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**WOMEN'S ENERGY MATTERS  
COMMENTS ON ENERGY EFFICIENCY  
AND THE DEMAND FORECAST**

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**WOMEN'S ENERGY MATTERS  
COMMENTS ON ENERGY EFFICIENCY  
AND THE DEMAND FORECAST**

Women's Energy Matters (WEM) respectfully submits these comments, which include excerpts from comments on matters involving both the CEC and CPUC. WEM is a party to procurement proceedings at the CPUC, which utilize the demand forecast, as well as energy efficiency proceedings.

CPUC explained why it needs accurate information on EE:

The CPUC needs complete and accurate forecast information on which to continue our efforts to ensure a reliable and cost-effective electricity supply. [R.10-05-006, 2010 LTPP OIR, at 12.]

In support of this need, CPUC's Energy Division recommends using the results of the evaluations, which were based on a set of rigorous analytical methodologies that have evolved across twenty years of energy efficiency evaluation in the state. 5-25-11 Summary of CPUC-Energy Division Comments on Draft Needs Assessment, Slide 9

**Multiple uncertainties about existing EE resources**

In the last LTPP, utilities' EE program resources were credited as only 20% available to meet procurement needs.<sup>1</sup> Hopefully this number would increase somewhat in this proceeding, but WEM believes it's likely that the utilities' estimate of 65% of goals represents the high end at this point in time. There are several problems. One — how much will actually be realized from IOU programs (the "Gross Realization Rate"). Two, the in-depth studies by joint staff (CEC/CPUC) were unable to provide much more certainty, about the amount of EE "embedded" in the forecast vs. available to meet load, or the problem of overlap. This involves the "attribution" of resources that do exist — i.e., how much energy savings come from utility programs vs. "naturally occurring" or state and federal codes & standards.

**Why EE overlap matters to the demand forecast**

CPUC's Total Market Gross (TMG) goals (D0808047) were supposed to capture the overall amount of EE existing in the system. Theoretically, this might be good for procurement, however there is one glaring omission: the CPUC did not determine how much of these goals were the utilities' responsibility.

*This means that it's not possible to accurately predict:*

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<sup>1</sup> Some of the confusion was caused by the difference in the definitions of "committed" and "uncommitted" EE resources used by CPUC and CEC. Xxx(cite decision explanation).

*(1) how much more or less EE, in each utility area (or any particular local area), would result from providing more or less funding to utility-administered programs in the future; or*

*(2) what would be the impact of program failure, i.e. shortfalls of 35% or more in utilities' realization rate, such as have occurred for the past decade.*

### **EE and Local Reliability — issues re location data and unclear “overlap”**

Energy efficiency is an exquisitely local resource. It works where it is located, and only there. It can't be transmitted or distributed. However, because of these qualities, it is eminently useful to relieve congested power lines and increase load-serving capability, *without spending anything on transmission, distribution or generation.*

Location data is therefore a fundamental requirement for utilizing EE in procurement.

California only recently began to report EE location data, and only for some of the programs.<sup>2</sup>

### **Avoided costs fail to reflect actual costs of procurement**

Current EE resources are mismatched to the needs of resource procurement in California because of perverse CPUC rules that work against EE addressing peak load or local reliability, which are the primary drivers for new procurement. EE Avoided Costs used to calculate the cost-effectiveness of EE fail to reflect the actual cost of energy at different times of day, seasons and locations. Unfortunately, Avoided Costs grossly undervalues peak savings. (Also, CPUC only recently began to report location data (by zip code) for part of the EE portfolio.)

Understandably, it would be difficult to create a model for Avoided Costs that could track the ever-changing prices in the electricity market at different transmission nodes. However, there's no need to create such a model when the real thing would serve just as well! This is why bidding EE into procurement RFOs would provide more appropriate incentives for EE providers to provide what's most needed in California — and at the same time would provide more clarity as to what's actually out there on the grid.

### **Alternative economic drivers and program delivery to maximize EE impacts**

Other procurement-related issues that have received far too little attention in the EE world include varying models of EE program delivery and financing, and actual economic drivers for EE in different consumer sectors. These are procurement-related because they have a lot to do with determining levels of program participation in different sectors, and the amount of energy savings per dollar of ratepayer investment.

There is currently a bitter dispute in the EE application proceeding (A0807021 et seq.) over differences between IOU and Energy Division's valuation of “custom” measures in the 2010-12 portfolios. Utilities dumped 1500 workpapers on Energy Division and

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<sup>2</sup> “Upstream” programs comprise some 30-40% of program budgets. Upstream means e.g. providing incentives for manufacturers and retailers to reduce costs, improve quality or variety, increase availability or visibility of products, provide point-of-sale rebates and/or various other promotional efforts.

expected immediate processing and acquiescence to utility estimates, which was not forthcoming. The process ground to a halt awaiting Commission guidance; utilities filed a Petition to Modify, the ALJ filed a Proposed Decision this spring, and new Commissioners tried to sort out these issues in an All-Party Meeting 6-6-11. One option under discussion was having custom projects determined by ex post valuation (all others were allowed to use ex ante values for measure parameters, only the completeness of the projects are subject to verification).

WEM's understanding is that many if not most of these custom measures involve industrial or large commercial projects. In his presentation for CEC's 5-25-11 workshop, Don Schultz discussed the difficulty of evaluating these types of projects because the new machinery, process, or construction is often so different from what existed previously that an apples to apples comparison is impossible. There are other questions too.

### **Proper use of ratepayer funds**

**Industrial and large commercial “custom” projects.** In the 1970s there was no public funding of industrial or large commercial projects; almost all EE programs were residential or small commercial. There was a good reason for this. Most large companies have facilities managers or production managers that are technically able to see the benefits of energy efficiency to the company's bottom line, unlike residential or small business consumers. Similarly, such companies have more access to financing. Thus they are quite capable of doing EE upgrades on their own.

It is difficult to understand why such companies would need ratepayer funding as incentives to do these projects. Right away there is a “net-to-gross” problem — how many of these projects would happen anyway, without utility involvement?

From the description at the 6-6-11 All-Party Meeting, it was clear that the utilities provided multiple program and engineering staff resources who were spending considerable time trying to determine how much energy savings credit utilities should get from each of these custom projects (in addition to demonstrating energy savings and therefore bill-savings for the customer — which would require different calculations).

PG&E's 2011 General Rate Case testimony explained that the “Customer Care” organization considered energy efficiency a prime motivator for “Customer Retention” and “Economic Development.” (See chapters with these names in PG&E Testimony Vol. 4, in A0912020.) The final settlement made it clear that neither of these categories qualified for *any* ratepayer funding; the company engages in these efforts for the purpose of maintaining and expanding its customer base, in order to benefit shareholders.

Most of these custom EE projects should be seen in this light, and should be denied ratepayer funding. The companies might argue (as they did in the early 1980s) that they deserve to get something from the EE funds because they were forced to pay into them. However, the Commission never accepted that argument as a reason for equitable funding for residential ratepayers when WEM put it forward, and D0501055 concluded that this is ok because the overall benefits of EE accrue to every ratepayer. WEM believes this is only valid to the extent that there really are system benefits to EE, which would necessarily mean less procurement and/or transmission/distribution.

**Residential projects.** The paltry funding for EE in the residential sector for some twenty-five years is good news in one sense: there is plenty of un-mined potential. This is in contrast to the diminishing returns in the large commercial sector, which utilities complain about.

The utilities are nevertheless very reluctant to provide much in the way of residential EE. They opposed the Whole House program, and in the 6-6-11 All-Party meeting, it was first on their list of programs that they proposed to reduce or eliminate to make their portfolios more cost-effective.

**WEM recommendations for reconfiguring EnergyUpgradeCA.** While the Energy Upgrade California program was put together with the best intentions, it was designed for a different reality — prior to the 2008 crash, and prior to Fannie and Freddie derailing PACE funding.

WEM feels that EnergyUpgradeCA is singularly unsuited for today's economic climate, and is a poor use of stimulus funds. For residential customers, it consists of comprehensive (therefore expensive) retrofits which are primarily funded by the ratepayer. The question is, how many of those will get done in this economy? Most ironically, the hot inland areas, where EE is most needed, will see the least work, in part because utilities say they have fewer contractor networks in those areas. The program appears to focus mostly on marketing, audits and slightly higher and more varied rebates.

The program provides virtually no stimulus or ratepayer funding for multifamily homes, renters, or moderately low-income customers, though the Commission promised to "get around to it" in late 2011 (when the stimulus money is about to disappear — it must be used or returned by March 2012). There is some money for job training but labor experts question the value of the training that is offered, and whether it will actually lead to jobs.

WEM fears that a large amount of these funds will be wasted because of the great difficulty getting consumers who have the will and the means to undertake these major projects. Currently, vast sums are being spent trying to coax affluent people to commit substantial funds to do extensive retrofits that have a very long payback time.

WEM believes that the story could be very different if the program design and delivery were changed in accord with current reality. For example, what if these projects required NO upfront contribution from customers, and all costs were covered by "on-bill financing" (OBF)? Rental units and low-income homes would be at the head of the line, rather than last served.

Even more significantly, an OBF program allows for a continuously replenished revolving fund. Rather than a one-time use of federal stimulus funds, the stimulus would be fully renewed every few years — with very positive impacts on the economy.

The current economic climate also presents a unique opportunity for mass production of energy efficiency, because of the great many construction workers who are currently

jobless. Programs could treat whole communities in a comprehensive manner. Once the barrier of requiring individual homeowners buy-in were removed, program administrators (including cities and counties) would be able to conserve most of the funds currently needed for marketing to individual homeowners, and use those funds instead for implementation.

### Questions about CPUC's goals

*2008 goals are LOWER than 2004 even though they are Total Market Gross.*

Text that accompanies Table 2, Adopted Total Market Gross Goals explains:

Our adopted goals for 2012-2020 take into account savings from the entire energy efficiency sector. Beyond savings from IOU programs, our adopted goals for the first time include recognition of state building standards and expected federal appliance standards, our BBEES and AB 1109 (requiring improvement in general service lighting). Recognizing the comprehensive nature of energy savings in California provides better information to procurement planners to delay or reduce the future need for supply-side resources, which will result in reduction of GHG emissions. D0807047, p. 22.

The decision said ED proposed a “hybrid” of TMG and “expansive-net” utility program-specific goals.<sup>3</sup> *But this was not adopted:*

We will not adopt the “expansive net” recommendation of Energy Division at this time because there is an insufficient record to do so. However, we believe this concept has merit... [W]e will update and adopt new goals in 2010. At that time, we intend to consider “expansive net” goals as part of adopting IOU portfolio specific goals. Ibid, p. 23.

This goal update hasn't happened yet (as of June, 2011).

D0807047 warned that the LTPP should watch out for “potential” savings shortfall:

We recognize that in the event

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<sup>3</sup> Figure 1, p. 13 D0807047 has the vague note: “savings eligible to be partly claimed by IOUs” — which includes (1) naturally occurring, (2) IOU programs, (3) Title 24 & federal standards, and (4) BBEES. The decision explains this further as follows:

Energy Division believes a hybrid goal structure (which incorporates both a total market gross goals and a utility program-specific goal) which measures all savings achievements within IOU service territories begins to solve the crucial interagency need for a metric appropriate to load forecasts, associated emission reduction baselines, and economically efficient procurement plans. Energy Division recommends use of the concept of “expansive net” to identify a utility-specific goal. As defined, expansive net represents the following:

Expansive Net = Current Net Program Savings + Utility

Program Induced Market Effects

Where Utility Program Induced Market Effects =

Utility share of the savings from new Codes and Standards

+ Utility share of the savings from new Compliance

Enhancement Programs

+ Utility share of the savings from Market Transformation Programs

such as the Big Bold Energy Efficiency Strategies D0807047, p. 13.

of a savings shortfall, adequate supply side procurement of capacity could be put at some risk. The LTTPs of each IOU must take this potential shortfall into consideration and weigh the level of uncertainty in full TMG goal attainment with the added cost to ratepayers for either over-procurement or emergency just in time procurement of capacity. D0807047, pp. 24-25.

The decision included WEM's comment:

WEM commented that "[t]he Commission needs to know that the EE goals will be attained to the same extent that it needs to know that power plants of a certain rating will be online and delivering power." Ibid, p. 26.

However the decision ignored the overlap that arises between the Total Market Gross goals and all the non-IOU elements already included in the CEC forecast. And finally, there are the massive shortfalls in IOUs' actual programs that have occurred every year since 2004.

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Respectfully Submitted,

/s/ Barbara George

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