

## **Key Principles For Reducing Costs And Maintaining Standards To Integrate Demand Side Management Resources Into The CAISO Markets**

There shall be minimum standards required for all resources, demand side and supply side including: visibility, transparency, measurement of performance, and capabilities. The minimum standards shall not specify the technical solution for demand side resources or supply resources to allow innovation in meeting the requirements.

1. Any common initiative or project shall be designed and implemented to allow participants to minimize costs through the explicit statement of objectives and minimum requirements that would satisfy these objectives.
2. Each objective and requirement shall have an explicit justification for review to ensure that all objectives and requirements are needed for the CAISO to fulfill its mandate of providing reliable electricity delivery at the least cost.
3. Each justification shall include a quantification of the potential risk or benefit that the objective or requirement is attempting to mitigate or provide and a quantification of the likelihood of the potential risk or benefit.
4. **Key Objective Visibility:** Demand side resources shall provide a level of operational visibility of the performance of the demand side resource that satisfies the objectives and requirements specified for all resources. The method used to satisfy the objectives and requirements may change for each resource.
5. **Key Objective Capability:** Demand side resources shall provide transparency of the loads that are controlled to ensure against double counting and the capabilities of the overall resource. The method used to satisfy the objectives and requirements may change for each resource.
6. **Key Objective Availability:** Demand side resources shall provide bids and schedules to the CAISO and provide knowledge of their forced and planned outages. The method used to satisfy the objectives and requirements may change for each resource.

## Technical Issues For Follow-Up With The CAISO

- Issue 1.** Telemetry is required for any resource larger than 10 MW (for PDR, RDRP, and PL mechanisms)
- The cost to provide telemetry for demand side resources can be prohibitive if many end use sites are monitored. The CAISO and its stakeholders should develop the objectives and requirements for solutions to satisfy the goal of visibility of demand side resources.
- Issue 2.** Type of telemetry required for Ancillary Services (A/S)
- The CAISO has stated that all A/S resources must provide telemetry. As mentioned in Issue 1, telemetry is cost-prohibitive for demand side resources. The CAISO and its stakeholders should develop the objectives and requirements for solutions to satisfy the goal of visibility of demand side resources.
- Issue 3.** Need to register each mass market customer for PDR.
- The CAISO logically requires that all customer meters are registered for participating in PDR or RDRP. However, the CAISO has not exposed an automated way to allow registrations to occur. This means that a manual process would be required to register all mass market customers for a PDR or RDRP and manual processes would be required for all changes or modifications to these resources. This is untenable going forward.
- Issue 4.** Requirement to update master file for rapidly changing resources.
- The master file update for demand side resources that are rapidly changing imposes constraints on both the CAISO and the demand side resource provider.
- Issue 5.** Certification of A/S resources.
- The CAISO requires all A/S resources to be certified. This can pose significant issues when multiple demand side resources are utilized to provide A/S and move in and out of programs and resources.
- Issue 6.** Need to have a separate PDR for each LSE.
- Before the FERC Order 745, PG&E agreed that individual PDRs must be created for each LSE, since the settlement processes for PDRs that spanned multiple LSEs would be far too complicated. However, due to the FERC Order 745, PG&E believes that this is a legacy requirement. PG&E has interpreted the FERC Order as all market participants must bear the costs for PDR and RDRP, since they receive the benefits. Thus, there is no compelling need to maintain the requirement to have individual PDRs and RDRPs for each LSE.
- Issue 7.** The number of SubLAPs for PG&E is excessively high.

- It is PG&E's understanding that the SubLAPs were created to find electrically contiguous areas where the prices in the CAISO model were similar. Since the launch of MRTU, very little geographical diversity in prices that is not attributable to transmission losses have been found in the CAISO markets. This was one of the strongest reasons to not implement Load Granularity Refinements. PG&E does not see much reason to continue with the existing SubLAP model to constrain PDR and RDRP resources, as it simply adds to the costs of incorporating PDR and RDRP resources into the CAISO markets without the corresponding benefits at this time.

**Issue 8.** SubLAPs do not roll up to the Local Capacity Areas.

- Because the SubLAPs do not roll up into the Local Capacity Areas, there is a need to maintain more than one relational database to track the differences between SubLAPs and LCAs. As PG&E stated in Issue 7, the entire definition of SubLAPs needs to be reviewed and during that review, the issue of aligning the SubLAPs with the LCAs should be examined.