2018 Interconnection Process Enhancements 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 Issues Paper posted on January 17, 2018.

Submit comments to InitiativeComments@CAISO.com

Comments are due February 7, 2018 by 5:00pm

The issue paper posted on January 17, 2018 and the presentation discussed during the January 24, 2017 stakeholder meeting can be found on the CAISO webpage at the following link: http://www.caiso.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.

Overview

These comments are submitted on behalf of three entities – collectively, "the Generators:" (1) Large-scale Solar Association (LSA); (2) EDF-Renewable Energy (EDF-RE); and (3) SPower. The Generators appreciate the opportunity to offer comments on the CAISO's Issue Paper (Paper) and the discussion about the Paper at the January 24th stakeholder meeting.

The Generators understand that the CAISO cannot include all 42 topics in the 2018 IPE initiative scope and must prioritize them. Thus, in addition to commenting on the individual topics below, the Generators highlight the titles the items, in its opinion, should have Very High (green highlight) or High (blue highlight) priority for inclusion in the final 2018 IPE initiative scope.

4. Deliverability

4.1 Transmission Plan Deliverability (TPD) Allocation (Very high)

This item would reconsider the current rules concerning project parking under the GIDAP.

The CAISO's current one-year parking limitation is too restrictive, as is the filed one-year extension in the 2017 Expedited GIDAP Enhancements initiative. Many competitive procurement solicitations require the equivalent of a Phase II Study, and there is simply not enough time between issuance of a Phase II Study and initial deliverability awards to acquire the Power Purchase Agreement (PPA) needed to qualify for such awards, especially given the timing of the affidavit submission process.

This is particularly true given two aspects: (1) The CAISO's implementation of the TPD feature, which seems inconsistent with the Final Proposal in the "TPP-GIP Integration" initiative that established the GIDAP; and (2) the current and likely future state of CPUC-jurisdictional Load-Serving Entity (LSE) resource procurement.

Implementation of GIDAP TPD

The CAISO's TPP-GIP Integration initiative final proposal was contained in the March 9th, 2012 document, Integration of Transmission Planning and Generator Interconnection Procedures (TPP-GIP Integration), posted here: http://www.caiso.com/Documents/FinalProposal-TransmissionPlanning_GeneratorInterconnectionProceduresIntegration.pdf. On p.29, this document states as follows (emphasis added):

> The ISO provided modifications in its draft final proposal in response to these comments. The ISO will determine how to allocate TP deliverability in two steps. First, the ISO will assess each project against minimum threshold criteria. Specifically, during the 120-day allocation period following the provision by the ISO of phase 2 study results to projects in the current cluster, the project must demonstrate that it has applied for a Conditional Use Permit, Application for Certification, or equivalent, and that it is on an active short-list for a load-serving entity's request for offer.

This language indicates that Interconnection Customers (ICs) would have 120 days after Phase II Study results are issued to demonstrate compliance with the minimum TPD award criteria. If the PPA process was already in motion, that period could possibly be used to advance it sufficiently for the project to qualify for a TPD award. (This is still early in the development process, the reason why the parking option was included also.)

However, the CAISO's GIDAP implementation appears to have evolved in a manner that effectively removed that 120-day period. Typically, Phase II Studies are issued in late November, and affidavits demonstrating TPD allocation compliance are due mere days later (e.g., December 1st, in 2017). In the 2015 and 2016 process, Affidavits were due one week before the Phase II studies were even issued, with significant confusion on being "eligible".

Thus, the CAISO's implementation of the GIDAP TPD allocation process makes it much more likely that generation projects will have to park for at least a year if they are seeking TPD (which is required by virtually all competitive LSE procurement requirements to date).

CPUC-jurisdictional LSE procurement

This timing issue has been exacerbated – and will likely continue to be so – by LSE procurement timing and requirements. LSE competitive solicitations typically require a "Phase II Study or equivalent." This requirement is imposed because a project's Network Upgrade cost caps and any contingent-project cost allocations are not known until the Phase II Study is issued. The lack of alignment between the CAISO's study timeline and LSE procurement timelines means that a project be parked for a year would have far less than a year to acquire a PPA.

The problem will likely get worse going forward. A draft decision in the CPUC's Integrated Resource Planning (IRP) proceeding would place LSE procurement on two-year cycles. The decision contains no provision for coordinating those procurement cycles with CAISO interconnection-study cycles.

In other words, given the current and expected future timing of the Phase II Study, affidavit submission, TPD allocations, and LSE procurement, the opportunity to park should start following the year after the Phase II study results are issued (not at issuance of the Phase II report as happens how) and should last a minimum of two years from that time. The CAISO should also reserve the flexibility to extend this period longer given market conditions at the time.

As LSA has pointed out before, parked projects are otherwise likely to be viable, having already made Interconnection Financial Security (IFS) postings. However, they will only remain so if they can stay in the queue long enough to qualify for utility procurement solicitations.

4.2 Balance Sheet Financing (High)

The option to submit a "balance-sheet financing" (BSF) affidavit in lieu of an executed and regulator-approved PPA is allowing proposed generation projects with questionable viability to: (1) Receive allocations of scarce TPD in the GIDAP process; and (2) retain their deliverability far beyond a reasonable period. The CAISO should recognize the market reality that independent generation projects of all but minimal size are simply not being constructed without PPAs, and either eliminate the BSF affidavit process or significantly reform it for such entities.

The Generators repeat LSA's past request for summary statistics for how many projects (and associated capacity) in each area acquired and/or retained deliverability through affidavit submission and how many have actually been constructed on such a merchant basis, to begin an honest conversation about the this option. The Generators suspect that the amount of capacity receiving/retaining deliverability through use of financing affidavits is significant, and that it far exceeds the small amount of capacity that realistically would be constructed without a PPA, based on historical experience or likely future market conditions. If not – e.g., if the amount of such capacity is very small – then that may alleviate, to some degree, the Generators' concerns about this mechanism.

The Generators recommend the changes listed below to the use of BSF affidavits in the GIDAP TP Deliverability award/retention and Commercial Viability Criteria (CVC) demonstration processes. The reasons for these recommendations are described in the rest of this section.

- **Change the GIDAP TP Deliverability point system** so possession of a regulator-approved PPA provides GIDAP projects the highest amount of points available.

- **Revise BSF affidavit submission option** for projects without regulator-approved PPAs to either:
  - **Eliminate this option entirely**, recognizing the market reality that larger non-utility projects simply are not being built in California without PPAs, and have not been since the formation of the CAISO. The Generators suggest revised language below that would continue to accommodate entities that legitimately use balance-sheet financing, but in a manner that can be verified by the CAISO.

  - **Strengthened this option significantly if it is retained**, by requiring the following:

    ■ Independent support for the financial claims of balance-sheet financing or financial commitments, e.g., executed loan agreement with a non-affiliated financial institution, significant expenditures on development activities (e.g., at the level needed to qualify for certain tax credits), or non-revocable escrow account that can only be used for project development; and

    ■ Credible evidence that the developer will actually proceed with project development without a PPA. For example, this could be a choice of these options:

      (1) **Minimum forfeit amount** (e.g., $20,000/MW) if the project withdraws after submitting a BSF affidavit, because otherwise projects with low or no Network Upgrades (whether serial-study or cluster-study) risk little from loss of ability to claim partial security release for "failure to secure an acceptable PPA;" or

      (2) **Demonstration of intent to proceed without a PPA** through a history of constructing similar-size projects in California with balance-sheet financing and no PPA. (The Generators understand the CAISO's concern that this condition could disadvantage less-experienced developers; however, such developers would still have the option to select the minimum-forfeit option above.)

  These changes should be imposed on projects that have been allowed to receive or retain deliverability using BSF affidavits, and not just those submitting such affidavits in the future. These projects should have a limited time (e.g., 60 days after this tariff provision becomes effective) to withdraw from the queue before the new conditions are imposed.

Affidavits in GIDAP TP Deliverability award rankings

The GIDAP TPD allocation process allows developers to submit a BSF affidavit for a project that has no PPA (or short-list position). Such projects receive the same amount of TPD allocation points as projects with regulator-approved PPAs. There is no validation process for such affidavit attestations, no requirement to demonstrate that the developer will actually proceed without a PPA (e.g., past experience building merchant projects without PPAs), or any requirement that the developer actually build the project, with or without a PPA.

Thus, the Generators propose the changes indicated in the edits to the table. The Generators understand from the discussion at the stakeholder meeting that some entities (e.g., municipal utilities or government agencies) may legitimately use balance-sheet financing to construct a new generation project; however, their processes presumably do still involve some form of formal oversight approval for that financing, as well as (for utility-owned projects) something equivalent to an off-taker agreement). The Generators' changes eliminate the "balance-sheet financing" option that is ill-defined in the tariff and unverified in the TPD award process but substitutes another form of formal financing approval that can actually be verified.

In addition, as noted above, the Generators recommends increasing the points awarded to projects with executed and regulator-approved PPAs so that such an arrangement counts for more than a financing commitment without a PPA.

MILESTONE	*PTS.*
Financing commitment & PPA received, i.e., project: (1) ~~will be balance-sheet financed or~~ has a project financing commitment approved by an official regulatory or other oversight body for full project capacity; and (2) has a regulator-approved PPA w/a CAISO-area LSE	10
PPA executed and regulator-approved for the full project capacity	~~7~~8
Financing commitment received, no PPA, i.e., project: (1) ~~will be balance-sheet financed or~~ has a project financing commitment approved by an official regulatory or other oversight body for full project capacity; and (2) will proceed to COD without a PPA	7
PPA executed but not yet approved, for the full project capacity	4
Project is on an active LSE PPA short list	3

Affidavits for Commercial Viability Criteria (CVC) compliance

Projects subject to CVC – which have, by definition, been in the interconnection queue for many years – can substitute an affidavit "attesting that the Generating Facilities will be balance-sheet financed, or otherwise receiving a binding commitment of project financing" for the required executed and regulator-approved PPA. The use of such affidavits in this process suffers from basically the same shortcomings as their use for GIDAP TPD allocations, except that such problems are worse for serial-study projects subject to CVC.

First, as with affidavits for GIDAP TPD allocations, any associated security forfeits are typically limited by the relatively lower Network Upgrade cost allocations of these earlier-queued projects. Thus, the prospect of such forfeits is often little deterrent to filing an affidavit for the sole purpose of complying with the CVC and retaining deliverability.

Second, this problem is exacerbated for serial-study projects by the terms and conditions of CAISO Tariff Appendices U or W, as applicable. Under those rules, projects withdrawing from the queue are only liable for actual costs to that point. Even if they have posted financial security, that security is releasable when they withdraw, with no approved justification required. Thus, the potentially serious cluster-study project financial consequence of losing the ability to claim "failure to secure an acceptable PPA" is not even applicable to these projects, regardless of how much their Network Upgrades may cost, and thus the consequence of submitting questionable affidavits is even lower than for cluster-study projects.

Third, as with affidavits for GIDAP TP Deliverability awards, there is no verification process for the veracity of the financing claims in these affidavits. Effectively, they have become a way for non-viable projects lingering in the queue for more than a decade without securing a PPA to hang on for years longer, triggering unnecessary upgrades, deliverability delays or unavailability, and costs for later-queued projects.

Finally, if a project has lingered in the queue for over 7 (or especially 10) years, plus potentially another year under the CVC process, and still does not even have a PPA short-list position (or equivalent independent active PPA negotiations), then the Generators submit that the project has essentially proven its non-viability and should lose its TPD. Thus, even if the CAISO decides to retain the BSF option for initial GIDAP TPD awards or retention, the Generators urge the CAISO to eliminate it for CVC compliance purposes.

If the CAISO nevertheless retains this option for CVC compliance, it should impose the conditions recommended above, i.e., independent verification of financing claims and minimum forfeit or demonstration that the developer would actually build the project without a PPA.

4.3 Participating in the Annual Full Capacity Deliverability Option (High)

This proposal would add qualifying criteria, e.g., the same TPD acquisition/retention as for GIDAP deliverability awards. The Generators oppose this proposal for two reasons.

First, the amount of applicable capacity is likely very small. As CalWEA has pointed out, very few projects have obtained deliverability in this manner (though CAISO disclosure of such figures would aid the discussion, if the CAISO decides to proceed with this topic).

Second, it is unreasonable to expect that a project owner will actively pursue a PPA based on acquiring deliverability in this manner when the process is so long (2+ years) and the outcome is so uncertain (since these projects would be "last in line" for TPD awards, and their awards would be only "leftover" deliverability and not any additional TPD enabled by additional upgrades).

The Generators have no objection to imposing TPD retention criteria after a reasonable amount of time on projects receiving deliverability using this mechanism, e.g., starting two years after the award.

4.4 Change in Deliverability Status to Energy Only (High)

This topic would provide additional opportunities to convert projects to Energy Only Deliverability Status (EODS); such projects would remain responsible for the allocated costs of DNUs still needed, to minimized cost impacts on other projects or PTOs. The CAISO also proposes that projects converting to EODS through failure of the TPD retention criteria or CVC retain such liability.

The Generators has not identified situations where additional opportunities to shift to EODS are needed. However, there seems little reason for imposing additional financial obligations for imposing additional cost responsibilities on generators availing themselves of the current opportunities – lowering requested deliverability after the Phase I Study, declining TPD awards after the Phase II Study, or for deliverability loss after a good faith effort to obtain a PPA through the CVC process (and 1-year compliance extension). (This is the Generators' "high priority" element here.)

This topic is closely tied to the BSF affidavit issue above. The situation described in the Paper would be most common with a project submitting a BSF affidavit, i.e., a project without an executed and regulator-approved PPA (or, for an initial TPD award, without even a PPA shortlist position). It would be fairly rare, for example for a project that actually acquires a PPA to then seek to convert to EODS or withdraw from the queue. Thus, CAISO action to eliminate or impose conditions on TPD awards or retention based on such affidavits would have the additional benefit of ameliorating whatever problems concerning the CAISO about EODS conversion and cost-shifting without impairing options legitimately available to developers.

4.5 Energy only Projects' Ability to Re-enter the CAISO Queue for Full Capacity (Very High)

This topic would consider allowing EODS or PCDS generation projects to enter the regular interconnection-study process, and receive deliver TPD awards, on the same basis as new generation projects. The Paper expresses some concerns about this proposal and, therefore, says that such projects "should remain responsible for their allocated costs for delivery network upgrades needed and should not have a negative cost impact on other projects, PTO's, or ratepayers."

The Generators are not sure just what the CAISO means by this phrase – limits on Network Upgrade cost reimbursement, or a separate study before/after study, or ? In any case, the Generators do not see any reason why these projects should be treated different from any other project in the queue. Below is a list of the CAISO's stated concerns in the Paper, and the Generators' responses.

> "If a project is allowed to re-enter the queue to obtain additional deliverability it would likely result in the identification of delivery network upgrades that would be reimbursable to the interconnection customer at the expense of ratepayers, however, these upgrades would likely only benefit that project."
>
> > Generators response: There is no reason to expect that any upgrades identified in these studies would be any more likely to benefit "only that project" than upgrades identified for any other project in the study. Moreover, Network Upgrade costs are reimbursable because those upgrades, once in service, are usable for any other generation project (or load) on the system.
>
> If delivery network upgrades provide a wider benefit beyond what is required just for that project to obtain additional deliverability, those upgrades with wide spread benefits will be identified in the CAISO's annual Transmission Planning Process (TPP).
>
> > Generators response: Again, there is no reason that this statement would be truer for projects re-entering the queue for deliverability only than for other projects in the study. Moreover, the TPP focus is usually on Area Delivery Network Upgrades (ADNUs), not the Local Delivery Network Upgrades (LDNUs) more typically identified in the interconnection process.
>
> …a project already has the opportunity to obtain additional deliverability under the existing annual full capacity deliverability options.
>
> > Generators response: It is true that the Annual Full Capacity Deliverability Study process is one option available to such projects. However, that process does not allow for financing of new LDNUs to enable deliverability; as long as these projects are willing to pay their fair share of such LDNUs, they should qualify on an equal basis for deliverability awards. In addition, as noted above, the Generators believe that deliverability awards under this process have been extremely small or non-existent.

Moreover, punitive measures such as limiting reimbursement for Network Upgrades – especially for shared upgrades for which other projects in the study cluster would receive full reimbursement – would be highly discriminatory and inequitable. Remember, these projects would have amply demonstrated their viability through financial-security postings or actual operation, and there is no policy reason why they should be treated differently in the study process or afterwards.

Finally, CalWEA noted in the stakeholder meeting that all other U.S. RTOs provide similar later opportunities to acquire capacity status, and the CAISO should investigate whether those opportunities have caused any actual problems.

4.6 Options to Transfer Deliverability (High)

The Generators commends the CAISO for including this option on the potential 2018 IPE topic list. It makes sense to allow resource developers and owners flexibility to move deliverability between projects on a limited basis, and such flexibility would be consistent with the CAISO's efforts to establish deliverability as a standard, separately tradable commodity. For example, the types of transfers listed below should be allowed, subject to the applicable counting rules for different resource types, as long as the total amount of deliverability does not exceed the level that the resource with the original deliverability award was studied for:

- Between generation projects behind the same Point of Interconnection (POI)
- Between generation projects and "behind-the-meter" storage add-ons (e.g., storage additions allowed through the Material Modification Assessment (MMA) request process)
- Between generation projects and storage projects behind the same POI
- Between generation and storage projects in the same electrically related area, on a case-by case basis (e.g., having the same effectiveness factors for local constraints)

4.7 Transparency on Availability of Deliverability (Very High)

The Generators appreciate the CAISO's willingness to consider suggestions about improving information about TPD availability and has several suggestions below.

First, the Paper states that the CAISO posted a TPD allocation report on the Market Participant Portal after the 2017 TPD allocation, and that some information about available TPD in different areas can be gleaned from this report. The Generators suggest that the information about available TPD be made clearer, and that the report be posted on in a public location not requiring special access to review.

Second, the CAISO should update annually, after each TPD allocation, the "Operational Deliverability Assessments" typically provided in Phase II Studies for each new generation project. (This update could be provided through the annual Reassessment process.) This is an extremely useful tool for generation developers and owners to assess the timing of their TPD status and adjust their contracting, financing, and construction processes accordingly. There is currently no process for adjusting the Phase II Study information, even though that status can change over time and the CAISO acquires the information through the Reassessment analyses. This change is a very high priority for the Generators.

4.8 Commercial Viability Criteria – Continuous Compliance Obligation

Most compliance obligations under the CAISO tariff require continuous compliance. For example:

- Resources certified to provide Ancillary Services must be continuously capable of providing such services, not just be able to provide them when tested by the CAISO; and
- Resources must continuously comply with safety and reliability obligations of the CAISO, NERC, and other applicable bodies.

There is no reason why compliance with CVC somehow should only be required on the day when sworn compliance affidavits are due, with non-compliance between those dates tolerated by the CAISO. Between affidavit submission, the CAISO should certainly re-verify CVC compliance if the project is modified (even if the modification is not otherwise material), and especially if the CAISO has reason to suspect that the project is not in compliance.

In addition, while the Generators does not favor allowing fuel changes after the 7- or 10-year tariff development deadline (see below), if such changes are allowed between compliance affidavit submission, the Generators do not believe that change should entitle a project to fall out of CVC compliance for up to a year without losing its deliverability.

This interpretation should not require a tariff change but, if the CAISO believes that such clarification is necessary, the tariff should certainly be changed to reflect it.

4.9 Interim Deliverability Status

The Generators' concerns in this area would be ameliorated if the CAISO would agree to provide annual updates to the Phase II Study Operational Deliverability Assessments, e.g., in conjunction with the annual Reassessment process – please see comments above.

4.10 Effective Load Carrying Capacity (High)

This topic would explore the implications for deliverability resulting from the recent issuance of revisions to the methodology for determining Resource Adequacy (RA) Qualifying Capacity (QC) for wind and solar resources, i.e., the CPUC's change from the Exceedance Methodology to the Electric Load Carrying Capacity (ELCC) methodology, pursuant to state law.

The Generators appreciate the CAISO's inclusion in the Paper of the questions that LSA raised earlier, and the CAISO's commitment to explore this topic in a more focused effort separate from 2018 IPE. The Generators urgesthe CAISO to take the following course of action in this respect, as soon as possible:

- **Issue a schedule and process for that separate initiative.** Specifically, the CAISO should initiate that effort quickly, and aim to conclude it by year-end.
- **Incorporate the new methodology into currently ongoing interconnection and planning studies.** For example, the CAISO is still performing interconnection studies assuming that solar projects require roughly twice (or more) deliverability for which they will actually qualify. Such outdated assumptions are triggering unneeded upgrades, forcing developers (and eventually ratepayers) to post security for and fund such unneeded investments. CAISO should reflect the new methodology in upcoming Phase I Studies for Cluster 11 and Phase II Studies for Cluster 10 while it determines how to address past studies and agreements given the change.

4.11 Cancellation or Delay of CAISO Approved Transmission Projects (Very high)

This topic would clarify CAISO decisions and communications in the annual TPP that could impact generation-project development. LSA has tried to clarify these points through the Business Practice Manual (BPM) Change Management Process, where the CAISO has repeatedly stated its agreement with these points but refused to clarify the applicable BPM language because: (1) The tariff language does not explicitly state these things; and/or (2) one can "glean" these rules from the BPM (but being unable to point to any specific language indicating that).

Thus, the Generators request that the CAISO revise the tariff, if necessary, to clarify that CAISO decisions in the Transmission Planning Process (TPP) regarding any Network Upgrade changes – modifications, delays (including placement of projects on hold), and/or cancellations, and mitigation plans for any of those changes – should consider both generation interconnection and deliverability timing.

The Generators are simply looking for a clear statement in an official document – tariff or BPM – that this is the CAISO's policy, practice, and obligation. The Generators do not understand the CAISO's reluctance to document this often-stated statement and, if a tariff revision is needed for that clarity, the Generators request that CAISO include that tariff revision in the 2018 IPE initiative.

In addition, the Generators recommend that the CAISO consider Affected Systems issues in its decisions to delay or cancel transmission projects. The Generators are aware of one situation where the CAISO's decision to delay a transmission project led to an Affected System effectively withdrawing its prior impact waivers, which could have delayed the generation project COD, since that entity was depending on the upgrade to mitigate adverse impacts of the generator interconnection.

5. Energy Storage

5.1 Distributed Energy Resources

The Generators do not have comments to offer on this topic.

5.2 Replacing Entire Existing Generator Facilities with Storage

The CAISO should consider whether at least some better-defined guidelines or "rules of thumb" could be provided to generation developers, instead of the current vague process.

5.3 Deliverability Assessment for Energy Storage Facilities

The Generators do not have comments to offer on this topic.

6. Generator Interconnection Agreements

6.1 Suspension Notice (High)

The Generators do not object to the CAISO's desire to clarify that Suspension Notices should include start and end dates, or that the CAISO's evaluation of such notices include potential harm to later-queued projects. However, the CAISO should:

- Clarify the process for developers seeking to extend such suspensions, within the limits allowed in the tariff.
- Comply with the Generator Interconnection Provisions (Appendix B) that the CAISO and developers will negotiate new milestones once the project exits suspension, and not require MMA requests for new milestones as a condition of initiating the suspension.
- Adopt CalWEA's proposal at the stakeholder meeting that developers seeking to suspend their projects have the opportunity to mitigate harm to later-queued project, e.g., by continuing to fund upgrades needed by later-queued projects or subjugating their deliverability rights to those of others in their cluster. (This is the element meriting the High rating.)

6.2 Affected Participating Transmission Owner (High)

The Generators support better clarification and documentation of situations where a PTO other than the interconnecting PTO is impacted by a generator interconnection.

The Generators supports a structure similar to the "Manager" structure for generation developer entities sharing a GIA, where one point of contact is established to interface with the CAISO and PTOs and then communicates (and manages payment obligations) with the other interconnecting entities. In this situation, the interconnecting PTO would act as the single point-of-contact "manager" and communicates (and manages payment distributions to) other impacted PTOs.

In lieu of that much more efficient structure, the Generators could support CalWEA's proposed four-party GIA, including both the interconnecting and other impacted PTOs. This consolidated structure would address inter-PTO services and obligations and reconcile differences between the GIA appendix structures between PTOs (which is a constant frustration to generation developers generally).

6.3 Clarify New Resource Interconnection Requirements

The Generators do not believe that a tariff change is needed but does not object to one. However, if the CAISO wishes to make the process more helpful to new developers, or those repowering or converting QF contracts, it should develop better explanatory materials for the New Generator Interconnection Process.

6.4 Ride-through Requirements for Inverter based Generation

The Generators believe that the vast majority of generation on the CAISO system developed in the past 10 years already must comply with LGIA Appendix H and supports the CAISO's efforts to ensure that inverter settings are properly established to meet this standard. Older projects become subject to such standards as they are repowered or converted to CAISO market resources, as the Paper notes.

While the Generators support the CAISO's efforts to maintain reliability, any effort to modify interconnection standards for existing generators after the fact should face a high bar, i.e., should only be made after CAISO demonstrates that such changes are needed. Such resources generally have no ability to extract additional revenues to pay for modifications and, if they no longer have purchase agreements, already struggle under current market conditions.

6.5 Affected System Options (Very High)

This topic would provide an interconnection-study option for developers that could avoid the need to deal with Affected System studies and timelines not coordinated with the CAISO process.

The Generators recommend that, where Interconnection Studies indicate a potential impact on an Affected System (which, contrary to statements in the Paper, does occasionally happen), that the CAISO and PTO make a good-faith effort to identify potential CAISO-system alternatives that would mitigate such impacts.

The Generators believe that the CAISO has misunderstood LSA's prior proposal here. The Generators are not suggesting that identification of such CAISO-system alternatives would remove the need or ability of Affected Systems to perform their own studies, or undermine the rights of Affected Systems to require mitigation. This proposal would simply provide another potential option for addressing the issue with Affected Systems. If an Affected System – using its own judgment – would find the CAISO alternative acceptable, the alternative could be included in the project GIA and remove the need for separate mitigation and agreements with the Affected System, i.e., enable the Affected System to issue an impact waiver when it otherwise would not.

The Generators are also not suggesting that the CAISO and/or PTO perform any additional studies – only that they provide potential mitigation solutions. The Generators fully understand that CAISO does not take responsibility for studying Affected System. Given its various other disclaimers on this topic. We are simply seeking CAISO/PTO input to help to address the developer-Affected Systems process.

6.6 Modeling Data Requirements

The CAISO receives considerable modeling data with a generation-project Interconnection Request, in the New Resource Implementation Process, and with MMA requests. Such requirements have become more burdensome in recent years, and (as noted in the Paper) such data are updated every 10 years for 70% of CAISO generating capacity.

The Generators do not understand why the current modeling data submission and updates are not sufficient for CAISO modeling purposes. The Generators object to imposition of requirements beyond those imposed by NERC/WECC in the absence of compelling reasons, which the CAISO's generally stated concerns do not justify.

7. Interconnection Financial Security and Cost Responsibility

7.1 Maximum Cost Responsibility for NUs and Potential NUs (Very High)

"Potential NUs" are Network Upgrades triggered by earlier-queued generation projects that may drop out of the interconnection queue without executing GIAs. Increasingly, generation developers have been faced with situations where the cost of such upgrades – which may be may be far above the cost of upgrades triggered in their own study cluster – are included in Interconnection Studies and, on that basis, allocated later to their projects through the annual Reassessment.

As LSA explained in the stakeholder meeting, the problem here involves reconciliation of two CAISO tariff provisions:

- **Maximum cost responsibility ("cost cap") set at the lower of Phase I or Phase II Study cost estimates** – e.g., GIDAP Section 10, which states that, "The lower subtotal for both RNUs and LDNUs shall also establish the Interconnection Customers' maximum cost responsibility for RNUs and LDNUs after issuance of the Phase II Interconnection Study report."
- **Potential allocation of Network Upgrade (NU) costs assigned to earlier-queued clusters or projects** that withdraw from the queue without executing a GIA, i.e., provisions in GIP Section 12.2.2 and GIDAP Section 14.2.2. (We call these "potential NU costs" in this discussion.)

There are two ways to reconcile these provisions: (1) Raise the cost cap to "make room" for potential NU cost allocations, should those allocations fall to a later-queued cluster; or (2) allocate any potential NU upgrade costs to later-queued clusters only to the extent that there is "headroom" – room between the cost cap and the projects' current cost responsibility.

Without any stated justification, the CAISO has selected option (2) above. the Generators believes that this selection severely undermines the cost-cap protection that was "part of the bargain" in both the GIP and GIDAP interconnection processes, and the resulting uncertainty is impeding development of new generation by greatly increasing PPA contracting risks.

The Generators believe that there is much stronger support in the tariff for option (1) above, for the reasons stated below.

- **The interconnection-study rules clearly state that Interconnection Studies are to include only upgrades triggered by the cluster under study** – see, e.g., GIDAP Sections 6.2 (for Phase I Studies) and 8.1.1 (for Phase II Studies).

  The CAISO's recent information-only listing of potential NUs and associated costs in Phase II Study reports – while informative – do not mean that those upgrades are somehow attributable to the projects under study or should be included in the cost caps.

- **The tariff Reassessment language (GIDAP Section 7.4) contains no provisions for raising cost caps for any reason.** Section 7.4.3 provides for potential cost-cap reductions under certain conditions, but there is no language allowing cost-cap increases in Reassessments – only allocation of costs assigned to projects in the same cluster, up to the level of the cost cap.

In summary, CAISO assertions in Phase II Studies that the cost caps will rise to reflect potential NU cost allocations have little basis in the tariff; to the contrary, the overwhelming indications in the applicable tariff language are that they should not. The Generators strongly oppose the CAISO's proposed tariff change (which goes far beyond a "clarification") to redefine the cost caps to include contingent "Potential Network Upgrades."

7.2 ITCC for Non-cash Reimbursement Network Upgrade Costs

The Generators agree with CalWEA that, if a developer receives compensation through Congestion Revenue Rights (CRRs) for these investments, they should not be subject to ITCC.

7.3 Financial Security Postings and Non-Refundable Amounts (High)

The Generators urge the CAISO to seriously consider the issues of whether the current postings and forfeiture amounts are unduly punitive and causing non-viable generation projects to linger in the queue to avoid the impacts of dropping out.

7.4 Queue Clearing Measures (High)

The Generators believe that the CAISO should explore additional measures to clear the queue of non-viable projects. For example, in situations where the benefits from a project dropping from the queue would exceed the costs (e.g., where that would remove the need for an expensive upgrade for later-queued projects) and the CAISO otherwise does not have tools to force the project out, the CAISO could offer to forgive the forfeit and/or facilitate voluntary payment by those later-queued project to induce the generation project to drop.

The CAISO should consider this and other creative ideas (e.g., LSA's earlier-suggested "forfeiture holiday") to encourage non-viable projects to drop. However, the Generators' concerns in this area would be reduced if the CAISO adopts the Generators' proposals to eliminate or validate BSF affidavit submittals, and enforce continuous CVC compliance obligations, as those measures will provide strong tools to force non-viable generators from the queue or, at a minimum, require them to relinquish their scarce deliverability.

7.5 Shared SANU and SANU Posting Criteria Issues (High)

The CAISO Tariff (Appendix A – Definitions) defines a Stand-Alone Network Upgrade (SANU) as a Network Upgrade that be "constructed without affecting day-to-day operations of the transmission system" during its construction." This topic would address two main issues: (1) Ability of generators to share SANUs; and (2) additional issues related to SANUs. Both types of issues are described below.

In general, the Generators are seeking confirmation that:

- Generation projects can share construction and cost responsibility for SANUs, as long as the PTO gives its permission for Interconnection Customer(s) to build them; and
- The financial security posted for SANUs and other "Plan of Service" Network Upgrades should not exceed 100% of the cost of that upgrade, regardless of which party builds the upgrade.

Both of these provisions are supported by the current CAISO tariff, but the Generators are open to tariff changes or clarifications if the CAISO believes that these are necessary or desirable.

This issue arose from LSA submission of Proposed Revision Request (PRR) 977 in the BPM Change Management process. PRR 977 sought to revise the BPM for GIDAP to: (1) Incorporate SANU provisions into the BPM, since no SANU tariff provisions were reflected there; (2) clarify ability of multiple projects to share a SANU, since such sharing is not prohibited by the tariff.

The CAISO rejected the PRR – not because the PRR was contrary to the tariff, but for unrelated and (in the LSA's opinion) erroneous process reasons. LSA submitted a detailed Appeal of the CAISO's rejection and prepared to argue its case to the CAISO Executive Committee. LSA ultimately agreed to withdraw its PRR 977 appeal of the CAISO's decision in return for a commitment to consider this issue in what is now referred to as the 2018 IPE process.

The Generators strongly believe that the CAISO's initial position in the Paper to exclude this issue from the 2018 scope is inconsistent with that CAISO commitment. LSA relied on that commitment in withdrawing its Appeal (which it continues to believe was strongly grounded in the tariff, as explained below). The CAISO did not promise to agree with LSA after full consideration of the issue; however, consistent with the CAISO's commitment (and its statements in the PRR process that the issue should be considered more broadly in a fuller stakeholder process) this issue should at least be included in the initiative scope.

The Paper also misdirects its criticism in this area. The Generators are not seeking changes to the SANU definition or PTO discretion to classify upgrades as SANUs. Likewise, the Generators believe PTOs should be financially protected for SANU costs, to the same degree as for the cost of other Network Upgrades, and it is not seeking to reduce such protections in this proposal.

The Generators' proposal and position is explained in more detail below.

Ability of generators to share SANUs

Generally speaking, the CAISO should encourage generators to share SANUs, such as switching stations (in the Generators' experience, the most common SANU). Such sharing is economical and conserves scarce resources like land and rights-of-way. This efficiency benefits ratepayers in addition to generation developers, since they ultimately pay the cost of SANUs through Network Upgrade refunds to generation developers (up to $60K/MW).

There is simply no prohibition in the tariff against sharing SANUs by multiple generators – those facilities can and are shared physically by more than one generator with the same POI. In fact, this sharing element is central to their definition as Network Upgrades, i.e., they are available for use by any generation project in the area or other uses on the system.

The tariff contains no prohibitions against sharing financing and construction costs and responsibilities for SANUs. Contrary to some parties, who seem confused by the concept that a shared upgrade could be "Stand-Alone," the tariff definition relates to the ability to construct an upgrade independent of the rest of the system, not the assignment to a single project (which some refer to as "Plan of Service" upgrades – more on that below).

There is also no physical difference between situations where: (1) a project with an earlier construction schedule builds a switching station as a SANU and then another project at that POI connects to it later; and (2) two projects cooperate to finance/build the station as a shared SANU and then connect to it based on their respective project schedules – the situation in PRR 977, and the confirmation that the Generators are seeking here.

Financial security for SANUs

That concept follows through to the Generators' proposed financial-security treatment of shared SANUs, regardless of which party builds them. (Even where an Interconnection Customer will construct SANUs, it must still post security, subject to release when a GIA will that commitment is executed.) As with any other Network Upgrade, costs should be shared between the projects that will use the upgrade.

There is no support in the tariff, or non-discriminatory rationale, for requiring multiple parties to post 100% of the cost of the SANU (or other "Plan of Service Network Upgrades" – a term that is not defined appear in either a tariff or BPMs). The Paper references the GIDAP (Section 8.4) for support for requiring Interconnection Customers to be assigned and to post 100% of the SANU cost. That provision does refer to a 100% SANU cost allocation but does not address situations where more than one customer triggers or shares a SANU. Any interpretation saying that this language prohibits sharing of SANUs must be based on the same misunderstanding described above about the SANU definition.

At a minimum, the cost and associated posting responsibility should be shared among the projects in the same cluster triggering the upgrade, just like any other upgrade. This would result in the PTO receiving the same financial protection as for any other upgrade, which the Generators support.

If any of the projects in the cluster drop out without executing a GIA, the PTO should have the same ability to assign up to 100% of the cost to the "last project standing," consistent with the applicable cost caps. There is no justification for requiring higher total postings for SANUs than for other upgrades, or greater protection for PTOs regarding the cost of such upgrades, just as there is no justification for requiring less.

The CAISO and PTOs have offered no reason why SANUs are unique, or any more risky to PTOs than other Network Upgrades, in a manner that would justify total postings in excess of 100% of the total costs. The Generators are even aware of situations where projects in successive clusters are allocated the cost of the same SANUs, and also required to make 100% postings. (How much financial "protection" is enough here – 500%?)

Again, while a SANU (or other "Plan of Service" upgrade) can be a contingent or "potential" Network Upgrade for later clusters, there is no justification for requiring financial-security postings (especially at the 100% level) when such postings are not required for other contingent/potential postings unless the upgrade falls to the later-queued project(s).

7.6 Clarification on Posting Requirements for PTOs

The Generators have no comments to offer at this time.

7.7 Reliability Network Upgrade Reimbursement Cap

This issue would address situations where a project with RNU costs above the $60K/MW reimbursement limit drops out after executing a GIA and the upgrade is needed by later-queued projects. The PTO would thus be required to build the upgrade anyway and incur the entire cost to do so. The Paper "seeks stakeholder input on methods for resolving this issue in 2018 IPE."

The Generators have several responses to this issue.

First, in the Generators' experience, the RNU cost reimbursement cap is has been triggered only rarely. (CAISO statistics about this situation would be helpful to the discussion.)

Second, the CAISO does not offer any evidence of intentional "gaming" of this situation. (Such evidence would be helpful to the discussion.)

Third, PTOs (i.e., ratepayers) retain any financial security posted for the upgrade. Since we are talking about projects dropping out after GIA execution, it is highly likely that the second financial-security posting would have been made; assuming that the withdrawal is for a reason justifying partial security release, the generator would forfeit around 15% of the cost of all its Network Upgrades, which could cover all or more of the RNU forfeit amount.

Finally, with all due respect, the hypothetical situation offered is only one side of the story. The other side is this:

(1) Project(s) originally assigned responsibility for the RNU qualify for 100% cost reimbursement but drop out of the queue <u>without</u> executing a GIA;

(2) Project(s) inheriting the upgrade exceed the RNU cost limit, either: (a) As a result of the contingent upgrade cost reallocation (so incurring a partial non-reimbursement of the contingent RNU cost amount); or (2) even before that reallocation (so the entire amount of the contingent cost allocation would be non-reimbursable).

If the PTO is made whole in the hypothetical situation (so it is no worse off), the Generators believes that the generation project in this situation should be made whole in the second, i.e. the contingent cost upgrade shouldn't trigger or increase any cost non-reimbursement.

7.8 Reimbursement for Network Upgrades (High, for deletion)

The Generators have two responses to this issue.

First, if the CAISO is not going to address in this initiative reduced posting and forfeit amounts from the perspective of the generator, it would be highly inequitable to address reducing or eliminating Network Upgrade reimbursement from the PTO/ratepayer perspective.

Second, the Generators agree with the CAISO that this proposal would "represent a fundamental paradigm shift in the CAISO's generator interconnection process" and that it should be excluded from 2018 IPE.

8. Interconnection Request

8.1 Study Agreement

The Generators have no specific comments at this time but supports generally the CAISO's efforts to streamline the interconnection study agreement process.

8.2 Revisions to Queue Entry Requirements

The Generators believe that the queue entry requirements – including the significant cost and effort to produce the technical documents and data required – are already stringent enough. The high cost of the current interconnection process means that most developers perform considerable research and studies on their own, and elimination of the Feasibility Study several years ago has required Interconnection Customers to perform more of their up-front studies.

8.3 Master Planned Projects (Open Ended and Serial Projects)

The Generators do not object in principle to the proposed concept in general, but it has the potential to be even more complex than the CAISO's proposed separate ELCC effort. If the CAISO decides to pursue it, these complexities would require another separate effort.

8.4 Project Name Publication

The Generators have no objection to publication of project names and contact information, with the permission of each customer (with the election made when the Interconnection Request is submitted, for example). This information could facilitate inter-project cooperation on issues like shared SANUs (see above).

8.5 Interconnection Request Application Enhancements

The Generators have no specific comments at this time but support generally the CAISO's efforts to streamline the interconnection study agreement process.

8.6 FERC Order No. 877

Is this meant to be Order No. 827? If so, the Generators have no comments at this time.

9. Modifications

9.1 Timing of Technology Changes (Very High)

The Generators believe that generation projects should be prohibited from technology changes once the 7/10-year tariff development deadline has passed. Even if the change would technically not be material, it would be clear at that point that the original project was simply not viable as proposed and should exit from the queue.

9.2 Commercial Viability – PPA Path Clarification

Please see the comments above. The BSF affidavit process should be eliminated, particularly for CVC compliance. If a project cannot acquire a PPA after 8 (11) years in the queue, it is clearly not viable and should exit the queue (or at least give up its deliverability), unless the delay is due to delays in transmission construction.

9.3 PPA Transparency

The Generators believe that the tariff and BPMs are clear on this point but has no objection to the proposed clarification.

9.4 Increase Repowering and Serial Re-Study Deposit

The Generators have no comment on this topic.

9.5 Clarify Measure for Modifications After COD (Very High)

The Generators have no objection to this clarification. However, the Generators believe this topic should be broadened to include the potential for downsizing generation projects after COD .

9.6 Short Circuit Duty Contribution Criteria for Repower Projects (Very high)

The Generators support this proposal and would broaden the concept in allow for mitigation (if possible) of any SCD impacts that would otherwise disqualify the project from the expedited repowering process. The Generators ask that the CAISO consider whether this change could be implemented in the BPM Change Management Process.

9.7 Material Modification for Parked Projects (High)

The Generators strongly object to this proposal, for two primary reasons. First, developers pay all the costs to assess such requests, so there is no cost burden on the CAISO or PTOs.

Second, projects usually park to allow more time to meet TPD allocation criteria, most commonly the PPA shortlist/acquisition criterion. It makes no sense to allow projects to park so they have more time to acquire a PPA but then prohibit them from making non-material modifications that could improve their chances of acquiring PPAs. Such changes include (but are not limited to):

- Splitting the project into phases so that it qualifies for smaller PPA awards
- Revising the COD and other milestones to meet requirements of an RFO
- Changing inverters or other equipment to increase output efficiency (e.g., from a central to a string inverter)
- Changing the gen-tie route to avoid permitting or environmental difficulties
- Adjusting site boundaries to comply with permitting requirements or lease provisions

10. Additional Comments

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