

Stakeholder Comments Template

Subject: Regional Resource Adequacy Initiative

Submitted by	Company	Date Submitted
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Western Resource Advocates, Natural Resources Defense Council, Northwest Energy Coalition, Western Grid Group, and Utah Clean Energy appreciate the opportunity to provide the following response to the “Regional Resource Adequacy Second Revised Straw Proposal.” We are non-profit organizations that advance policies to further a low-carbon grid and reduce harmful emissions from fossil-fuel generation. We regularly participate in regional forums and regularly interact with PacifiCorp and other utilities who may become interested in participating if an RSO is formed with design elements and a governance structure that meet their needs. We regularly advocate positions before the Public Utilities Commission of Utah, the Oregon Public Utility Commission, the Idaho Public Utilities Commission, the Washington Utilities and Transportation Commission, and the California Public Utilities Commission, as well as the Montana Public Service Commission, the Nevada Public Utilities Commission, the Colorado Public Service Commission, the New Mexico Public Regulation Commission, and the Arizona Corporation Commission. Together we provide a perspective that we hope can be helpful to CAISO in transforming into a Regional ISO (RSO).

In some issue areas the current proposal is mostly unchanged from the previous two proposals. However, it differs in two fundamentals. The current proposal modifies the way in which Maximum Import Capability is allocated, and it removes the zonal concept for addressing internal constraints that was included in the last proposal. In addition, CAISO requests comments in two new areas: (1) rules for substituting external resources in the event of an outage, and (2) rules for establishing how “firm” a non-resource specific import must be to count as a resource adequacy resource.

To the extent that the Revised Proposal is unchanged from the two previous proposals, we stand by our previous comments in both.¹

¹ Previous comments from our group include the comments of WRA and NVEC on the Straw Proposal, WGG, NRDC, and NVEC on the Straw Proposal, and WRA, WGG, NRDC, and UCE on the Revised Straw Proposal.

1. Resource Adequacy Unit Outage Substitution Rules for Internal and External Resources

Proposal

The CAISO tariff provides that in the event of a forced outage or de-rate, a scheduling coordinator must substitute an alternative resource physically located within the CAISO Balancing Authority Area (BAA). Significantly, pseudo-tied generating units are considered to be external resources. In an expanded BAA, this requirement could overly limit the resources available to be substituted in the event of an outage, because entities operating noncontiguous systems often operate many pseudo-tied units not physically located in their current BAA. To address the potential limitation, CAISO proposes allowing an external resource to fulfill the same must-offer obligation filled by the lost internal resources as long as the substituted resource has similar operating characteristics and capabilities and the entity making the substitution has sufficient import capability. CAISO seeks comment on this proposal.

Comment

We agree the tariff must be revised to allow greater substitution than can occur under current tariff provisions, and we can support CAISO's proposal to allow the substitution of external units for an internal resource, subject to the three conditions included in the May proposal. However we also note that allowing pseudo-tied resources to count as internal resources is an alternative solution that may more accurately reflect operations of potential participants and may be preferable for other reasons. We recommend the CAISO consider this alternative and determine which would be the better long-term option.

With regard to the condition that the substituted resource have similar operating characteristics we suggest that the similarity screening be based on meeting or exceeding availability criteria for the replaced resource (ramp rate, forced outage rate, etc.) rather than resource type. This should allow free substitution of resources from different classes including utility scale generation, distributed generation, storage, etc. The purpose should be to maintain or improve capacity resource availability and performance, not like-for-like substitution.

2. Discussion of Import Resources that Qualify for Resource Adequacy Purposes

Background

Under current Resource Adequacy (RA) rules, load-serving entities can meet RA requirements using imported resources that are not tied to a specific physical resource as long as they have sufficient import capability.

In its comments on the Revised Straw Proposal, the Department of Market Monitoring noted that PacifiCorp's integrated resource plan relies on bilateral spot market purchases to meet a significant portion of peak capacity needs, raised concerns regarding market impacts, and recommended that the requirements relating to the physical availability of imports used to meet RA requirements be further discussed in this process.

CAISO seeks stakeholders views. It asks: "How 'firm' must system RA import resources be? For example, is there a role for resources such as bilateral spot market purchases or short-term

firm market purchases procured at market hubs outside of the BAA to meet a portion of an LSE's power needs?"

Comment

We support developing requirements for determining how "firm" a non-resource specific import should be to count as an RA resource, and further believe the stringency of requirements should depend on the time period considered. Imports should be more firm in the month-ahead RA showing than in the year-ahead RA showing.

In the month-ahead showings, we believe LSEs should have contracts in place to demonstrate imports are firm. In the year-ahead showing, the LSE should have contracts in place for some yet-to-be determined percentage of total load. We do not support the use of bilateral spot-market purchases as RA resources.

This approach appears to us to be consistent with the manner in which PacifiCorp undertakes its procurement. As part of its integrated resource planning, PacifiCorp has relied on what it terms "Front-Office Transactions," defined as transactions made three months to three years in advance, to meet a portion of its total need. PacifiCorp has used FOTs to meet a considerable portion of its peaking needs over many IRP cycles, and, in support of its IRP, PacifiCorp provides analyses of market depth in the hubs in which it trades and monitors overall regional depth through the Western Electricity Coordinating Council's Power Supply Assessment.

3. Load Forecasting

CAISO makes the following load forecasting proposal.

- All participating LSEs will provide one year forward hourly forecasts. With hourly forecasts, coincidence can be directly determined without developing coincident factors.
- Submissions will include estimates of demand response, energy efficiency, and distributed generation. The RSO will develop a template and reporting system to facilitate load forecast submissions.
- After-the-fact load forecast accuracy will be made public.
- Month-ahead load forecasts may be updated from year-ahead forecasts to account for load migration.
- The RSO will review forecasts that diverge unexplainably from average year-over-year weather normalized load trends.
- The RSO will use a 4% divergence threshold considering three years of weather normalized data.

Hourly Forecasts

In our previous comments, we supported the proposal to require the provision of hourly data. We have emphasized the need for an RSO to employ state of the art methods in assessing and protecting reliability, and hourly data is a needed component in probabilistic assessment. We further support the calculation of coincident peak load using hourly load data. We believe this is

an additional benefit of requiring hourly submissions. We continue to support the requirement that participating LSE's provide hourly data.

Inclusion of Demand Response, Energy Efficiency and Distributed Generation

In our comments on the Straw Proposal, we supported CAISO's proposal to require all LSEs to provide hourly load forecasts that identify Demand Response, Additional Achievable Energy Efficiency, and Distributed Generation resources and provided our rationale. We continue to support requiring the submission of this information. In addition, we support CAISO's proposal to develop a template and reporting system to facilitate load forecast submission.

Load Forecast Accuracy

In our comments on the Straw Proposal we recommended the accuracy of forecasts and forecast error should be made public. In our comments on the Revised Straw Proposal we expressed appreciation to the CAISO for including our recommendation in the revised proposal. We continue to support this aspect of the current proposal. Specifically, we support publishing the Mean Absolute Percentage Error for all of the submitted load forecasts. We continue to believe making this information public can help mitigate bad behavior and will help build trust that the RSO's processes will lead to efficient and fair outcomes.

Monthly Load Forecast Adjustments

In our previous comments, we supported allowing load-forecasting entities to update their forecasts in the month-ahead timeframe noting that one would expect month-ahead forecasts to be more accurate than forecasts developed year-ahead and that providing transparency into the accuracy of forecasts after the fact, as CAISO has proposed, will assist in revealing and mitigating against leaning and gaming.

We continue to support allowing adjustments to month-ahead forecasts but do not agree with the CAISO's current proposal to limit adjustments to "quantifiable and demonstration load migrations" only. When an LSE updates its load shapes for forecasting hourly load, this will flow through into the month-ahead forecasts. We recommend CAISO modify its proposal to allow month-ahead forecast adjustments for load migration and load shape modifications.

Load Forecasting Review and Adjustment Authority

We continue to support the RSO being given the authority, through its tariff, to adjust LSE forecasts that appear unreasonable and for which the LSE is unable to demonstrate that a forecast inconsistent with its peak trend is reasonable. Allocations of capacity requirements are dependent on these forecasts, and unreasonably low forecasts can lead to leaning and potential resource insufficiency. We support an affirmative obligation on the CAISO to notify the LRA as well as LSE if a potential forecast inconsistency is identified, but agree with the CAISO that this should be a consultative process.

Load Forecasting Review Criteria

We continue to support the RSO using an identified criterion to trigger a review of an LSE's load forecast for reasonableness, and, given the information that was previously provided in the Revised Straw Proposal, the use of a 4% divergence threshold in an LSE's forecast from an average year-over-year weather normalized peak trend appears to be a reasonable trigger criterion. However, we also continue to believe the processes that follow are significant. Once a

review has been triggered, the review process must be transparent. We encourage CAISO to develop details in the next revision explicating the review process anticipated.

In addition, we join with the California Large Energy Consumers Association and San Diego Gas & Electric in noting the rapid development of distributed energy resources that raises concerns about overreliance on historical load data. It may be useful to secure the services of an independent consultant or national laboratory to help assess the comparability of load forecasts across the expanded RSO footprint.

4. Maximum Import Capability

Background and Proposal

In both the Straw Proposal and the Revised Straw Proposal, CAISO provided background regarding how Maximum Import Capability (MIC) is currently calculated and proposed a minor change to accommodate regionalization. CAISO explained that in determining MIC, it relies on two years of historical data. To allocate the MIC it uses a 13-step process that preserves existing rights and practices and then allocates the remaining capacity based on load ratio shares. To accommodate regionalization, CAISO proposed to use the same approach with one minor change. It proposed the addition of a phrase to a footnote in the Business Practice Manual to allow non-simultaneous base case studies when areas of the expanded BAA have different seasonal peaking characteristics.

In this revision, CAISO proposes a more significant change. Instead of determining MIC for the entire RSO footprint, CAISO proposes determining MIC for each TAC subregion and allocating MIC to the LSEs within each subregion based on load ratio shares. In the event that new transmission projects create additional MIC capacity, the CAISO proposes allocating the additional capacity to each subregion in proportion to each subregion's cost share.

Subregional Determination and Allocation of MIC

We support CAISO's proposal to determine MIC by subregion and to allocate it based on a load-ratio share of the LSEs serving load within each subregion. This approach provides equity and aligns import capability with the cost responsibility envisioned through the TAC initiative.

Allocation of New Import Capability

We support the proposal to allocate additional import capability resulting from new transmission in proportion to each region's cost share. We agree that those who pay the costs should receive the benefits and vice versa.

Determination of MIC

In our comments on the Revised Straw Proposal we disagreed with the use of historical data in determining MIC and urged CAISO to develop a robust stochastic approach. We continue to be concerned that the use of historical data may artificially limit import capacity, particularly as import patterns may change with an RSO and depending upon a variety of economic and weather-related factors. We recommend CAISO propose in its next revision a plan to develop a probabilistic assessment of MIC with timelines and a process akin to its LOLE approach to determining PRM.

Establishing a Pre-RA Commitments Date

We appreciate CAISO's recognition that the "cut-off date" for considering what existing contractual obligations constitute Pre-RA Commitments must be addressed. We recommend contract rights and an appropriate period and options for transition should not be predetermined but instead refined through a consultative process. Retain flexibility in future RSO market design and to expand regionalization to the broadest range of participating transmission owners and market participants is an important consideration.

5. Monitoring Locational Resource Adequacy Needs and Procurement Levels*Background and Proposal*

To address internal resource adequacy transfer constraints two proposals have been considered. In the Straw Proposal, CAISO proposed extending the Path 26 methodology for allocating shares on constrained lines for RA purposes to all other internal constraints, but as it thought through how to implement the proposal, it recognized a number of problems and challenges. So, in the Revised Proposal, it proposed establishing zonal RA requirements. The RA import limit for each zone was to include the total MIC for all interties into the specified zone and the total of any internal transfer limits.

In this revision, CAISO proposes only to monitor locational resource adequacy needs and evaluate the level of procurement in locational areas. CAISO has recognized the complexity and administrative burden on LSE's that the development of a zonal approach will entail, and does not believe the situation currently warrants this effort.

Comment

We don't have enough information to comment. Please provide a more detailed analysis in the next revision addressing the potential risks of not having in place a method to address internal constraints and how CAISO would address these situations if they were to arise.

6. Allocation of Resource Adequacy Requirements to Commissions, Local Regulatory Authorities and Load Serving Entities*Background and Proposal*

In both the Straw Proposal and the Revised Straw Proposal CAISO proposed allowing the allocation of local and flexible capacity requirements either directly to load-serving entities or to their state commission or local regulatory authority (LRA) for reallocation to the load serving entities in their jurisdiction. We supported this proposal and expressed our belief that this approach supports the continuation of California's regulatory processes without change, accommodate utilities whose state commissions prefer to leave the running of the day-to-day business of the utility to the utility, and also accommodates multistate utilities like PacifiCorp that don't have a single regulatory authority overseeing its activities.

In this proposal CAISO seeks additional feedback. In response to feedback raising jurisdictional concerns, CAISO now proposes two options for allocating RA to multi-jurisdictional utilities. It requests feedback.

- Option 1: ISO allocates all RA requirements directly to multi-jurisdictional LSEs.
- Option 2: ISO provides each LRA the opportunity to allocate RA requirements to every LSE under its jurisdiction even if some of those LSEs are subject to the jurisdiction of multiple LRAs.

Comment

In order to better understand CAISO's reasons for seeking additional feedback, we reviewed the responses to the Revised Straw Proposal addressing this issue. Industrial Customers of Northwest Utilities (ICNU), PacifiCorp, and to a lesser extent the Washington Utilities and Transportation Commission (UTC) referenced jurisdictional concerns.

ICNU stated that it is "generally concerned about the ISO's proposal, to the extent that it would supersede the authority of the states to perform inter-jurisdictional cost allocation for ratemaking purposes."

PacifiCorp stated "The ISO agreed that a multi-jurisdictional utility would be problematic for them, since they cannot identify the local, flexible, and now zonal requirements on a jurisdictional basis, however, it did not change its initial proposal. PacifiCorp would like additional clarification from the ISO on how a 'multi-jurisdictional LSE' will be treated differently than a single state LSE."

UTC "encourage[d] the ISO to explain how it intends to implement this conceptual approach...and how such an approach would affect jurisdictional roles."

We are familiar with PacifiCorp's interjurisdictional cost allocation protocols and do not agree with ICNU that the allocation of RA requirements would supersede interjurisdictional cost allocation or with PacifiCorp's implication that the allocation of RA capacity to a multijurisdictional utility requires allocation on a jurisdictional basis. We see no direct link between the allocation of system, local, and flexible RA to a multijurisdictional LSE and the allocation of LSE system costs to its state jurisdictions. This appears to be a conflation of issues.

PacifiCorp operates a single system to serve customers in six states with resources located in eight. Its interjurisdictional cost allocation protocol allocates total system costs to five of the six state jurisdictions based on a load ratio share—75% capacity, 25% energy.²

If PacifiCorp joins as a new PTO, system, local, and flexible RA requirements will be determined based on operational needs, resource requirements will be allocated to PacifiCorp, and these resources will come with costs. However, whether these RA requirements are allocated directly to PacifiCorp or first allocated to an LRA to then allocate to PacifiCorp does not change the cost responsibility. Because RA costs are part of system costs, RA costs would be allocated to PacifiCorp's six jurisdictions using the then current interjurisdictional allocation protocol approved in each state.

² Washington is not party to the multistate cost allocation protocol.

We believe creating LRA-specific allocations for system, local, and flexible RA requirements as would be necessary under Option 2 is an unnecessary complication with the potential to draw the RSO into PacifiCorp's contentious interjurisdictional cost allocation struggles. Allocating RA requirements directly to a multi-jurisdictional LSE as is done in other regions such as MISO and PJM avoids these complications. We support Option 1.

7. Reliability Assessment

For the reasons expressed previously, we continue to support the RSO conducting a reliability assessment using common metrics.

a. Planning Reserve Margin for Reliability Assessment

Proposal

CAISO proposes to establish a probabilistic Planning Reserve Margin ("PRM") through a Loss of Load Expectation ("LOLE") study using a criterion of one in ten. CAISO proposes the study be refreshed periodically as new PTOs join.

Comment

We fully support establishment of a probabilistic PRM. We agree this methodology can provide a robust and accurate assessment of the necessary reserve margins required to maintain a specified level of reliability and represents a best practice. We further support a one in ten LOLE as reasonable; it's a common criterion in the industry. Finally we support periodically refreshing the study.

b. Resource Counting Methodologies for Reliability Assessment

Proposal

CAISO proposes proceeding with the Exceedance methodology for determining the capacity value of wind and solar resources. It states it will continue to look into the Effective Load Carrying Capability (ELCC) and will initiate a future stakeholder process to consider a possible transition into a ELCC methodology as well as evaluate other methodologies that would incorporate best practices.

Comment

The CAISO revised straw proposal states: "For wind and solar counting some stakeholders support use of the Exceedance method and other support using ELCC with some suggestions for exploring a transition from an Exceedance method to an ELCC method."

We strongly prefer an ELCC method, but given the data requirements and complexity of this approach, suggest an affirmative commitment by the CAISO to adopt this approach as soon as is reasonably possible.

As numerous stakeholders commented, a stochastic approach of this type, although more complex, offers significantly improved skill. In addition, we agree with commenters noting the importance of aligning with the CPUC's mandate to use an ELCC method for assessing these and other variable energy resources.

An ELCC method should adjust results based on local area or sub-area, as suggested by SGD&E and others, and should reflect “included hours” more closely aligning with area system and seasonal peak. Appropriate subdivision of generation categories should be incorporated; for example, by wind turbine class and fixed/tracking solar PV and solar thermal, including the effect of directly associated storage resources. Provisions for exception cases where resources clearly exceed the capabilities identified for reference resource types should be encouraged. Broadly considered, the details for resource counting should be determined through stakeholder workshops and expert technical input.

For assessment of hydro resource counting, we agree with Seattle City Light that LSEs should be able to provide justification for hydro capacity based on verifiable methods other than a prescriptive three-year period. Recent experience in California, the Northwest and elsewhere in the region suggests that drought and other inter-annual variability can skew the historical record and lead to over- or under-counting of hydro.

In particular with advances in forecast skill for the El Nino/Southern Oscillation (ENSO) cycle and other macro weather patterns, renewable resource counting can be incrementally approved with cautious application of forecast as well as historical assessment.

For all weather and climate dependent resources, periodic reassessment of ELCC and other methods will be necessary as climate change impacts occur in the coming years.

We do not support the use of an Exceedance methodology for wind and solar resources. As we stated in our previous comments, in addition to the disadvantages identified by CAISO in the Revised Proposal, use of an Exceedance method would be a retrogression for PacifiCorp, its stakeholders, and its regulatory communities. PacifiCorp previously used the Exceedance method in developing its IRP. However, because of dissatisfaction with the method, PacifiCorp now uses a modified ELCC approach.

We encourage CAISO to develop an approach similar to the process it has proposed for the development of a probabilistic PRM and include in the next revision a plan to develop an ELCC approach, or, at a minimum identify the conditions it needs to move forward.

8. Other

Thank you.