

Stakeholder Comments Template

**Deliverability of Resource Adequacy
Capacity on Interties**

Submitted by	Company	Date Submitted
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Both Solar Gen 2 LLC and Green light Corporation are in the development stages of over 300 MW of renewables projects in Imperial Irrigation District and are active in IID transitional Cluster,

1. Do you have any comments on the overall issue that the ISO is proposing to address? For example, has the ISO adequately framed the issue?

ZGlobal offers the following comments to the CAISO’s March 15, 2011 Issue Paper for Deliverability of Resource Adequacy Capacity on Interties and the associated stakeholder process to explore changes to the methodology for calculating the Maximum Import Capability (MIC) for Resource Adequacy (RA) purposes.

California has taken a leading role in the development of renewable resources, a majority of which are required to be located within California. Though California is one state, a majority of its electrical system is primarily subdivided into five separate and distinct Balancing Authorities (BAs). They include:

1. California Independent System Operator (CISO)
2. Sacramento Municipal Utility District (SMUD)
3. Turlock Irrigation District (TID)
4. Los Angeles Department of Water and Power (LDWP)
5. Imperial Irrigation District (IID)

In order to transfer energy and/or capacity between the BAs, BAs are required to adhere to specific rules and standards dictated by the North American Reliability Corporation (NERC) and the Western Electric Coordinating Council (WECC). Part of the process includes coordinated planning among the BAs to determine how much energy and capacity can be reliably transferred between BAs in order for each to meet its load obligations and operating reserve requirements. One aspect of the planning criteria that has been established by the CISO is the determination of MIC that establishes the volume of energy and/or capacity that can be transferred between BAs

that it will count on for ensuring that it has enough capacity to meet its planning reliability requirements.

The issue is that the current methodology that the CISO utilizes for determining MIC for RA counting purposes (namely, relying on historical averages) has the unintended consequence of erecting artificial barriers to constructing power generation facilities in one BA that intends to transfer its energy and capacity to another BA. The focus of these comments is to highlight those barriers and propose remedies for the CISO's consideration.

Issues

- **Tying MIC to historical tie schedules artificially reduces the value of projects within California, but external to the CAISO BAA.**

The primary electrical value of power generation facilities is energy and capacity. The capacity value of a power generation facility is determined by its ability to deliver its electrical output from the facility to the load center. For facilities within the CISO, the CISO determines this ability via a "deliverability study" and then deems the facility "deliverable" based on that assessment. That assessment may determine that the facility is "deliverable" without transmission equipment upgrades or if upgrades are required, determine specific system upgrades needed to make it fully deliverable. For facilities outside the CISO, the CISO determines the ability for a **BA** such as SMUD (**not the specific external facility**), to "deliver" from the host BA to the CISO based on historical usage up to the intertie rating. That "deliverability" is not assigned to specific power plants in the other BA, but rather apportioned to load serving entities (LSEs) on a yearly basis. This inconsistency results in disparate treatment for generation projects located within the CAISO and external to the CAISO.

As a result, when LSEs compare the value of a facility within the CISO, the facility located within the CISO has capacity value (RA). However, the very same facility located within one of the other four adjacent BAs, does not. To make it worse, if there has been little or no historical scheduled flow across the intertie, there is no ability for the facility to claim RA although actual physical transmission capacity may exist and capacity has been added within California, albeit not within the CISO BAA. An artificial barrier has been imposed. As a result, the practical outcome is that the facility interconnected within one of the other four BAs other than the CISO, is of reduced value. This "external" unit is thus placed at a disadvantage despite no physical barrier to the imported energy.

Example

The intertie between IID and CISO at Imperial Valley Substation (IVS) is rated for 239 MW. For 2011, historical usage of -159 MW (that is, 159 MW of scheduled flow from the CISO into IID through IVS) has dictated that the CISO count the "deliverability" between CISO and IID as **0 MW** although 239 MW of actual, physical transfer capacity is available. Further, the imported energy from the adjacent BA would constitute a counter-schedule thus increasing the efficient use of available transmission not recognized by the present CISO RA tie allocation process. Any facility that connects on the IID side of IVS will thus be de-valued because of the lack of RA, while the very same facility connected one mile away on the CISO side of IV would receive full RA value.

- **The current method for calculating MIC does not fully consider or adhere to actual intertie OTC ratings.**

Transmission path ratings between BAs do not change often and when they do, it is not without extensive studies and agreement among a number of entities, including the adjacent

BAs. Assuming a MIC of 0 MW at an intertie, while the intertie rating is actually on the order of several hundred MWs runs the danger of assigning deliverability to interconnecting facilities on the CISO side in excess of what can actually be accommodated based on the scheduled use of the intervening intertie. .

- **When a facility's value is artificially reduced via the present MIC calculation, it precludes the facility from inter-connecting to a transmission-ready system in the adjacent California BA because LSEs within the CISO will not be able to realize the full value of facility's energy and capacity.**

This is the unintended consequence of the present CISO RA Tie allocation process. Despite the fact that the resource is fully available, it cannot be counted as such, even though intertie capacity limits are respected. The result is fallowed transmission capacity in other California BAs and between the CISO and those BAs. The ability to transfer energy and capacity from California BAs rich in renewable energy to the CISO is artificially limited, impeding California's' ability to achieve the 33% RPS goal

- **Finally, the nature of the year-to-year allocation does not give adequate assurance to LSEs or developers that projects within California BAs will realize full value although they add capacity to the electrical system within California.**

This issue appears to be out-of-scope for this stakeholder process, but it is important to highlight this additional concern relative to the present process...

2. Do you have any suggestions on how this issue might be addressed and resolved? If you have a suggested approach, please describe your proposal and its perceived benefits and provide examples to illustrate your proposal.

In order to align processes with the California renewable energy development effort both within and outside of the CISO, and to ensure that assessment of RA capacity (i.e., MIC) is not artificially constrained up to the available OTC intertie capacity, the CISO should modify its process for determining MIC. The CISO's MIC process should incorporate known projects within the other four California BAs that predominantly reside within California that intend to transmit energy and capacity to LSEs within the CISO, and then comparing that with historical usage and physical intertie limits. The CISO should not insert itself into the adjacent BAA's transmission queue process, but rather coordinate with the BAA to determine the export capability that should be counted for the MIC determination. As long as there is intertie capacity available and accounted for, there is no reason discount the ability to deliver between BAs, on the respective interties.

Example

Intertie rating between the CISO and BA1 = 200 MW

Historical usage = 0 MW

Existing contracts/pre-RA commitments = 50 MW

Current CISO MIC calculation = 50 MW (0 MW for historical usage + 50 MW for pre-RA commitment obligations)

If a generating facility of 75 MW was to interconnect to BA1 and notify BA1 of its intent to deliver to an LSE within the CISO and BA1's interconnection process allowed, then the CISO's MIC calculation can count that RA as available to the intertie for purposes of MIC. The new MIC to accommodate the resource would be 125 MW (0 MW for historical usage + 50 MW for pre-RA commitment obligations + 75 MW for the generation resource).

If a second generating facility of 100 MW was to interconnect to BA1, the CISO could not accommodate any more than 75 MW. Assuming BA1's interconnection process allowed and BA1 notified the CISO, then the new MIC would be 200 MW (0 MW for historical usage + 50 MW for pre-RA commitment obligations + 75 MW for generation resource number 1 + 75 MW for the second generation facility). The remaining 25 MW from within BA1 could not be used to increase the MIC.

This approach aligns with State RPS legislation that encourages in-state renewable procurement and thus the proposed adjustment to the present MIC process would only apply to those adjacent BA's that are "predominately" in state.

3. If you have any additional comments, please provide them here.

Implementation of this proposed modification to the MIC process necessitates cooperation with the adjacent BAs' transmission planning processes. In this manner, an intertie's MIC for RA purposes would be determined based on the adjacent BAs' planning studies and a rational assessment of generation interconnections that utilize the interties. Thus, the question of the external facility queue is left to the individual BAs to reconcile based on their internal processes.