

**CPUC Staff Comments on CAISO's Draft DR and EE Roadmap****General Comments**

The California Public Utilities Commission (CPUC) staff appreciates the opportunity to provide comments on CAISO's draft DR and EE Roadmap, dated June 12, 2013. The roadmap provides a viable plan for future Demand Response resources and lays out concrete, specific actions that will take these resources to a new level of usefulness. The CPUC staff agrees with the CAISO that DR has potentially great value as: 1) a flexible capacity resource for the renewable integration, 2) a balancing energy and ancillary service resource, 3) an alternative to transmission upgrades. We share the CAISO's concerns about the challenges with the current utilities' DR programs from resource planning, grid operation, and customer perspectives. The four paths laid out in the CAISO's draft roadmap provide a clear mechanism to allow the CAISO and the CPUC to address the supply-side and demand-side DR/EE issues effectively.

At the California Energy Commission's 2013 Integrated Energy Policy Report (IEPR) workshop (June 17, 2013) the CPUC staff revealed a new DR paradigm to address the challenges with the utilities' current DR programs. Instead of considering all DR programs under a single framework and counting them for RA as supply-side resources regardless of the program's operational characteristics, the new approach will involve the development of DR under two different frameworks: (1) supply-side resource and (2) customer-focused and rates (demand-side). The four paths in CAISO's roadmap generally align with the CPUC staff's vision of two new DR frameworks. Attachment A demonstrates this alignment. The CPUC anticipates that it will consider the two DR frameworks as well as many of the activities identified by the CAISO on page 22 of its draft roadmap in a new Demand Response rulemaking (DR OIR) that is expected to begin in September 2013.

The CPUC staff provides specific comments for each path in the CAISO draft roadmap:

**Load Reshaping Path:**

- EE is a resource: The CAISO provides useful clarification between resources and load modifiers in order to clarify its view that energy efficiency should be applied in the forecasting process. The CPUC staff agrees with this differentiation, although it is important to make sure that this differentiation does not create the misunderstanding that a "load modifier" is not a resource. It is *a type of* resource, though a demand side resource. The differentiation is necessary, as demand side resources are applied to reduce the demand forecast rather than as a dispatchable resources to meet demand. Interagency discussions should not confuse the nuances of these definitions, because it could ultimately lead to the faulty conclusion that EE is *not* a resource if CAISO frames the terminology as load modifiers v. resources. This concern specifically relates to CAISO's treatment of EE in the Resource Sufficiency path.
- Locational EE: CAISO anticipates promising opportunities for energy efficiency to support its goals of reshaping the peak load by directing program activity to areas with load constraints. This concept has merit and is under consideration for the next EE portfolio guidance proceeding but it is important to manage expectations regarding the potential for EE to reshape load in particular locations. For one, the EE potential for any given planning area has certain limits based on the available technology and current penetration of EE in the area. This potential will be further understood as CAISO works with CEC and the IOUs on the locational analysis of EE potential. Additionally, targeting EE programs to certain locations is subject to Commission

decision. Giving certain areas greater access to energy efficiency incentives raises policy questions regarding equal access, and the Commission will need to address those issues should it decide to establish locational targeting of EE programs.

- Aligning retail price signals with grid conditions is well underway for a significant group of customers: The roadmap designates “aligning retail [price] signals with grid conditions” as a needed alignment, including retail tariff changes. Two forms of retail electricity pricing under discussion at the CPUC could achieve quite a bit of such alignment: critical peak pricing (CPP) and real-time pricing (RTP). The CPUC has adopted timelines for the three large IOUs to phase in default CPP for most non-residential customers by 2016, and thus is on a path to have a significant portion of IOU load on rates well-aligned with grid conditions. However, the CPUC is prohibited under current law from ordering default RTP or CPP for residential customers, and even if these legal restrictions were lifted, must work diligently with stakeholders to craft rate design policies and implementation processes that will engender customer satisfaction and acceptance, in order to avoid potential political backlash.

RTP could bring a closer alignment than CPP between retail prices and grid conditions. Indeed, the CPUC’s dynamic pricing policy decision (D.08-07-045) found that “RTP is the best rate to promote economic efficiency and equity between customers; however, RTP cannot be developed and implemented until MRTU becomes operational.” (FOF 11.) Even though MRTU has been operational for several years, many details of how to set and implement just and reasonable RTP rates remain to be worked out. As various parties have noted, the lack of sufficient price variations in the wholesale energy markets and especially the apparent lack of generation capacity valuation present in MRTU prices are serious problems requiring solutions before retail rates indexed to the wholesale market can be offered. The CPUC and stakeholders can and should continue to work out how to set RTP rates under these conditions. Parties should also recognize that perhaps only a small percentage of customers are likely to adopt RTP rates when they become available. Nonetheless, even a small percentage of large customers using RTP rates may improve the alignment between retail price signals and grid conditions, and is a goal worth continued effort at the CPUC.

CAISO’s comments seem to espouse the widespread implementation of RTP for a broad population of consumers. If this is not an accurate interpretation, then additional clarification is needed to determine what types of retail rates CAISO envisions – and for what classes of customers.

It is unclear whether the first paragraph on page 8 intends to refer to both residential and non-residential customers. As indicated above, the CPUC has made CPP the default rate for most non-residential customers, with opt-out to mandatory TOU. Ordering such changes for residential customers would indeed require state legislation, and the CPUC is currently considering what types of rates should be offered to residential customers, and on what basis (opt-in, opt-out, etc.), should new legislation enable such changes. While the CPUC has expressed support for more time-differentiated rates for all classes of customers in its Energy Action Plans, the CPUC must base its decisions on legislative mandates and evidence presented in particular rate design cases, and needs to find ways to make more economically efficient rate designs acceptable and attractive to the public.

## Resource Sufficiency Path:

- DR as Resource Adequacy (RA) – Current and Past Practices: CAISO’s characterization of how DR is counted for Resource Adequacy is no longer in practice.<sup>1</sup> Prior to 2013 DR resources were accounted for by deducting the expected DR capacity from the RA requirement (see Attachment B, Figure 1). Since 2013 DR resources are counted as supply-side resources in RA filings (see Attachment B, Figure 2). In the 2012 RA decision,<sup>2</sup> the CPUC adopted a DR Maximum Cumulative Capacity (MCC) bucket for DR resources so that DR could be accounted for as a resource on the supply-side (similar to a physical resource). Energy Division (ED) staff implemented the DR MCC bucket into the 2013 RA filing template. Under this mechanism, DR programs with load modifier operational characteristics are also accounted for as resources.
- DR as Resource Adequacy (RA) – the Future: The CPUC staff recognizes that the CAISO faces challenges utilizing all current DR programs as resources in day to day grid operations. As shown in Attachment B, Figure 3, future DR resources would be developed and categorized as either supply-side resources or customer-focused load modifiers. The CPUC staff envisions that only the supply-side DR would be counted for RA as a supply-side resource, while other current DR programs (such as Critical Peak Pricing (CPP)) would be considered load modifiers. CPUC staff agrees that criteria need to be developed for classifying demand-side programs as discussed in the CAISO’s Load Reshaping Path (pg. 6). The CPUC DR OIR would be the likely venue to determine classification of DR resources and implementation of the corresponding RA counting rules would be best suited for the 2015 RA proceeding.<sup>3</sup> While the CAISO identifies in its roadmap to include load modifying DR programs in CEC’s demand forecast starting 2015,<sup>4</sup> the CPUC, via its DR OIR, will determine the specific timing, and may create a transitional period for existing DR programs.
- Incremental EE: CAISO’s discussion of incremental energy efficiency was limited, as the draft roadmap does not describe the strategic activities to integrate the locational load impacts of energy efficiency into their planning process. Referring to the CPUC’s Long-Term Procurement Plan proceeding, CAISO “expressed concern with the uncertainty involved with using EE forecasts beyond the levels embedded in the IEP load forecast used in the studies.”<sup>5</sup> The CPUC staff would like to understand this concern, and whether it is due to a misunderstanding of the role of a load modifier as a type of resource, a misunderstanding about the difference between incremental EE versus embedded EE in the load forecasts, or if there is another basis for this statement. Embedded EE represents only energy savings for installations that have already occurred. It does not count energy savings for future installations, for which there is potential and the IOUs have targets to achieve. There is uncertainty regarding these resources--just as there is for DR or any other demand side resource. A necessary task is to determine the uncertainty parameters that can be accounted for in the longer term planning, so that EE can be counted within reasonable limits. CAISO and CPUC staff have previously discussed an approach to applying the EE Goals to the CAISO planning processes. These discussions should continue.

---

<sup>1</sup> See CAISO Draft Roadmap, page 13, paragraph 4.

<sup>2</sup> D.12-06-025.

<sup>3</sup> The 2015 RA proceeding will address RA rules for the 2015 compliance year and will commence in the fall of 2013.

<sup>4</sup> See CAISO Draft Roadmap, page 5.

<sup>5</sup> CAISO Draft Roadmap, page 11.

## Operations Path:

- Recognizing DR is not exactly the same as conventional generation: On page 14, the draft roadmap acknowledges that DR is not exactly the same as conventional generation. The roadmap goes on to state that recognition and acceptance of the differences is important so that CAISO operators and DR providers are proceeding with common expectations about resource performance. The CPUC staff agrees. CAISO's efforts to reduce existing barriers to DR (such as improving the DR resource registration process and exploring alternatives to existing telemetry/metering requirements) are concrete and helpful steps in advancing this particular objective.
- DR Must Offer Obligation: The CAISO proposes to apply a must-offer obligation rule to DR resources that are counted for RA; the same rule applies to conventional generation RA resources. The CAISO contends that this will ensure the CAISO can access DR resources for normal and emergency operations. The CPUC agrees that this issue should be discussed; any must-offer obligation rules for DR resources will need tailored to the fact that these resources are use-limited. The CPUC will work with the CAISO and participate in the CAISO's initiatives for the must-offer obligation for flexible resources and use-limited resources for local and system RA. The CPUC's 2015 RA proceeding will address the must-offer obligation for flexible, use-limited resources.
- CAISO's Standard Capacity Product for DR: The CPUC staff agrees that the CAISO needs to develop a Standard Capacity Product (SCP) for DR with transparent rules and penalties for performance consistent with RA rules for conventional generation resources. Since the CAISO has not determined the timeline for its SCP initiative in its draft roadmap, the CPUC and CAISO will need to coordinate closely in setting the appropriate RA rules during the transition period and determine whether the must-offer obligation should be required in absence of SCP for DR.

## Monitoring Path

- General Comment: The CPUC staff agrees that monitoring of DR and EE resources is important to ensure that the initiatives described in the draft roadmap accomplish their objectives and to make appropriate modifications as needed. The Monitoring Path section of the draft roadmap lists several questions that the CPUC staff agrees are key questions to focus on. One additional question the CPUC and CAISO need to resolve is determining which agency will be responsible for determining the load impacts of third party DR programs that bid into CAISO wholesale markets. Currently the IOUs provide annual load impact reports for all of their DR programs.
- Role of the CPUC for EE Monitoring and Evaluation: On page 21, the roadmap states that the Demand Analysis Working Group (DAWG) assesses EE program impacts and performance. The roadmap should clarify that EE performance and expectations (ex post and ex ante analysis) is actually generated by the Energy Division at the CPUC. This information is shared with the DAWG so that the appropriate adjustments to the demand forecast can be made. On page 20 of the roadmap, the bar chart should indicate the CPUC as the lead agency for verification of EE performance.

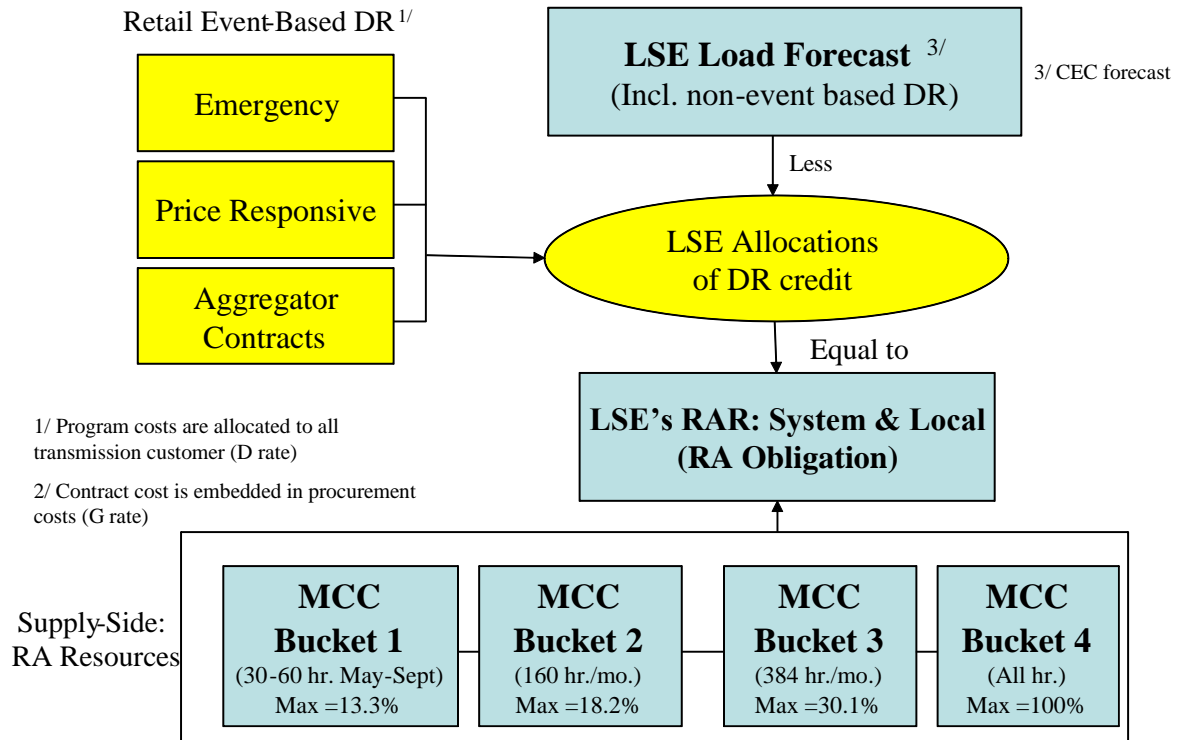
## Attachment A

### Mapping of CAISO Four Paths and CPUC Vision

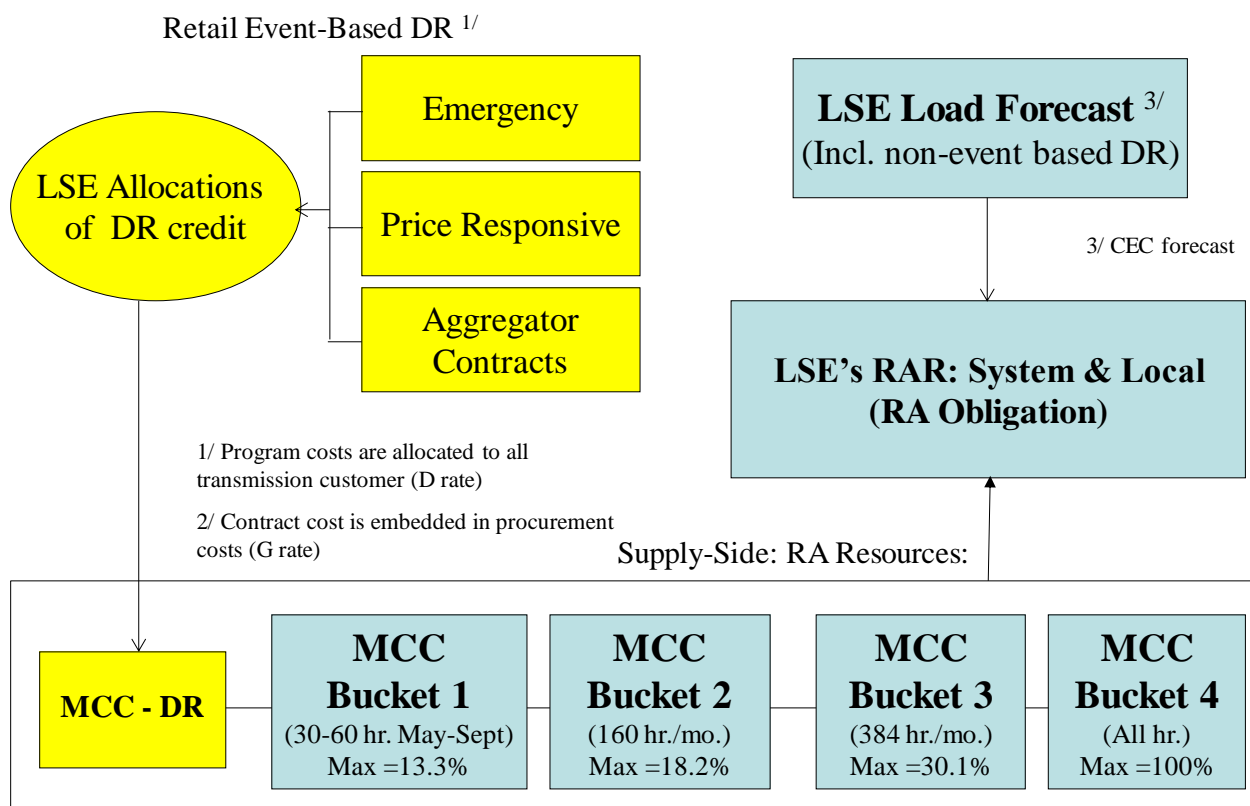
	CAISO Draft DR/EE Roadmap	CPUC Vision for DR (June 17 Presentation at CEC IEPR Workshop)	How it will be accounted for in RA
1	Load Reshaping Path	<u>Customer-Focused Programs and Rates:</u> <ul style="list-style-type: none"> <li>• Load modifiers, e.g., dynamic rates, DR supporting programs, non-dispatchable DR</li> </ul>	Resources will be reflected in CEC's load forecast
2	Resource Sufficiency Path	<u>Supply-Side Resources:</u> <ul style="list-style-type: none"> <li>• Dispatchable DR                             <ul style="list-style-type: none"> <li>○ IOU Programs</li> <li>○ 3<sup>rd</sup> Party Programs</li> </ul> </li> </ul>	Resources will qualify for RA/LTPP/TPP
3	Operations Path		
4	Monitoring Path	Evaluation, Monitoring, & Verification (EM&V): <ul style="list-style-type: none"> <li>• Supply-Side Resources</li> <li>• Customer-Focused Programs and Rates</li> </ul>	

## Attachment B

### Figure 1: RA Counting for DR (Prior to 2013)



**Figure 2: RA Counting for DR (2013 - 2014)**



**Figure 3: RA Counting for DR (2016 & Beyond <sup>1/</sup>)**

