

## Stakeholder Comments Template

### Subject: Regional Resource Adequacy Initiative

Submitted by	Company	Date Submitted
<i>Paul Nelson Eric Little</i>	<i>Southern California Edison</i>	<i>May 4, 2016</i>

This template has been created for submission of stakeholder comments on the Revised Straw Proposal for the Regional Resource Adequacy initiative that was posted on April 13, 2016. Upon completion of this template please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on May 4, 2016.

Please provide feedback on the Regional RA Revised Straw Proposal topics:

1. Load Forecasting

On page 15 of the straw proposal, the CAISO is seeking feedback on the following issues:

- Would it be appropriate for the ISO to specify the type of criteria and processes that load forecasting entities should use to conduct their load forecasts?
- Alternatively, would it be appropriate for the ISO to allow flexibility for LSEs to conduct load forecasts in a manner that they determine and fits their individual needs?

The CAISO needs to strike a balance between establishing forecast standards and allowing flexibility to organizations providing forecasts. Without sufficient standards, developing an integrated forecast and coincident peak may be difficult because of differences in standards. The CAISO's proposal of weather normalized 1 in 2 load forecasts which include expected load modifiers from demand response, energy efficiency, or behind the meter generation is a good starting point. SCE recommends a load forecasting workshop hosted by CAISO and assisted by the

California Energy Commission to review what standards for load forecasts need to be established and what issues should be left to the local organization to establish.

The current load forecast from individual load serving entities is confidential as it could reveal their position in the market. The CAISO mentioned that they would publish load forecast accuracy measures. The release of load forecast data needs to adhere to the current confidentiality standards.

## 2. Maximum Import Capability

SCE is concerned that the CAISO's current methodology to measure feasible maximum import capability (MIC) is no longer the best measure with an increasing amount of solar generation. The methodology needs to measure expected capability and availability. Per the straw proposal, the CASIO uses the highest import level when the peak load is within 90% of the annual peak. In the past, maximum imports were generally correlated with peak gross load and would be a good proxy. In the future, the current methodology may no longer be a good proxy for import capability.

Currently, there can be up to 10,000 MW of simultaneous wind and solar during the day. This has a significant reduction to both CAISO generation and imports during the daytime hours. With a growing CA solar fleet, the current methodology to select the maximum imports when load is 90% of annual peak may no longer be the best measure of import capability. While this has been sufficient in the past, it should not be considered appropriate in the future as renewables is displacing imports. SCE recommends the CAISO look at imports during hours when net load<sup>1</sup> is 90% of annual net load peak<sup>2</sup> or another methodology to measure import capability.

CAISO is proposing to calculate a MIC value for "each relevant simultaneously constrained part of the grid." Does this mean the proposed RA zones described in the Internal RA Transfer (section 5.3.1) or does this use a different definition?

---

<sup>1</sup> Net load = Measured Load – Wind - Solar

<sup>2</sup> CAISO currently calculates the let load peak which is displayed on the website under [Today's Outlook](#).

### 3. Internal RA Transfer Capability Constraints

The proposal introduces a zonal RA concept which introduces additional complexities and costs versus benefits that need to be evaluated. SCE cannot form an opinion of a Zonal RA construct until understanding the following issues.

#### a. How are RA Zones defined?

The proposal does not provide detail on how RA Zones are defined. Is it based upon transmission constraints, the service area of Participating Transmission Owners with load, boundaries with neighboring balancing authorities, or agreements with other balancing authorities<sup>3</sup>? For example, based upon PacifiCorp joining CAISO suggest four zones: PAC West, PAC East, North of Path 26, and South of Path 26. How were these zones determined for reliability purposes? Furthermore, what is the difference between the concept of a RA Zone and a Local Reliability Area<sup>4</sup>?

#### b. How does GHG Compliance interact with Resource Adequacy?

The current design of the Energy Imbalance Market includes a do not sell to California flag which will prevent that resource from serving load in California. The do not sell flag was included as an option for those entities that do not wish to comply with CA's cap and trade program, or for renewable resources that have a requirement to sell output to local jurisdiction customers. While the CAISO has not proposed a GHG methodology for the DA market under the integration of PacifiCorp, SCE is concerned about how a mechanism similar to the current EIM mechanism would work within the RA paradigm. Can any generation unit selecting the no not sell to CA flag provide system-wide RA? Would a unit selecting a do not sell to CA flag be limited to only providing RA to their local area or zone? In terms of replacement, if a unit offering system-wide RA no longer is available, can it be replaced by a unit using the do not sell to CA flag? These are just a few of the issues that need to be resolved with the interaction of the GHG compliance program and RA. The next proposal should address the relationship between Resource Adequacy and the GHG compliance mechanism.

---

<sup>3</sup> For example, the current PacifiCorp West balancing authority area has several locations that are not physically connected and uses agreements with Bonneville Power Administration or other balancing authorities

<sup>4</sup> The CAISO already has local reliability areas (LRA). On top of LRA would be a zone. What is the implication on reliability to classify an area as a LRA or zone?

c. Accounting for Internal RA Transfer Constraints

SCE supports CAISO moving away from the original proposal to use the Path 26 methodology to account for intra-BAA transfer constraints. However, as CAISO notes in their presentation, there are numerous details that need to be discussed and developed for the new zonal RA concept. SCE specifically has comments on the concept of netting benefits between resources across a constraint.

The CAISO needs to clarify if netting will be done on a monthly or annual basis. SCE believes monthly netting makes the most sense at this time because it matches the length of final monthly RA showings, but there are additional details that need to be developed. The timeline and process for netting during monthly showings will need to be developed to make sure it is feasible. Additionally, the netting process for annual showings, if it will exist, needs to be defined including a description of if and how it will translate to monthly showings.

While SCE can imagine there being benefits to having the netting process be voluntary, SCE does have some concerns since it could artificially constrain the resources that are available to meet zonal RA requirements. If a resource is procured and shown for RA within a certain zone, but not volunteered for netting, will the CAISO assume that the resources can't meet load within that zone? If this is the case, LSEs/LRAs within the zone will need to procure more resources than are actually needed to meet load within the zone.

Finally, SCE requests that CAISO clarify replacement obligations for resources depending on their location and if they were considered a netting benefits resource.

4. Allocating RA Requirements to LRAs/LSEs

SCE does not have comments at this time

5. Updating ISO Tariff Language to be More Generic

SCE supports making the tariff more generic and less California centric and offers no detailed comments as this time.

6. Reliability Assessment  
a. Planning Reserve Margin (PRM)

The Proposal states that the CAISO will calculate a system PRM and PRMs of different zones. The zonal approach creates a new set of issues that must be evaluated and have the costs versus benefits considered. The proposal needs additional detail on how the zonal PRM will be implemented and if there are limitations on the amount of resources that are eligible to be counted outside a zone.

Because of resource diversity, the system PRM will be lower than zonal PRM values. For example, consider a winter peak zone and a summer peak zone. Under this arrangement, there are resources in each zone that can help serve the other zone's peak, therefore the system PRM will be lower than the zones' PRM. Yet, if they are not allowed to share resources, then additional capacity must be purchased. This implementation will reduce the benefits of regional expansion as parties have to contract additional resources based upon regional PRM values. There is a difficult balance that needs to be resolved to allow resource sharing, but not to the point where one region is paying for the reliability of another region. It is not clear that the zonal PRM concept best achieves that balance.

In terms of methodology to calculate a PRM, the CAISO is seeking feedback on using a stochastic or deterministic methodology. The currently CPUC adopted value of 15-17% and was based upon stochastic models from the 2002-2004 period.<sup>5</sup> In 2008, the CPUC opened an Order Instituting Rulemaking to investigate if the PRM should be revised. The proceeding was closed in 2010, without changing the PRM value or methodology. During the workshops of the proceeding, one of the issues discussed was the impact of renewables and whether they change the PRM. To answer this question, SCE performed a PRM analysis looking at stochastic renewables and load which a conclusion of a PRM of 16% to achieve one outage in 10 years.<sup>6</sup>

---

<sup>5</sup> [CPUC D.04-01-050](#), page 11.

<sup>6</sup> Nelson, Paul., Sakota, Gigio., Kubassek, Justin., Gandhi, Alope. *Planning Reserve Margin*, June 2010. SCE shared its results with stakeholders; who included the IOUs, CPUC, and CAISO.

The analysis over the last 15 years shows that PRM is rather stable and does not substantially change from year to year. As the system grows larger, the stability will increase since no one resource or LSE's load will change the PRM result. Because of the stability of PRM over time, the costly complexity of calculating a PRM using stochastic methods, and the CAISO deterministic method likely producing similar results to the stochastic methods, therefore, SCE supports using the simpler approach. This will reduce costs for the CAISO as well as stakeholders that have to review the CAISO methodology and results. In addition, SCE recommend the PRM values not be established annually, but evaluated periodically such as when new transmission owner join or some other system change that would reviewing the reasonableness of the PRM. The periodic use of stochastic method can be used to validate that the simple approach continues to function properly.

The CAISO needs to provide more detail on the implication of the PRMs by zone. Would each zones LSE's have different procurement obligations or would there be some form of weighted averages to get a single system PRM that applies to all LSEs?

- b. Uniform Counting Methodologies  
SCE is supportive of a uniform counting methodology for resources for the CAISO RA showing.
  - c. Backstop Procurement Authority  
SCE is supportive of a methodology that assigns the costs to the entity that fails to procure their required resources.
7. Other:  
SCE does not have additional comments at this time.