



**Comments of Pacific Gas & Electric Company
CAISO Demand Response and Energy Efficiency Roadmap and Workshop**

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I. Introduction

The Pacific Gas and Electric Company (PG&E) offers these comments on the California Independent System Operator's (CAISO) May 13, 2013 Demand Response and Energy Efficiency Roadmap and workshop.

II. Summary

PG&E thanks the CAISO for conducting the May 13, 2013 workshop, and appreciates the opportunity to provide comments on the discussions at the workshop as well as the CAISO's roadmap. PG&E provides general comments followed by responses to each provision of the roadmap.

- Demand-side resources (energy efficiency (EE) and demand response (DR)) can contribute to long- and short-term reliability. Significant amounts of ratepayer funds are being spent on these resources so it is important that cost-effective and reliable energy efficiency and DR be accounted for when making generation and transmission procurement decisions.
- Demand response that can be bid into the wholesale markets is extremely valuable; the same is true for DR that is not able to be submitted as a biddable resource.
- Cost-effective and reliable energy efficiency and DR should be fully considered as transmission alternatives.
- The CAISO should not be involved in designing retail rates but it can play a significant role as a provider of market information to LSEs and DRPs to use for their customers.

III. Comments

A. General Comments

- Energy efficiency and demand response provide reliability and are significant ratepayer investments that must be incorporated into CAISO plans and operations.** California ratepayers currently fund several hundred million dollars annually for energy efficiency (EE) and demand response (DR). This is a significant investment that produces real reliability benefits so it is important that the State realize value for those investments. The CAISO should include reliable amounts of demand-side resources in their Transmission Planning Process and daily load forecasting. Doing so effectively will allow the CPUC and CAISO to develop a least cost portfolio to meet reliability needs. Put simply, supporting demand-side resources means that when economic, California would shape its long-term as well as daily load curves to more easily

match supply with demand (rather than simply procuring more generation resources even if less expensive demand-side alternatives exist). PG&E is confident that, if all parties work collaboratively toward this common goal, reliability can be assured in a cost-effective manner. Reliable amounts of demand-side resources (EE, DR, and dynamic rates) serve reliability and therefore should be recognized in all CAISO forecasts, whether they are bid into the wholesale market or dispatched outside of it.

- ii. **DR programs can provide reliability and can reduce energy procurement costs whether bid as supply or not.** Reliable amounts of DR programs should be considered for meeting reliability or economic needs, regardless of whether they are bid into the wholesale market as supply. The challenge will be to define how each type of program or resource can address a need. Demand response can help the CAISO with peak shaving, cost reduction, emergency response and flexibility. A key need is to determine what DR is best bid in as supply, and what DR should not be bid as supply which the CAISO will recognize as a load adjustment.

A reasonable dividing point may be that DR that is offered for things the CAISO buys and controls for real-time reliability may be best bid in like supply (e.g. Ancillary Services, real-time Emergency DR, real-time energy, etc.) but other programs used by LSEs to manage costs (e.g. day-ahead energy) or programs investor-owned utilities (IOUs) use for local reliability (i.e. DR for distribution reliability) would not be bid as supply.¹ A reasonable division can be made.

Demand response and EE programs possess the potential to have a greater role in ensuring reliability and lowering costs than they currently play. This will require that when the CAISO is planning, both the load-side as well as the supply-side of the equation be considered. To this end, demand-side resources should be fully considered in all CAISO reliability and procurement planning processes. .

PG&E now provides comments on the ISO Demand Response and Energy Efficiency Roadmap Workshop Handout.²

B. Comments on CAISO Demand Response and Energy Efficiency Roadmap

- i. **CAISO: To maximize the value of dispatchable utility and third-party demand response programs, it is essential for these programs to be part of the ISO market optimization to help balance supply and demand cost-effectively.**

PG&E: Demand response bid into the wholesale market can effectively address reliability needs; non-market-based DR can also be effective. The specific steps the CAISO proposes must be broadened as it currently implies that DR needs to be bid in as a supply-side resource to

¹ Fundamentally, demand-side resources are customer-based programs. There are many types of customers, with different load curves, risk tolerances and opportunity costs. To reflect this diversity, a diverse array of demand-side programs are needed that will provide a matching degree of risk, convenience and reward. For DR programs, this means having both retail and wholesale programs.

² <http://www.caiso.com/Documents/Handout-DemandResponseandEnergyEfficiencyRoadmapWorkshop.pdf>

be of value. As discussed above, this is too narrow a view and will lead to unnecessarily high costs for ratepayers. There is a role for DR that is bid into the wholesale market but the CAISO should seek to improve its processes to fully incorporate DR that is not bid as supply into its daily demand forecasts. Currently, each day PG&E and the other IOUs provide the CAISO the DR they plan to dispatch that day, by sub-Load Aggregation Point (sub-LAP). This information should be utilized to its fullest extent so as to avoid procuring energy that is not needed due to the IOU-dispatched DR.

- ii. **CAISO: Consumers and their automated devices should have the opportunity to receive and respond to prices or signals that reflect real-time grid conditions.**

PG&E: The CAISO should reduce the scope of this focus to reflect the role of the California Public Utilities Commission (CPUC), ESPs and DRPs in electricity rate design and retail offerings and focus on how it can improve the communication of wholesale market price and reliability data. The role of sending retail price signals should reside with the retail providers (IOUs or Load Serving Entities (LSEs)) rather than the CAISO. PG&E understands that the premise of the CAISO's support for connecting customer consumption to wholesale energy prices is that if the customers realize the cost of energy in real-time, they will respond and reduce consumption. There are numerous regulatory and statutory barriers in place that make this virtually impossible to implement for retail customers. PG&E's commercial and industrial customers are already subject to time-of-use (TOU) rates, which place a higher cost on energy consumed during peak hours and a lower cost on energy consumed during off-peak hours. These rates have been effective in sending a signal to consume less during high-load hours and shift load to low-load hours. Furthermore, when wholesale prices do spike, it is typically for such a brief period of time that there would often be little incentive for customers to change their behavior. The benefit of IOU TOU rates is that they send a predictable, sustained price signal to customers. Customers can structure their long-term consumption knowing the economics of doing so. However, there is an opportunity for the CAISO to improve the channels for communicating reliability signals so that LSEs and DRPs can incorporate them into their programs and rates for their customers. This may include communicating prices and reliability signals through new channels.

- iii. **CAISO: The following activities have been identified to include energy efficiency and demand response as transmission alternatives:**
- **Establish performance and operational requirements for alternative resources, like demand response**
 - **Ensure measures are in place to monitor and verify the timely development of these resources**
 - **Verify the performance of demand response and energy efficiency programs**

PG&E: The CAISO and other planning entities should always be making sure that the benefits from investments in EE and DR are considered into their plans. Energy efficiency and DR used as transmission alternatives should be both cost effective and reliable. Because

they are very different resources compared to transmission and generation, incorporating EE and DR will require work to develop mechanisms to ensure the required MW impacts of these resources are realized and maintained with a level of reliability that is comparable to transmission and generation resources.

- iv. **CAISO: The ability to effectively use energy efficiency and demand response resources depends upon their existence, which requires investment and the opportunities, at a minimum, for consumers or demand response providers to recover their investment.**

PG&E: PG&E agrees that a revenue mechanism must be in place to support EE and DR to be used to meet long-term reliability needs. Like generation and transmission resources, there should be consequences should they fail to materialize as anticipated. Also, when additional incremental needs are identified, incremental EE and DR (i.e., EE and DR beyond the amount approved in their respective program cycles) should be considered to meet that new need along with more conventional resources.

- v. **CAISO: A technology and regulatory framework must develop that supports meeting the above objectives and removes barriers to participation.**

PG&E: PG&E agrees with the CAISO's assessment. PG&E has identified additional activities throughout its post-workshop comments that would effectively complement the CAISO's recommendations. PG&E recommends that the CPUC, CAISO and CEC, along with stakeholders such as the DR Collaborative, jointly determine the appropriate sequence and forum of activities to be addressed to integrate EE and DR into the planning processes and CAISO systems. Doing so will avoid confusion and duplication, and will ensure that this goal is achieved as expeditiously as is practical.