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TO: HONORABLE CITY COUNCIL

FROM: ED SHIKADA, ASSISTANT CITY MANAGER / UTILITIES GENERAL MANAGER

DATE: DECEMBER 11, 2017

SUBJECT: AGENDA ITEM NUMBER 15, Discuss the Draft 2018-2020 Sustainability Implementation Plan (SIP) Key Actions as a Work Program for 2018-2020 and Direct Staff on Next Steps

Executive Summary

At its December 6, 2017 meeting the Utilities Advisory Commission (UAC) discussed the Sustainability and Climate Action Plan (S/CAP) Implementation Plan (SIP) described in staff report 8487 and to be discussed by the Council tonight. The minutes from that meeting are attached.

Attachment

A. Draft Excerpted Minutes of the December 6, 2017 Utilities Advisory Commission Meeting

Ed Shikada
General Manager / Assistant City Manager
Utilities Department

James Keene
City Manager



EXCERPTED DRAFT MINUTES OF THE AUGUST 2, 2017 UTILITIES ADVISORY COMMISSION MEETING

ITEM 3: DISCUSSION: Discussion of Sustainability and Climate Action Implementation Plan

Jonathan Abendschein, Assistant Director of Utilities Resource Management said Council would be discussing the Sustainability and Climate Action Plan (S/CAP) Implementation Plan (SIP) at its December 11, 2017 meeting, and staff was looking for feedback from the Utilities Advisory Commission (UAC) on the plan. He said four key areas of the S/CAP were being highlighted in the SIP: electric vehicles, energy, water, and mobility. The SIP was focused on what would be done in these areas through 2020, at which point staff would return with an expanded SIP for the period through 2030. He said that in the area of electric vehicles, the focus was on building out electric vehicle infrastructure. Chargers were being installed in publicly-owned parking areas, and the City had started a program to provide rebates for charging infrastructure on private property in multi-family and small non-profit structures where it is more difficult to install chargers.

Christine Tam, Senior Resource Planner, spoke about the energy section of the SIP. She said the focus was on two things: first, make sure energy is used efficiently, and two, shifting energy use from natural gas to cleaner electricity where appropriate. The City was using carbon offsets to compensate for natural gas use in the short term. This was a transitional measure that would continue as long as was needed. At the same time, to reduce natural gas use, the City continued to push for more efficiency in buildings through voluntary programs and mandates, and was also working to jump-start building electrification, focusing on voluntary heat pump water heater programs to start, and working to discover how to spur significant uptake for these technologies. Lastly, planning for resilience, electric supply impacts, and the impact of reduced sales on the gas utility were important, and would be explored through utility strategic planning processes.

Karla Dailey, Senior Resource Planner, spoke about the water section of the SIP. She said that in the water area the City would continue to help people use water efficiently and reduce per-capita water use. There was also a focus on the idea of "the right water for the right use." For example, it might not make sense to use imported water from the Hetch Hetchy system to flush toilets when that could be accomplished with other water sources. Recycling more of the wastewater processed by the RWQCP was important, both for the opportunity to use recycled water to replace potable water, and to reduce the outflow of treated wastewater to the San Francisco Bay. One important near-term project was building a project at the Regional Water Quality Control Plant to reduce the salinity of Palo Alto's recycled water to make it more desirable. Lastly, storm water management was another important aspect of protecting the Bay and reducing water waste, and the Green Storm Water Infrastructure Plan would address this issue.

Gil Friend, Chief Sustainability Officer spoke about the mobility section of the SIP. Mobility was a key area of the S/CAP. Transportation was the largest emissions source for the City, and vehicle traffic could impact the quality of life in the community. There were a variety of mobility strategies to be explored in the following few years, including education-related programs, incentives, and possibly mandates. There was more work to be done before specific proposals would be brought forward.

Commissioner Johnston asked what the implication would be for the City's electric supply if the City were successful in driving substantial building electrification. Solar generation did not operate at night. Would there be renewable energy at night to fuel these electrified appliances?

Abendschein said that topic would be addressed as part of the City's Integrated Resource Plan for its electric utility. He noted that the City's portfolio was fairly diversified, with solar only 30% of the electric supply. He also pointed out that the heat pump technologies staff was proposing to use would be more efficient than gas technologies even if fueled by the current California energy mix, which includes much more gas than Palo Alto's portfolio.

Friend said energy storage would also be an important part of the solution to that issue.

Commissioner Forssell thanked staff for pointing out that heat pumps could be more efficient than gas, even if fueled by the California energy mix. She sometimes struggled to see the difference between Palo Alto's electric portfolio and the idea of buying offsets to compensate for the community's natural gas use, but efficiency was always positive. She asked whether staff had considered methane leakage associated with transporting gas to Palo Alto.

Dailey said it was a difficult thing to quantify. There was no consensus on how to measure that leakage.

Abendschein also noted that the cap and trade program in California makes the gas transmission owner responsible for gas emissions. It may not be responsible for gas leakage in transmission in pipelines leading to California, but inside California this issue was starting to be addressed.

Commissioner Schwartz said the City's goals for carbon reduction were too aggressive and not based in practicality. They were more aggressive than the State goals, which were the most aggressive in the nation. She said the 1990 emissions baseline used as a reference point was not a good measure because Palo Alto had been a bedroom community at that time, while it was now a destination. Building electrification was a distraction. It was a small carbon impact. Pushing for electrification was imprudent before getting a second transmission feeder in place because of issues of resiliency in the electric system. It was a higher priority to purchase backup equipment to make sure the City could get substations back online in a disaster. The City should focus instead on ensuring that solar systems were able to provide some level of resiliency by being paired with storage or installed as part of a microgrid. She said it was not a good idea to provide rebates to customers to buy EVs. She was also skeptical of "vehicle to grid" technologies. She thought the focus on expanding EV infrastructure was a good one.

Abendschein clarified that the presentation gave the wrong impression, and that the City was not planning to provide rebates for residents who purchase EVs, only for installing EV infrastructure.

Councilmember Filseth asked what keeps people in Palo Alto from buying electric vehicles.

Shikada said there were a lot of opinions on that question. Staff would be exploring that through a survey. An example of something he believed was a significant barrier was the difficulty of residents in condos or apartments to install charging infrastructure in multi-family housing.

Friend agreed. He noted that costs for EVs were decreasing. He said people sometimes had stereotypes about EVs that could be overcome through efforts like EV ride and drive events.

Commissioner Schwartz said some people valued luxury or low cost over the environmental value of an EV. It was easy to project your own worldview onto others. People who are environmentally focused think others are focused on that too, while they might actually be more interested in comfort. It was a mistake to assume that everyone in Palo Alto was environmentally focused.

Commissioner Forssell noted that there were low-cost electric vehicles available, especially with the State and Federal incentives. She applauded the focus on EV charging infrastructure.

Chair Danaher supported the plan. He referenced the greenhouse gas (GHG) abatement cost curve in Exhibit E of the report, noting that residential space heating was one of the more expensive measures. This chart did not necessarily capture all measures, such as energy efficiency in buildings or denser housing. If Palo Alto were going to be a model, it was important to focus on the most cost-effective solutions. He said the plan noted the importance of cost-effectiveness, but on page five of the plan, he noted that there was a "Design Principle" that stated "Use ambient resources: Maximize the efficient capture and use of the energy and water that fall on Palo Alto." He said that might be a good goal for water supply, but if it implied expanding the number of solar installations in Palo Alto, it might not be the most cost-effective use of City resources.

Friend agreed with the need to focus on cost-effective efforts. He said "cost-effectiveness" was listed at the beginning of the plan as a principle that applies to every goal in the plan rather than being stated repeatedly throughout the document. He spoke to Commissioner Schwartz's comment on not forcing people to adopt electrification technologies. He agreed. However, the City could educate them and provide them the best options to take advantage of these technologies if they chose to do it. He spoke to her comment on the aggressiveness of the goals. He thought the goal was grounded and he believed the community would be able to accomplish those carbon reduction goals. He said there was appetite in the community to do something leading edge, and the goals could be adjusted as the community learned more about how to achieve them.

Commissioner Schwartz said the City was behind on certain types of technology, and it was unlikely the community would be able to leapfrog ahead of other utilities that had better technology in place. She said these technologies took time to put in place. Those technologies made a critical difference in managing energy use. It was fine to be slower to adopt new technologies, but it was not realistic to adopt aggressive carbon goals at the same time.

Chair Danaher said cost effectiveness had to be looked at across all sectors. He noted that the Carbon Neutral electric supply portfolio did not involve supplying renewable energy at all times during the day or year. As a result, the goal of electrifying all gas use might not be the most cost-effective approach to carbon reduction. It bothered him to see that stated as "the goal" for the long term. It would be a good place to include the words "where cost-effective" for that goal, specifically. He looked forward to more discussion of the topic of electric supply with staff. He also thought it was important to think about alternative electric vehicles like electric bikes and skateboards and whether there was anything the City should be doing to encourage these transportation modes. He did not know if there was anything, but it was worth considering. The future would have much more variety in transportation modes. He also thought it was important to consider energy storage and the role of utilities in EV charging infrastructure. He expected to learn more in future meetings he was going to have with European utilities. Overall, though, he thought the plan was excellent.

Commissioner Segal spoke to the question of why people stopped biking after they got out of high school. She said she tried to bike as much as possible, but there were barriers that made it difficult, such as finding places to lock her bike and the connectivity of bike lanes through the City in the east-west direction.

Friend noted the success Palo Alto had in bicycle use, with 44% of students biking to school. The City Manager had convened a Manager's mobility partnership with the city managers from Menlo Park, Mountain View, Redwood City, and Stanford to look at collaborative approaches to bikability.

Chair Danaher suggested reducing the parking area at the high schools. He said there were small one-person vehicles that could be used for shopping, the City could get some of those on the road as examples. It came down to convenience and cost.

Friend said it was important to encourage people rather than punish them.

Commissioner Forssell was pleased to see that the City planned to explore non-potable water sources. She remembered a public comment sharing some data about basement dewatering. She asked whether there were any updates on that issue.

Shikada said there was an item on the December 11, 2017 Council agenda to codify certain measures related to groundwater dewatering.

Dailey said the focus was on reducing groundwater pumping rather than putting it to use, since it was difficult to build adequate water distribution infrastructure for such a temporary use.

NO ACTION