



UTILITIES ADVISORY COMMISSION MEETING FINAL MINUTES OF FEBRUARY 1, 2017 MEETING

CALL TO ORDER

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

Present: Chair Cook, Commissioners Ballantine, Forssell, Johnston, Schwartz, and Trumbull

Absent: Vice Chair Danaher and Council Liaison Filseth

ORAL COMMUNICATIONS

None.

APPROVAL OF THE MINUTES

Commissioner Trumbull moved to approve the minutes from the January 11, 2017 UAC special meeting and Commissioner Johnston seconded the motion. The motion carried unanimously (6-0) with Chair Cook, Commissioners Ballantine, Forssell, Johnston, Schwartz, and Trumbull voting yes and Vice Chair Danaher absent.

AGENDA REVIEW AND REVISIONS

Chair Cook announced that New Business Item #6 (Utilities Strategic Plan) would be moved to Item #1 and that New Business Item #4 (Preliminary Financial Forecasts and Rate Changes for Electric, Gas, Wastewater Collection, and Water Utilities) be moved to Item #2.

REPORTS FROM COMMISSION MEETINGS/EVENTS

Commissioner Schwartz discussed her attendance at the Smart Grid Consumer Symposium at Distributech in San Diego, where she moderated a session on safely unlocking the value of consumer data. Jesse Berst, founder of the Smart Cities Council, gave the keynote speech on the intersection of smart cities and utilities. He spoke on distributed generation, renewables, smart grid technology, and how smart building formed the keystone of these technologies. He demonstrated a mobile application called DubaiNow that provided services she thought Palo Alto residents would appreciate. She said the City of Fort Collins won the Utility Clear award from SGCC for its Peak Partners program, which was a combined demand response and energy efficiency program designed to reduce their peak load, and Efficiency Works, a regional program focused on water and energy efficiency measures for homes and businesses. She spoke with a representative of EPB, Chattanooga, Tennessee's municipal utility. She confirmed that their fiber rollout had primarily been to provide smart metering and smart grid services, and that providing cable and telecom services had been a secondary benefit. The smart grid services had greatly improved their reliability in the face of the weather issues they experience. The improved connectivity due to the

fiber system had attracted businesses. They were able to achieve 55% penetration in the cable and telecom market due to the fact they had been underserved by major cable and telecom companies. The EPB representative was not able to name any unusual or special benefits of fiber connectivity to residents aside from the cable and telecom services. The smart grid services had provided benefits to residents, including prepaid electricity services, which were popular with renters. She was also working on an event in July for the National Town Meeting (Grid Evolution Summit), and she was hoping to get other Commissioners or staff to attend.

UTILITIES DIRECTOR REPORT

Seeking Applications for the Silicon Valley Water Conservation Awards

The Silicon Valley Water Conservation Awards Coalition is seeking applications and nominations for businesses, organizations, agencies and individuals who have demonstrated excellence in water conservation. The City of Palo Alto Utilities is a coalition member and received the award for Water Utility of the Year in 2014. This year's deadline to submit an application or nomination is Friday, February 3rd. Find details, link to application form and information on past award winners at waterawards.org The Awards Ceremony will be held on World Water Day, March 22. Please join us and recognize these heroes of our precious natural resource!

Impact to Water Supply Conditions Following Recent Rain

Storage in the Hetch Hetchy Regional Water System is essentially full due to the recent storms. Governor Brown, however, has not declared an end to the drought, and the State Water Resources Control Board is proposing to extend the Emergency Water Conservation Regulation through the end of May 2017. A decision will be made February 7. The impact of extending that regulation is negligible to Palo Alto as the City already has a "zero percent" state-mandated conservation target and is on track to save more than 20 percent compared to the baseline year of 2013. The much-improved water supply situation may cause customers to wonder why the drought surcharge is still in effect in Palo Alto. The surcharge was implemented to cover the mostly fixed costs of operating the water system during a time when water sales, and thus revenue, were low. A slight rebound in water sales is predicted, and reserve levels are healthy enough that staff will recommend lifting the drought surcharge in July 2017.

Utilities Employee Wins Award for Winemaking

Congratulations to Utilities Supervisor John Reinert, who not only monitors and delivers millions of gallons of high quality drinking water for the City by day, but also produces an award-winning wine in his off-hours. When John isn't working, he and his wife Stacy run Brilliant Mistake Wines, and their Cabernet Sauvignon was the top red wine choice in a "friendly" competition at the NCPA Strategic Issues Conference.

Art Rosenfeld, "Godfather of Energy Efficiency," Passes Away

Art Rosenfeld, known unofficially as the "Godfather of Energy Efficiency" in the utility industry, passed away last Friday at the age of 90. Over the span of the past four decades, Art has tirelessly advocated for energy efficiency, from developing energy efficiency technologies for lighting and windows, to persuading policymakers and utilities to invest in "negawatts" instead of power plants. Art Rosenfeld was instrumental in helping the California Energy Commission adopt the state's Title 24 energy standards, which set the most stringent building energy code in the country. California's per capita energy usage has remained flat since the mid-1970s, whereas the rest of the country has experienced a 50% growth in per capita energy usage. Palo Alto is a direct beneficiary of this "Rosenfeld effect," and the energy code and utility energy efficiency program tools that

Palo Alto has used to keep its electric load flat or declining over the past few decades are largely due in part to his efforts.

COMMISSIONER COMMENTS

None.

UNFINISHED BUSINESS

None.

NEW BUSINESS

ITEM 6: DISCUSSION: Utilities Strategic Plan

General Manager Ed Shikada presented on the Strategic Plan. Now was a good time to provide an update, since the last update was in 2011. The key objectives for the current strategic plan were safety and reliability, customer service excellence, cost management, and environmental sustainability. The plan used a “balanced scorecard” structure. It provided a good basis for the next strategic plan. The next UAC update would provide an overview of the utility’s progress on the 2011 strategic plan. The preliminary approach for updating the plan was expected to be to identify key policy, program, and operating drivers, understand emerging issues, perform an analysis of strengths, weaknesses, opportunities, and threats, and organizational needs, then establishing strategic priorities and implementing actions. This was a conceptual plan, and staff intended to release a Request for Proposals (RFP) for a consultant soon to assist with the process. The goal was to complete the process by the end of December. Check-ins with the City Council would happen early and late in the process, while check-ins with the UAC would happen throughout the process. Keeping to the timeline was important to keep people engaged. Staff engagement would also be critical to a successful process. He presented a sample of questions that might be explored during the Strategic Plan update. Some addressed service reliability objectives, some financial objectives, some related to the workforce, and others related to the services the utility provided. He welcomed feedback on how the UAC would like to engage with the process.

Chair Cook asked whether this could be a standing item. He felt it was important and looked forward to working on it with staff.

Shikada said it would continue to be a standing item.

Chair Cook said it was important for the UAC to be engaged on this process and he was looking forward to working on it with staff and the other Commissioners.

Commissioner Schwartz asked about the appropriate way to refer strategic planning consultants to staff without creating conflicts of interest.

Shikada said to pass contact information to him and they would be informed of the RFP.

Commissioner Schwartz emphasized that the term “behavior modification” used in Shikada’s sample questions was an industry term that was not intended to be nefarious, and was rather intended to refer to providing information to customers.

ACTION: No Action.

ITEM 4: DISCUSSION: Preliminary Financial Forecasts and Rate Changes for Electric, Gas, Wastewater Collection, and Water Utilities

Acting Senior Resource Planner Eric Keniston introduced himself as the City's Rates Manager. He said staff would present the preliminary financial forecasts and rate changes for all utilities that night. The formal rate recommendations and financial plans for the water and wastewater utilities would be provided to the UAC in March, followed by the rate recommendations and financial plans for the electric and gas utilities in April. He reviewed the reserves guidelines and various reserves for the utilities, emphasizing that the key contingency reserve for all utilities was the Operations Reserve. He said overall rate increases were expected to be slightly less than projected last year. He reviewed the rate changes for the Electric, Gas, Water, and Wastewater utilities, and showed the projected Refuse and Storm Drain rates as well, stating that the overall increase for the average resident's bill was projected to be five percent effective July 1, 2017. Future year bill increases were projected to be three to five percent. This was lower than the previous year projections, which had projected nearly a nine percent increase in customer bills in 2017.

Assistant Director of Resource Management Jonathan Abendschein emphasized that this was an annual process where staff either recommended rate changes or that rates remain unchanged.

Keniston stated that the preliminary projection for electric rate increases was twelve percent in 2017 and nine percent in 2018. Reserves were low due to reduced hydroelectric output due to the drought, which had resulted in increased costs. As a result, staff was recommending a short-term loan from the Electric Special Projects Reserve to the electric utility's Operations Reserve, projected to be repaid within two years. He showed historical and projected costs and revenues for the utility. Electric supply costs were increasing in FY 2017, then flattening out through the forecast period. The increased costs were due to more renewable projects coming online as well as increasing transmission charges from the California Independent System Operator (CAISO). The City was also increasing its capital investment in the electric distribution system going forward. Lastly, there were increases in operating costs, in part due to a contract staff had put in place to complete maintenance work that was not being performed due to staff shortages. In addition, after the July 1, 2016 rate increase, sales had decreased by roughly 5%, which was unanticipated, leading to a decrease in revenues. This meant staff was projecting higher rate increases than forecasted last year. He spoke about other long term uncertainties and projects that could affect costs, including smart grid. Staff was also considering recommending adoption of a hydroelectric rate adjuster to help manage volatility created by its hydroelectric resources.

Commissioner Schwartz asked, given the use of contractors for maintenance not performed due to staff shortages, whether it would be more cost-effective to pay higher wages. She asked whether staff had performed any sensitivity analysis on the issue.

Abendschein said pay was not the only thing creating the staff shortages. There were not as many people coming in to the industry as there were leaving. All electric utilities were experiencing these pressures.

Shikada said the City was not at the point where it had the capability to do these types of sensitivity analyses yet. Staff recognized there was an issue. It was a challenge to reconcile the

competitive environment faced by the utility portion of the workforce with the competitive environment faced by the rest of the citywide workforce. The different markets created divergent pay scales. It was an ongoing challenge that the City continued to struggle with.

Commissioner Schwartz asked whether the City had reached out to organizations like the Institute of Electrical and Electronics Engineers (IEEE) that were working to bring students into the industry, particularly women engineers.

Shikada said he was not sure how active the City was with IEEE, but the City was involved through Northern California Power Agency (NCPA) and professional organizations.

Commissioner Schwartz recommended reaching out to the IEEE Power and Energy Society and branching out beyond the California public power community.

Commissioner Forssell noted that in previous years staff had stated they were consciously drawing down reserves, but now reserves were below their minimum guideline levels. She asked whether this was intentional.

Keniston stated the plan was to draw down reserves, but to still keep them above minimum levels, but various events, including sales decreases, led to the reserves ending below minimum levels.

Abendschein noted that there were multiple reserves. The Rate Stabilization Reserve had been intentionally drawn down. The Operations Reserve and Hydroelectric Stabilization Reserves were intended as contingency reserves for situations like the drought. These had been drawn down to deal with the drought, as expected, but had ended up lower than expected due to other factors, including the sales decreases.

Commissioner Ballantine noted that last year he had been surprised at how little latitude the UAC had in designing rates once a cost of service study was completed. He had been surprised at the different increases for different customer classes. He understood why, given that phenomenon, those rate changes had been delayed as long as possible.

Chair Cook noted that outer year rate projections were uncertain.

Keniston confirmed that was the case. For example, if customer consumption patterns changed or there was low rainfall, it could affect the forecasts. If there were changes in Capital Improvement Program (CIP) costs, it could affect the forecasts.

Abendschein emphasized that the reserve projections shown in the presentation depended on a short term loan from the Electric Special Projects reserve.

Keniston presented the preliminary projections for gas rate increases. He said that no rate changes were proposed for the distribution portion of the gas rates, though changes in wholesale gas prices and Pacific Gas & Electric (PG&E) transmission rates would be passed through to customers through the commodity and transmission rate components as usual. One to three percent increases to the overall gas rates were projected for the rest of the forecast period to pay for cumulative increases in operating and capital costs. Capital spending was projected to be lower in FY 2017 and FY 2018 due to a delay in gas main replacement. A side effect of the lower capital

spending was the ability to phase projected rate increases in slowly over several years, leading to a more gradual increase in rates as compared to last year's forecast. Staff had seen some other beneficial changes from the previous year forecasts, including increases in gas sales. He noted uncertainties for the Gas Utility included the potential long term effects of building electrification and uncertainty about the State's cap and trade program.

Commissioner Schwartz said it was important not to present a policy of encouraging building electrification as a foregone conclusion. She did not think the issues had been adequately discussed. She asked whether staff could frame this as something to be discussed. She said gas was a commodity that was decreasing in price, and that if it were a more efficient heating method, staff should not assume it was a certain policy.

Keniston said staff had meant to portray it as an uncertainty and he had not included any building electrification in the forecast.

Shikada said the point was well taken and that staff would make it clear that building electrification was still a topic under discussion.

Keniston presented the preliminary projections for wastewater rates. Staff was proposing a 2% increase to wastewater rates on July 1, 2017, with 5% to 8% increases in later years. This was due to projected cumulative increases in operational and capital investment costs, combined with increases in wastewater treatment costs. The increase in treatment costs was due to projected increases in operations and maintenance costs at the Regional Water Quality Control Plant combined with a major capital investment program to replace aging infrastructure at the Plant. These costs were shared between the City and other agencies that were served by the Regional Water Quality Control Plant. Reserves for the wastewater collection fund were adequate to phase rate increases in more gradually than had been projected in last year's forecast. This was because no new sewer main replacement was planned for FY 2017 or FY 2018, since projects were being delayed while projects currently in progress are completed.

Keniston then presented the preliminary projections for water rates. Staff was proposing a 6% increase in water rates effective July 1, 2017, all of which would go toward an expected increase in San Francisco Public Utilities Commission (SFPUC) wholesale water rates charged to the City. Additional 6% rate increases were projected for subsequent years through FY 2022. The majority of these increases were related to increasing wholesale water purchase costs due to the SFPUC's Water System Improvement Project (WSIP), a major rehabilitation of the regional water system. Staff was planning to propose a pass-through rate for wholesale water costs to ensure annual changes in wholesale water costs were passed through to customers accurately. Currently staff relied on SFPUC estimates of wholesale costs for rate setting, which were frequently different from the final wholesale rate adopted by the SFPUC. This meant that the difference between the estimate and the final adopted rate affected reserves. A pass-through charge would eliminate that discrepancy. He then stated that the water utility had seen decreased sales during the recent drought, though sales were beginning to increase again. The utility's reserves, however, had been protected through the adoption of drought surcharges. Staff was planning to propose deactivating these surcharges now that Palo Alto was no longer subject to drought restrictions. In addition, the utility's reserves were benefitting from a delay in water main replacement. No projects were planned for FY 2017 or FY 2018. As a result, the forecast was for water rates to increase more slowly than had been projected in last year's forecast, since reserves could be used to phase rate

increases in gradually. He discussed uncertainties in the projection. It was unclear how much water consumption would rise after the drought. Costs for seismic rehabilitation of reservoirs and the Foothills transmission line were still uncertain. And while the WSIP rehabilitated a significant portion of the regional water system, there were still sections of the Hetch Hetchy system up in the Sierras that had not yet been evaluated and could require investment in the future. Lastly, a recycled water project was being evaluated, with uncertain costs and benefits.

Chair Cook stated there was no public comment.

Shikada said it was important to note staff was apprehensive about the increases in rates. While staff approached its rate evaluations from an analytic point of view, they were conscious of the impact of increasing rates on ratepayers.

Commissioner Trumbull noted that electric utility reserves were being replenished. He asked what portion of revenue would go toward replenishing reserves.

Keniston noted revenues were below costs, so revenues were generally going towards paying the costs of the electric utility. He did not know exactly what portion of revenues went towards replenishing reserves.

Abendschein said it was important to note that reserves replenishment was not the primary driver of the increases. The need to replenish reserves affected the pace of rate increases more than the absolute size of the increases.

Commissioner Schwartz asked what feedback staff had been receiving from customers, and whether staff tracked that feedback.

Keniston stated he had not personally received complaints.

Abendschein stated staff did not have formal reports on feedback. Informal feedback from customer service staff was that the number of concerned customers was lower than in previous years. Communication efforts had improved, and he suspected customers were more aware of the reasons for the increases, such as infrastructure investment.

Shikada stated staff would bring back more specific information regarding customer responses. He noted that decreases in demand were evidence of a customer response.

Commissioner Schwartz noted there was discussion in the trade press about how electric rates across the country were dropping. We were in an unusual area, though Palo Alto's rates were still below PG&E's.

Commissioner Ballantine asked whether the cost of service study would need to be redone because of the rate increase.

Keniston said it would not. Generally you did not need to redo the cost of service study every year.

Commissioner Ballantine said that it was likely, then, that the rate increases for residential customers would be higher than the rate increases for commercial customers.

Keniston said that was not the case, that the changes would be very similar across all customer classes.

Commissioner Ballantine asked whether the reference to Smart Grid in the presentation referred to improved telemetry to avoid outages or whether it just referred to smart metering.

Assistant General Manager Dean Batchelor said smart grid efforts encompassed both types of technology.

Commissioner Trumbull asked how responsive customers were to rate changes. He asked whether changes in rates led to large changes in consumption.

Keniston said most utilities did not show major consumption changes in response to rate changes, but the electric utility had seen a significant response as a result of the previous year's rate changes. That may have been because of how long it had been since the previous rate increase. In addition, all utilities were on the same bill, and so changes in other utility rates can sometimes affect electric usage.

Commissioner Trumbull asked whether there was a potential for a cycle in which efficiency could drive price increases, which would then continue to drive further efficiency, to the point that it adversely affected the financial position of the utility.

Shikada said the likelihood of this phenomenon creating a critical financial issue was low, at least in the near term.

Commissioner Schwartz said electrification of vehicles created a beneficial new source of revenue for the electric utility that was also beneficial to the customer and the environment.

Commissioner Forssell asked staff to confirm that electric usage had dropped six percent in the previous year, and whether that had happened before. She asked whether there had been a difference between residential and commercial reductions.

Keniston said electric usage had dropped before, but this was a larger decrease. All customer classes had decreased consumption similarly, with slightly greater decreases for commercial customers.

Commissioner Forssell asked whether there was any evidence that some of the decrease had been related to efficiency rather than rate changes.

Keniston said he did not have an exact number. He expected the contribution from efficiency was a small share of the decrease, but would bring more information back to the UAC.

Commissioner Forssell asked how large a rate increase would be needed to avoid a loan from the Electric Special Projects reserve.

Keniston said he did not have that number, but it would be a much larger increase in the near term followed by a decrease in a later year, since replenishing reserves was not an ongoing cost.

Commissioner Forssell asked what the Electric Special Project Reserve was used for.

Keniston said it was for project approved by Council. The primary projects currently expected to use Electric Special Projects Reserve funding were a second transmission line and smart grid investments.

Chair Cook said it would be helpful to know what the demand assumptions were and to have those communicated. He asked whether the equity transfer to the General Fund was included in the forecast.

Keniston said those transfers were included in both the Electric Utility and Gas Utility forecasts.

Chair Cook asked staff to describe the transfers.

Abendschein stated these transfers were a return on the General Fund's original equity investment in the system. The transfers were based on a methodology adopted in 2009 and had not been changed since then.

Chair Cook asked whether the transfers were projected to end in the future.

Abendschein said they were not, which was the same as any other return on an original investment in an asset.

Chair Cook asked how that transfer related to cost of service.

Senior Deputy City Attorney Jessica Mullan said that when a cost of service analysis is done, the transfers based on the previously adopted methodology are included in the analysis.

Commissioner Schwartz said it was a pretty typical transfer for a municipal utility.

Chair Cook said there were aspects of the transfer he did not understand, and wanted to get a better understanding of it in the future.

Abendschein said it was a concept that had been discussed extensively between the UAC and Council in the past.

Chair Cook said the idea of continuing these transfers when rates were increasing was difficult for him to understand.

Commissioner Schwartz said she had not been hearing customer complaints about the transfer.

Mullan said it was important to remember that this was a transfer for a specific purpose based on a well-defined Council-adopted methodology.

Abendschein said previous discussions between the UAC and Council had come to the conclusion that this was a clearly defined part of the electric and gas rate structures.

ACTION: No Action.

Chair Cook left the meeting at 8:30 p.m., after hearing Item 4, designating Commissioner Ballantine as Acting Chair.

ITEM 1: ACTION: Staff Recommendation that the Utilities Advisory Commission Recommend that the City Council Adopt a Resolution Establishing Pledged Sources of Revenue for Repayment of State Revolving Fund Loans for Wastewater Enterprise Capital Improvement Projects at the Palo Alto Regional Water Quality Control Plant, and Repealing Resolution 9631

Assistant Director of Public Works Phil Bobel described the distinction between the Wastewater Treatment Fund, which is managed by Public Works, and the Wastewater Collection Fund, which is managed by the Utilities Department. The Collection Fund pays Palo Alto's share of the costs for the Treatment Fund, which is shared among a number of partner agencies. This issue was being brought to the UAC due to a last minute request by the State that the City pledge the Wastewater Collection Fund's revenue as a condition of a loan the City was seeking for improvements to its treatment plant.

Water Quality Control Plant Manager Jamie Allen said the City had a plan to replace the Regional Water Quality Control Plant (RWQCP) incinerators with a sludge dewatering facility to enable sludge to be transported for off-site processing. The City was seeking a \$30 million loan from the State for that project. The State loan provided a very low interest rate compared to a revenue bond. The City was also seeking a \$6.75 million planning and design loan for other plant improvements. The City requested that the debt coverage for that loan be provided only from the City's Wastewater Treatment Fund. In 2007 and 2009, similar loans from the State required both Wastewater Collection Fund and Wastewater Treatment Fund revenues to be pledged, so it was not a surprise that the State denied the City's request and required that the Wastewater Collection Fund revenues be pledged as well. Council had previously approved a resolution pledging only the Wastewater Treatment Fund revenues for repayment of this loan, should the State grant it, and staff was requesting that the UAC recommend that the Council approve a new resolution repealing the previous resolution and pledging the revenues of both the Wastewater Treatment and Wastewater Collection Funds.

Bobel noted that the partner agencies had pledged repayment of their share of the debt service, but regardless, the State required the pledging of the revenues from these City funds.

Allen noted that the contract for these improvements was in the process of being awarded.

Acting Chair Ballantine asked for public comments

Herb Borock, Palo Alto resident, said Palo Alto should not be the only agency pledging revenues from their wastewater collection utility. The other partner agencies should have the same requirement to pledge their net revenues.

Allen stated other partners had made contractual agreements for repayment with the partner agencies to the satisfaction of the State.

Commissioner Johnston clarified that this was not a request for additional funding, but rather a request to pledge an additional revenue stream as collateral.

Bobel confirmed this was the case. For the State, the City's enterprise fund setup, with separate treatment and collection funds, was not something they commonly encountered. They looked at Palo Alto's sewer system as a single system, with both collection and treatment, rather than as two separate systems. As a result, they requested that the City pledge the revenues from both funds.

Allen noted the State would not provide the loan without this commitment.

Commissioner Forssell asked about Appendix F of the staff report. She noted the bonds were junior to the 1999 bonds. She asked whether the Collection Fund had ever been called on to pay for those bonds.

Allen confirmed that these bonds would be junior to the 1999 bonds.

Abendschein confirmed the Collection Fund had not been called on to pay for those bonds.

Commissioner Forssell asked what the revenue source was for repayment of these bonds.

Allen stated the revenue source was the contractual payments made by all partners in the RWQCP, including the City.

Bobel stated that each partner paid a share of the operating and capital costs for the RWQCP, including the City, and these revenues for the Wastewater Treatment Fund were used to pay the debt service.

Commissioner Forssell asked whether the wastewater treatment and collection costs were presented separately on customer bills.

Bobel stated they were not. There was only one charge for sewer service shown on the bill.

Abendschein confirmed that was the case.

ACTION: Commissioner Schwartz moved, seconded by Commissioner Trumbull to recommend that the City Council repeal Resolution No. 9631 and replace it with a Resolution (Attachment 1 of the staff report) pledging an additional source of revenue for the repayment of two State Revolving Fund loans from the State Water Resources Control Board: one loan for design and construction of the Regional Water Quality Control Plant sludge dewatering and load-out facility, and one for planning and design of three additional projects: the laboratory/environmental services building, primary sedimentation tank rehabilitation, and fixed film reactor rehabilitation projects. The motion carried unanimously (5-0, with Acting Chair Ballantine and Commissioners Forssell, Johnston, Schwartz, and Trumbull voting yes and Chair Cook and Vice Chair Danaher absent).

ITEM 2. DISCUSSION: Amendment to Utilities Rule and Regulation 27, Generating Facility Interconnections

Electric Engineering Manager Tom Ting gave a presentation on changes to Rule and Regulation 27. This rule governs interconnection of generation facilities to the City's electric distribution system. The resolution amending the Rule was adopted by Council in December 2016. The Rule is consistent with CPUC Rule 21 and with IEEE 1547. The goal of this revision effort was to streamline the process and address review of solar interconnection applications and to complement the streamlining the Development Center had adopted. In addition, the Division was also seeking to become consistent with surrounding utilities (where it made sense for Palo Alto), to address advances in technology, and to better define requirements, timelines, and the screening process.

Senior Electrical Engineer Mike Mintz described the significant changes to the Rule. This included revisions to several sections, addition of Smart Inverter requirements, removal of Supplemental review criteria, and addition of definitions to Rule and Regulation 2 (Definitions) that related to changes in Rule 27. The "supplemental review" process in Rule 27 was removed to simplify the Rule. Any issues that came up that would require supplemental review under the existing procedures would be discussed directly with the applicant in the future instead of going through a separate process.

Commissioner Schwartz asked if these changes only applied to roof top solar or if it also applied to other types of generation.

Ting confirmed it would apply to all generation projects.

Commissioner Schwartz asked if would apply to the generator at the anaerobic digester and whether there were any micro grids or black start generators in Palo Alto.

Ting confirmed it would apply to the anaerobic digester and there were no microgrids or black start generators in Palo Alto.

Commissioner Ballantine commended staff for working to improve the interconnection process in line with what other utilities in California had done with their processes. He said the revised rules for inverters to conform to IEEE 1547 would improve grid resiliency by mitigating the chance that solar inverters would shut off when the grid was experiencing temporary voltage problems. He said there was also the possibility to integrate more advanced inverters that could provide grid support.

ACTION: No Action.

ITEM 3. ACTION: Utilities Advisory Commission Recommendation That Council Approve the Update on the City of Palo Alto's Ten-Year Electric Energy Efficiency Goals (2018 to 2027)

Resource Planner Lena Perkins presented on the electric energy efficiency goals. She said one important context for this goal setting exercise was the adoption of SB 350 in 2015. The legislation required doubling of energy efficiency in the State of California. Utility energy efficiency was only one component of that doubling, and utilities with aggressive goals like the City had less room to increase their energy efficiency goals. A computational model was used to assess program potential. The 2015 model, as compared to the 2012 model, included high impact, low cost behavioral programs. These new types of programs included training of facility managers and

green building code adoption. Most savings were expected from commercial and industrial customers as compared to residential customers. Most residential savings were likely to come from behavioral programs. She showed the proposed goals compared to the previous goals. The proposed goals were ambitious, a 20-30% increase over existing goals. There were a number of new programs staff planned to use to achieve the goals. However, they were even more aggressive considering the energy efficiency measures that could not be counted because they were incorporated into Building Codes and Standards. She showed historical savings, noting that 2012 savings were particularly high due to a large data center project that was unlikely to be replicated. She noted that the long term rate impact of the efficiency measures was roughly 5%, but that the loss of revenue could be offset by increases in load due to electric vehicle adoption or other load growth.

Commissioner Johnston asked about the rate impact why we were setting such aggressive targets when we might be seeing negative load growth in the future.

Perkins replied that the state was considering setting EE goals for mid-sized POUs. Perkins also stated that we were required to both collect funds to spend on EE and show that our EE programs delivered real, cost-effective savings. She noted that any EE savings in City facilities would allow the City to save money.

Abendschein added that EE savings could make room on the existing distribution system for load growth such as increased EV charging. Abendschein also made the distinction between retail rates and bills, as bills are projected to remain nearly flat while the retail rates may go up.

Commissioner Schwartz asked why we were setting such aggressive targets.

Perkins stated that the State was considering setting utility specific EE targets, and that these goals might not be aggressive compared to those targets.

Commissioner Schwartz asked about the cost effectiveness of the City's portfolio.

Perkins stated that staff was focused on creative, cost-effective programs. The portfolio as a whole is projected to be cost-effective.

Commissioner Schwartz asked about the home energy reports, since many residents were unhappy with the comparison to their neighbors.

Perkins replied that the Home Energy Reports had been discontinued two years ago, but that Staff was working on a Behavioral Program centered around "carrots" and gamification in the form of the potential residential Energy Lottery.

Commissioner Schwartz asked about the Program for Emerging Technologies.

Perkins responded that the Program for Emerging Technologies was housed within the Utilities Department, and offered to send more information about the program.

Commissioner Forssell asked about the Navigant energy efficiency model discussed in Attachment A of the staff report. She referenced that the model was highly sensitive to the “Willingness and Awareness value” used. She asked what value was used for Palo Alto.

Perkins said the values used were a bit stale but were in the process of being updated by the State. There is also a question of how people actually behave around conservation, whether there is a rebound effect or whether perhaps once people conserve in one area they view themselves as conservation type people.

Commissioner Schwartz stated that she has seen people where they define themselves as “green” and they want to do more and more conservation and environmental programs.

Commissioner Ballantine asked how EVs factored into these programs

Perkins stated EVs were not factored in. The CEC had recommended that these not be included.

Commissioner Ballantine asked how EVs were factored in to the behavioral programs. He noted that his EV had made him get a bad score on his Home Energy Report.

Perkins stated the savings were based on actual measures installed according to a reporting methodology. The City was only able to make savings claims based on rebates actually provided and assumptions about the savings from that specific measure.

Commissioner Schwartz said this was a regular problem for measurement and verification, particularly for education and marketing programs. She disclosed she was starting a measurement and verification project with Navigant to do a project in Colorado, and asked the City Attorney to let her know if she needed to recuse herself.

Commissioner Ballantine asked whether load increase from EVs would negatively affect the savings the City could claim.

Perkins said that load increase from EVs or others would not affect those savings as the EE savings will be reported in absolute energy savings numbers to the CEC.

Commissioner Schwartz recommended approval of the staff recommendation since any model is inherently limited.

Perkins responded that a great deal of work and sensitivity analysis went into these recommended goals, but that any model was limited by the quality of the data and the structure of the model.

Trumbull moved to approve the staff recommendation, Ballantine seconded staff recommendation.

Passed 5-0

ACTION: Commissioner Trumbull moved, seconded by Commissioner Ballantine to recommend Council approve the proposed annual and cumulative Electric Energy Efficiency Goals for the period 2018 to 2027 as shown in the following table:

**Summary Table: Annual Electric Energy Efficiency Goals
(% of total City customer usage)**

	Electric (%)	Electric MWh
2018	0.75%	7,300
2019	0.75%	7,300
2020	0.80%	7,800
2021	0.80%	7,800
2022	0.85%	8,300
2023	0.85%	8,300
2024	0.90%	8,600
2025	0.90%	8,600
2026	0.95%	9,100
2027	0.95%	9,200
Cumulative 10-year EE Goal	5.7%	54,900

The motion carried unanimously (5-0, with Commissioners Ballantine, Forssell, Johnston, Schwartz, and Trumbull voting yes and Chair Cook and Vice Chair Danaher absent).

ITEM 5. DISCUSSION: Property Assessed Clean Energy (PACE) Financing: Program History and Future Considerations in Palo Alto

Staff Specialist Lisa Benatar presented on PACE financing. Many cities around the State authorized PACE providers to provide service in their areas. The City has one PACE provider in its territory, and a natural question was whether to expand the program. This presentation provides a high-level overview of PACE financing. Benatar explained the basics of the PACE program. PACE was a way for home owners to finance energy/water efficiency or renewable energy projects without having to qualify for a traditional loan. California was the first state to become PACE enabled. The players in the program were the property owner, contractor, PACE provider, and JPA. Cities designate areas where willing property owners can enter into contracts with City officials to install energy efficiency and renewable energy measures. The property owner’s credit rating was less important than his or her history of paying property taxes, so the approval process can be simpler. Once the contract is approved, the contractor does the work and the PACE provider pays the contractor. The JPA issues bonds and the PACE provider sells off the bonds to investors. The property owner makes PACE payments on his or her property tax bill, and those funds flow to the investors, who are repaid, with interest. PACE financing was developed in 2006-07, and in 2008 CA passed AB 811 enabling the programs, and Palo Alto authorized CaliforniaFIRST to operate in Palo Alto in 2009. PACE was intended to overcome the high up-front costs and long payback periods for some energy efficiency and renewable energy measures, like solar. The benefits included the fact that the PACE provider vets the contractors and loan approvals are easier, so it was expected that more projects would be done. They would help cities achieve their GHG goals. PACE providers would provide reports that cities could use. Authorizing multiple providers should bring interest

rates down through competition, though that has not occurred. The downsides of PACE include high interest rates. In addition, in Palo Alto it is difficult to find PACE-eligible measures that provide enough savings to make PACE payments favorable. The biggest obstacle to PACE financing in Palo Alto may be that PACE tax assessments are in a senior position relative to mortgages. PACE programs paused in 2010 when the Federal Housing Finance Agency (FHFA) issued a statement warning government lenders of the risks of providing loans for properties that had PACE tax assessments. California attempted to sue the FHFA to resolve the problem and lost, so the State subsequently instituted a State-wide mortgage loss reserve fund. This did not get the FHFA to change its position, but it did help the uptake of the program. Some PACE providers began agreeing to subordinate PACE liens, although this may not technically be possible, and there are fees. In addition, legislation in 2016 provided some consumer protections. Thirty-five states are now PACE enabled, though most PACE activity is still in California. In Palo Alto, with one PACE provider, there have been 23 applications of which 21 were approved, but only 7 projects were funded through the end of 2015. All projects were residential. There were various reasons why uptake has been low. Income demographics are important. Palo Alto has a high median income. 20% have incomes below \$50,000, while 62% have incomes above \$100,000. High-income customers are usually eligible for lower-interest financing like a home equity line of credit. Low-income customers are eligible for the City's Residential Energy Assistance Program (REAP), which provides energy efficiency upgrades at no cost to the customer. In addition, 42% of Palo Altans are renters rather than homeowners, including, most likely, many middle-income customers. Benatar then gave some examples of the types of projects normally financed with PACE. In Menlo Park eight of eleven PACE projects were solar projects. The most common PACE projects in general were solar, HVAC, and roofing. HVAC was a low likelihood measure for Palo Alto, given the climate, while roofing was not really something that was encouraged and did not necessarily count as an efficiency measure. Solar was far more cost effective when financed as a leased system, or with a home equity loan, or a loan from a solar provider instead of a PACE provider, since the interest rates were lower.

Commissioner Ballantine stated there was no public comment.

Commissioner Johnston asked what the cost was to the City for maintaining the PACE infrastructure.

Benatar stated the cost was minimal.

Commissioner Schwartz asked whether there was any major staff time commitment.

Benatar stated there was not, unless there were some concerns that the PACE program was a government sponsored program and that the customers asked the City to mediate problems with a PACE provider.

ACTION: No Action.

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

General Manager Shikada stated the rolling calendar was busier than it had been in the previous month. The Strategic Plan had been added as a standing item. He called attention to several upcoming items, including the Financial Plans for the March and April meetings, an electrification update in March, an update on Fiber to the Home in March, and a performance update on the

2011 Strategic Plan in March. He also noted the Sustainability Implementation Plan discussion coming up in April. This was a discussion of specific implementation plans for goals set in the Sustainability and Climate Action Plan (S/CAP) recently adopted by Council.

ACTION: No Action.

Meeting adjourned at 9:53 p.m.

Respectfully Submitted,
Marites Ward
City of Palo Alto Utilities