



Comments of Pacific Gas & Electric Company Regional Resource Adequacy – Revised Straw Proposal

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) offers the following comments on the California Independent System Operator’s (CAISO) Regional Resource Adequacy (RA) Revised Straw Proposal.

Before discussing its specific comments on the topics mentioned in CAISO’s Revised Straw Proposal, PG&E would like to outline two high level concepts that inform our Regional RA comments.

1. Due to the scheduling restrictions associated with this initiative, PG&E understands the CAISO’s focus on only those changes to the Resource Adequacy Sections of the CAISO Tariff that are absolutely necessary to allow for regional integration. PG&E asks the CAISO to consider removing items which require further study in order to allow the CAISO to meet its current schedule as indicated in the table below.

PG&E’s View on the Current Scope of the Regional RA Revised Straw Proposal	
<u>Changes Needed</u>	<u>Changes Requiring Further Study</u>
Load Forecast Methodology	Zonal RA Requirements
Reliability Assessment	Changes to Maximum Import Capability
Updating ISO Tariff Language to be More Generic	Allocating RA Requirements to LRAs/LSEs

2. The CAISO market must balance the incentives between forward requirements and the spot market, and work towards a simpler Resource Adequacy paradigm that can be adopted region wide.

PG&E believes the CAISO’s market should be designed to balance system security associated with forward capacity requirements with the risk of unnecessary over-procurement of resources. One way to balance these competing priorities is through providing financial incentives to the Day Ahead and Real Time energy and ancillary services markets rather than through a resource adequacy payment. Zonal RA Requirements will impose further restrictions in the forward capacity market. PG&E believes the CAISO should focus on simplification rather than creating additional requirements, such as Zonal RA, that are beyond the scope of the current RA program.

PG&E offers comments on the following topics discussed in the CAISO's Regional RA Revised Straw Proposal:

1. PG&E seeks to better understand the need for a new Zonal RA requirement and asks the CAISO to provide empirical evidence showing a link between Zonal RA and NERC reliability requirements.
 2. The CAISO should acknowledge its responsibility to ensure load forecasts are developed using a consistent load forecasting methodology.
 3. PG&E recommends that the CAISO propose a probabilistic Planning Reserve Margin structure.
 4. The CAISO should take this initiative as an opportunity to provide a justification for why a resource type has a unique counting criterion.
 5. PG&E requests the CAISO commit to provide transparency on the CAISO's proposed Reliability Assessments.
 6. PG&E would benefit from more information on why the Maximum Import Capability methodology should account for CAISO non-simultaneous peaks.
1. PG&E seeks to better understand the need for a Zonal RA requirement and asks the CAISO to provide empirical evidence showing a link between Zonal RA and NERC reliability requirements.

PG&E requests that the CAISO provide justification for the proposed Zonal RA requirements. We would appreciate a stronger emphasis on the operational and reliability concerns the CAISO has identified that leads it to propose these requirements. PG&E recommends that, if the CAISO believes RA Zones to be necessary, the CAISO define a reliability-based detailed study process¹ to determine boundaries of RA Zones and carry out this process to determine what Zonal RA requirements would exist under this study before seeking approval for it as part of this regional initiative.

We are particularly skeptical of the need for RA Zones considering the complexity that these requirements would place on an already complex RA Program. Some of the complications arise based on whether RA Zones take on the issues that Local RA regions currently face. These include whether:

- 1) Demand Response resources must respond in a specific period of time to meet zonal contingencies
- 2) Initial Zonal RA requirements will be based on line ratings or expected flows during peaking periods.
- 3) Expected non-RA flows of resources external to the RA Zone but internal to the CAISO are counted as "netting" the Zonal RA requirement.
- 4) Zonal constraints are coincidental and how these impact RA Zone boundaries
- 5) Import counting criteria might need to be different for each of the RA Zones

¹ This study could be similar to the Local Capacity Technical Study. This study would likely be more expansive than the Local Capacity Technical Study due to the need to analyze reliability needs that would define the Zonal boundaries.

These are only some of the considerations which PG&E hopes to avoid by better understanding the drivers of the Zonal RA section of this proposal. By clearly identifying the reliability concerns associated with this section of the proposal, stakeholders will be more likely to be able to propose effective measures to address any real underlying reliability concerns that are not being addressed through the current RA framework. PG&E believes that it will be difficult to resolve these issues in a timely manner and that they may interfere with the CAISO's current goal of submitting its regional RA proposal to the CAISO Board of Governors by the end of August.

2. The CAISO should acknowledge its responsibility to ensure load forecasts are developed using a consistent methodology.

In the Revised Straw Proposal, the CAISO indicates that it plans to develop a process to consolidate sources of load forecasting data so it can 1) receive the necessary load forecasting information to develop a system-wide load forecast, 2) discern the system coincidence peak throughout an expanded footprint, and 3) determine each LSE's contribution to the system-wide coincident peak forecast.² In PG&E's view, the CAISO also has a responsibility to ensure that the forecasts provided to the CAISO are developed using a consistent methodology.

PG&E has three concerns with the proposed CAISO load forecasting structure:

- a) PG&E does not believe the CAISO's divergence threshold will be meaningful enough to avoid unjust or unreasonable costs allocated to undeserving ratepayers.

The Revised Straw Proposal discusses how the CAISO intends to validate LSE forecasts through a 4% divergence threshold in an LSE's average year-over-year change in the previous 3 years of normalized peak load data.³ PG&E is not convinced that using a 4% divergence threshold for further evaluation or providing the accuracy of each LSE's load forecast after the fact will have a meaningful effect on the RA compliance period and on the costs that may be incorrectly assigned to undeserving ratepayers. The current structure depends on the CEC's process, which uses an independent system forecast to compare LSE forecasts and evaluate deviations. The use of different load forecasting methodologies will make it difficult to determine whether load forecast errors are due to common errors that the CAISO can improve on by providing simple guidance to LSEs or whether errors are due to special circumstances associated with one LSE choosing to follow a different methodological practice that does not align with the rest of the LSEs. These difficulties will limit the ability to use statistical analysis to better forecast load in the future, which could greatly lower ratepayer costs in the short and long run.

- b) The CAISO should seek to address any known inconsistencies between the CPUC/CEC methodologies and the CAISO's existing or proposed load forecast adjustment rule.

There are likely to be several differences between the CAISO's proposed approach to load forecasting that will differ from California's existing CPUC/CEC process. For example, the Revised Straw Proposal indicates that the CAISO currently allows entities to adjust submitted load forecasts prior to

²CAISO Regional Resource Adequacy Revised Straw Proposal, pg. 12

³CAISO Regional Resource Adequacy Revised Straw Proposal, pg. 16-17

the start of the Month Ahead RA processes.⁴ Currently, the only load forecast adjustments the CEC and CPUC rules allow are related to load migration. Changes in underlying economic or weather assumptions between the annual load forecasting data and month ahead forecasting are not allowed under these rules to limit manipulation. PG&E understands that the CAISO is unlikely to avoid all inconsistencies between the two processes on its first try. However, PG&E finds this particular example is important enough for us to ask the CAISO to address what types of monthly load forecast adjustments it is proposing to allow, and how monthly load forecast adjustments will be reviewed by the CAISO.

- c) The CAISO's proposal to allow LSEs to use inconsistent counting rules for load modifying resources calls into question the CAISO's statement that it must have consistent counting rules for resources in its Reliability Assessment.

In its Revised Straw Proposal, the CAISO has chosen not to define how LSEs must include Demand Response, Additional Achievable Energy Efficiency, and Distribution Generation in its hourly load forecast. The CAISO argues that entities conducting load forecasts in an expanded BAA should retain the flexibility to treat adjustments to their load forecasts how they choose and to adopt whatever methods best represents the needs of their unique situation. PG&E understands that the CAISO believes its accuracy metric will capture inaccuracies in these various adjustments. As PG&E stated in its Straw Proposal comments⁵, PG&E supports the CAISO's need for consistent counting rules for its Reliability Assessment. PG&E continues to agree with the CAISO's argument that "...establishing consistent counting rules that the ISO would use for ISO resource adequacy showings and the reliability assessment will mitigate concerns about over-counting resources by an entity, which can result in leaning on other entities."⁶ PG&E believes this argument logically extends to the counting rules for load modifying resources such as Energy Efficiency, Demand Response, and Distributed Generation. The CAISO should align these counting methodologies to limit the view that there could be discrepancies in the treatment of resources. The CAISO should also make clear whether pumping load from pumped hydro storage should be included in the load forecast. As PG&E stated in its comments in the Straw Proposal, an inconsistent load forecasting methodology has the same impact as inconsistent counting rules, which the CAISO has identified as a structural design flaw that promotes capacity leaning.

- 3. PG&E recommends that the CAISO propose a probabilistic Planning Reserve Margin (PRM) structure.

While PG&E appreciates the simplicity that a deterministic PRM could create, we believe that a planning reserve margin is sufficiently important to require at least an initial study to assess the relative reliability change associated with a new BAA joining the CAISO. While a consistent PRM has benefits in long term planning, the CAISO should look to maintain the balance between accuracy and consistency. PG&E urges the CAISO to also conduct a PRM study when an external BAA decides to join the existing BAA. PG&E believes this study should occur before the integration of BAAs in order to properly understand the impacts of the integration on reliability.

⁴ CAISO Regional Resource Adequacy Revised Straw Proposal, pg. 15

⁵ PG&E comments – Regional RA Straw Proposal, 3/17/2016, p. 2

<http://www.caiso.com/Documents/PGEComments-RegionalResourceAdequacy-StrawProposal.pdf>

⁶ CAISO Regional Resource Adequacy Revised Straw Proposal, pg. 36

Again, PG&E is concerned as to whether time will permit the results of further PRM study work to be developed and appropriately reviewed by stakeholders, prior to submission of this initiative to the Board of Governors in August.

4. The CAISO should take this initiative as an opportunity to provide a justification for why a resource type has a unique counting criterion.

PG&E appreciates the clearly outlined counting methodologies of the various resource types the CAISO currently has within its footprint. PG&E has a preference for using a Pmax test for RA counting criteria, wherever possible, to simplify the RA program. While PG&E recognizes that resource types have unique characteristics, the CAISO should take this initiative as an opportunity to provide a justification for why a resource type has a unique counting criterion. We believe this detail will be valuable for external BAAs to understand why their resources might be counted differently from what their existing process might currently use.

Furthermore, PG&E would like to understand why the CAISO proposes an option for Storage resources that is called a four hour test but appears to be relatively similar to a Pmax test. Please provide details on how this four hour test is different than a Pmax test and, if so, why storage requires a different test than other resources. If there is a need for a four hour test, why don't other resources also have this requirement?

5. PG&E requests the CAISO commit to provide transparency on the CAISO's proposed Reliability Assessments.

In its comments on the Straw Proposal, PG&E asked the CAISO to commit in its tariff to provide more information to market participants on the results of the CAISO's Reliability Assessments and whether the CAISO chooses to take action as a result of these assessments.⁷ While PG&E understands that the CAISO has a number of issues that they are working through in this stakeholder initiative, PG&E believes that reports on the CAISO's Reliability Assessment and other forms of transparency with regard to the CAISO backstop procurement process will allow external stakeholders to better reflect on the value of the Reliability Assessment. Stakeholders will also be able to use these reports to better understand CAISO procurement costs and processes.

6. PG&E would benefit from more information on why the Maximum Import Capability methodology should account for CAISO non-simultaneous peaks.

The CAISO proposes to change the methodology for how Maximum Import Capability is determined to account for the possibility that "a PTO that joins the ISO has a need to serve its peak load that occurs non-simultaneous with the rest of the system and when there are no simultaneous constraints between certain areas of an expanded ISO BAA."⁸

PG&E appreciates the added detail the CAISO provided on the Maximum Import Capability (MIC) process as well as the need for the proposed methodological change. The CAISO indicates that

⁷ PG&E comments – Regional RA Straw Proposal, 3/17/2016, p. 3

⁸ CAISO Regional Resource Adequacy Revised Straw Proposal, pg. 24

without the change, imports may be artificially constrained, and imports may be able to contribute for more than has been historically seen at the CAISO System coincidental peak since the imports have been aligned with the needs of the region and not the CAISO.

PG&E continues to be confused by this aspect of the proposal. Since the RA construct is built around the simultaneous CAISO peak, we would appreciate more information from the CAISO on this change. Particularly:

- a) Why is a PTO's peak load that occurs non simultaneous with the rest of the system relevant to this initiative and to the MIC calculation for purposes of RA?
- b) Wouldn't the CAISO expect these import levels to be self-correcting considering that imports, prices, and load might adjust once the PacifiCorp regions become a part of the CAISO optimization?

In addition to more information in this section, PG&E requests that the CAISO explicitly define that an intertie referred to in the MIC section of the proposal is a point that the new regional ISO footprint shares with an external BAA.

PG&E believes that sufficient time will not be available to develop and review with stakeholders the details and implications of the proposed MIC methodology changes prior to the submittal of this initiative to the Board of Governors in August.