

Stakeholder Comments Template

Integration of Transmission Planning and Generation Interconnection Procedures (TPP-GIP Integration) Second Revised Straw Proposal, posted January 12, 2012

Submitted by	Company	Date Submitted
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This template is for submission of stakeholder comments on the topics listed below, which were discussed in the TPP-GIP Integration Second Revised Straw Proposal posted on January 12, 2012, and during the stakeholder meeting on January 19, 2012.

Please use the list of topics and questions below to structure most of your comments. At the end of the document you may offer comments on any aspect of this initiative not covered by the topics listed. When you state a preference for a particular approach on a topic or issue, your response will be most helpful if you clearly explain the reasoning and business case for your preference.

Summary:

CalWEA is very encouraged with this latest CAISO proposal for TPP-GIP integration. We believe that this proposal is a major step in the right direction and, with the modifications and refinements proposed below, will effectively and efficiently address a problem that once seemed intractable. CalWEA proposes the following changes and refinements to the CAISO proposal to better reflect the realities of renewable energy development in California:

- Impose “readiness” milestones on generation projects before they are allowed to enter Phase 2 of the GIP study process under any option. Those projects that do not meet these readiness milestones would be allowed to “park” for one year (with their financial security posting requirement postponed accordingly) and be studied in the Phase 2 Study of the next queue cluster cycle. The parking would be allowed for one cycle only at which time the projects that do not meet readiness milestones would have to leave the queue.*
- Address the deliverability upgrades of all projects that complete their Phase 2 studies and meet additional readiness milestones (see below) as part of the next TPP cycle. Projects that do not meet the additional readiness milestones and need deliverability*

upgrades would be allowed to park for one year before the deliverability upgrade is planned for in the next TPP cycle, provided that they meet the additional readiness milestones. The parking would be allowed for one cycle only and, if a project does not meet its readiness milestones during that time, it must opt for Energy Only (EO) status or leave the queue.

- Use more expansive and flexible list of readiness milestones for qualifying to enter into Phase 2 studies and for receiving deliverability transmission as part of the TPP.*
- Consider eliminating Option B for entering into Phase 2 studies as we cannot envisage any project opting for this option. As a result we see Option B as simply complicating the GIP process. As noted above, CalWEA proposes that only projects that meet certain readiness milestones be allowed to enter the Phase 2 study process and only those projects that have completed their Phase 2 study and meet further readiness milestones would qualify to have their deliverability transmission upgrades, if any, planned as part of the TPP.*
- Correct the technical interconnection study process, especially as related to the deliverability assessment process, to reflect credible operating conditions.*

CalWEA elaborates on these proposed refinements to the CAISO's proposal, below.

Section 1. High-level structure of the TPP-GIP Integration proposal. (Please use section 2 below to comment on the details of each element.)

1. The process as described in the January 12 paper and outlined below reflects the proposed process for projects in GIP cluster 5 and later. The process for existing queue projects (serial through cluster 4) will proceed according to the ISO's January 10, 2012 revised discussion paper.

Given that the reforms introduced through this CAISO initiative will fundamentally overhaul the GIP and significantly change the TPP, particularly as related to the process of determining the scope, cost and payment responsibility for Delivery Network Upgrades (DNUs), it is only fair to isolate, to the extent possible, interconnecting generation projects in Queue Clusters (QC) 1 through 4 who have made significant investment and business decisions based on the earlier GIP and TPP protocols.

2. After GIP Phase 1, each generation project advancing to GIP Phase 2 must elect either (A) – project requires TPP-based deliverability; or (B) – project is willing to pay for delivery network upgrades.

While we appreciate that the main goal of the CAISO's proposal is to avoid over-building major new transmission projects by discouraging speculative renewable resource development from continuing in the interconnection process, we believe that the CAISO's main priority should be to efficiently implement its open access mandate. The CAISO can reasonably rely on utility resource procurement processes and associated regulatory oversight, which take into account indirect project costs including transmission, as well as direct costs and other factors to weed out uncompetitive and unviable projects.

At the same time, we believe that there are numerous steps that the CAISO can readily take to avoid the unnecessary build-out of the transmission system starting with immediate reform of its technical study processes. For example, the CAISO has not explained why on-peak reliability studies should represent wind resources at their peak nameplate capacity, or why off-peak reliability assessment studies represent both wind and solar resources at their peak nameplate capacity. We believe that these studies should correspond to credible system operating conditions as opposed ones that simply are more likely to trigger transmission upgrades. Another change that will go a long way toward avoiding the need for unnecessary transmission upgrades involves changes to the CAISO's deliverability assessment process and studies. Please see CalWEA's previously submitted comments on these topics (also the attachment to these comments).

Finally, we propose that, instead of asking interconnection projects to choose Option A or Option B for entering into their Phase 2 studies, the CAISO should screen all projects that have completed their GIP Phase 1 studies by using readiness milestones. We propose that the projects that meet at least two (2) of the following seven (7) viability milestones be allowed to enter into Phase 2 studies:

- 1. Demonstrate completion of conditional use permit or equivalent (note that other permits are typically acquired very close to the start of construction);*
- 2. Demonstrate site control sufficient to allow construction of 75% of requested interconnection capacity;*
- 3. Demonstrate proof of project financing or, since securing financing prior to completing the LGIA is highly unlikely, post a 50% higher financial security deposit;*
- 4. Demonstrate a PPA that is approved by the relevant Local Regulatory Authority (e.g., CPUC);*
- 5. Demonstrate proof of access to the POI (such as sufficient land control for the gen-tie line);*
- 6. Demonstrate equipment purchase order; and*
- 7. Demonstrate one year of locally recorded meteorological data.*

Projects that have completed their Phase 1 studies but cannot meet these readiness milestones would be allowed to "park" for one year (with their financial security posting requirement postponed accordingly) and be studied in the Phase 2 Study of the next queue

cluster cycle. Parking would be allowed for one cycle only, at which time the projects that do not meet readiness milestones would be required to leave the queue.

Screening projects for readiness will be a much more efficient process for avoiding the planning and development of unnecessary transmission upgrades (whether DNU or RNU) as well as for avoiding future re-studies due to the drop-off of projects that may be in the “desired development area” and choose Option A but prove not to be commercially viable at the end of their Phase 2 studies.

3. The requirement for customer-funding of network upgrades (option (B)) would apply only to delivery network upgrades (DNU); posting and reimbursement for reliability network upgrades (RNU) for all projects would remain as today.

We agree with the CAISO that ICs should be reimbursed for their upfront financing of RNUs. However, all DNUs should be centrally planned as part of the TPP for those projects that have gone through their Phase 2 interconnection studies and have met stringent readiness requirements (see below). We recommend that the readiness indicators for projects whose deliverability will be determined by the TPP should be based on a more expansive set of criteria than the two criteria established by the CAISO (having a PPA plus all the construction permits). We propose that a project that has completed its Phase 2 study should meet any four (4) of the following six (6) milestones before its deliverability upgrades, if any, are determined via the next TPP cycle:

1. *Demonstrate completion of conditional use permit or equivalent;*
2. *Demonstrate site control sufficient to allow construction of 75% of requested interconnection capacity;*
3. *Demonstrate proof of project financing or, since securing financing prior to completing the LGIA is highly unlikely, post 50% higher financial security deposit;*
4. *Demonstrate a PPA that is approved by the relevant Local Regulatory Authority (e.g., CPUC);*
5. *Demonstrate proof of access to the POI (such as sufficient land control for the gen-tie line); and*
6. *Demonstrate equipment purchase order.*

Projects that do not meet the additional readiness milestones and need deliverability upgrades could ask to be parked for one year before the deliverability upgrade is planned for in the next TPP cycle provided that they meet their readiness milestones at that time. The parking would be allowed for one cycle and, if a project does not meet its readiness milestones by that time, it will have to opt for Energy Only (EO) status or leave the queue.

4. The allocation of TPP-based deliverability to generation projects would occur after GIP Phase 2, rather than after Phase 1 as in the previous proposal.

We generally agree with this arrangement as we believe that the deliverability status of a project should be realized outside the GIP process and as part of the next TPP cycle, provided that the project has met all of the readiness criteria as set forth in our comment on question 3 above.

It is important to note that an updated deliverability assessment, as we have outlined in our previous comments (see the attachment to these comments), is critical to a meaningful TPP-GIP integration. Adopting CalWEA's proposed reforms in the deliverability assessment process is likely to avoid the triggering of major DNU's anyway. And since the DNU's will only be triggered by projects that are shown to be viable and very close to commercial operation, the chances that any of the identified DNU's become stranded investment will be reasonably low.

5. Allocation of TPP-based deliverability – and project's ability to retain allocation – will depend on the project's completion of significant development milestones that demonstrate high confidence in attaining COD. (Specification of appropriate milestones is covered in the next section.)

As noted above, even the Phase 2 RNU for a project should be identified only after the project has shown some level of readiness. Hence, we fully agree with the CAISO that the allocation of existing TP Deliverability should be made only to those projects that can demonstrate commercial readiness.

6. The allocation of TPP-based deliverability should achieve the following objectives as far as possible: (a) select projects with high probability of completion; (b) limit ability of non-viable projects to retain the allocation; (c) provide sufficient certainty to enable financing of viable projects; (d) objectivity and transparency.

CalWEA agrees with this concept.

Section 2. Details of individual elements of the proposal.

GIP Phase 1

7. For extremely large cluster groups compared to the amount of "TP deliverability" (the amount supported by existing grid plus all approved upgrades to date), GIP phase 1 will study deliverability in each area up to the amount of TP deliverability plus a reasonable margin. The intent is to avoid excessive DNU costs that can result from extremely large clusters, while providing useful information on needed DNU and associated costs if generation development exceeds grid capacity.

CalWEA agrees with this concept.

8. Phase 1 will study RNU for all projects in the cluster.

CalWEA agrees with this concept.

- 9 As a result of Phase 1 each project will know its RNU and associated costs, and these results will establish cost caps for RNU as they do today.

CalWEA agrees with this concept.

10. The DNU and associated costs resulting from phase 1 will be advisory. The only formal use of Phase 1 DNU costs in the TPP-GIP process will be to establish posting requirements for projects advancing to phase 2 under option (B), as described below.

CalWEA agrees with this concept. However, we emphasize that the deliverability assessment process should be corrected per our previous comments (see the attachment to these comments).

Project's Decision to Enter Phase 2 and Implications of Decision

11. After GIP Phase 1, each generation project advancing to GIP Phase 2 must elect either (A) – project requires TPP-based deliverability; or (B) – project is willing to pay for delivery network upgrades. Once a project chooses and the deadline for phase 2 is passed, the project cannot switch to the other option.

As noted above, only “viable” projects should be allowed to enter into GIP Phase 2 studies (or be parked for up to one year to either meet readiness criteria or leave the queue). Phase 2 studies for all such “viable” projects should only be used to identify their reliability upgrade needs. Past Phase 2, only those projects that have demonstrated progress in their readiness, by meeting additional readiness milestones as set forth in these comments, would be taken into the TPP to address their deliverability upgrade needs. All deliverability upgrades determined in this fashion would be directly rate-based in TAC.

12. A project choosing (A) will have to post for its RNU under today's rules, but not for DNU.

CalWEA agrees with this concept.

13. A project choosing (B) will have to post for both RNU and DNU. Its DNU posting amount will use phase 1 results for the project's study area, converted to a DNU rate (\$ per MW of deliverability) = (cost of incremental DNU)/(deliverability MW studied above TP deliverability amount). The posting amount will = rate x (project MW), where project MW reflects how the project is modeled in the deliverability study depending on the resource type, would typically be less than nameplate for renewables.

Since we do not believe that there should be two separate options for projects to move forward into Phase 2 studies, we do not have a position on this matter. In any case, we believe that all projects should only post for the RNU.

14. A project choosing (B) will be eligible for TPP-based deliverability if available, but should expect very low probability of obtaining it and should plan to fully fund its needed DNU.

Since we do not believe that there should be two separate paths for projects to move forward into Phase 2 studies, we do not have a position on this matter.

GIP Phase 2

15. ISO will perform a baseline re-study at the start of each phase 2 study process. The re-study will assess impacts of status changes – project drop-outs or revised COD, new transmission expansion approvals, etc. As a result, the RNU or DNU for some projects may be modified and their GIAs revised.

CalWEA understands CAISO's reasoning for performing baseline re-studies and, as a result, we support the concept. However, if the readiness criteria for projects entering into GIP Phase 2 studies are enforced by the CAISO, the likelihood that such re-studies cause major disruptions to previously developed transmission upgrade plans will be significantly reduced.

16. Phase 2 will study RNU for all projects in phase 2.

Since we do not believe that there should be two separate paths for projects to move forward into Phase 2 studies, we do not have a position on this matter.

17. Phase 2 study will assume that all TP deliverability is used up by (A) projects and existing queue, and then will model (B) projects at requested deliverability status to assess their incremental DNU needs.

CalWEA agrees with this concept.

Allocation of TPP-based Deliverability

18. Once phase 2 results are completed and provided to the projects, the 120-day period for negotiating and executing the GIA begins. Option (A) projects that demonstrate completion of certain milestones within this period will be able to execute GIAs at their requested deliverability status, with no cost responsibility for DNU. Option (B) projects that complete the same milestones would be eligible for TPP-based deliverability, but would receive an allocation only if capacity is available.

Since we do not believe that there should be two separate paths for projects to move forward into Phase 2 studies, we do not have a position on this matter. All projects that have met their readiness criteria, completed their Phase 2 study, and determined their reliability upgrades should sign their GIA based on their originally requested deliverability status and level. To the extent that there may not be enough transmission to meet the deliverability needs of these projects and these projects meet the higher-level readiness criteria, identified in our

comments on question 3, these projects should receive their added deliverability transmission needs as part of the TPP process.

19. The proposed milestones required are (a) completion of all permitting required to begin project construction, and (b) either a PPA approved by buyer's regulatory authority or demonstration of committed project financing. PLEASE COMMENT on whether these milestones are appropriate, or if not, what milestones would be preferable and explain why. Please keep in mind the objective that milestones must provide a high confidence that the project will meet its planned COD.

The readiness milestones identified by the CAISO are too restrictive and inconsistent with the realities of project development. Instead, we suggest that the CAISO use the milestones we proposed above in response to question 3.

20. PLEASE COMMENT on what could constitute evidence of committed project financing as an alternative to regulator-approved PPA for item (b) above.

Uncertainty regarding the cost and degree of customer responsibility would preclude most any lender from making any financial commitment to a project prior to finalizing its LGIA. Therefore, instead of presenting proof of financing, a project should have the option of posting an additional 50% of the financial security deposit requirement to show that it has met this commercial readiness milestone.

21. All option (A) projects that meet the milestones by the time required would be able to execute FC GIAs at this time, even if the total amount exceeds the TP deliverability available. In that case, the ISO would expand the TPP planning portfolio in that area for the next TPP cycle, to provide sufficient deliverability.

CalWEA agrees with this concept. Furthermore, since CalWEA believes that all projects should continue down a single path that is essentially the same as option A of the CAISO proposal, this feature would apply to all projects.

22. Any project that obtains TPP-based deliverability would have additional milestones in its GIA which track progress toward COD. Failure to meet one of these milestones would cause the project to lose its deliverability allocation, but would not necessarily terminate its GIA if the project wishes to continue as EO.

CalWEA agrees with this concept except we believe that CAISO should only take away the deliverability allocation of a project that is not meeting its GIA milestones after offering the project a sufficient cure period to meet the GIA milestone.

23. An option (A) project that does not meet the milestones by the time required would have an opportunity again in the next GIP phase 2 cycle, one year later. If it does not qualify by the end of the next year's 120-day GIA period, it must either withdraw from the queue or continue under an Energy Only (EO) GIA.

CalWEA agrees with this concept.

24. An option (B) project that does not obtain TPP-based deliverability in the current cluster cycle (120 days from phase 2 results to GIA execution) will no longer be eligible for TPP-based deliverability and must proceed to GIA that includes full self-funding of its DNU.

CalWEA does not believe that Option B is useful and therefore has no position on this concept.

25. If a (B) project drops out after phase 2 instead of executing a GIA that includes self-funding of its DNU, it loses a portion of its posting. PLEASE COMMENT on how much of the posting should be forfeited, and explain your logic.

CalWEA does not believe that Option B is useful and therefore has no position on this concept.

Other Proposal Elements

26. DNU paid for by an interconnection customer would fall under the merchant transmission provisions of the ISO tariff and would be eligible for allocation of congestion revenue rights commensurate with the capacity added to the ISO grid. The customer would be able to select a non-incumbent PTO to build the project, provided it is a “green field” project and the builder meets qualifications specified in the ISO tariff.

Even though CalWEA does not believe that Option B is useful, we believe that allowing non-incumbent PTOs to compete to build all GIP-triggered, stand-alone network upgrades will add the competition necessary to better manage the cost of building transmission upgrades.

27. If a (B) project funds DNU that provide more capacity for deliverability than the project needs, the funding party or parties would need to fully pay for the DNU, but would receive reimbursement for the excess deliverability from later projects that are able to use it.

CalWEA does not believe that Option B is useful and therefore has no position on this concept.

28. Some projects that go forward under these new provisions could be subject to reduction in annual net qualifying capacity (NQC) for one or more years. This could occur if transmission capacity in an area must be expanded through the TPP to accommodate the amount of deliverable capacity that achieves COD in that area. Consistent with the ISO’s January 10 discussion paper on cluster 1-2 approach, “existing” projects would not be subject to the reduction, but “new” projects would be. “New” would include all cluster 5 and later projects that elect option (A).

CalWEA agrees with this concept provided that the CAISO adopts a more suitable approach for its deliverability assessment process. Furthermore, the CAISO should plan for and ensure the development of all the needed transmission as part of its TPP process such that a “new” project whose deliverability is compromised can regain its original deliverability level as soon as possible.

29. It was suggested by some stakeholders at the January 19 meeting that as an alternative to applying NQC reductions if the need arises, the ISO should allow the new projects to count fully for resource adequacy without any NQC reduction so that the projects and the LSE buyers are insulated from any direct impacts, and then make up for any resulting shortfall in resource adequacy capacity via ISO backstop capacity purchases. PLEASE COMMENT on this proposal.

Rather than arbitrary and temporary solutions, CalWEA once again urges the CAISO to address the source of the problem: designing Delivery Network Upgrades to meet extremely rare system conditions and assuming that renewable generators operate at their full capacity, even though the RA capacity that projects are eligible to provide will be less (in some cases, much less) than full capacity. For more information, see our previous CAISO comments, attached, and a recent filing before the CPUC:

[http://www.calwea.org/pdfs/publicFilings2012/CalWEA Comments on Phase 1 Scoping Memo and Ruling.pdf](http://www.calwea.org/pdfs/publicFilings2012/CalWEA_Comments_on_Phase_1_Scoping_Memo_and_Ruling.pdf)

30. Please use the space below to offer comments on any other aspect of the proposal not covered above.

ATTACHMENT

Comments of the California Wind Energy Association on the CAISO January 10, 2012 Revised Discussion Paper on Special Deliverability Requirements for Clusters 1 and 2

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Introduction

The California Wind Energy Association (CalWEA) appreciates the opportunity to comment on the California Independent System Operator's (CAISO's) January 10, 2011, revised discussion paper on special deliverability requirements for Cluster 1 and 2 interconnection requests. The CAISO's revised discussion paper presents a specific approach for addressing an intractable situation that the state faces in dealing with the cost and permitting requirements of building the extensive Deliverability Network Upgrades (DNU) that the CAISO, through its deliverability assessment process, has determined are needed to meet the interconnection requirements of the generator interconnection requests associated with Queue Clusters 1 and 2 (QC 1&2). The CAISO's proposed approach broadly consists of the following steps:

- A. Based on an assumption that not all interconnecting generation projects in QC 1&2 will complete their projects, even though they have completed their Phase 2 studies and met all their interconnection process requirements, the CAISO proposes to eliminate, based mainly on their cost, some DNUs.¹
- B. The CAISO proposes criteria for rationing the "reduced deliverability" resulting from the elimination of the DNUs among the remaining generators on an ongoing basis.
- C. The CAISO proposes an approach to restore the "deliverability shortfall" to those interconnecting generation projects that, despite CAISO's drop-out assumption, do

¹ Although the CAISO indicates that it considers the probability that some interconnecting generation projects will not materialize, its sole criterion for eliminating DNU projects is effectively the cost of such projects, as discussed below.

actually continue to develop and face reduced or no deliverability from the DNU eliminations.²

An important element of the CAISO proposal is that, once a DNU project is eliminated, the cost associated with that project is also eliminated, leading to a generally more reasonable network transmission cost responsibility for the QC 1&2 generators. Furthermore, the CAISO offers to extend this approach to generators in Queue Clusters 3 and 4 (QC 3&4) with a similar generally favorable outcome.

CalWEA generally supports this CAISO initiative because it leads to the elimination of very expensive DNUs that, as CalWEA has contended for a long time, were by and large unnecessary to start with. This, in turn, should reduce the interconnection cost responsibility and increase the viability of good renewable projects. However, CalWEA has grave concerns with this well-intentioned, yet speculative and kludgy, approach particularly as it serves to extend the life of what we consider to be a totally broken deliverability assessment process as currently used by the CAISO. Our main concerns and suggestions are as follows:

1. The CAISO's current deliverability assessment process, which CAISO will continue to use as the main building block of all the steps of this new process, is fundamentally broken and reforms must be focused there. This is the single most effective step that CAISO could use to restore rationality to its interconnection study process and will eliminate the need for all kludgy solutions, such as the one proposed here, to fix its faulty results. Furthermore, we believe that if the adjustments to the deliverability assessment process, as proposed in these comments, are adopted by the CAISO and retroactively applied to QC 1&2 generators, numerous DNUs will be eliminated in a technically consistent and sound manner rather than the kludgy approach proposed here.
2. The process for determining DNU elimination is rather arbitrary and focuses mainly on the cost of DNU projects as opposed to their effectiveness in achieving deliverability of the existing and future generation projects as well as the impact of such DNU projects on the overall reliability and efficiency of the CAISO controlled grid. We are especially dismayed that the proposed approach serves mainly to eliminate bulk system upgrades that normally offer broader system benefits.
3. The processes for rationing the reduced deliverability resulting from the elimination of DNUs is speculative at best and could lead to serious unintended and adverse consequences such restricting the deliverability of an otherwise viable renewable generation project, jeopardizing its ability to meet its Power Purchase Agreement (PPA) obligations or secure one, and thus jeopardizing the ability to finance the project.

² The CAISO proposed to deal with this "deliverability shortfall" by planning for addition policy-driven transmission projects through its annual TPP process.

1. The CAISO Deliverability Assessment Process Must Be Reformed

As CalWEA also stated in our comments on the deliverability of distributed generation resources, we continue to have major and fundamental technical concerns with the CAISO's deliverability assessment process and, as a result, we question any results produced through such a process. With the understanding that the main purpose of the deliverability assessment for new projects is to ensure that: the existing and already studied generators, as well as intertie imports, are deliverable at the time of the peak load condition at the deliverability levels previously determined for them, CalWEA has the following concerns with the CAISO's deliverability assessment:

- a. The dispatch level used for the intertie imports and for inside the CAISO Balancing Authority Area (BAA) generation resources in the deliverability assessment process bear no relation to reasonable expectations of system operation as they neither correspond to any historical performance of such imports or generation levels nor to any economic/reliability dispatch mechanism that would be used in the future for these resources. The CAISO creates its deliverability basecase by starting with a WECC transmission basecase based on 1-in-5 peak load condition (a system condition which occurs for a few hours every 5 years). The CAISO then adjusts the dispatch for intertie imports into its BAA and for existing and already studied generation inside its BAA according to a formula presented in its deliverability assessment process. The goal of this dispatch adjustment is to stress the parts of the transmission system that the generator(s), whose deliverability is being studied, rely on for delivering their output to meet the load in the already stressed 1-in-5 peak load case.

As noted above, the selected dispatch levels have no relation to reasonable expectations of system operation. CalWEA believes that, given the goal of this study, which is to ensure the continued deliverability of resources previously determined to be deliverable at certain levels, the import dispatch on a particular intertie should be limited to the Maximum Import Capacity (MIC) of that intertie. CalWEA also believes that the dispatch level of an existing inside-CAISO-BAA generator must be limited to the assigned deliverability level for that generator. And the dispatch level of a new generator whose deliverability is being studied must not exceed the RA capacity credit associated with that generator – for example, for a new wind generator whose deliverability is being studied, the dispatch level, unless requested otherwise, should not exceed 30% of its nameplate capacity as opposed to the 40% to 64% nameplate capacity as typically assigned by the CAISO. If there is a need for the intertie and/or generation dispatch levels to exceed the aforementioned maximum amounts in order to build a functioning basecase, such dispatch needs to be just high enough to make the basecases work and not any higher.

- b. The consideration of Category C contingencies in the deliverability assessment process, in conjunction with the unlikely operating conditions described above, represents a super-stressed system condition whose likelihood of occurring in reality is effectively zero. Again, considering the goal of the deliverability assessment, and given that the assumed operating scenario is extremely unlikely to occur in real-life, CalWEA does not see the relevance of considering Category C contingencies in the deliverability studies. Of course, as history has shown, the CAISO has determined the need for some of the largest DNUs based on the study of Category C contingencies in its deliverability assessment process.
- c. The CAISO's application of network upgrades in lieu of other remedies in the deliverability assessment process ignores significantly lower-cost and appropriate solutions to deal with the reliability criteria violations identified in the related studies. Currently, the CAISO only considers network upgrades to address the reliability criteria violations determined as part of the deliverability assessment contingency analysis as discussed in Step b above and despite the fact that the studied scenario has no foundation in reality. In effect, the CAISO refuses to consider any of the following significantly lower-cost and appropriate solutions to deal with the reliability criteria violations that it detects in its deliverability studies:
 - The use of congestion management to the extent that resources that need to be dispatched down are dispatched only up to their RA capacity value; and
 - The use of Special Protection Schemes (SPS) for all Category B and C contingencies. Furthermore, the use of load shedding should be allowed along with SPS for all Category C contingencies (although, as noted above, CalWEA believes that studying Category C contingencies for deliverability assessment is not justified to start with).

To make matters worse, the DNUs that the CAISO selected to address the reliability criteria violations detected in its deliverability assessment seem to consistently be very costly, such as the addition of one or more major 500 kV transmission upgrades. This contrasts sharply with the transmission upgrades designed for the more realistic reliability criteria violations encountered as part of the annual CAISO TPP reliability assessment, which almost always consist of low-cost local transmission solutions. In our view, this situation is exactly backwards: any major system upgrades that are needed should be accomplished in the TPP, not the generator interconnection process.

Finally, we suggest that the CAISO consider moving the entire deliverability assessment out of the generation interconnection process and into the TPP process. Discussion of this concept belongs in the GIP-TPP integration stakeholder process and we stand ready to work with the CAISO to address the perceived concerns in making such an arrangement work.

2. The Process to Determine DNU Elimination Is Arbitrary

The CAISO presents the following criteria for eliminating the “probably not-needed” DNUs:

- (a) The network upgrade consists of new transmission lines 200 kV or above, and has capital costs of \$100 million or greater; or
- (b) The network upgrade has a capital cost of \$200 million or more.

The CAISO’s proposed process for eliminating transmission upgrades solely focuses on eliminating the more expensive and potentially more difficult-to-permit transmission projects as opposed on the effectiveness of such upgrades. Thus, this process has no sound technical justification. Technically sound criteria for DNU elimination should be based on an optimization process that would, among other objectives, maximize the total MW of generation deliverability using low cost and low environmentally impactful retained DNUs.

Although attaining a rigorous solution based on the technical objective presented above may seem difficult at first glance, a reasonable approximate solution should be straightforward to design and implement. As a start, CalWEA’s proposed reforms (above) for the deliverability assessment process would go a long way to rationally achieve the goal of reducing current unnecessary DNUs and stay in line with the effectiveness objectives laid out here.

3. CAISO’s Proposed Approach to Ration Deliverability after DNU Elimination Is Speculative and Could Have Severe Unintended Consequences

Since the CAISO’s proposed approach for eliminating DNUs assumes that some interconnecting generators requiring the eliminated DNUs will still go forward, CAISO is forced not only to ration deliverability among those generators for which those eliminated DNUs were deemed necessary but also to deal with the impact of DNU reduction on future interconnecting projects. So the kludge perpetuates beyond QC 1&2 by also impacting the deliverability assessment process for QC 3&4 and so on. The following are some of CalWEA’s concerns with the probable “collateral damage” associated with this CAISO proposal:

- Assuming that some of the generators in QC 1&2 will go away, probably a fair but still arbitrary assumption, the CAISO proposes to allow every generator in QC 1&2 to retain its assigned deliverability level even with the reduced DNU requirement. However, since the DNU elimination is based on the cost of DNU projects and not their effectiveness in achieving the deliverability of the QC 1&2 generation projects, there are no guarantees that even with the departure of some QC 1&2 generation projects, the remaining generators will retain the

deliverability levels required by their PPAs.

The CAISO's proposal to restore required deliverability level to the remaining generators who lose deliverability in this fashion calls for planning for additional DNU's (as policy upgrades) as part of its annual TPP process. This additional step not only adds uncertainty and delay to restoring the deliverability of such generators, but is also likely to lead to similarly offensive DNU's due to the fundamentally faulty nature of the CAISO's current deliverability assessment process. In the meantime, generation projects facing reduced deliverability under the conditions presented here, particularly those whose PPA commitments would be compromised, will face significant uncertainty when trying to secure financing or will simply fold.

- In light of its decision to get rid of some QC 1&2 DNU's, the CAISO proposes another process for determining the DNU's for QC 3&4 generation projects that move into their Phase 2 studies. Unfortunately, this additional process, as well-intentioned as it might be, is fraught with additional arbitrariness.

The CAISO proposes that, in the basecase used to study the deliverability of QC 3&4 generation projects, it would eliminate the target DNU's along with a set of QC 1&2 generation projects that relied on the target DNU's to become deliverable. Of course, the elimination of QC 1&2 generation projects (projects that are still in the queue and are living up to all their interconnection requirements and obligations) will be by and large arbitrary and mainly based on the judgment of the engineers and other analysts who will be setting up the QC 3&4 deliverability assessment basecase. As one can readily foresee, the process and the outcome of deliverability assessment for individual QC 3&4 projects will strongly depend on which QC 1&2 generators would be dropped when building such a basecase. This can readily lead to a very arbitrary and discriminatory outcome whereby some generation projects in QC 3&4 can fare very well and others can fare very poorly based solely on the QC 1&2 generation projects that were selected for elimination in building the basecase. And the arbitrariness and discrimination initiated in this fashion is expected to continue to propagate into all future queue clusters.

CalWEA believes that these and other potentially severely adverse unintended consequences of the arbitrary approach presented by the CAISO will require the development of further kludgy solutions that will eventually lead to the total unraveling of the entire process. Instead, CalWEA believes that the deliverability assessment process reforms that we have proposed here, especially once combined with the broader reforms being discussed as part of the GIP-TPP integration initiative, will fundamentally and systematically address the issues of oversized DNU's and will obviate the need for kludgy solutions now and going forward.