



DRAFT

UTILITIES ADVISORY COMMISSION MEETING - SPECIAL MEETING MINUTES OF APRIL 12, 2016

CALL TO ORDER

Chair Foster called to order at 7:10 p.m. the meeting of the Utilities Advisory Commission (UAC).

Present: Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz
Absent: Commissioners Eglash and Hall, and Council Liaison Scharff

ORAL COMMUNICATIONS

None.

APPROVAL OF THE MINUTES

Commissioner Schwartz proposed the following changes to the minutes: (1) change the fourth sentence in the first paragraph under "Reports from Commission Meetings/Events" to: "She said that it is preferable to provide customers a choice and would be relevant to our discussions of opt-in, opt-out with respect to the PaloAltoGreen Gas program."; and (2) change the second sentence in the second paragraph under "Reports from Commission Meetings/Events" to: "She said the techniques offer lessons to utilities including Palo Alto, particularly with respect to opportunities for customers looking to establish or rehabilitate credit ratings."

Chair Foster moved to approve the minutes from March 2, 2016 UAC meeting with the proposed changes and Commissioner Ballantine seconded the motion. The motion carried unanimously (5-0) with Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz voting yes and Commissioners Eglash and Hall absent.

AGENDA REVIEW AND REVISIONS

None.

REPORTS FROM COMMISSION MEETINGS/EVENTS

Commissioner Schwartz attended the Power Agency of Northern California (PANC) meeting, which had the new California Public Utilities Commission (CPUC) Office of Ratepayer Advocates director as the speaker. She is trying to bring innovation and the City can learn from what they will be doing.

Commissioner Schwartz reported that she will be attending the next meeting (April 13) of the "51st State Initiative" that examines what it will look like if you could start from scratch to develop a new energy market as a way to discuss innovations around the future of energy.

UTILITIES DIRECTOR REPORT

1. City of Palo Alto Utilities Ranks in Top 10 for Most Solar Watts per Customer: CPAU earned a spot on the annual Top 10 utility solar list compiled by SEPA, the Smart Electric Power Alliance (formerly the Solar Electric Power Association). SEPA ranked CPAU third on the Watts per Customer list, for 1,846 watts per customer and 861 PV systems installed in 2015. This is the 3rd time CPAU has made the Top 10 list. Awards were announced this afternoon at the Utility Solar Conference in Denver. SEPA's ninth annual survey includes more than 300 utilities across the country.

2. Palo Alto CLEAN (feed-in tariff) Program: On March 28, the City Council voted to maintain the 16.5 cents per kWh CLEAN rate to encourage local solar projects despite having a unanimous recommendation from the Finance Committee to reduce the price to the avoided cost of about 9 cents per kWh.

3. Mayor's Green Business Leader Awards: The City's "Mayor Green Business Leader" Awards program recognizes and promotes Palo Alto companies who have made major strides in improving building energy efficiency. In Palo Alto, businesses that benchmark their energy use and receive ENERGY STAR certification are considered a Green Business Leader. On April 4, Mayor Burt honored eight companies for their leadership in energy efficient building management in 2015. Thirty buildings totaling over 2.3 million square feet of office space qualified for this 4th annual award. CPAU's news webpage (cityofpaloalto.org/utilities) has more information about the companies honored.

4. National Mayor's Challenge for Water Conservation: Mayor Burt has joined the Mayor's Challenge for Water Conservation, a national competition in which city mayors encourage their residents to save water and sign the "My Water Pledge" on behalf of their city. The city with the most pledges at the end of April wins, and residents are then entered into a chance to win prizes such as a new Toyota Prius! Sign on to water conservation at mywaterpledge.com

5. April is National Safe Digging Month – Call 811 to Prevent Pipeline Accidents: April is National Safe Digging Month, a campaign to educate people to "Know What's Below and Call 811 Before You Dig." The City promotes this important safety reminder to our community throughout the year, but is placing additional emphasis on the message in April. Excavation damage remains one of the leading causes of gas and other utility pipeline accidents. These accidents are preventable by first calling 811 prior to digging. The Underground Service Alert (USA) is a free service that will come out and mark all of your underground utilities. Visit Call811.com for more information.

6. Recent and Upcoming Events

March 26: Rainwater Harvesting Workshop and Rain Barrel Giveaway

April 13: Learning about California Native Plants Workshop Details and registration for this and other workshops are available at cityofpaloalto.org/workshops

April 30: Great Race for Saving Water – 5K fun run and walk to raise awareness about water resources and conservation. This family-friendly race and Earth Day festival is a fun, healthy way to celebrate the environment and our precious natural resources. Join fellow community

members at the scenic Baylands for some outdoor recreation, raffle prizes, goodies, and a chance to catch the “running toilet!” Free bike repairs and tune-ups will be offered by Repair Café for those who bicycle to the event. Details and registration at cityofpaloalto.org/GreatRace

COMMISSIONER COMMENTS

None.

UNFINISHED BUSINESS

None.

NEW BUSINESS

ITEM 1: ACTION: Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt 1) a Resolution Approving the Fiscal Year 2017 Electric Financial Plan and Amending the Electric Utility Reserves Management Practices, and 2) a Resolution Increasing Electric Rates by Amending the E-1, E-2, E-2-G, E-4, E-4-G, E-4-TOU, E-7, E-7-G, E-7-TOU, E-14, and E-16 Rate Schedules, and Repealing Rate Schedules E-18 and E-18-G

Senior Resource Planner Jonathan Abendschein summarized the written report. He explained that distribution and power supply costs are increasing requiring an 11% rate increase this July followed by a 10% rate increase next year. He said that this is the first rate change since July 2009 and the first electric rate change since the passage of Proposition 26. A cost of service analysis (COSA) was completed to support the rates and ensure that they are compliant with Proposition 26. Abendschein reminded that the UAC reviewed, and the Council adopted, electric rate design guidelines and that the COSA is to be completed in two phases. The first phase of the COSA is complete and provided tonight with the second phase starting in late 2016 to examine rate options that need further study and may need advanced metering technologies such as time-of-use rates.

Abendschein said that the projected cost and revenue profile, which reveals that in FY 2015 and FY 2016, revenues did not cover costs and that costs are increasing due to new renewable projects coming on line, increases in capital costs and some increases in operations and maintenance cost related to deferred maintenance and the difficulty filling vacant positions in the Operations Division. Abendschein said that the drought caused short-term cost increases that were funded from reserves. Consistent with the purpose of the reserves, the Rate Stabilization and Hydro Stabilization Reserves were drawn down in FY 2015 and FY 2016 and are expected to be exhausted by the end of FY 2017. Although staff would have liked to keep the rate increase under 10%, the level of reserves requires a larger increase this year and, even with two years of significant rate increases in FY 2017 and FY 2018, the Supply Operations Reserve falls \$3.9 million below the minimum guideline level. Abendschein said that this is allowed as long as the Council approves and the financial plan shows the reserve climbing above the minimum level during the planning period. He added that there is uncertainty in the hydroelectric generation forecast and the spring rains may increase the generation above what is in the forecast. Abendschein said that the risk of any negative impact to the bond rating by falling below the minimum guideline level is very small due to the presence of the significant balance in the Electric Special Projects Reserve, which provides a substantial cushion for the financial health of the Electric Fund.

Commissioner Danaher asked what rate increase would be required to keep the Supply Operations Reserve above the minimum guideline level. Abendschein said that a 14% rate increase would be required in July 2016 to ensure that the reserve remain above the minimum level. Abendschein said that the projected 11% and 10% rate increases do a good job matching revenues to costs over the next several years. If too large of a rate increase is implemented too early to refill reserves, there could be a need to reduce rates in the future, which is difficult to explain.

Abendschein said the Electric Distribution Operations Reserve also goes to minimum guideline level in FY 2016, but is projected to be above the minimum level for the planning horizon (through FY 2023).

Abendschein explained that a cost of service analysis (COSA) includes three steps: calculation of the revenue requirement, determination of how much revenue to collect from each customer class, and design of rates to collect the revenues. The COSA involves examining the consumption patterns of each customer group. The result of the new COSA is that there is a different alignment of costs by customer class since the last Electric COSA was performed. This is caused by changing consumption patterns for each customer group.

Chair Foster asked if the increased costs for the streetlighting and traffic lights would be paid by the City's General Fund. Abendschein confirmed this understanding. Chair Foster said that the cost for streetlighting doesn't seem like a cost of service in the same sense it does for other customer classes. He said that the rate impact for the residents and businesses is softened by hitting the General Fund with these increased costs. Assistant Director said that this is not the reason the cost allocation realignment is being done, but agreed that this is the effect of the change.

Commissioner Danaher said that the goal of the COSA is to have a transparent way to see the costs for each customer group and that this is an appropriate way to show the costs of services such as streetlighting. Chair Foster said that he is not surprised by the cost, but is worried that this new expense for the General Fund will result in other priorities not being able to be funded since the General Fund has limited sources of funds. Commissioner Danaher asked if the increase cost was driven by the change of streetlights to more efficient LED lamps. Abendschein said that the revenue requirement was developed by determining all the costs—capital and operating—that are needed for the streetlighting and traffic signal service. Abendschein said that Utilities has coordinated very closely with the City's Office of Management and Budget on this proposal.

Chair Foster asked about the large increase in the Municipal Rates (Rate Schedule E-18) and which customers they would impact. Abendschein said that these customers are the City facilities and that when the E-18 rate is repealed, the facilities will be assigned to an applicable rate schedule. He said that this utility—the Electric Fund—is the last utility with these special rate schedules for City facilities. Utilities has coordinated with the Office of Management and Budget on these changed proposal. Chair Foster asked if the Palo Alto Unified School District is part of the customer group. Abendschein responded that it is only City facilities such as City Hall and the Regional Water Quality Control Plant (RWQCP), but does not include the school district.

Abendschein said that the bill impact for each facility depends on the new rate schedule that they would be assigned to and that some facilities could experience rate increases of 35% or more, but some, such as the RWQCP, will not as that facility will move to the E-7 rate schedule which has similar rates to the current E-18 rates. The smaller City facilities that are moved to the E-2 or E-4 rate schedules will have larger increases.

Abendschein explained that the recommended rate design for residential customers (on Rate Schedule E-1) is for two tiers, instead of the current three tiers, since the two-tier rate design most closely matches the cost of service. He added that the proposal includes the addition of a minimum charge for all customers. Abendschein said that the residential rate design proposal is to be consistent with the cost of service down to the rate level as required by Proposition 26. He said that the non-residential rates continue with the same rate design as in current rates.

Commissioner Schwartz recommended reviewing Bluebonnet Electric Cooperative's website, which has a good explanation of the components of their electric rates.

Abendschein showed the bill impact of the rate changes for residential (E-1) customers as a result of collapsing the three tiers to two tiers. The largest users have a lesser increase in percentage terms.

Commissioner Ballantine asked if next year's anticipated rate increase of 10% will have a disproportionate impact on residential customers again. Abendschein said that this year's changes rebalance the cost of service relationship between the customer classes and the changes next year should be more proportionate and not impact one customer group much differently than any other.

Commissioner Ballantine asked about whether staff evaluated the impact of two-tier vs. three-tier rates when trying to match the rate structure to the cost of service with respect to the impact on electric vehicle (EV) charging. Abendschein said that there was not sufficient time to conduct detailed analysis on the impact on EV charging, but that this will be reviewed in more detail in Phase 2 of the COSA. Commissioner Ballantine said that with higher EV penetration, the third tier might need to come back or there is some type of fixed cost when peak daytime load needs to be expanded to accommodate EV charging. He said that the carrying capacity of the grid may change as it relates to peak demand, but not necessarily energy. Abendschein said that the City has a fair amount of excess distribution capacity currently and, even with Palo Alto's high penetration of EVs, the impact is still not significant enough to cause cost increases to the distribution system at this time and there will be sufficient time to adjust to a dramatic increase in EV penetration, if it actually occurs. Abendschein added that the bulk of the residential EV charging occurs during the middle of the night and not at the distribution system's peak times.

Commissioner Danaher noted that the draft Sustainability and Climate Action Plan encourages EVs and asked whether EV owners would be pushed into the highest price tier. Abendschein noted that the rate proposal eliminates the highest priced third tier so the impact on EVs is reduced from current rates.

Vice Chair Cook said that the community doesn't like rate increases. However, we have been blessed with rates that have not changed in 8 years and the rate comparisons show that the rate increase still results in relatively low rates compared to neighboring utilities. Vice Chair Cook asked if the rate proposal would result in any discouragement of EVs or of electrification to reduce GHG emissions. Abendschein said that there are many drivers for electrification and cost is not necessarily all of it. The rate increase will tend to discourage electrification, but the elimination of the third tier will encourage electrification. Abendschein noted that gas rates are projected to increase as well.

Commissioner Ballantine stated that in a recent presentation to the UAC, staff showed that the economics of solar thermal systems (hot water heating) are challenging. He said that these rate changes will improve the cost-effectiveness of solar PV, which could push people to use solar for electricity rather than for its thermal heat. However, this is a less efficient way to use energy from the sun so this change will push towards thermal use. He said that using heat from the sun to make heat makes more sense from a physics perspective.

Vice Chair Cook asked whether smart meters will change the cost of service since customers may adjust their usage based on better information provided to them. Abendschein said that it was too early to conclude anything since the CustomerConnect program is still underway and that Phase 2 of the study will show more results as to changing customer behavior that may change the factors that contribute to the allocation of costs in the cost of service study.

Vice Chair Cook said that the community has enjoyed stable rates for a long time, but will need to accept the rate increase at this point. He commented that Proposition 26 has taken away the ability to design rates to some extent, which can be very frustrating. Abendschein reminded that this is why the rate design guidelines are taken to the UAC for recommendation and the Council for approval in advance of conducting a new COSA.

Chair Foster asked if the projected 11% in FY 2017, then a 10% rate for FY 2018 followed by a 2% increase in FY 2019 could be spread out more evenly over the those years—for example, 8% per year in FY 2017 and FY 2018 following by a higher than 2% increase in FY 2019. Abendschein explained that the reserve would fall far below the minimum in that case. Alternately, the City would have to cut back on capital improvements or maintenance to reduce cost. Abendschein referred the Commission to the rapidly escalating costs in FY 2016 and FY 2017 shown in Figure 7 on page 20 of the FY 2017 Electric Financial Plan. He said that rates must follow those costs. Chair Foster asked how much lower the reserves would go with an 8%, rather than an 11% rate increase in July. Abendschein said that the reserve would almost be exhausted in that case. He noted that reducing the increase in FY 2017 and FY 2018 would require a larger increase in FY 2019 and FY 2020 to the extent that rates would then be too high to not only recover costs, but to refill reserves such that a rate decrease could be needed in the future, which would be difficult to explain to customers.

Chair Foster would prefer not to hit the General Fund with the cost of streetlights and traffic lights as he thinks that the General Fund will have to reduce programs and funds elsewhere to pay the increased cost. He would also like to continue with three tiers for the E-1 rate schedule to promote conservation. Senior Deputy City Attorney Jessica Mullan said that the streetlights

rates must be based on the cost of providing the services and any alteration to the proposal must be cost-justified. Chair Foster said that all residents and businesses benefit from streetlights including businesses and residents. Chair Foster asked how long the streetlight service has been provided by Utilities as a “freebie”. Assistant Director Jane Ratchye said that this is the first time that the Electric Fund will be subject to Proposition 26 since the City hasn’t changed rates since it was effective in 2010. Mullan added that now that the City is adjusting its electric rates, it is under Proposition 26 and all electric rates must be cost-justified, which is why the COSA was so careful to make sure that all rates are based on the cost of service.

Commissioner Ballantine agreed that it’s not only City employees that benefit from streetlights, but the greater city and community—all ratepayers—that benefit. Vice Chair Cook added that there are many things that are a common good and asked why ratepayers would pay for that common good and not roads or other services. Commissioner Ballantine said that the City doesn’t supply electricity to the roads. Chair Foster said that the City has no ability to raise taxes for this service. Commissioner Schwartz said that it is more transparent to show the true cost of providing this service and that if the rates for streetlights were not increased to cover the cost of providing the service, the rest of the electric rates would have to increase even more. Chair Foster said that of the \$12 million revenue increase for this rate increase, \$2 million is for the increased cost of streetlights. Chair Foster asked how the City would be able to cover these increased costs. Mullan said that she couldn’t speak to the budget process the Council will go through to balance the budget, but she wanted to clarify that streetlights are an electric service and that service must be provided at cost-based rates. Chair Foster said that she would recommend that the City develop a creative way to fund this cost rather than put it on the General Fund. Commissioner Ballantine said that the changes to the municipal rates (repealing the E-18 rate schedule) will also add significant costs to the General Fund. Chair Foster agreed that the hit to the General Fund is not just the \$2 million for the streetlights, but an additional increase for electric service for municipal facilities. Abendschein said that the total impact to the General Fund is about \$2.5 million since the E-18 rate affects some customers who are not the General Fund (such as the RWQCP). Vice Chair Cook said that he heard earlier that Utilities staff worked with the City to coordinate this change. He asked if the General Fund expressed any concerns. Abendschein said that concerns were expressed, but that staff incorporated the change and included these increased costs when it prepared the City’s financial forecast last fall.

Commissioner Schwartz asked if there are public hearings to educate the community about the rate changes and asked if there should be additional communication efforts given the large increases. Ratchye added that the Utilities Communication Manager has developed a comprehensive communication plan for the rate increase. Commissioner Schwartz asked if the UAC can provide suggestions to improve communications.

Chair Foster asked for Commission comment on two versus three tiers for the E-1 Rate Schedule. Commissioner Schwartz noted that the investor-owned utilities (IOUs) have gone from five tiers to four and then three and will soon go to two tiers, then to time-of-use (TOU) rates with no tiers. Abendschein said that it’s nice to be consistent with other utilities, but the proposal was developed because it is the most consistent with the cost of service. Commissioner Schwartz commented that a two-tier rate structure is better for EV owners.

Abendschein said that the rates also provide more of an equitable incentive for all customers to install PV, instead of only high energy users who are in the highest (most expensive) tier. It also improves the incentive for all customers to increase efficiency.

Commissioner Ballantine noted that the rate impact percentage-wise is the lowest for the highest users. He said that the first tier increases by 16%, tier two increases by 30%, but the third tier falls by 3%. Although the model developed these rates, no rate structure can actually exactly reflect the cost of service. Abendschein said that the model is used to allocate actual costs and those decisions have to be explainable and fully justifiable—the method does not involve averaging, or a statistical scenario—and industry standard methodologies were used to allocate the costs and develop the rates. Commissioner Ballantine asked if there is any way to re-create a third tier since the percentage difference is so low.

Commissioner Schwartz asked if a larger increase on high energy users—so that their increase would be comparable to lower energy users—could potentially fund the streetlights. She said that the higher energy users may be less price sensitive. Abendschein said that the only way to do that is to find a cost of service nexus with streetlights and noted that we are constrained by the imperative to develop rates based on the cost of service. He said that when judgement was used, staff used the judgement to align as close as possible to the policy guidelines established by Council, but there are many constraints now that there weren't in the past. Abendschein said that the need to have cost of service based rates requires that many of the policy decisions that were made in the past need to be undone.

Commissioner Ballantine asked if residential rates could be seasonal like the non-residential rates. Abendschein said that the rates effectively do that since the residential class is a winter-peaking group and the tier one cutoff reflects the summer usage so that the tier two usage is for winter usage. Commissioner Ballantine said that EV use is not seasonal. Abendschein said that if seasonal rates were developed for residents, the rates would be higher in the winter than in the summer.

Chair Foster asked if there were any recommendations before a motion is made. Commissioner Ballantine said that perhaps a work group could examine the consultant's work to see if there is any strategy to use to change the proposal. Chair Foster said that there is a certain frustration when presented with rates and COSAs since there seems to be very little that can be done. Chair Foster said that the dropping of the three tiers could be justified. Abendschein said that the COSA does not justify three tiers.

Chair Foster said that there seems to be little room to not increase the streetlight costs to the General Fund. Interim Director Ed Shikada mentioned that the General Fund has anticipated that it needed to fund streetlights and stated that the transition is recommended by the City Manager. Chair Foster responded that the hit to the General Fund includes not just for streetlights, but also for the change to Municipal Rates, and asked if there was any source of funds that the General Fund can use to pay these increased costs. Shikada said that one source of funds could be the gasoline tax, which could potentially be used for streetlights, but revenues from that source are diminishing. He also mentioned that a new transportation tax is being discussed that could be used for keeping streets in good repair. Shikada concluded that

the General Fund is aware of these changes and supports the recommendation that the Electric Fund no longer funds these services.

ACTION:

Vice Chair Cook moved to recommend that the UAC recommend Council approve staff's proposal and Commissioner Schwartz seconded the motion. The motion carried unanimously (5-0) with Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz voting yes and Commissioners Eglash and Hall absent.

ITEM 2. ACTION: Staff Request that the Utilities Advisory Commission Recommend that City Council approve the Proposed Net Energy Metering Successor Rate E-EEC-1 and Net Energy Metering Grandfathering Policy

Resource Planner Aimee Bailey summarized the written report. Bailey stated that a State requirement requires net energy metering (NEM) until a cap is reached. She explained that NEM is like "rolling the meter backward" by providing full retail rate compensation for distributed generation, which in Palo Alto are rooftop solar photovoltaic (PV) systems. Palo Alto's NEM cap is 9.5 MW and when it is reached, a successor program is needed.

Bailey discussed the 8 NEM Successor Program design guidelines that were reviewed by the UAC in November 2015 and approved by Council in January 2016. She noted that the NEM successor rate must be consistent with the cost of service and must be compliant with Proposition 26. Bailey mentioned that the City's installed NEM capacity was 7.5 MW as of mid-February and that the City may reach its NEM cap by the end of 2016. However, if a few large systems were installed by commercial customers, the cap could be reached quickly and, therefore, a successor program needs to be in place to provide certainty for customers contemplating installing solar PV.

Bailey noted that there is a proposed bill in the State legislature (Assembly Bill 2339) that may require the NEM cap to be calculated differently—and could double the City's NEM cap, but it is still in the legislative review process and may be amended. If and when the bill is signed into law, Palo Alto would comply.

Bailey presented the proposed rate: a two-part rate that charged the retail rate for any energy delivered to the customer and a credit applied for any energy delivered to the grid. The credit rate is based on the short-term value of solar and would change every year as that value changes. For FY 2017, the proposed credit rate is 7.485 cents per kilowatt-hour (¢/kWh). Bailey showed an illustration of a customer with a solar PV system to show when energy usage is greater than PV generation and when PV generation is greater than usage. She showed an illustration of a PV customer's bill with the current NEM program compared to the proposed NEM successor program.

Bailey described the components of the proposed credit rate for FY 2017 of 7.485 ¢/kWh: 3.02 ¢/kWh for avoided energy cost + 1.45 ¢/kWh for the environmental attribute + 0.58 ¢/kWh for capacity + 2.00 ¢/kWh for avoided transmission costs and ancillary service value + 0.44 ¢/kWh for avoided transmission and distribution system losses.

Commissioner Ballantine said that smart inverters, if installed or required in the future, could increase the value of the ancillary services used in the credit rate calculation. He remarked that he hoped that an expanded discussion on this topic may be better suited for the upcoming UAC meeting in June when the rolling calendar shows the subject of storage and microgrids on the agenda. He asked how the City will encourage people to stabilize the grid using advanced inverters. Bailey confirmed that the proposed credit rate did not include any additional value stream that advanced inverters could provide. She said that the City is very interested in this subject and released a request for proposal for encouraging distributing energy resources. Commissioner Schwartz noted that Arizona Public Service has a good program for managing inverters that the City could potentially learn from.

Commissioner Danaher asked why the energy value is only 3.02 ¢/kWh since solar generation is in the middle of the day. He asked what the City's energy costs are and how the value was developed. Bailey explained that the energy value is based on the shape of solar energy production so that it is higher than energy generation that occurs on a "flat" 24/7 basis. She said it was a short-term value based on the forward prices for mid-day energy for FY 2017 and is consistent with all assumptions used to manage the City's electric portfolio. Commissioner Danaher asked if the value included the Renewable Energy Certificates (RECs). Bailey explained that the RECs are included and are currently valued at 1.45 ¢/kWh. Bailey said that the energy value was for the solar generation profile and, therefore, takes into account the timing of the energy generated at peak demand.

Vice Chair Cook asked how this value compared to the avoided cost of local solar used in the Palo Alto CLEAN (feed-in tariff) program. Assistant Director Jane Ratchye explained that one of the fundamental differences between the proposed credit value for the NEM successor program compared to the avoided cost of solar for the CLEAN program is that the NEM successor value is based on a short-term avoided cost (for FY 2017) while the CLEAN program is based on a long-term levelized cost over a 20- or 25-year period.

Commissioner Schwartz asked if the City can use the excess capacity generated by PV systems in excess of the customer's usage. Bailey noted that many customers do not export any energy, but use most or all energy generated on site. She added that solar generation does assist the City in lowering its peak demand, which reduces its costs for capacity needs and that the proposed credit rate includes that value of local solar. She said that this value will be re-evaluated every year, which is part of the reason that the credit rate will be adjusted annually to ensure that local solar generation is fairly compensated at full value.

Bailey noted that NEM will require a bidirectional meter that would be required to measure separately the energy delivered to the customer as well as the energy received from the customer. She said that the meter would be paid for by the utility (all ratepayers) as meter replacement is part of the long-term plan. However, the customer would pay an interconnection fee under the Electric Service Connection Fee schedule (Rate Schedule E-15) that is currently being revisited (estimated to be a one-time fee of \$100-\$200). She added that the City would likely be required to issue 1099s for exported energy if its value exceeded \$600 annually.

Bailey noted that customer economics for solar PV depend on many factors including the fraction of energy used on site versus the amount exported, solar PV costs, federal incentives, and other tax implications. She said that if all solar energy is used no-site and none is exported to the grid, the proposed NEM successor program is effectively identical to the current NEM program and customer economics do not change. Bailey said that this is the case for most commercial customers who use all the energy they generate on site. Customers who shift energy usage to times when their PV system is generating would improve the economics of their system.

Commissioner Schwartz asked about the impact of storage on customer load and whether there is some optimization that could occur. Bailey said that staff is evaluating that impact in its evaluation of storage and other distributed energy resources (DERs). She pointed out that this was discussed in Attachment B of the report, which addresses each of the Council-approved NEM successor program design guidelines. Bailey mentioned that the proposed rate encourages storage and other DERs, especially in light of the impact of renewables on the grid and the “duck curve” issues.

Commissioner Ballantine said that if the maximum amount of roof space in the City was used for solar PV generation to effectively power Palo Alto, but the one “bad day” occurred with a power outage, the lack of smart inverters would result in a drop of all the load in Palo Alto. He encouraged the City to find ways to encourage smart inverters and the local use of storage to avoid that potential problem.

Bailey described the proposed grandfathering program that would enable NEM customers to remain on NEM for 20 years from the time of interconnection and to expand their systems by up to 10% of the original system capacity after the NEM cap is reached.

Public Comment

Tom Kabat said that NEM rules were very valuable to get PV off the ground and the industry did respond to these incentives resulting in a dramatic lowering of costs. Now the industry has expanded and costs have come down to between 6 and 9 cents per kWh over the life of the system. He said that the City’s “game changing” carbon neutral policy makes the investment in local solar less valuable since the new resources added to the electric portfolio are low-priced solar located outside the City. He said that the staff estimate of the value of local solar is fair and is not overpaying as in the Palo Alto CLEAN program. The staff proposal is fair to current PV customers (by grandfathering them in for the life of their investments), to future PV customer (by fairly valuing their generation and requiring them to pay the normal cost for energy delivered to them), and to their shaded neighbors and other non-PV customers (since they don’t have to pay higher rates to support PV customers). The program also encourages energy storage (to take on the duck curve problem), and is a policy to encourage electrification, which is the way to reduce carbon emissions since the City’s electric portfolio is already carbon neutral.

Gina Goodhill Rosen, a representative of Solar City, supports the NEM grandfathering proposal, but strongly opposes the successor program as she says it undervalues the solar generation produced. Without a comprehensive, rigorous analysis of both the costs and benefits of NEM,

the consideration of the proposal should be delayed. NEM fairly compensates solar customers, has been working well and is part of the reason the solar industry has been so successful. Solar has brought many jobs and millions of dollars of investment to the state and city. The proposal does not fairly compensate PV customers for the benefits they provide to the grid and compensates them at a significantly lower rate than the Palo Alto CLEAN program does. This mixed message is confusing to customers and implicitly recognizes that there are benefits of local solar that are not being recognized in this proposed NEM successor program. This proposal does not support the City's and state's climate goals and is in stark contrast to the California Public Utilities Commission's (CPUC's) decision to continue NEM for the investor-owned utilities (IOUs) who serve the large majority of the state's residents and businesses. Legislation (AB 2339) may expand the NEM cap for municipal utilities or the City could independently choose to expand its own cap. She said that the City should delay action on the NEM successor program until the legislation has been enacted.

Chair Foster asked Ms. Rosen to expand upon the CPUC decision with respect to the IOUs. MS Rosen said that the CPUC adopted basically a continuance of NEM for the IOUs after a year-long stakeholder review process.

Chair Foster for staff's comment about the CPUC decision to continue NEM. Bailey said that the City is not subject to CPUC regulations and the IOUs are not subject to Proposition 26. Bailey reiterated that the credit rate proposed is a cost-justified rate that was developed in concert with the Electric Cost of Service Analysis (COSA) and that it is compliant with Proposition 26, which is the overriding consideration for the development of this rate. Chair Foster asked for staff's comments on the disparity between the proposed credit rate of 7.485 ¢/kWh and the Palo Alto CLEAN price of 16.5 ¢/kWh. Ratchye mentioned that the Palo Alto CLEAN rate is available to all customers, including residential customers, so customers are free to participate in the Palo Alto CLEAN program and get the 16.5 ¢/kWh rate for all the energy generated by their PV system. Bailey explained the differences between the CLEAN program price and the NEM successor credit rate. For one, the CLEAN price is fixed for a 20- or 25-year period, but the NEM successor rate would change every year as the avoided cost changes (up or down) over time. Also, the energy component of the rate is calculated using market rate forecasts for what the City would buy energy from the market for the next year for an energy production profile of solar energy generation. The energy avoided cost for the CLEAN price was calculated by taking the average of the best ten proposed prices received in the most recent Request for Proposals (RFP) for long-term renewable Power Purchase Agreements.

Chair Foster asked if there is any choice on this, or is the City stuck by the Proposition 26 requirement. Deputy Senior Assistant City Attorney Jessica Mullan said that there are always choices, but the legal requirement is to have rates that are cost justified such as the proposed rate. Any other proposal would require the consultant to determine that it was cost justified.

Commissioner Ballantine asked whether the Palo Alto CLEAN price is compliant with Proposition 26. Ratchye explained that the CLEAN price is for resources procured for the whole portfolio so that the cost is shared by all customers, but that customer rates need to comply with the cost-based requirement of Proposition 26.

Commissioner Schwartz noted that Solar City has a different business model than the City. She said that the City is also tasked with keeping rates and costs low for the ratepayers. She said that as you look at the evolving industry and that the City has done much to encourage solar, but this is a place where the City can control costs to residents and not unduly burden those with lower energy usage or those who cannot install solar on their homes. She said that this is one place where we can minimize costs to residents and not unduly burden the people who have shade trees and won't put solar on their house or if their usage and bills are too low and the staff recommendation does that and she supports it. Commissioner Schwartz said she was called by someone selling solar installer today who asked if her bill was under \$75 and she said yes, then they hung up on her.

Commissioner Danaher said he supports continuing NEM as suggested by Ms. Rosen in Mountain View or other places, but in Palo Alto, we have large contracts for solar energy that are a less expensive way to provide solar to the City. He only reluctantly supports the CLEAN program price since he wants to get renewable energy at the lowest possible cost. He supports the staff proposal, especially until there are smart inverters that could provide an actual extra local benefit for local solar.

Vice Chair Cook supports continuing NEM, which he said is what this proposal does. He said that as the technology gets less expensive over time, the same incentive is not required. He said that continuing the program at a lower cost makes sense.

ACTION:

Commissioner Schwartz moved to recommend that the UAC recommend Council approve staff's proposal and Vice Chair Cook seconded the motion. The motion carried unanimously (5-0) with Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz voting yes and Commissioners Eglash and Hall absent.

ITEM 3. ACTION: Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt: (1) a Resolution Approving the Fiscal Year 2017 Gas Utility Financial Plan; and (2) a Resolution Increasing Gas Rates by Amending Rate Schedules G-1 (Residential Gas Service), G-1-G (Residential Green Gas Service), G-2 (Residential Master-Metered and Commercial Gas Service), G-2-G (Residential Master-Metered and Commercial Green Gas Service), G-3 (Large Commercial Gas Service), G-3-G (Large Commercial Green Gas Service), G-10 (Compressed Natural Gas Service) and G-10-G (Compressed Natural Green Gas Service)

Acting Rates Manager Eric Keniston summarized the written report. He explained that gas rates were proposed to increase by 8%, slightly higher than the 7% shown in the preliminary forecast in February. Overall rates for a median customer bill would be around 9%.

Keniston explained that gas revenues have been below expenses for several years, and reserves had been used to make up the shortfall. A series of rate increases would be needed to bring revenues back in line with cost. Keniston also explained that gas sales had been decreasing over several years. While commodity rates changed monthly based on market prices, distribution costs were not, and if consumption continued to decrease, rate increases would need to be higher to recover shortfalls.

Keniston showed that, with current sales projections and the proposed rate trajectory, Operations reserves would fall to near the minimum guideline levels for a few years before recovering back to target. The proposed rate changes themselves were shown, and Keniston noted that they resulted in an average 8% increase for most customers.

As was requested by the UAC in February, two additional scenarios were provided, the first where Operations reserves were allowed to stay at or near the minimum guideline level, the second where reserves were kept at or near target levels. The first scenario indicated a 24% rate increase would be needed in FY 2018, the second a 16%, and staff recommended neither approach.

The Commission had no questions on the proposed rates or FY 2017 Gas Financial Plan following Keniston's presentation.

ACTION:

Vice Chair Cook moved to recommend that the UAC recommend Council approve staff's proposal and Commissioner Schwartz seconded the motion. The motion carried unanimously (5-0) with Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz voting yes and Commissioners Eglash and Hall absent.

ITEM 4. ACTION: Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt a Resolution Approving the 2015 Urban Water Management Plan and Adopt an Ordinance Amending Municipal Code Sections 12.32.010 (Water Use Restrictions), and 12.32.020 (Enforcement)

Senior Resource Planner Karla Dailey explained that the 2015 UWMP is a regulatory requirement and has many prescribed elements and data. It is not an internal planning document that will determine what the City's plan is with respect to options such as recycled water and groundwater. She noted that things have changed since the 2010 plan including the completion of the Emergency Water Supply and Storage Project to refurbish 5 wells, drill 3 new wells, and install a large new storage reservoir. She said that water demand has fallen due to the current drought as well. In addition, the Hetch Hetchy system has nearly completed its long-term capital program, the Water System Improvement Program.

The City is embarking on a holistic plan to evaluate recycled water and groundwater, including the potential to recharge groundwater with purified recycled water. The 2015 UWMP includes an evaluation of a group of conservation programs, or "Demand Management Measures". The Water Shortage Contingency Plan is a significant part of the 2015 UWMP and new permanent restrictions are proposed to be added.

The Commission had no questions on the 2015 UWMP following Dailey's presentation.

ACTION:

Vice Chair Cook made a motion to recommend that the UAC recommend Council approve staff's proposal and Commissioner Schwartz seconded the motion. The motion carried

unanimously (5-0) with Chair Foster, Vice Chair Cook, Commissioners Ballantine, Danaher, and Schwartz voting yes and Commissioners Eglash and Hall absent.

ITEM 5. ACTION: Selection of Potential Topic(s) for Discussion at Future UAC Meeting

Commissioner Ballantine noted that the forward looking “rolling calendar” shows a schedule for the UAC to discuss microgrids and storage in June. He asked that staff include a discussion, or at least an opportunity for the UAC to discuss, the City’s interconnection rules and the benefits of advanced inverters. Ratchye indicated that the item will be a discussion item and that this discussion would be appropriate with that item.

ACTION:

None.

ITEM 6. DISCUSSION: Update and Discussion on Impacts of Statewide Drought on Water and Hydroelectric Supplies

Senior Resource Planner Karla Dailey said that the precipitation and snow pack is above average and that San Francisco is not planning to ask for water use reductions from its customers. The state, however, may continue to require reductions in potable water use. A decision will be made on May 3, 2016. Dailey provided precipitation data at Hetch Hetchy through April 3, 2016 showing above average numbers. Dailey also showed updated graphics of the Regional Water System storage level and water savings to date in Palo Alto. Dailey said San Francisco Public Utilities Commission anticipates a lot of water going into storage as the snowmelt occurs. Dailey concluded with an update of drought impact on Palo Alto’s electric costs. Ratchye explained that even though water year 2016 is an above average year for precipitation at Hetch Hetchy, projected hydro generation for fiscal year 2016 will be reflective of a dry year scenario.

Meeting adjourned at 10:10 p.m.

Respectfully submitted,
Marites Ward
City of Palo Alto Utilities