

Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your written comments on the 2018 IPE stakeholder initiative Revised Straw Proposal posted on July 10, 2018.

Submit comments to InitiativeComments@CAISO.com

Comments are due July 31, 2018 by 5:00pm

The straw proposal posted on July 10, 2018 and the presentation discussed during the July 17, 2018 stakeholder meeting can be found on the CAISO webpage at the following link:

<http://www.aiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx>

Please use this template to provide your written comments on the Issue Paper topics listed below and any additional comments you wish to provide. The numbering is based on the sections in the Issue Paper for convenience.

4. Deliverability

4.1, 4.2, 4.3, 4.5 and 9.2 Transmission Plan Deliverability Allocation (combined topics)

a. Allocation Ranking Groups (one through seven)

The Proposal acknowledges stakeholder comments that a project is unlikely to execute a PPA requiring FCDS, and thus commit significant development security, without assurance that the project will get TPD. CAISO further asks the following questions:

1. If a project is determined to be least cost/best fit for an LSE, would developers and/or LSEs be willing to execute a PPA contingent on receiving TPD? (As the CAISO points out, none of the allocation groups, even Group 1, has a guarantee of obtaining a TPD allocation).
2. If not, should Groups 4 and/or 5 be eliminated from the proposed allocation groups?

Nextera response: As the CAISO recognizes, most developers would not be willing to execute a PPA requiring FCDS, and then commit significant development security without assurance that the project would receive a TPD allocation. While even Group 1 may not get FCDS, it would be much more likely to do so since it can at least trigger (and pay for) LDNUs needed for FCDS.

The problem is that virtually all PPAs to date either require FCDS or are Energy Only (i.e. this is usually a binary choice). However, developers might be willing to execute agreements with "contingent" FCDS

provisions (i.e. with different prices applicable to the degree that the project does not receive full deliverability) without a cancellation right if deliverability is not obtained. This construct would effectively decouple Resource Adequacy and deliverability within the same contract, and ensure that the PPA would not be lost if deliverability was ultimately not available through Group 4-5 designations.

To encourage such flexible arrangements, the CAISO should retain Groups 4-5 and revise the criteria to also include PPAs with contingent FCDS provisions instead of specifying that the PPAs must “require” FCDS. Nextera agrees with the CAISO’s intent here, and Groups 4-5 would become much more viable with this revision.

b. Specific Topics:

i. Overall TPD Allocation Process:

As noted above, Nextera supports the CAISO’s general TPD allocation structure (with the recommended Groups 4-5 revisions), including replacement of the Annual Full Capacity Deliverability (AFCD) option with Groups 4-7 of the allocation process. However, as noted below, Nextera believes that the CAISO should still allow generation projects to re-enter the queue to obtain deliverability on the same basis as new generation projects.

ii. Elimination of Balance sheet financing terminology:

Nextera has no comment on replacement of the BSF affidavit option with Allocation Group 3. However, Nextera supports the CAISO’s proposal to “grandfather” projects that exercised BSF affidavit options to obtain and/or retain deliverability in the past. This may require some retention of the associated terminology.

iii. Elimination of Annual Full Capacity Deliverability Option

The Revised Proposal would eliminate the AFCD option, but the proposed substitutes in the Proposal would not address the main problems with that option. These include access only to “leftover” RA deliverability and the inability to trigger and pay for DNU on the same basis as new projects to help assure FCDS. Specifically, project Groups 4-7 (the proposed replacement for this option) should be allowed to re-enter the queue for deliverability. (See additional discussion below).

iv. Energy only projects’ ability to re-enter the CAISO Queue for Full Capacity

The Proposal recognizes stakeholders’ desire for this option, but proposes to defer consideration in view of the uncertainties listed below:

- **ELCC impact:** This Qualifying Capacity methodology change might allow more generating capacity to obtain deliverability with the current capacity.
- **CPUC procurement planning proceeding:** The CPUC may issue additional guidance that will reduce the proportion of jurisdictional Load-Serving Entity (LSE) supply portfolios that must have deliverability.

These issues are legitimate but should not prevent the CAISO from implementing a queue re-entry option in the next cluster-study window in April 2019, for the reasons explained below.

The CAISO has committed to presenting ELCC study information this fall at stakeholder meetings in the Transmission Planning Process (TPP); therefore that information will be available before the next window opens. If ELCC implementation results in fewer upgrades triggered because the existing transmission system can accommodate more deliverability, then there would be few costs to awarding that additional deliverability to new queue entries.

More fundamentally, to the extent that projects re-enter the queue for more deliverability than is required to meet LSE procurement needs, that will be a self-correcting process over time. If the CPUC issues guidance that includes contracting of more Energy Only projects, then as LSEs contract to meet their needs, any unnecessary and costly DNUs would be dropped as re-entry projects triggering them convert back to Energy Only to avoid the extra cost (e.g. using the additional conversion timing flexibility the CAISO is offering in this initiative).

v. Commercial Viability Criteria (PPA Clarification)

As noted above, Nextera supports the CAISO's proposal to "grandfather" projects exercising BSF affidavit options to obtain and/or retain deliverability in the past.

4.4 Change in Deliverability Status to Energy Only

Nextera agrees that generation projects should be allowed to convert to Energy Only at any time, and to keep such projects responsible for the cost of DNUs if still needed. However, revisions are needed to avoid situations where these projects have "the worst of both worlds" (i.e. EO status and DNU funding obligations).

Without a preliminary analysis from the CAISO on whether or not DNU obligations would remain, ICs cannot reasonably assess this likelihood. Thus, the CAISO should assume that these projects would wish to retain their deliverability status and withdraw the EO conversion request if significant DNUs are found to still be needed.

This assumption would require one additional pass in CAISO Reassessment Studies. More specifically, if removing a project's EO conversion results in retention of significant DNUs (e.g. above a certain dollar threshold), the deliverability assessment would be re-run with project deliverability restored. This change would help ensure a match between deliverability status and DNU cost responsibility.

4.6 Options to "Transfer" Deliverability

Nextera supports the CAISO proposal to allow deliverability transfers between different portions of a project. Because this change would be behind the same POI, it should not impact the transmission grid.

This option should also allow deliverability transfers between different projects behind the same POI, including those owned by unrelated entities. Like deliverability transfers within a single generation project, such transfers would not impact the transmission grid since generation-project ownership does not affect potential grid impact of deliverability transfers.

5. Energy Storage

5.2 Replacing Entire Existing Generator Facilities with Storage

As long as any required mitigation is covered, projects should be allowed complete replacement with energy storage through: (1) repowering with storage replacement capacity; (2) conversion of capacity through the MMA process; and (3) addition of energy storage and then retirement of the original capacity (what we call "sequential replacement" below). However, in some circumstances, it would not be fair for mitigation of all negative consequences (if any exist) to be at the expense of the facility owner (e.g. under options 1 or 3 above).

The alternative to repowering or replacing an existing project would likely be simple retirement of that generation. Adverse consequences of a generation retirement (e.g. adding capacitors locally to provide voltage support) would normally be funded by the PTO.

The fact that the retirement here is accompanied by the substitution (through repowering or sequential replacement) of the existing generation by energy storage should not change that principle. In effect, these are two separate transactions – retirement of the existing generation and addition of the storage. Each transaction would have essentially the same impact on the system as if the retirement occurred on one site and the storage was added to a nearby site instead of the same site.

Thus, the PTO should continue to bear the cost of the generation retirement, while the resource owner should bear the cost of any adverse consequences of the storage addition but not for the consequences of the generation retirement.

6. Generator Interconnection Agreements

6.1 Suspension Notice

Nextera agrees with the CAISO that suspension should require CAISO approval so that projects seeking suspension cannot impose adverse impacts on later-queued projects. In addition, the CAISO should consider imposing criteria on projects seeking suspension (e.g. like the CVC). In other words, suspension should not be allowed to be used as a delay tactic for non-viable projects.

6.2 Affected Participating Transmission Owner

Nextera strongly supports use of a single, multi-party GIA between the CAISO, the Affected PTOs, and the IC, and not negotiation of separate GIAs with each PTO. Imposition of double negotiation/compliance obligations and costs on the IC, as proposed, would be overly burdensome.

This is especially true because the CAISO does not impose uniform format and substance requirements on the GIA Appendices, which contain all the project-specific details for each generation project. Common GIA Appendix formats could partly ameliorate complications and other problems with the separate agreements, but no such consistency has been imposed to date.

6.4 Ride-through Requirements for Inverter based Generation

Nextera generally supports the proposed new requirements, assuming (as stated in the last stakeholder meeting) that they would be applicable only to new generation projects and those seeking to change out inverters. However, Nextera has concerns in the two areas described below.

- **Diagnostic Equipment:** Continuous recording of inverter-level data on a 1 msec resolution, with 30-day storage, would be a significant data-storage requirement. The CAISO should verify with equipment manufacturers that the cost of such capability would not be significant as inverters currently do not have this capability. If the cost would be significant, the CAISO should instead consider requiring equipment (similar to fault recorders) that would only be triggered for low- and high-voltage events.
- **Requirement for a PMU at every site:** Nextera requests further information on the need for this requirement. Individual solar sites generally aren't large enough to have significant impacts, and the PMU sampling is too slow to capture momentary cessation and therefore may not be that useful for model verification.

7. Interconnection Financial Security and Cost Responsibility

The Revised Straw Proposal states that the CAISO is sympathetic to PTO complaints that GIA execution does not mean a project is proceeding, and that some other measure (e.g. financial-security postings) should determine when a PTO must fund an NU if a project then drops out.

Nextera disagrees for the following reasons:

- (1) **PTOs have not demonstrated that this requirement is an undue burden.** For example, no information was provided about how often PTOs must fund such upgrades (i.e. the dropout occurs after GIA execution and the upgrade(s) are still needed) or the cost impact of such situations.
- (2) **Significant financial-security postings would already be made by GIA execution.** Projects executing a GIA must have made at least the first posting and typically have made the second also. While there may not be 100% coverage for each NU that is still needed, the resulting forfeits (of the postings for NUs still required, and also those made for NUs no longer required) should still offer meaningful protection and financing mitigation, and they could even exceed 100% protection for NUs still needed.

Nextera understands that PTOs may not retain all the financial security forfeited under current rules and has no objection to modification of forfeiture provisions to allow the interconnecting PTO to retain all forfeited amounts. (This change might also help with SANU issues below).

7.1 Maximum Cost Responsibility for NUs and Potential NUs

Nextera has serious concerns about the CAISO's proposals in this area, regarding both process and substance.

With respect to the process, the CAISO's proposals in this area (e.g. definitions) were modified significantly in the stakeholder meeting presentation from the Revised Straw Proposal. The Revised Straw Proposal, (which CAISO clarified in the meeting is actually a draft final proposal for Track 2 issues) does not contain a complete and well-vetted framework. Therefore, Nextera strongly recommends delaying final consideration of this topic to Track 3 (pushing out consideration by the CAISO Board to November from September).

Nextera also has concerns about the content of the CAISO's proposals. These proposals fail to recognize that CAISO's evolving policies in this regard have and will continue to derail otherwise viable projects. Specifically, the very important "cost certainty" objective of the GIP/GIDAP cluster-study framework is not met by the CAISO's proposals here.

For example, a framework that could result in \$5 million in assigned costs but \$100 million in "potential" cost responsibility is not workable simply because the developer has advance notice about the "worst case" costs. The CAISO's proposals in this area, which could add very significant costs to the latter (and perhaps the former as well), unfortunately would significantly increase the chances of such unbalanced and risky results.

Nextera strongly believes that: (1) cost allocation, maximum-cost impacts, and financial-security postings should not exceed 100% of the cost of an upgrade in total, or the proportional share of those costs for each project; and (2) cost impacts for upgrades covered under an executed GIA should not be

imposed on later-queued projects in a direct cost allocation or via maximum-cost increases. Nextera opposes many of the CAISO's proposals here because they are inconsistent with these principles.

Current Maximum Cost Responsibility (MCR)

Under the current tariff, MCR consists of what the CAISO now calls "Direct Network Upgrades" (Direct NUs), the lower of Phase I or Phase II NU costs allocated to a generation project in its own cluster.

The CAISO has added "Potential Network Upgrades" (PNUs), now called "Contingent Network Upgrades" (CNU), to the MCR. CNU are assigned to earlier-queued clusters where there is no executed GIA, even though there is no provision in the tariff allowing inclusion in the MCR. In the current cluster, the MCR PNU/CNU increase for each project has been the share it would have been allocated if the upgrade were allocated to its cluster.

New proposals

In addition to Direct NUs and Contingent NUs, the CAISO is now proposing to add several additional items to the newly-termed, "Maximum Cost Exposure" (MCE). These additions represent significant departures from past GIP/GIDAP principles and are internally inconsistent. The CAISO proposes to add the following:

- **100% of SANU costs:** The proposal would add 100% of SANU costs even where: (1) There is an executed GIA; and (2) cost responsibility is shared with other projects in the cluster.

Nextera opposes this proposal both because of the inter-cluster impacts when a GIA has already been executed, and because the cost allocation and MCR/MCE would exceed 100% of the upgrade cost.

The CAISO justifies this proposal by noting that SANUs typically would be needed even if all projects in the current cluster drop out. However, that could be true for other NUs as well, and Nextera opposes this different treatment of SANUs.

- **100% of each CNU:** This is the most onerous proposal in the IPE package, and could prematurely derail otherwise viable projects. It is inconsistent with the CAISO's current Direct NU and CNU allocation policies.

The MCR/MCE for each project for Direct NUs (assigned directly to a cluster) includes only the cost share allocated to that project. The CAISO does not currently allocate 100% of the cost of each upgrade for that cluster (and/or raise the MCR/MCE to that level) for each project in order to "leave room" for cost reassignment if others drop out.

Likewise, as noted above, the MCR/MCE increase for each project for CNU currently includes only the cost share that would have been allocated if responsibility for that upgrade was assigned to the current cluster. However, the proposal would raise that MCR/MCE increase to 100% of each CNU for each project in the current cluster. In other words, the MCR/MCE increment for CNU could be far higher than each project's cost share if the CNU becomes a Direct NU.

The CAISO's proposal provides no basis for changing the current MCR/MCE treatment for CNU. Nextera disagrees with including CNU in the MCR/MCE, but if the CAISO retains that policy, it should continue adjusting MCR/MCE for CNU costs using the same cost share as if the upgrade was a Direct NU (i.e. for each project by its allocated cost if the upgrade falls to its cluster). As noted above, MCR/MCE impacts should not total more than 100% cost of an upgrade.

- **Costs for “Precursor” RNUs (PRNUs here) even where there is an executed GIA:** This proposal is intended to limit reimbursement for each project to \$60K per MW (see additional comments on this issue below). The CAISO cites fairness to ratepayers in its reasoning for these complex proposals, but they have not been demonstrated to be necessary and go far beyond what is needed to address this simple and straightforward issue.

In addition to moving this proposal to Track 3, Nextera urges the CAISO to perform limited back-casting on a recent study cluster (e.g. Cluster 9 or 10) to determine MCE/MCR increases that could result from these policies before issuing its next proposal version, and to share the results with stakeholders.

7.3 Eliminate Conditions for Partial IFS Recovery Upon Withdrawal

Nextera supports the CAISO’s proposal.

7.5 Shared SANU and SANU Posting Criteria Issues

Nextera believes that the proposals here confuse “Plan of Service” (POS) upgrades (not defined, but generally considered to be those where 100% of costs are assigned to a specific project) and SANUs. SANUs may be POS upgrades and vice versa, but there are different issues with each.

Nextera agrees that SANUs can be shared and appreciates the CAISOs clarification on this point.

Nextera disagrees with including 100% of SANU costs for each generation project in Direct NUs, financial security postings, or in MCE/MCR, as described above. Combined postings for shared SANUs (or any other upgrades) should not exceed 100% of costs (i.e. it would be unreasonable to require 200%, 300% or more for security coverage of a single upgrade).

If projects drop out and reallocation is allowed to later-queued projects, then security postings can be revised accordingly. Other upgrades may still be needed if one or more projects drop out, and the fact that this is more common for SANUs (or POS upgrades, if this policy is intended to apply there also) does not change that fundamental principle.

The CAISO inquires specifically about allowing PTOs to determine posting amounts for shared SANUs. Nextera strongly opposes this proposal. First, the CAISO should not abdicate this important issue (especially without any criteria or guidance) since SANU costs can be a significant part of a project’s cost responsibility and such discretion is not allowed for any other NU costs or postings. Second, there is no apparent justification for PTOs having different policies in this area (i.e. there should be uniform SANU MCE/MCR, allocation, and security posting policies for all PTOs).

7.7 Reliability Network Upgrade Reimbursement Cap

The three options offered by the CAISO are not fully explained and require more discussion. Nextera urges the CAISO to defer consideration of this issue to Track 3 (November consideration by CAISO Board). For example, it is not clear which proposals would allocate costs in executed GIAs to later-queued projects versus only limiting RNU cost reimbursement to \$60K per MW.

There are several problems with the substance of the CAISO’s proposals in this area.

First, this may be a solution in search of a problem as the CAISO has not demonstrated that there is a real issue here that must be resolved. If the CAISO goes forward with this proposal, at a minimum, it should provide information about the frequency or cost of the problems identified in the Revised Straw

Proposal, any evidence of gaming or other questionable behavior related to the reimbursement limit and evidence of actual harm to PTOs or ratepayers.

To Nextera’s knowledge, exceedance of the \$60K/MW threshold is relatively rare, and dropouts of projects exceeding that limit with already executed GIAs would be even rarer. Significant rule changes should not be considered for infrequent problems with low overall cost impacts.

Second, the Revised Straw Proposal states that limiting RNU reimbursement to \$60K/MW “...is a principle that overrides any cost protection principles for interconnection customers and PTOs.” The basis designating this the “overriding” principle compared to other factors (e.g. larger goals like RPS attainment) is not explained.

Third, the continued reasonableness of the \$60K/MW limit is questionable. That limit was established back in 2012 based on a percentage of RNU costs for Clusters 1-2. As the PTOs’ posted Per-Unit Costs (updated annually) have demonstrated, PTO construction costs have increased rapidly over the last few years. Applying a 4-5% annual escalation factor to the limit would probably raise it to the \$80K/MW range by now, and examination of actual costs for later clusters might raise that figure even higher. Fundamental changes in treatment of above-limit costs should not be made in any case until those limits are updated, and updates should be considered aside from any such rule changes.

Fourth, the proposals would consider the entire cost of the subject upgrades, not just the amounts that could be over the reimbursement limit or that are not already covered by security forfeits (including forfeits for upgrades no longer needed). Any allowed inter-cluster impacts should only cover the “excess” amount that is not already paid for through forfeits.

Finally, all three options appear to far exceed the action needed for the limited purpose of ensuring that the \$60K/MW limit is not exceeded. If adding these “Precursor RNUs” (PRNUs) to the Direct Assignment RNUs would not cause later-queued project to exceed \$60K/MW, then there is no problem and no further adjustment to either the cost assignment or MCE is needed. If inter-cluster impacts are allowed, and if adding PRNUs would cause the later-queued project to exceed \$60K/MW, then the CAISO’s solutions need only consider the excess amount.

The PTO should still be responsible for funding the PRNU since the upgrade was included in earlier-queued project GIAs, and only reimbursement of the “excess” amount should be addressed in the CAISO’s solutions. Solutions that include adding the full PRNU cost to either the MCE or directly assigned costs go far beyond what is needed for the purpose of limiting RNU reimbursements. Moreover, Nextera opposes such solutions as well because they would result in allocating impacts for more than 100% of the cost of an upgrade, as explained above.

For these reasons, Nextera opposes all three options; the detailed reasons are described below.

- **Option 1:** 100% of any PRNU costs in the Phase I study included in the MCE. If more than one project needs the same precursor RNU, each project would have 100% of that precursor RNU’s cost included in their MCE.

Nextera response: See objections above to including in the MCE any costs for earlier-queue cost assignments where a GIA is executed, particularly inclusion of 100% of each upgrade cost.

- **Option 2:** Document any PRNU cost in earlier-queued GIAs but re-calculate RNU costs for later projects needing that upgrade if the earlier project drops out.

Nextera response: This may be (subject to clarification of the details) the least objectionable of the three options, but it is still problematic because the PRNU cost is already covered by an executed GIA.

- **Option 3:** Proportional cost of any PRNU cost in the Phase I Study included in the MCE (could be 100% or less if multiple projects need the RNU). Projects could have MCE increases if other same-cluster projects withdraw.

Nextera response: This option needs more explanation. It is potentially the most objectionable of the three if the intent is that later-queued projects would both have PRNUs included in their MCEs and also actually be responsible for funding these upgrades. In addition, an MCE that can later increase is not actually a “maximum” cost exposure, and therefore, is no less objectionable than an MCE increase itself.

8. Interconnection Request

8.4 Project Name Publication

No comments at this time.

9. Modifications

9.1 Timing of Technology Changes

Nextera agrees that technology conversions after the 7/10 year tariff development deadline should be prohibited. Projects that have not managed to be viable with their original technology by that time should simply reenter the queue as new projects.

However, technology additions should be allowed for projects beyond that deadline. Nextera understands the CAISO’s concerns in the Revised Straw Proposal that projects may seek to circumvent the above technology-change prohibition by adding storage and then downsizing to remove the original technology. However, that issue can be addressed much more directly by allowing the technology addition at the requested capacity level by conditioning CAISO approval on: (1) the original project proceeding satisfactorily (as reported in the now-required quarterly progress reports); and/or (2) a commitment by the IC not to significantly downsize the original project. There is no need to subject this capacity addition to more rules than those applicable to capacity additions for other projects.

10. Additional Comments

Nextera appreciates the CAISO’s work to improve the interconnection process and is grateful for the opportunity to provide comments here. We look forward to continuing to work with the CAISO in this stakeholder process.

Respectfully, submitted

Sarah Qureshi, Esq.