

FINAL

UTILITIES ADVISORY COMMISSION MINUTES OF APRIL 7, 2010

CALL TO ORDER

Vice Chair Waldfogel called to order at 7:07 p.m. the meeting of the Utilities Advisory Commission (UAC).

Present: Commissioners Ameri, Berry, Eglash, Keller and Waldfogel and Council Member Yeh (arriving at 7:37 p.m.) Commissioner Foster arrived at 7:15 p.m.

Absent: Chair Melton

ORAL COMMUNICATIONS

None.

APPROVAL OF THE MINUTES

The Minutes from the March 9, 2010 UAC special meeting were approved as presented.

AGENDA REVIEW

No changes to the agenda were proposed.

REPORTS FROM COMMISSION MEETINGS/EVENTS

None.

UTILITIES DIRECTOR REPORT

Utilities Director Valerie Fong delivered an oral report on the following items:

1. **Finance Committee action on Ameresco contracts:** Last night, April 6, 2010, the Finance Committee was not able to develop a consensus recommendation on the Ameresco contracts. Two members voted for and two members voted against recommending one of the contracts and two members voted for and two members voted against recommending both contracts. Staff will forward on to the Council the staff and UAC recommendation to approve both contracts for either 15- or 20-year terms. Thank you to the UAC for holding a special meeting on March 31 to consider the proposal and to Commissioners Foster and Eglash for attending the Finance Committee meeting to represent the UAC's recommendation.
2. **Sierra Hydrologic Conditions Update:** The El Nino has been good to the Sierra after 3 dry years. Precipitation and snowpack are about average to date across the Sierras. Runoff into Federal Central Valley Project (CVP) reservoirs is forecast about 90% of average as the dry ground is recharged. CVP reservoirs are at about 70% full which is normal for April 1st. Western forecasts the next 12 months of base resource to be about 84% of average. Calaveras project has 96% of normal snowpack and Spicer reservoir is projected to fill by late June leading to slightly better than average generation.

3. **Hetch Hetchy Hydrologic Conditions Update:** As of April 1, 2010, the Hetch Hetchy regional water system had over 1.2 million acre-feet in storage, or almost 89% of capacity. Snow survey measurements indicate that the snowpack is 107% of average April 1st conditions. Given water already in storage and the snowpack conditions, water year 2010 is on track to be slightly above normal.
4. **Statewide Energy Efficiency Status Report Submittal:** California Senate Bill 1037 (2005), established policies on energy efficiency, including the expectation that all utilities add efficiency before investing in other resources. Assembly Bill 2021 (2006) required annual reporting of achievements, as well as local approval of 10-year energy efficiency targets every three years. The UAC just voted to recommend 2010 targets at its March 9 meeting. Additionally, at last night's Finance Committee meeting, the Committee voted unanimously to recommend Council approval of the 10-Year Energy Efficiency Plan.

This year's report, "*Energy Efficiency in California's Public Power Sector: A 2010 Status Report*" was submitted to the California Energy Commission on March 15 by the California Municipal Utilities Association, the Northern California Power Agency and the Southern California Public Power Authority. Forty publicly owned utilities (POUs), including Palo Alto, submitted energy efficiency data in compliance with the legislation.

The principal findings are as follows:

- POUs continue to make major investments in energy efficiency. During FY08/09, POUs spent \$146 million on energy efficiency programs, a 41% increase compared with the previous year, and nearly three times the amount spent just three years earlier.
- Peak demand dropped 117 megawatts and more than 644 million kilowatt-hours were saved.
- California's POUs have invested over \$367 million on energy efficiency since 2006.
- POU programs provide nearly four dollars of societal benefits for every dollar spent.
- The 15 largest POUs account for nearly 97% of the total energy efficiency savings.
- Lighting continues to dominate public power energy efficiency programs, accounting for more than half of total energy savings achieved.
- California's POUs exceeded their collective energy efficiency targets in FY08/09.
- Smart-grid related programs will experience acceleration in the public power arena.

The full report is available on the City's website at www.cityofpaloalto.org/utilities following the link to the main residential page. In addition, the report will be provided to City Council as part of an informational memo on April 19. A copy of that informational memo will also be provided to this Commission.

5. **Development of Smart Grid Strategic Plan:** The kick-off meeting with our smart grid consultant Enernex took place last week. Thank you Commissioner Foster for attending the meeting. We will now be getting into detailed evaluation to develop a smart grid strategic plan and will be bringing it back to the UAC in the Fall.
6. **LED Streetlights Project:** Phase 2 of the LED Streetlight Pilot Project is currently underway. Based on the results from last summer's testing of LED and induction streetlights, staff has eliminated induction lights as an alternative to the High Pressure Sodium streetlights. LED streetlights have

demonstrated that they are more energy efficient and cost effective than induction streetlights. For phase 2, LED fixtures from 4 vendors have been installed near City Hall and in the Midtown residential neighborhood. Feedback from Engineering and Operations staff as well as the community will help narrow down the choice of vendor for the expanded deployment. The locations can be found on a news item on the LED streetlight project in the Utilities webpage. Staff plans to conduct a walk-through tour with the public in May. Staff is also looking into alternative ways to gather community feedback besides email, e.g. text messaging.

UNFINISHED BUSINESS

None.

NEW BUSINESS

ITEM 1: ACTION ITEM: Formation of Ad Hoc Subcommittee to Assist with Utilities Strategic Plan

Vice Chair Waldfoegel advised that the scope for the Strategic Plan Ad Hoc Subcommittee would be to update the goals and objectives from the Utilities Strategic Plan, which was last updated in 2005.

Commissioner Foster nominated Commissioners Ameri, Berry and Melton. Commissioner Eglash asked if Commissioner Waldfoegel might be interested in serving on that committee. Waldfoegel stated that he would be too busy in the next six months to devote the time. Eglash reminded his colleagues that serving on these subcommittees does require a commitment of time and that commissioners should agree that they are interested and aware of the commitment before nominating them to serve on the subcommittee.

Commissioners Ameri and Berry stated that they would like to serve and understood the time commitment required. It was decided to ask Chair Melton if he would like to serve as well with the option to decline.

Director Valerie Fong stated that the work for the subcommittee would likely start up in the next couple of months and that the whole commission would be involved as the final Utilities Strategic Plan would ultimately go to the Council for approval.

ITEM 2: DISCUSSION ITEM: Anaerobic Digester at the Regional Water Quality Control Plant

Assistant Director Jane Ratchye stated that there was no report or presentation on this item, but reported that the City Council directed that a feasibility study be completed to study the costs and benefits of an anaerobic digester for green waste. Ratchye stated that Utilities had done a very preliminary analysis and found that the project was worth looking into in more depth. She said that Utilities will be engaged in the feasibility study and will ensure that all the values/attributes of the project are taken into consideration.

Commissioner Keller asked about the scope of the feasibility study. Ratchye stated that the Council has provided some parameters and that the Public Works Department would manage the project. She reiterated that involvement by the Utilities Department would be to ensure that the project would include input and advice from the perspective of Utilities.

Commissioner Foster stated that he supported the feasibility study and that Utilities should be involved. He asked if the Council approved only a feasibility study for the project, or an EIR, too. Council Member Yeh confirmed that the Council approved the completion of both an EIR and a feasibility study for the project.

Commissioner Waldfogel wanted to make sure that the City's program to incent local generation is updated and values local generation properly. Ratchye replied that staff will make sure that all the values of local generation are considered in the feasibility study, including local capacity, avoided transmission fees and losses as well as the potential value of the resource to meet the City's Renewable Portfolio Standard.

ITEM 3: DISCUSSION ITEM: Transmission Interconnection Alternatives

Senior Project Engineer Tom Finch provided a presentation of Palo Alto's existing transmission interconnection with PG&E, an overview of the February 17, 2010 aircraft-caused power outage, and Palo Alto Utilities' proposed plans to improve the reliability of our transmission interconnection.

Palo Alto's electric power is supplied by three 115,000 volt transmission lines owned by PG&E. They connect PG&E's Ravenswood and Cooley Landing substations to Palo Alto's Colorado substation. The two 115kV lines from Ravenswood are on double-circuit steel towers. The Cooley Landing 115kV line is on wood poles. All three lines are located in the same right-of-way, with the poles and towers 40 feet apart.

A light aircraft taking off from Palo Alto Airport on February 17, 2010 at 7:55 am struck one of the PG&E towers and broke it in two, knocking out both Ravenswood 115kV lines to Palo Alto. A wire from one of the Ravenswood lines broke from the impact of the aircraft and was thrown 40 feet to the Cooley Landing 115kV line. The broken wire wrapped around all three wires of the Cooley Landing – Palo Alto 115kV line, knocking out that line also. At this point power was interrupted to all 28,000 City of Palo Alto electric customers. PG&E made repairs to the Cooley Landing line and restored power to this line at 5:30 pm. Palo Alto's Utility Control Center used SCADA to restore power to all Palo Alto electric customers by 6:15 pm.

Utilities Staff has studied the following alternatives to get another transmission connection to Palo Alto:

Plan 1 – 60kV connection to SLAC – In 2007 Palo Alto hired Power Engineers to do a rough cost and feasibility study to install a City owned 230-60 kV transformer at SLAC's substation and construct two underground 60kV lines from SLAC to Palo Alto's Hanover Substation. Power Engineers found the project to be feasible at a rough cost of \$45 million. Work on this project stopped in 2009 when the Department of Energy wrote a letter to Palo Alto stating they no longer wanted to participate in the project study due to concerns about having to comply with NERC and WECC regulatory requirements.

Plan 2 – 230kV underground connection from Ravenswood Substation to Colorado Substation – In 2006 Palo Alto requested PG&E to do a rough cost and feasibility study to construct a PG&E owned underground 230kV line from PG&E's Ravenswood Substation to Palo Alto's Colorado Substation. PG&E did the study and found the underground connection to be feasible at a rough cost of \$200 million, not including Palo Alto's installation of 230-60kV transformers at Colorado Substation. Utilities Staff estimates the cost of the new transformers at Colorado to be \$10 million, for a total project cost of \$210 million. The project was not pursued due to excessive cost.

Plan 3 – 230kV from Newark Substation to Ames Substation, 115kV from Ames to Colorado Substation – In 2006 Palo Alto's transmission planning consultant Flynn RCI proposed a project to convert the PG&E Newark-Ames 115kV lines to 230kV, install a 230-115kV transformer at Ames Substation, and install a new 115kV circuit on towers of PG&E's existing Cooley Landing – Los Altos 60kV line. The new 115kV line would terminate at Palo Alto's Colorado or Adobe Creek substations. Flynn RCI proposed this project to the CAISO as an alternative to PG&E's planned reconductoring of the Ravenswood – Ames 115kV lines. The estimated rough cost of this project is \$200 million not including any Palo Alto work at Colorado or Adobe

Creek substations. The CAISO has not shown any interest in pursuing this project, and reconductoring of the Ravenswood – Ames 115kV lines has been completed.

Utilities Staff met with PG&E Transmission Planning on March 19, 2010 to discuss transmission upgrades to improve reliability and mitigate outages such as the February 17, 2010 event. Palo Alto and PG&E discussed the above proposed transmission upgrade plans. PG&E claimed that their existing Ravenswood – Cooley Landing – Palo Alto 115kV system meets all NERC, WECC and CAISO reliability standards and that any transmission upgrades (including studies) would be at Palo Alto's expense. Palo Alto stated the February 17 outage was a single contingency event and PG&E needs to upgrade the system at its expense. PG&E stated the outage was a multiple line event by NERC's definition and they are allowed to mitigate this type of outage with dropping of Palo Alto's electric load.

Utilities Staff's recommended next steps are to write the letter to PG&E and the CPUC from the Mayor stating our concerns with PG&E's transmission reliability and to contact the DOE and Stanford University to attempt to restart the SLAC 60kV interconnection project.

Commissioner Berry asked what NERC and WECC are. Staff said NERC stands for North American Electricity Reliability Corporation and WECC is the Western Electricity Coordinating Council. Staff also noted DOE's reluctance, under the new federal reliability rules, to have to meet the requirements of a transmission owner, however, as the rules continue to evolve, this may be unavoidable, and DOE may be more open to working with Palo Alto on transmission interconnection alternatives via SLAC.

Public Comment:

Art Kramer asked why there was no mention of why there was a 4-hour outage soon after the February 17 citywide outage and asked if it was related. Assistant Director Tomm Marshall stated that it was not related to that transmission outage, but was an outage on the distribution system.

Herb Borock asked whether there was a difference between Cooley Landing and the line to Ames. He asked if these were the same. Marshall stated that the Ames line enters Palo Alto from the south and follows a different path than the Ravenswood-Palo Alto and Cooley Landing-Palo Alto lines. The Ames line is the same line as the Cooley Landing-Los Altos line.

Commissioner Foster stated that he supported the recommendations staff has developed, especially reopening discussions with DOE/SLAC. He asked when the last discussions with DOE took place. Fong replied that those discussions concluded last year. Foster said that the costs and benefits should be examined and that we should do everything that we can do to prevent such an outage as on February 17, but also need to evaluate the costs.

Commissioner Eglash asked what staff has heard from the business community. Fong said that staff met with the facility managers of the large customers. Eglash asked what the perspective of those customers is and whether we know the level of their concerns about our system reliability. Marshall said our customers are concerned about momentary outages on PG&E's transmission systems that affect the customer's sensitive electronic equipment, as well as sustained power outages such as the 2/17/10 event. Eglash asked if we could quantify our reliability relative to PG&E's. Finch provided some comparison indicators for the last year that showed Palo Alto's System Average Interruption Frequency Index (SAIFI) is 0.56 customer interruptions per year compared with 1.1 customer interruptions per year for PG&E. Palo Alto's System Average Interruption Duration Index (SAIDI) is 50 minutes per customer per year compared with

136 minutes per customer per year for PG&E. Palo Alto's customers on average experience about half as many outages as PG&E's customers. Waldfogel asked if we could compare PG&E's systemwide reliability indicators since their service are included lots of rural areas in addition to suburban areas and Palo Alto is all suburban area. Finch replied that PG&E does have statistics for a similar area – the San Francisco Peninsula. Those statistics show PG&E's SAIDI for the Peninsula is 90 minutes per customer per year – still nearly twice that of Palo Alto.

Commissioner Eglash warned against an over-reaction to the recent event, noting that it is exceedingly rare. Instead, he advised spending time, money and resources on where our biggest reliability problems are in the distribution system since that system has the most outages. He also said that he was concerned to hear of the power quality issues. Eglash added that he was concerned that the presentation did not mention earthquakes, which are much more common in Palo Alto than plane crashes, and there is a virtual certainty of having an earthquake in the future. Marshall replied that after the 1989 earthquake, system upgrades were undertaken such as seismic tie downs of substation and distribution transformers to their foundations to secure them during earthquakes.

Commissioner Ameri asked what the investment for the interconnection with PG&E and wondered if there would be any other benefits such as seismic upgrade.

Commissioner Ameri asked what is the amount of investment that we are going to make in the existing interconnect in the next 10 years and what is the annual renovation replacement budget for the existing one. Marshall replied that PG&E has the interconnection but is not aware if PG&E has any plans to have any investments in that infrastructure.

Council Member Yeh asked if Plan 3 was above ground or underground. Marshall replied that it was above ground. Yeh asked if it could have some failure and if we have emergency generators to serve specific end uses such as the water system pumps, since it was advised to conserve water during the citywide outage. Marshall said that the City does have some portable emergency generators and they were used in the outage. Yeh asked if it was more cost effective to buy more emergency generators for emergency preparedness for critical facilities. Marshall replied that staff is re-evaluating how much we should have, of what types and sized, and where they should be located and stored. Yeh noted that the incident has raised questions by the Council about emergency preparedness for earthquakes, floods, etc.

Commissioner Waldfogel stated that the UAC could take up the topic of emergency preparedness in the future, including a natural gas outage.

Commissioner Foster said that he got feedback from residents on the vague statement on water conservation during the outage. He added that from the presentation, the Colorado substation seems like a single point of failure in our system. Marshall replied that Colorado is a single point of failure during an extreme event (more extreme than the 2/17/10 plane crash) and this is why the SLAC interconnection is Staff's preferred transmission upgrade plan. SLAC would provide Palo Alto with a separate transmission supply source from Colorado substation.

Commissioner Waldfogel asked if the SLAC option would serve the entire City load. Finch said that it would and that it would also be able to supply the entire SLAC load from Colorado substation in the event SLAC loses its 230kV line. Commissioner Waldfogel stated that the \$45 million solution was more attractive than the \$200 million solutions.

ITEM 5: ACTION ITEM: Potential Topic(s) for Discussion at Future UAC Meetings

Vice Chair Waldfogel decided to reorder agenda items 4 and 5 so that Commission Ameri could participate in Item 5 without having to leave and return. The Commissioners agreed to the reordering.

Commissioners reviewed the 12-month rolling calendar and discussed future items to schedule. Commissioner Foster requested a discussion about communication after outages, noting that he had heard from many in the community that the communication was excellent after the 10-hour citywide outage, but was nonexistent for the next day's 4-hour outage that affected a much smaller part of the City. Fong said that while this is an operational issue that communications involves more than just Utilities, staff could see value in a discussion on staffing constraints involved in such communications efforts and would return at a late Commission meeting with the item.

ITEM 4: DISCUSSION ITEM: Bay Area Water Supply and Conservation Agency Activities Update

Commissioner Ameri recused himself from this discussion of water related issues since he works for a water agency in the East Bay that receives water from the same supplier as Palo Alto. He explained that there was no financial conflict of interest, but since there could be a perception of a conflict, he has chosen to not participate in the discussion.

Senior Resource Planner Nico Procos provided a presentation on current BAWSCA activities

The City of Palo Alto purchases its entire water supply from the SFPUC Hetch Hetchy system. The City is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA), a group of 24 public agencies and 2 private water companies that are wholesale customers of the SFPUC. The presentation covered recent and future BAWSCA initiatives, including:

1. The previous drought allocation plan to allocate water during a drought expired in June 2009. In late 2009, the BAWSCA members convened a workgroup to create a successor plan to replace the old expired formula. The group has reviewed numerous potential successor formulas. As of April 2010, the group had not come to agreement on the successor formula.
2. During approval of the Water System Improvement Program (WSIP), the SFPUC included an Interim Water Supply Limitation (IWSL) on sales from the system, in effect until 2018. The total limitation is 265 MGD, of which the SFPUC allocation is 81 MGD and the BAWSCA agency allocation is 184 MGD. By December 2010, the SFPUC must make a decision on individual BAWSCA allocations, but has indicated a preference for the BAWSCA agencies' to submit a proposal on the matter. The same workgroup that has been working on the new drought allocation plan is working on the IWSL and intends to submit a proposed allocation to the SFPUC in time for the December 2010 deadline. The BAWSCA Agencies (and the SFPUC) could face environmental surcharge penalties if individual IWSL allocations are exceeded.
3. With the imposition of the IWSL, the BAWSCA agencies were projected to exceed the 184 MGD by 2018 limitation. In late 2009, the BAWSCA agencies' convened a workgroup to re-calibrate an existing water conservation model and evaluate potential new conservation measures to meet the 2018 limitation. The agencies' identified 5 new measures for quick implementation that would keep the members within the 184 MGD limitation. These new measures are in various stages of implementation.
4. Finally, the presentation discussed the new long term study that the BAWSCA members are working on to meet future demands after 2018. This study is intended to identify and develop new dry and average year supply sources. The Study will also assist the BAWSCA members in efforts to remain within any future SFPUC supply limitations.

Commissioner Keller asked if staff is happy with the progress of the discussions and progress on the BAWSCA activities at this point. Procos said that he was worried about the December 2010 deadline for the establishment of the Interim Water Supply Limitation by the SFPUC. The SFPUC is a public agency and has to follow its process to approve the Interim Water Supply Limitation. Considering the process and the individual agency considerations, there is limited time to complete the Interim Water Supply Limitation activities.

Commissioner Waldfoegel asked how these activities would be overlaid with the 20% water savings by 2020 initiative. Ratchye replied that all the activities need to be taken up together and will culminate in the preparation of the 2010 Urban Water Management Plan, whose deadline was extended by the state to June 30, 2011.

Commissioner Berry expressed confusion on exactly how much water Palo Alto can count on for the long term. Ratchye agreed that it was confusing indeed, but that this situation is not new. The supply assurance, or Individual Supply Guarantee, under the old contract was not a guarantee of water deliveries or a water "right" per se, either. Until the drought allocation formula and the determination of the Interim Water Supply Limitation is made, there is uncertainty. However, uncertainty will likely persist since the Individual Supply Guarantee exists in perpetuity, but it is unclear what that really means in terms of an entitlement or a guarantee.

Commissioner Keller asked how much effort it is worth to save water. Commissioner Foster added that the supply of water will always be a constrained resource and Palo Alto should conserve it.

INFORMATIONAL REPORTS

The following reports were provided for information only, but were not discussed by the Commission:

- Fiscal Year 2009 Energy Efficiency Program Evaluation Results
- 2010 Palo Alto Business Electric Customer Satisfaction and Communication Effectiveness Survey Results
- Report on the Response to the Council Colleagues' Memo Directing the City Manager to Explore Ways to Reduce Potable Water Use in Palo Alto by 20% by 2020 and the Proposed Baseline and Strategies to Achieve the 20% Reduction Goal
- Utilities Quarterly Update
- City of Palo Alto's Energy Risk Management Report for the Second Quarter, Fiscal Year 2010

COMMISSIONER COMMENTS

None.

Meeting adjourned at 9:20 p.m.

Respectfully submitted,
Marites Ward
City of Palo Alto Utilities