

**BEFORE THE  
PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Application of PACIFIC GAS AND ELECTRIC ) COMPANY (U 39-E), for Approval of 2006-2008 ) Demand Response Programs and Budgets. ) _____ )	Application 05-06-006 (Filed June 1, 2005)
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Southern California Edison Company's (U 338-E) ) Application for Approval of Demand Response ) Programs for 2006-2008 and Cost Recovery ) Mechanism. ) _____ )	Application 05-06-008 (Filed June 1, 2005)
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Application of San Diego Gas & Electric ) Company (U 902-E) for Approval of Demand ) Response Programs and Budgets for Years 2006 ) through 2008. ) _____ )	Application 05-06-017 (Filed June 2, 2005)
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**REPLY COMMENTS OF THE  
CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION  
ON UTILITY PROPOSALS TO AUGMENT THEIR DEMAND RESPONSE  
PROGRAMS FOR 2007 AND 2008**

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Dated: September 22, 2006

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The California Independent System Operator Corporation ("CAISO") respectfully submits reply comments in response to the Assigned Commissioner's Ruling ("ACR") requiring utility proposals to augment 2007 and 2008 demand response programs. These reply comments are being submitted in accordance with the post-workshop schedule established by Administrative Law Judge Malcolm on September 7, 2006.

## **I. Introduction**

The CAISO appreciates the Commission's efforts to augment demand response programs and the utilities' proposals to alter their suite of demand response programs to achieve greater market penetration and be responsive to their customers' needs.

Demand represents the "other" economy in the wholesale energy market and presents significant opportunities to enhance the reliability of the grid and the efficacy of the wholesale energy markets. The CAISO understands the challenges associated with meeting increasing demand and, therefore, agrees with PG&E's comment that "[i]n the short-term, demand response may be one of the few alternatives available because of its lead-time, particularly during periods of unusually high energy prices." (PG&E at 8.) Given the long lead-time and the regulatory and political difficulties involved in constructing new generation and transmission facilities, demand response is a long-term solution that is ideally situated and relatively untapped.

The CAISO hopes that the goals set forth will be achieved and that subscribed and expected MWs will converge to produce a valuable and reliable resource. As such, the CAISO appreciates the thoughtful and informative remarks provided by all parties and offers the following reply comments.

## **II. Permanent on-peak load shifting technologies and strategies should be considered by the Commission**

- Permanent load shifting is useful and can reduce costly peak demand
- Permanent load shifting should be valued appropriately
- The Commission should remain flexible to crossover and evolving technologies that are primarily load management technologies but could also be dispatchable

Demand within the CAISO Control Area hit an all time peak on July 24, 2006 of 50,085 MW. In contrast, the 2005-2006 winter peak demand was 33,275 MW (Dec. 14,

2005). The peak load differential of 16,810 MW between the winter and summer is majority temperature sensitive load. From September 2005 to September 2006, the CAISO system demand was over 45,000 MW only 57 hours or 0.65% of the hours per year. In other words, 5000 MW of peaking generation must remain available and receive sufficient capacity and energy payments for those few hours to meet the peak demand year after year. Thus, anything the Commission and utilities can do to either make loads responsive to price or system conditions, or shift load permanently away from the on-peak period, will help reduce reliance on costly peak capacity and potentially preserve operating reserves and, therefore, reliability.

As indicated in the comments received by the utilities, there seems to be a general consensus that permanent load shifting should be further explored and addressed, and for the above reasons, the CAISO fully supports this notion. TURN, however, makes a salient point that permanent load shifting, albeit highly beneficial, should not be valued as a “dispatchable” form of capacity (TURN at 12). The CAISO also agrees with this concept and encourages the Commission to ensure that permanent load shifting is distinctly classified and valued separate from dispatchable demand response capacity products and programs.

However, technologies are evolving and what appear to be permanent load shifting technologies may also be dispatchable. Thus, the CAISO urges the Commission to allow some flexibility in its policies for technologies that prove to be crossover demand response/load shifting technologies. In other words, a technology may generally be used for load management purposes, but may also be dispatchable and provide capacity benefits and grid services. For example, a thermal energy storage (“TES”)

technology may be dispatchable if the TES unit is addressable down to the individual unit and can switch between the A/C cooling and TES cooling mode. In large numbers, such a product could benefit the CAISO in its ability to provide, for example, regulation service (if so approved). Collaborative demonstrations of such technologies between the CAISO, CEC and CPUC/utilities would be beneficial and should be encouraged, where and when appropriate.

**III. Qualified, third-party aggregators should actively participate in meeting the utilities' demand response goals**

- The CAISO Control Area could benefit from a greater quantity of reliable demand response resources.
- Aggregators, in collaboration with the utilities, can help achieve demand response goals and objectives.
- Aggregators bring unique products and risk management/risk-sharing strategies that can benefit end-use customers.

The CAISO's interest in this topic arises from the collective ability of aggregators to make a greater quantity of reliable demand response resources available on both a day-ahead and day-of basis. As EnerNOC clearly states, "[t]ogether, utilities and aggregators can reach more customers, and achieve more DR, than the utilities alone." (EnerNOC at 7.) The CAISO agrees and, therefore, endorses greater participation by third-party aggregators working in conjunction with the utilities.

The CAISO is interested in reliable, expected MWs. In other words, when the CAISO dispatches demand response resources, it must have the confidence that those resources will respond and provide the intended effect. If this can be achieved, the whole market can benefit from more accurate dispatch decisions by the CAISO. Aggregators can potentially bring these reliable MWs to the CAISO's and utilities' operations, particularly if compensation is tied to performance. As such, aggregators would have significant incentives to perform. In addition, aggregators bring targeted and unique

business approaches that often involve risk management/risk sharing strategies that can be attractive to end-use customers. Thus, collaboration between the utilities and qualified, third party aggregators should help meet the aggressive and warranted demand response goals set forth by the Commission.

For the above reasons and given the urgency for greater demand response penetration, the CAISO is unclear why SCE would not want to collaborate with third-party aggregators to increase participation in its I-6/BIP program. Prior to the energy crisis of 2000-01, SCE had 1,214 MWs of peak load reduction capability.<sup>1</sup> Due to, among other things, the unexpected and extensive reliance by the CAISO on these interruptible resources during the crisis, participants opted-out of these programs and SCE now has 685 MW in its territory. (SCE at 4.)<sup>2</sup> Anything the utilities can do to gain back what was lost, including enlisting the help of qualified, third party aggregators, would help reliability for summer 2007.

**IV. As appropriate, demand response programs should integrate with CAISO markets and operations**

- Responsive demand response products can be highly beneficial.
- Simple and common criteria for triggering demand response are needed.
- CAISO will work with the Commission and others in order to ensure that the CAISO's reliability needs are understood.

It is important that the CAISO have the opportunity to work with the utilities and Commission to ensure that existing and future demand response programs, where appropriate, easily integrate with the CAISO's wholesale markets, timelines, and system operations.

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<sup>1</sup> Mark Wallenrod, Manager, Pricing & Tariff Operations, "SCE Load Reduction Programs: Summer 2001 Experience and Lessons Learned" ACEEE Conference on Energy Efficiency and Reliability, October 30, 2001, p. 6.

<sup>2</sup> Opt-outs from interruptible programs occurred in the other utility service territories as well.

For instance, the CAISO will be implementing a new integrated forward market and a residual unit commitment (RUC) process with the implementation of the CAISO's new Market Design and Technology Upgrade (MRTU) project. In order for the CAISO to avoid procuring additional resources to meet its demand forecast in its RUC process, (i.e., where the Day-ahead market does not clear to the CAISO's demand forecast), any day-ahead demand response commitments should be made known to the CAISO before 10 AM the day before the commitment. In this way, the CAISO can reduce its load forecast based on participation from demand response resources, and thereby lower commitment costs borne by market participants.

Equally important is assurance that appropriate demand response products meet the operational and reliability needs of the CAISO. For example, more responsive demand response products, i.e., those products available in 15-minutes or less, provide the CAISO with greater flexibility to stay within its control performance standards and help maintain operating reserves. And demand response products that are responsive in less than 10-minutes can potentially qualify as operating reserves to the CAISO and earn a capacity payment for doing so. Thus, the right responsive mix of demand response products can be highly beneficial and can extract greater or additional value from the wholesale energy and capacity markets. In this regard, the CAISO commends SCE for its efforts to help the CAISO meet its reliability needs by offering a "fast" resource that is interruptible under a 15-minute option.

The CAISO would also like to see developed, where appropriate, simple and common criteria for triggering different demand response programs. For example, day-of-reliability programs should be linked to system conditions and triggered accordingly.

Product differentiation and pricing can be offered when programs are triggered based on CAISO system needs and customer responsiveness.


Ultimately, the CAISO has a role and responsibility for ensuring that the Commission, utilities and third-party providers clearly understand the CAISO's needs. With this understanding, program/product developers can more clearly craft economic and reliability based products that provide value up the entire chain, from end-use customers to the grid operator.

**V. Conclusion**

The CAISO appreciates this opportunity to submit reply comments and help inform the process to approve demand response program modifications for summer 2007 and 2008.

Dated: September 22, 2006

Respectfully submitted,

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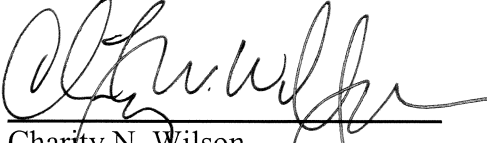
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## CERTIFICATE OF SERVICE

I hereby certify that I have served, by electronic and United States mail, a copy of the foregoing Reply Comments of The California Independent System Operator Corporation on Utility Proposals to Augment Their Demand Response Programs for 2007 and 2008 to each party in Docket Nos. A.05-06-006, A.05-06-008 and A.05-06-017.

Executed on September 22, 2006 at Folsom, California.



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