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California Energy Commission  
Dockets Office, MS-4  
1516 Ninth Street  
Sacramento, CA 95814-5504

RE: **Docket No.08-DR-01**

Dear Sir or Madam:

In response to the Notice of Efficiency Committee Load Management Standards Workshop on Draft Proposed Standards, posted November 21, 2008, TURN submits these comments on the Draft Proposed Load Management Standards, Standard LMS-2. TURN presents these comments in addition to issues raised by interested parties in the workshop on December 10, 2008.

**Proposed Standard LMS-2: Dynamic Electricity Rates**

For the many reasons discussed below, TURN urges the CEC to not adopt any standard that includes requirements regarding rate design, including requirements for default rates and time-differentiated rates. Therefore the latest version of LMS-2 should be eliminated or completely rewritten.

## **1. The CEC does Not Have Authority to make Requirements Regarding Rate Design**

The Public Resources Codes carefully delineates the CEC's responsibilities with respect to rate design policy.

- Section 25216.5 (c) authorizes the CEC to evaluate policies governing rates and to transmit recommendations to the Governor, Legislature, PUC, and to publicly owned electric utilities.
- Section 25403.5 (a)(1) notes that any adjustments in rate structure in association with load management goals are subject to approval by the PUC.
- Section 25602 (j) authorizes the CEC to carry out technical assessment studies on implications of ratesetting policies.

The CEC is not authorized, however, to impose requirements about default rates, nor to require time-differentiated rates. The CEC is clearly authorized to participate in CPUC cases regarding rate design and is authorized to present policy positions of the Energy Commission and/or its Staff to the CPUC, which then must consider them (like positions taken by other CPUC intervenors). The CEC has appeared before the CPUC on rate design on several occasions in the past, though not in recent years. But the CEC cannot dictate to the CPUC how to set rate design policy and how to develop rate structures – through the load management standards or any other forum. Thus, LMS-2 exceeds the CEC's authority.

## **2. Unintended Consequences should be Avoided**

Emphasizing one goal of rate design, such as making rates “cost-based,” may frustrate other goals of this proceeding, such as demand response. The energy price differential between normal and critical event days and on-peak

versus off-peak hours must be large enough to grab customers' attention to effectively result in demand response. With the cost-basis for energy charges diminishing between on-peak and off-peak, as it has over the last 10 years, a strict cost-based energy rate differential may not be sufficient to engender customer interest in demand response. The CEC should not make a standard promoting one principle of rate design over the others, especially for this complex issue where many goals need to be weighed.

A CEC "Statement of Guidance", containing principles of rate design to be considered, is probably more appropriate than creating a standard such as LMS 2 which may have unintended consequences and will be difficult to change.

### **3. The Logical Foundation for LMS-2 Should be Re-examined**

TURN's representative at the December 10, 2008 meeting expressed concern that the energy efficiency goal of rate design appears almost last in the priorities of LMS-2, despite the high role of conservation in the Statewide loading order. In response, the Associate Member shared that recent evidence shows that "tiered rates don't work" to promote conservation. In TURN's view this is an unwarranted conclusion from preliminary evidence, which we discuss in detail below to correct the record.

Presumably the evidence referred to comes from a recent study by Severin Borenstein, "Equity Effects of Increasing-Block Electricity Pricing."<sup>1</sup> For several reasons the conclusion that "tiered rates don't work" is not warranted by Borenstein's evidence.

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<sup>1</sup> Center for the Study of Energy Markets, CSEM WP 180, November 2008, <http://www.ucei.berkeley.edu/PDF/csemwp180.pdf>.

*a. Academic Expectations vs. the Real World*

Borenstein's hypothesis is that if consumers were responding to increasing-block rates, the probability density function exhibited by demand data would tend to cluster around the tier-escalation points (e.g., around the 130% of baseline, 200% of baseline, etc.). Since his dataset does not conform to this expectation, Dr. Borenstein concludes that the tiered rate structure is not inducing consumers to conserve. An alternative and very plausible explanation, however, is that customers do not know what tier they are in, how many kWh they have consumed that month, what marginal price they are facing, and that they have few realistic options to conserve even if they know they have reached a high tier.<sup>2</sup>

TURN submits that the density structure exhibited by Borenstein's data does not necessarily lead to the conclusion that increasing-block rates do not induce a conservation effect. Indeed, a precise, regimented, and conscious response to a tiered rate structure is not what we should use as the litmus test for whether tiered rates induce conservation. Although Borenstein seems to allow for some level of consumer imprecision with respect to households hitting their "consumption level...targets"<sup>3</sup>, he still requires a level of implied consumer regimen and consciousness that is not only unrealistic<sup>4</sup>, but a false hurdle. Consumers who may not realize in real time that they have passed from one tier to the next will still generally recognize that their bills are going up faster than

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<sup>2</sup> Significant end uses, such as space conditioning, can involve a comfort loss if usage has to be severely curtailed at the end of the month.

<sup>3</sup> By using intervals around the tier escalations of about 7% of household consumption.

<sup>4</sup> Given the current state of consumer education. Southern California Edison has proposed a "Residential Tier Alert Program" in A.08-06-001 using data from its AMI system to notify customers up to 3 times per month via email or phone when they are close to a tier change. See SCE-1, p. 121.

they may have expected with modest increases in usage. Indeed, as Borenstein allows, consumers make “some inference about the average price they have paid over the prior few billing periods rather than the precise marginal price that they face.” Increasing-block rates precipitate larger swings in the average price than would be the case with, say, declining-block rates, or even flat rates, which is precisely the signal that induces consumers to conserve. Whether or not consumers respond to exact marginal prices in the strictest sense in real time, they do respond to differences in average price, which are made larger by the marginal prices inherent in the increasing-block rate structure.

Empirical evidence supports our understanding that while customers may not be aware of the details of their rates, many understand that using more energy leads to higher rates. A study undertaken as part of the Statewide Pricing Pilot (SPP) showed that:

“On the billing side of the question, some, even many, respondents are aware that different price blocks exist, but even within this group, none were particularly clear about either the size of the blocks (the amount of electricity included in a block) or the relative block prices.”<sup>5</sup> (page x).

The same study found that customers understood the conservation effect (avoiding waste) of increasing rate tiers:

“While very familiar with the ‘buy more, pay less’ model used for other types of purchases, most group participants felt that the ‘use more, pay more’ model made more sense given that electricity is considered a natural resource. A ‘use more, pay more’ model would be more apt to discourage wasteful electricity use, most customers assumed, while a ‘use more, pay less’ model is assumed to encourage people to use more electricity, potentially using too much or wasting it.” (p. 20)

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<sup>5</sup> Momentum Market Intelligence for Southern California Edison, Pacific Gas & Electric and San Diego Gas and Electric, “Residential Customer Understanding of Electricity Usage and Billing,” conducted September-October 2003.

A better test of the effect of increasing-block rates on conservation could be following over time the consumption behavior of customers who have encountered high tiers, and therefore high average rates. Under current conditions where a customer's only feedback comes from the monthly bill, it takes several months for a customer to realize and effectively act upon the bill information that reveals consumption in high-priced tiers. Given the lack of customer knowledge of prices and tiers, Borenstein's result from one point in time is not at all a proof that increasing tiered rates "do not work" for conservation.

*b. Consequences of Concluding that Customers are not Price Responsive*

If Borenstein's preliminary conclusion –that residential customers do not respond to increasing tiered rates by conserving usage – is accepted,<sup>6</sup> this presumed lack of price responsiveness makes it difficult to substantiate any statewide policies to promote dynamic prices. If customers do not respond to marginal and average prices during the month, when every incremental kWh consumed is in the higher tier, by what logic would customers respond to dynamic prices, applicable only to the kWh consumed during a few hours on a few critical days per month? There is a logical inconsistency in rejecting price responsiveness due to tiered rates yet accepting it for applicability during a few peak hours.<sup>7</sup>

*c. Conservation is Needed as Well as Peak Responsiveness*

The fall 2008 Research Review of the Center for the Study of Energy Markets (CSEM) also featured an article "Time to Push Energy Conservation

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<sup>6</sup> "I find preliminary evidence that customers do not respond to the increasing marginal prices they face." Borenstein, Abstract of CSEM WP 180.

<sup>7</sup> Furthermore if demonstrated customer response, for example from the SPP Pilot, is due to the event notification rather than the actual price signal, there is no need to deliver actual price information and to promote dynamic pricing.

AND Energy Efficiency.”<sup>8</sup> TURN agrees with the premise of this article: rather than the focus being solely on energy efficiency, which has driven policy over the years, it is time to promote conservation (using less energy) as well. Otherwise the energy savings from more efficient homes and appliances is diminished as the homes and appliances get bigger and fancier. Similarly, TURN suggests, the available pricing tools must be used in service of all the goals -- reducing energy over the course of the month (conservation) AS WELL AS during peak periods (load management). One goal should not be sacrificed to the other, as LMS-2 does in its current form.

#### **4. Summary**

In summary, the LMS-2 standard should be eliminated or completely rewritten. Imposing requirements concerning rate design are beyond the CEC’s authority. Emphasizing one rate-design goal, reflecting costs, at the expense of others could have unintended consequences and should not be mandated in a standard, which can be difficult to change. The preliminary evidence purporting to show that customers do not respond to marginal prices and higher tiers is unconvincing. If that is indeed the case (which may be because customers do not understand the details of their rates), there is also no foundation for dynamic pricing either, and the policy direction of LMS-2 cannot be substantiated.

TURN values the conservation incentive of increasing block rates, and also values the goal of on-peak usage reductions. Electric rates, however, should not be used to sacrifice one important goal for the other and certainly not in the form of a standard.

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<sup>8</sup> Based on “Towards a Sustainable Energy balance: Progressive Efficiency and the Return of Energy Conservation,” CSEM WP-171 by Jeffrey Harris, Rick Diamond, Maithili Iyer, and Christopher Payne.

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Sincerely,

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Staff Attorney

Cc: Jackalyne Pfannenstiel, Chair, CEC  
Arthur Rosenfeld, Commissioner, CEC  
Gabriel D. Taylor, Project Manager, CEC