

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 DNU.¹
- B. The CAISO proposes criteria for rationing the "reduced deliverability" resulting from the elimination of the DNU 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 DNU's 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 DNU's 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 overdesigned DNU's and will obviate the need for kludgy solutions now and going forward.