

MEMORANDUM

TO: UTILITIES ADVISORY COMMISSION
FROM: UTILITIES DEPARTMENT
DATE: AUGUST 7, 2019
SUBJECT: Termination of City of Palo Alto Utilities Demand Response Pilot Program

This is an informational report and no action is requested of the Utilities Advisory Commission. Staff is informing the UAC of the termination of the City's Demand Response Pilot Program, effective May 1, 2019 due to on-going meter communications issues, low customer participation, and the need to put staff resources on other pressing programs until the meter issues are resolved. Staff will consider reinstating the Demand Response program when either 1) advanced metering infrastructure (AMI) has been installed, simplifying administration, or 2) communications issues with existing interval meters are resolved.

Background

The Demand Response (DR) Program began in 2012 as a pilot program (initiated as a two year pilot program in [City Council Staff Report #1450](#) and given a three year extension in [City Council Staff Report #3454](#)). It was designed to reduce the Palo Alto community's annual peak electricity demand and share any savings from the reduced purchase requirements with Program participants. The Program is only eligible to large commercial customers who can achieve at minimum 50kW capacity reduction and is active for the summer season each year, which typically begins in the early May and ends in mid-October. Time of Use (TOU) rates for medium and large commercial customers will remain available after the Program ends.

Meter issues

In the late 1990's, in preparation for deregulation, the Utilities department began purchasing electric meters with analog telephone modems in an effort to provide customers with 15 minute interval data, so that customers could be better informed about their energy usage. Staff worked closely with the largest utility customers to have them install phone lines out to their electric meter and take advantage of this service. As VOIP became more popular, many customers either kept only one landline at their facility or abandoned this service. Staff began to research options to replace the landline connections.

In 2016, after testing meter options, Utilities decided to purchase meters equipped with built in cellular modems. Within 6 months of receiving the first batch of "cellular meters", staff learned that the telecom industry was planning to sunset the 3G cellular network and force all customers to upgrade to 4G cellular by the end of 2019, which was a surprise to the City's meter manufacturers. In order to be able to incorporate 4G meters into the Program, staff worked with Verizon Wireless to establish a new 4G/LTE

virtual private network for meter communications. The meter manufacturer was unable to deliver the 4G meters until the 4G/LTE network was built and tested by Verizon. Verizon completed the test on April 15, 2019 and provided the information to the meter vendor to resume production of the meters, which the City had ordered in September 2018. Due to the delayed availability of the meters, as well as numerous communication problems, the number of customers able to participate in the Program has decreased over time. In 2018, the program only had 4 participants, down from a peak of 8 in 2013-14. Once the City receives, tests and installs the new cellular meters, there will be a bigger pool of customers that can participate in this program.

After the communications issues are fixed, staff will seek vendors to coordinate and manage the Demand Response program. There are a number of vendors in this field. Allowing a vendor to manage the Program would make CPAU staff available for other tasks.

Staff will coordinate the installation of these 4G "cellular meters" with the adoption of AMI meters. While AMI is expected to be deployed in the next few years, the 4G meters are required to maintain continuity of interval meter service to large commercial customers during AMI deployments. The cost of converting the existing 3G customers to 4G is estimated at under \$20,000.

Attachment A shows the Demand Response Program results from 2013 – 2018.

Attachment:

Attachment A: Demand Response Program results, 2013 – 2018

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