TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER DEPARTMENT: UTILITIES
DATE: JULY 16, 2007 CMR: 299:07
SUBJECT: AS REQUIRED BY THE ENERGY POLICY ACT OF 2005, A PUBLIC HEARING TO CONSIDER A RECOMMENDATION TO NOT IMPLEMENT THE ELECTRIC TIME-BASED METERING AND PRICING OPTIONS

RECOMMENDATION
In order to meet the reporting requirements of the Energy Policy Act of 2005 (EPACT), staff recommends that the City Council hold a public hearing and find that it is not appropriate to implement the electric time-based metering and pricing options required by the EPACT, and direct staff to evaluate the future technical feasibility, customer interest, and cost-effectiveness of providing time-based rate options to each customer class and report back to Council by June 30, 2009.

BACKGROUND
To meet the EPACT requirements, the City of Palo Alto Utilities (CPAU) must offer time-based metering and pricing options to all customer classes by August 2007, or issue a decision as to the appropriateness of implementing the standards. This report addresses those requirements.

Time-based metering and pricing options provide incentives for customers to respond to electric supply costs and constraints. Modifying behavior in response to time-based prices can result in lower costs, reduced environmental impacts and increased system reliability. Electric supply is more costly during periods of high usage, and therefore, reduced use or shifting use to less costly time periods can reduce utility costs and save money for customers. Because high-price periods coincide with lower power generation efficiency and greater transmission system congestion, time-based pricing also realizes environmental and reliability benefits.

The specified time-based rate options to be considered under EPACT are: 1) time-of-use pricing; 2) critical-peak pricing; 3) real-time pricing; and/or 4) peak load reduction credits.

1) Time-of-use (TOU) pricing provides an electric rate to customers based upon the time of day, or for pre-determined blocks of hours during the day, that electric energy is consumed. TOU rates are usually seasonal in nature, apply to pre-determined blocks of hours, and are...
published in advance. Presently, TOU rates in Palo Alto are offered only to large commercial customers on a voluntary basis.

2) Critical-peak pricing (CPP) goes a step further than TOU pricing by adjusting prices more frequently and with shorter notice, with an increase of prices for peak usage hours during days of unusually high electric system demand to directly reflect actual wholesale market price spikes.

3) Real-time pricing (RTP) retail rates change on an hourly, or possibly more frequent, basis. Rates are usually announced to customers on an advanced, or forward, basis.

4) Peak load reduction credits (PLRC) are provided to large load customers who enter into pre-established agreements to reduce load during peak hours.

At the current time, CPAU offers TOU rates to commercial and industrial customers (rates E-4-TOU and E-7-TOU). Also, CPAU’s existing voluntary load curtailment program has successfully demonstrated demand reduction results that help to ensure reliable system operation and minimal overhead cost.

DISCUSSION
Through prior studies and economic evaluations, staff has determined that implementation of time-based metering and pricing options are not currently practical or effective for some Palo Alto electric customer classes, and it is therefore not appropriate to implement the EPACT time-based metering standards for all customer classes at this time. This is due primarily to utility billing system limitations, insufficient metering capability, and uncertain and expected low customer participation at current time-based cost differences.

1) Limitations of the current customer information and billing systems.
   The current Utilities billing system cannot readily accept the necessary programming modifications required to generate customer bills on a TOU rate option. Manual billing would be required to implement these rate options, and the current staffing level is insufficient to support manual billing. The CPP, RTP and PLRC time-based rate options are not available under the current billing system either. The current billing system version is no longer being supported by the software vendor, which has resulted in the business decision to migrate to a new Utility Customer Information System in conjunction with the city-wide SAP upgrade.

2) Insufficient metering capability.
   The only Palo Alto meters capable of time-based pricing are demand meters currently installed in commercial and industrial applications. The majority of current meter installations are not capable of being programmed for TOU, CPP or RTP options. A new policy would need to be established to replace existing residential and commercial single-phase electric meters with meters capable of recording consumption by time. Staff’s review of options for residential and commercial metering for the FY 2008/09 will include meter purchasing, calibration standards, communication capabilities, meter maintenance budgets, staffing, and Capital Improvement Program impacts.
3) **Uncertain and low customer participation.**
Palo Alto has offered voluntary TOU rates to commercial demand-metered electric customers since January 2002, but has not had any customers choose service under the commercial TOU rate schedules. Furthermore, consultant studies to evaluate the customer potential for a demand response program, whereby customers receive financial incentives to reduce demand during high demand on-peak hours based on the Utility’s avoided cost, have determined that such programs require greater differences between on-peak and off-peak prices than is currently available to attract significant customer participation. Low participation may require charging participating customers for their time-based meter (common to other electric utilities), which would make the program even less attractive.

For these reasons, staff has determined that it is not appropriate to implement the electric time-based metering and pricing options required by the EPACT at the current time.

**RESOURCE IMPACT**
The costs associated with the recommended evaluations will be included in the various Utilities Department operating budgets.

**POLICY IMPLICATIONS**
These recommendations do not represent a change in current City policies.

**ENVIRONMENTAL REVIEW**
The adoption of the resolution does not constitute a project under the California Environmental Quality Act. Therefore, no environmental assessment is required.

**ATTACHMENTS**

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