

SCE Comments on the CPUC - CAISO Joint Workshop on Slow Response Local Capacity Resource Assessment

Submitted by	Company	Date Submitted
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The following are Southern California Edison’s (SCE) comments on the California Public Utilities Commission (CPUC) and California Independent System Operator (CAISO) joint workshop on Slow Response Local Capacity Resource Assessment held on October 3, 2016. SCE appreciates the opportunity to provide comments and participate in the stakeholder process.

Recommendations

The methodology should use an average of the study years rather than maximums

In order to perform the pre-dispatch analysis, multiple historical load shapes are scaled up to represent a 1 in 10 peak year. Each year is then studied separately to find the expected number of event days, dispatch hours, and other pre-dispatch criteria. SCE recommends that results from each study year be averaged together to create a single set of pre-dispatch criteria. Since every study year is already scaled to a 1 in 10 peak, averaging the results maintains the 1 in 10 standard. If maximum values were used instead of average to create the criteria, the criteria will likely be overly restrictive and not reflect a 1 in 10 condition on the system.

The criteria, once developed and agreed upon, should be streamlined for implementation

SCE recommends developing one system (TAC)¹ wide recommendation for ease of implementation. Alternative option is to have area specific recommendations, however that may increase the complexity for regulatory compliance and operational purposes.

One possible approach to developing the counting criteria is to set a % limit for slow-response DR to count. For example, looking at the SCE study, Demand Response (DR) up to a 5% of 1-in-10 peak load level meets “sufficient energy” criteria in SCE TAC area.

If such a general limit is adopted, it should not prevent a Load Serving Entity (LSE) from going above it and using additional slow response DR for meeting Local Capacity needs - however going above such a limit should be subject to an area specific study.

The longer term goal should be to define an operating profile definition for all “slow-response” resources (not just DR) to meet Local Capacity needs.

¹ Transmission Access Charge (TAC)

If implemented, this analysis should continue to be performed as part of the TPP

The Slow Response Local Capacity Resource Assessment study should be updated annually as part of the Transmission Planning Process (TPP). One of the reasons driving the need for annual updates is the fact that the area load shapes may change from year to year – resulting in a different need profile. E.g., El Nido area load shape from 2010 and 2011 is significantly different from the one in 2012 and later years.

The CAISO and the stakeholders should continue work on improving the methodology. One area of improvement would be using better load forecasting methodologies that are more accurate at generating a 1-in-10 peak year hourly profile than simply scaling every hour. SCE initially proposed and used this load scaling methodology as a first step in generating useful results, however this methodology should be improved.

This is a planning level analysis and recommendations, the CAISO, the CPUC and the stakeholders need to work on bridging this with various operational issues

As highlighted at the workshop, these are planning level recommendations, and they need to be bridged with operational issues. When planning for operational/implementation changes, the CAISO should consider modifying its systems to most closely match the practical design of the subject programs so that they continue to be utilized as intended, and as they have been approved and deemed cost-effective by the CPUC.

Operational Considerations

When would the “pre-dispatch” resources be dispatched?

It is clear that “pre-dispatch” resources would have to be dispatched prior to when a potential contingency may occur (pre-contingency), since they cannot respond fast enough post-contingency. The current IOU and CAISO studies assume that this dispatch would be based on a (forecast) load trigger; e.g. when the forecast load exceeds a certain threshold, the slow-response DR would be triggered. However, it is not clear when this pre-dispatch would happen. If it happens in the Day-Ahead Market, it would result in a higher number of dispatches, due to inherent load forecast uncertainties. If this dispatch occurs in Real-Time, it would reduce the number of dispatches, as the forecast error would be smaller. However, dispatching in the Real-Time Market may need new CAISO processes (e.g. consideration of Minimum On-Line Constraints).

SCE advocates that pre-dispatch of slow demand response resources be designed to happen day-of or in real-time. The primary demand response program administered at SCE that is the focus of this effort is designed around a 30-minute response time (BIP 30). If these programs are called too frequently, it would lead to diminished enrollment thus causing a decline of a resource that is designed to be a last line of defense. Any process the CAISO decides to use to dispatch these resources should be reflective of the intent of the programs as they were designed and approved by the CPUC.

How often would the resources be pre-dispatched?

The planning studies assume a significantly higher load year than normal (i.e. a 1-in-10 load) to ensure that the system is reliable even under stressed conditions. Therefore the planning study is intended to calculate the required criteria to meet the reliability standards (i.e. minimum required capabilities) for a stressed year that is expected to occur once every 10 years. However, in an average year, the resource

would be dispatched a lot less frequently. This is an important difference to note, as interrupting customers often each year would have a significant adverse impact on program enrollments. As these studies are improved, clear expectations should be developed with regards to frequency of dispatch for the resources, and underlying customers, in an average and in a stress year.

The planning studies also assume a “perfect forecast”, while real-life operations may require a safety factor, resulting in more dispatch hours. The frequency of pre-dispatch would also depend on dispatch timing (DA vs RT), as well as on the amount of slow-response resources in the supply stack.

How would pre-dispatch work with existing programs?

Reliability-only programs currently require a CAISO Warning or Emergency (or a system contingency) as a condition for dispatch. Would the pre-dispatch concept work with these DR program restrictions and current CAISO rules and procedures? Is there a need to change the CAISO rules and/or the existing DR programs’ and tariffs’ use restrictions?

As stated above, it is SCE’s preference that any pre-dispatch protocol designed and implemented by the CAISO should be reflective of current program design. SCE is looking to limit major program disruption, customer confusion, customer dissatisfaction and more importantly attrition of the program megawatts. A thoughtful approach at implementation to preserve demand response resources should be a guiding principle in this effort.

If changes to current programs are needed as to enable them to better meet the system needs, the timeline for this effort should be aligned with the IOU DR Application guidelines and timelines as set forth by the CPUC.

Timing concerns and recommendation

There are conflicting timing requirements here. On one hand, these issues should be addressed in time for the 2018 IOU DR Applications (due mid-January 2017), especially if existing programs and tariffs need to be modified.

On the other hand, considering the initial stage of the studies and significant implementation issues that remain unresolved, it may be wise to delay implementation of new rules, and continue the status quo. Based on SCE’s study, at current slow-response DR penetration levels, there is sufficient energy available for pre-dispatch in 2017, so SCE does not see a reliability risk in delaying this process by a year.

Additionally, SCE hopes that the CAISO TPP, Local Capacity studies and related processes can be synchronized with the CPUC RA proceeding, and a consistent set of performance requirements developed for counting local resources. This would ensure system reliability, while avoiding double-procurement and minimizing customer costs.