

California Department of Water Resources State Water Project

Comments on CAISO's Demand Response and Energy Efficiency Roadmap: Making the Most of Green Grid Resources Draft

July 12, 2013



On June 12, 2013, CAISO posted its draft Demand Response and Energy Efficiency Roadmap: Making the Most of the Green Grid Resources. California Department of Water Resources State Water Project (SWP) appreciates the opportunity to provide comments.

The Roadmap correctly recognizes that demand response (DR) will play a crucial role in the transition to a clean, environmentally sustainable power sector in California. As the largest wholesale DR provider in California, and as a State agency, SWP can attest to the importance DR will have to achieving California's energy policy goals.

The Roadmap is organized into four concurrent paths that aim to increase the participation of DR and Energy Efficiency (EE) in California. For each of the paths, the Roadmap identifies strategic activities that CAISO and other State agencies will pursue over the next several years. While the paths envision objectives that can be met by both wholesale and retail DR, SWP is concerned that not one of the proposed strategic activities attempts to improve the participation or effectiveness of CAISO's existing wholesale DR resources. While SWP agrees that CAISO and the state must do more to encourage DR policy goals and new participation, it is also important for CAISO to identify how its existing DR resources can improve participation and potentially provide valuable flexibility attributes. Existing wholesale DR resources can do more to facilitate the transition of California's power sector; excluding those resources from the Roadmap would be a tragic missed opportunity.

SWP offers the following comments on the Roadmap's paths, with suggestions on how the activities within the path can be expanded to improve participation and effectiveness of existing wholesale DR resources:

The load reshaping path: The Roadmap describes the benefits of a flatter system load profile, with lower peaks that are less steep. SWP's wholesale load, functioning as Participating Load, has long played an important role in reshaping CAISO's load profile by lowering peak demand and can make greater contributions in reshaping the load profile through more flexible rules. Providing a market mechanism for Real-time load bids would allow resources to accelerate or delay ramping to soften peaks and valleys.

Under the Participating Load Agreement between the CAISO and SWP, SWP's pump loads can offer approximately 2,900 MW of available Participating Load capacity; however, the current Tariff limits a Participating Load to bidding in decreases as Curtailable Demand. Prior to MRTU, the Participating Load model permitted such a load to bid an increase in consumption. Restoring that capability would be an important addition to the activities in the Roadmap's Load Reshaping path, because allowing

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Participating Load to bid to increase demand would help mitigate over-generation conditions. CAISO acknowledged that changes were needed to MRTU in order to restore the deleted functionality and committed to make them (ER09-1048, 12-22-09 Motion of CAISO for Clarification or Rehearing). Over four years after MRTU implementation and with a critical need to encourage more DR, it is time for CAISO to restore the DR functionality that previously existed.

The resource sufficiency path: The Roadmap describes the need to ensure sufficient resources with needed operational characteristics in the right places at the right times. CAISO rightly identifies the need to define DR resource attributes and their ability to provide flexible capacity. However, the Roadmap makes no mention of the flexibility requirements and the capability of the Participating Load model currently in use. If CAISO's need for flexibility attributes is as great as it claims, there is no reason for CAISO not to identify the flexibility attributes available from every potential source, including existing DR provided through Participating Load. If identifying generation flexibility attributes is important, identifying DR flexibility attributes is no less so. It may be that changes are needed to the existing Participating Load model to allow such flexibility to be provided. Modeling enhancements and other corrections may be necessary. These are items that SWP cannot undertake on its own, because CAISO analysis is fundamental to these determinations. SWP therefore urges CAISO to include such an analysis of Participating Load potential contributions in its Roadmap objectives. CAISO should not overlook the opportunity to update an existing program that may be a significant source of flexibility.

SWP also notes that the Roadmap is incomplete in its description of how DR is treated for Resource Adequacy (RA) purposes. The Roadmap indicates that under CPUC, all DR programs are treated as load modifiers meaning that expected DR capacity plus 15% Planning Reserve Margin (PRM) is deducted from RA requirements. In fact, Participating Load, such as that of SWP, uses pseudo gen as a resource for RA counting in which DR capacity is not deducted from RA requirements and the resource is made available to the CAISO. The Roadmap cannot provide a complete picture unless it considers the full array of DR, both existing and potential, that is available to it, and the full scope of applicable requirements.

The operations path: The Roadmap acknowledges that DR resources are not comparable operationally to conventional generators and their underlying differences should be recognized. While differences between DR and conventional resources exists, DR resources are capable of being effective in maintaining reliability standards such as reserve requirements.

The Roadmap indicates that a potential route by which DR can gain access to the wholesale market is by increasing and decreasing consumption through the Participating Load model. As described above, the current Participating Load model does not permit Participating Load to bid to increase consumption; in order for such an objective to become reality, there is a need for CAISO to improve the Participating Load model and reduce barriers for Participating Load to participate in CAISO markets.

SWP's PL resources are technically capable of providing additional demand response services (e.g. increasing consumption) and they have the potential for providing flexible attributes as well. Unfortunately, the Roadmap continues to focus on retail demand response while neglecting to consider the existing wholesale demand response model. Developing retail DR is clearly important to meet

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CAISO needs and California policy goals, but those needs and goals are, according to CAISO, putting substantial demands on the grid. Encouraging retail DR and EE does not mean that CAISO can simply ignore wholesale DR, particularly when wholesale DR is, in fact, an existing program that requires revisions to recognize its full potential. As a large wholesale generator and load, the SWP can provide excellent, reliable, and significant demand response to assist the CAISO and the electricity market in meeting future challenges. The focus of the Roadmap should be expanded to include wholesale demand response to facilitate such participation.