Comments of the California Wind Energy Association on the CAISO December 12, 2011 Issue Paper and Straw Proposal on Resource Adequacy Deliverability for Distributed Generation

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Submitted On: January 5, 2012

Introduction

The California Wind Energy Association (CalWEA) appreciates the opportunity to comment on the California Independent System Operator's (CAISO) December 12, 2011, issue paper and straw proposal for determining and assigning resource adequacy deliverability for Distributed Generation (DG) resources. After identifying the issue requiring resolution, the CAISO's straw proposal offers the following two main steps for assigning deliverability to DG resources:

A. Establish an annual process, tied to the existing Transmission Planning Process (TPP) and using the CAISO standard Deliverability Assessment Process (DAP), to determine the amount of deliverability that can be allocated to specific transmission substations downstream from which DG resources would interconnect according to the annual Transmission Planning Process (TPP) 33% Renewable Portfolio Standard (RPS) scenarios; and

B. Allocate the amount of DG deliverability determined in the first atep A to Local Regulatory Authorities (LRAs) and Load Serving Entities (LSEs) using a process that is essentially the same as the existing process for allocating import capacity on the interties to LSEs, and the LRAs and LSEs would then assign such deliverability to specific DG resources. The deliverability assigned in this fashion to a specific DG resource will stay with that resource.

CalWEA commends the CAISO for recognizing this important issue and for developing this framework for determining and assigning deliverability to DG resources. CalWEA finds the proposed process and broad methodology to be generally logical and by and large straightforward to implement and administer. However, to make the process equitable and efficient, fundamental improvements are necessary within the first step of the two-step process and additional questions and concerns still need to be addressed. In summary:

1. The CAISO's current DAP, which will be used for this new process, must be reformed;

2. The annual process for determining the deliverability of DG resources should be combined with the current annual process used to allocate full (or partial) deliverability for Energy Only (EO) resources already operating and interconnected or in the Generation Interconnection Process (GIP) or Wholesale Distribution Access Tariff (WDAT) queues; and

3. The CAISO should explain how the proposed process intends to address operational impacts of large levels of DG penetration and the firmness of deliverability allocated to DG resources as compared with the deliverability assigned to generators interconnecting through various GIP and WDAT processes.

1. The CAISO Deliverability Assessment Process Must Be Reformed

CalWEA continues to have major concerns with the application of the CAISO's Deliverability Assessment Process and, as a result, questions any results that come from such a process. Realizing that the main purpose of such study is to make sure that (i) the existing and already studied interconnecting generators, as well as intertie imports, are deliverable at the time of the peak load condition, and (ii) the deliverability of such generators and intertie imports, as previously determined, is preserved, CalWEA's concerns with the CAISO's DAP are as follows:

a. The selection of the intertie import and inside CAISO Balancing Authority Area (BAA) generation dispatch levels for the DAP have no relation to the expected reality of system operation as they neither correspond to any historical performance of the intertie imports into or generators inside the CAISO BAA nor to any economic dispatch mechanism that would be used to dispatch such import or generation levels. For the purpose of conducting the DAP, the CAISO starts up with a WECC transmission basecase based on 1 in 5 peak load 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 DAP. The goal of this dispatch adjustment is to stress 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 1 in 5 peak load case.

   As noted above, the selected dispatch levels have no relation to the expected reality of system operation as they neither correspond to any historical performance of the intertie imports into or generators inside the CAISO BAA nor to any economic dispatch mechanism that would be used to dispatch such import or generation levels. CalWEA believes that given the goal of this study, which is to ensure the continued deliverability of resources previously

determined to be deliverable, the import dispatch on a particular intertie should be limited to the Maximum Import Capacity (MIC) of that intertie. CalWEA also believes that an inside CAISO BAA generator's dispatch level must not exceed the RA capacity credit associated with that generator – for example for a wind generator, the dispatch level should be as low as 30% (or lower) of its nameplate capacity. 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 for the DAP, in conjunction with the extraordinarily-low probability operating conditions described above in Step a, results in the study of a super-stressed system condition with even less probability to occur in reality – effectively approaching zero. Again, considering the goal of the deliverability assessment, and given that the operating scenario has no foundation in reality and will be extremely unlikely, if ever, to occur, CalWEA does not see the relevance of considering Category C contingencies for performing reliability type studies that are used in the deliverability assessment process. Unfortunately, CAISO systematically performs its deliverability assessment based on Category C contingencies, which, as described above, results in the study of a super-stressed system condition that is extremely unlikely to ever occur.

c. The CAISO's selection of network upgrades in lieu of other remedies in the DAP ignores significantly lower cost and appropriate solutions to deal with the reliability criteria violations identified in the studies. CAISO selects remedies to deal with reliability criteria violations as determined as part of the contingency analysis discussed in Step b above. However, even though the studied scenario has no foundation in reality, 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 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 contingencies. The use of load shedding should be allowed along with SPS for all Category C contingencies.

Instead, the CAISO consistently opts for network upgrades to remedy reliability criteria violations detected in its deliverability assessment process. Furthermore, the network upgrades selected by the CAISO seem to consistently be very costly and regional in nature, such as the addition of one or more major 500 kV transmission

upgrades, as opposed to the lower-cost local solutions that it typically develops as part of its annual TPP process.

2. The Processes for Determining Deliverability of DG and Other Energy-Only Resources Should Be Combined

The CAISO established an annual process, as part of its 2010 GIP reform stakeholder process, for determining and assigning full (or partial) deliverability to EO resources that would request deliverability as part of the annual Interconnection Request (IR) process based on the availability of transmission capacity in the system – the process is presented in Section 8.2 of the Appendix Y of the CAISO tariff (GIP For Interconnection Requests). The process to assign deliverability to DG resources essentially follows the same principles as the one established to assign deliverability to requesting EO resources. Hence, it seems equitable and efficient to combine these two processes into a single study. Indeed, the CAISO proposal offers no rationale for conducting a separate process for DG resources. Furthermore, the timing of the single combined process for assigning deliverability to the requesting EO and to the DG resources should be synchronized to correspond to the timing already established for assigning deliverability to the requesting EO resources, i.e., following the completion of Phase 2 studies for interconnecting generators in the annual GIP processes.

These changes to the CAISO's proposed process to assign deliverability to DG resources will have the following major benefits:

a. The "more certain" GIP resources and their lumpy transmission upgrades coming from Phase 2 studies will be known and there will be no need to rely on the convoluted approach proposed in the straw proposal to deal with the deliverability of highly uncertain Phase 1 interconnecting GIP resources;

b. Interconnecting GIP resources requesting Full Capacity Deliverability Status and paying for network transmission upgrades will receive the first opportunity to utilize the transmission capacity made available through the most recently identified lumpy transmission upgrades from the TPP and from the previous GIP cycles;

c. The deliverability allocation process would avoid providing DG resources, which are not paying for deliverability, with preferential access to available transmission capacity relative to other energy-only projects – i.e., a combined process would provide all energy-only generation resources that seek the benefit of obtaining deliverability status from existing available transmission capacity with equal access to such capacity; and

d. The CAISO's highly constrained resources will be conserved by performing fewer studies.

3. The CAISO Should Explain How the Proposed Process Will Address Specific Questions and Concerns

The CAISO should explain how its proposed process will address the following specific question and concerns about the proposed process:

a. There are mounting concerns with the operational impact of large volumes of DG resources in the bulk power systems. Many researchers wonder about the dire impact on system operation if the transmission system operator has no control on the operation of DG resources. What is the process that CAISO intends to implement to gain control, or at least observability, over the DG resources that gain deliverability in this fashion?

b. The deliverability assigned to all resources depends on both the load levels at various parts of the system and the available transmission capacity. CalWEA believes that deliverability assigned to DG resources will be more sensitive, perhaps significantly more, to local load conditions than is the case for the deliverability level of the central plant resources. How does CAISO intend to treat deliverability assigned to DG resources if the local load conditions change in a meaningful fashion from one year to the next?