

CPUC Rate Forum

Cathy Yap
Barkovich & Yap, Inc.
Consultants to CLECA

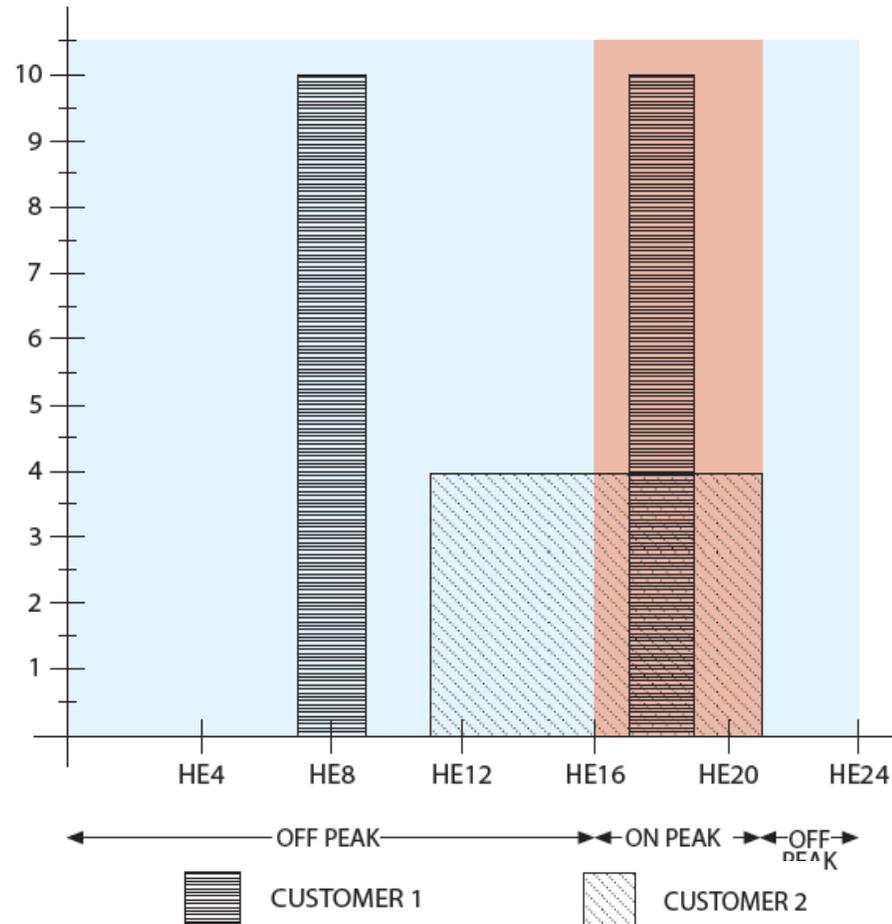
Instantaneous customer demands drives the sizing of the utility system

- ▶ Capacity requirements can be created by customer demand for as little as an hour if the customer demand is imposed during a peak period.
- ▶ Customers expect that the utility will meet their instantaneous requirements anytime they impose these requirements on the system.
- ▶ Meeting these instantaneous demand requires fixed assets, *e.g.*, generators, transmission lines, distribution lines, and substations
- ▶ Even if customers generate a portion of their own energy needs, they still place demands on the utility system, either when they require power or when they deliver power into the utility system.

Rate design allocates costs within customer classes

- ▶ The RAP Study Claims that demand charges by their nature inevitably shift costs from higher-load-factor customers to lower-load-factor customers, without justification by cost causation.
- ▶ This is not true. Without demand charges, customer with low load factors can impose substantial fixed costs on the utility system and avoid paying fully for those capacity costs because their usage is so low.

These two customers pay exactly the same amount for energy in each TOU period but impose dramatically different capacity costs on the system. Without demand charges Customer 1 would avoid paying for its full share of capacity costs.



Capacity cost imposed by a customer is based on its peak usage *not* its average usage during a peak period

- ▶ Eliminating demand charges would unfairly shift costs from low load factor customers to higher load factor customers.
- ▶ The best solution for generation costs is a mixture of coincident demand charges and time of use varying rates. Today both PG&E and SCE have generation rate designs for medium and large light and power customers that reflect this rate design approach.

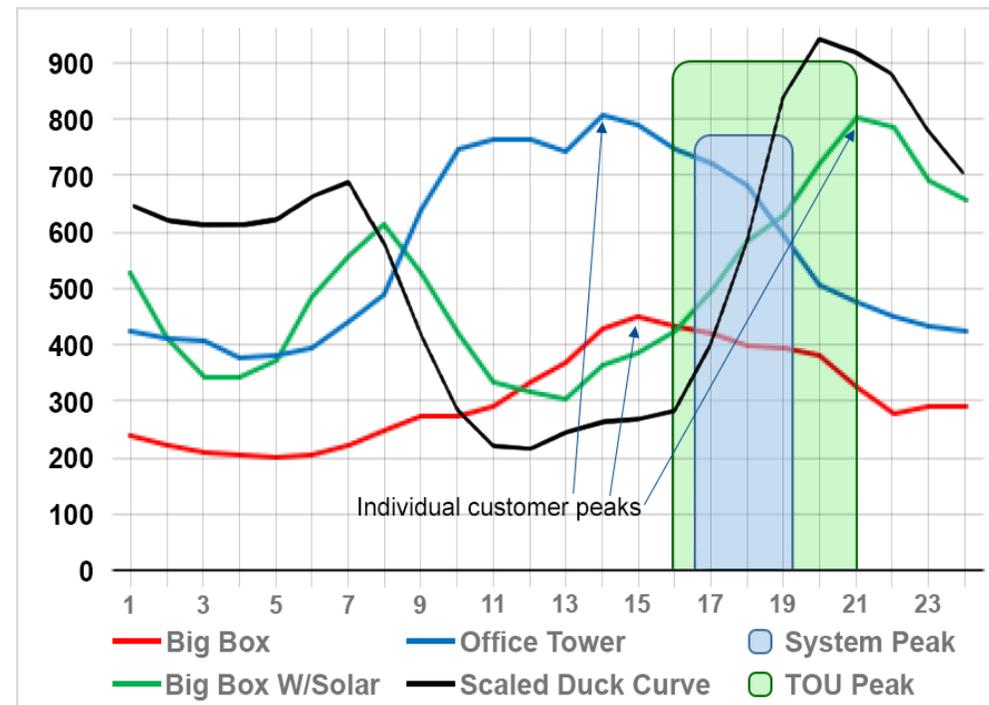
Coincident demand charges provide a proper price signal during peak periods

The RAP study conclusion is incorrect—TOU energy charges are not sufficient to capture capacity burden

- ▶ Coincident demand charges recovers demand costs imposed during peak period
- ▶ Customers not charged for peak loads outside of peak period
- ▶ Coincident demand charges ensure the solar customer would fairly pay for its contribution to the system ramping burden

Graph from RAP Study marked up to show on-peak TOU and duck curve shape

Figure 6: Hourly Loads for Three Southern California Customers³²



To the extent transmission, subtransmission, and distribution costs are time dependent, coincident rather than non-coincident demand charges should be employed

- ▶ The extent to which the utility transmission, subtransmission, and distribution costs are time dependent is an empirical question that requires further study
- ▶ SCE has proposed reflecting a significant portion of its subtransmission and distribution costs in time variant rates based on its recent evaluation

Charging a significant portion of the subtransmission and distribution system cost on the basis of coincident rather than noncoincident demand charges avoids overbilling customers who use much of their energy during off-peak periods

- ▶ Demand charges are better than energy charges because these customers place a capacity requirement on the utility system that results in fixed costs
- ▶ Segregating the time dependent from the non-time dependent costs provides a more precise billing of capacity costs through demand charges
- ▶ Non-coincident demand charges are appropriate for non-time dependent capacity costs