



November 9, 2011

Submitted by email to the CAISO at [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com)

**RE: Questions of the Large-scale Solar Association on the CAISO's Draft Discussion Paper: Cluster 1 and 2 Deliverability Concerns/Provision of Additional Information**

The Large-scale Solar Association (LSA) submits these comments in response to the CAISO's November 1<sup>st</sup> document entitled Draft Discussion Paper: Cluster 1 and 2 Deliverability Concerns/Provision of Additional Information (Study). The CAISO conducted the Study in response to stakeholder concern about "long development timelines and high costs of network upgrades" identified in the Cluster 1/Cluster 2 (C1/C2) Phase II Study. LSA appreciates the CAISO's willingness and efforts to address interconnection customers' concerns; however, LSA has several concerns and questions about the Study.

The Study provides the amount of generation that would have to drop out of the CAISO interconnection queue to remove the need for three large transmission upgrades identified in recent Cluster 1/Cluster 2 (C1/C2) Phase II Studies:

- Mohave–Lugo 500 kV line loop-in Pisgah 500 kV Substation and series capacitor banks on both Pisgah–Nipton and Pisgah–Mohave 500 kV lines
- New Colorado River – Red Bluff No.3 line
- New Red Bluff – Valley 500 kV line with series capacitor banks

The Study states that, "given the excessive amounts of generation currently in the ISO queue, it is highly likely that enough generation in the related study areas will drop out, such that the transmission upgrades are not required," at least not for Clusters 1 and 2. (LSA notes that the withdrawals that would make the identified upgrades unnecessary are relatively modest – about 10-20% of the total generation (13,500 MW) the study assumes would use the overloaded lines.) It's not clear whether CAISO believes that those upgrades could be needed for later study clusters, since they were included in the base cases for those later projects.

LSA's questions and concerns about the study are described below. They relate to these issues: (1) the selection of Study topics; (2) use of the Study; (3) Study assumptions and findings; and (4) additional information requested to help interpret the Study results. LSA is concerned that the Study could introduce more uncertainty if its implication and use are not clarified. LSA looks forward to receiving the additional information requested, and to further dialog (and perhaps follow-up analyses).

Generally, LSA is concerned the scope of this study is narrow but the potential implications are large. Because the size of the queue is much greater than the renewable capacity that will probably be built, the problem of inflated base-case generation amounts is not limited to Clusters 1 and 2 but extends back to the Transition Cluster and forward to Clusters 3 and 4.

The pervasiveness of the problem, and the lack of a formal means to address it, supports a broader and more comprehensive solution that considers more than a single study cluster, for example First Solar's proposal in the TPP-GIP Integration initiative, or a variation thereof, to better tie allocation of transmission capacity to LSE procurement.

Generally speaking, any modifications to the upgrades identified in earlier studies would significantly impact projects in the clusters following them. LSA encourages the CAISO to consider potential impacts on later clusters, and the broader approach suggested above, before taking any actions as the results of this study.

With respect to the process for this effort, LSA urges the CAISO to post stakeholder comments received on the Study on its Web site. The CAISO should also respond in writing to those comments, or hold a stakeholder meeting to address these issues.

### **Study topics**

LSA requests additional explanation about how the CAISO selected the upgrades and areas studied. Specifically:

- How did the CAISO select the three identified transmission upgrades to study here?
- Will the CAISO be conducting a similar analysis for other upgrades and/or regions? For example, can the CAISO estimate the amount of effective MWs needed to drop in order to eliminate the need for the larger Delivery Network Upgrades (DNU) identified in that Phase II Study Report, e.g., the Los Banos-Westley line reconductoring?

### **Use of the study**

LSA asks the CAISO to clarify how the Study will be used, since it does not appear to constitute a modification of the C1/C2 Phase II Study. Otherwise, it's not clear how the Study would help mitigate the impacts of the recognized inflated transmission upgrade and cost estimates.

For example, without a Phase II Study modification, the Generator Interconnection Agreements (GIAs) for these C1/C2 projects will reflect these unneeded upgrades, including:

- Developer commitments to finance them;
- PTO commitments to build them (which developers would expect them to pursue promptly and diligently); and
- The long timelines needed to construct them.

Similarly, without a revised Phase II Study, the Second Interconnection Financial Security (IFS) Postings for C1/C2 projects, due in February 2012, will also reflect upgrades not needed for those projects.

Does the CAISO plan to modify the C1/C2 Phase II Study to reflect more realistic assumptions about higher-queued projects and, therefore, more realistic conclusions about transmission upgrades needed? Some options include, e.g.: (1) removing higher-queued projects without GIAs and/or PPAs; (2) limiting generation quantities in each area to the levels in the TPP supply portfolios; and/or (3) deleting projects to reflect the results of the current CAISO queue-clearing efforts. Would the CAISO consider re-doing Transition Cluster studies to also reflect these more-realistic estimates?

If the CAISO modifies the C1/C2 Phase II Study to reflect more realistic assumptions about higher-queued projects, and that re-study removes one or more of the identified upgrades, what would happen if those upgrades are needed to serve lower-queued projects? Would the PTOs finance and build them (perhaps subject to abandoned-plant treatment), since tariff rules do not allow for re-assignment of costs to later projects (at least, those in Clusters 3 and 4)? Would the CAISO also re-do the Cluster 3 and 4 studies, since those results were based on the results of the C1/C2 Phase II Study?

If the CAISO is not planning to modify the C1/C2 Phase II Study, how does the CAISO envision that the Study will help address immediate problems like costs and contracting with utilities? LSA would also like additional information about how later project dropouts would be addressed, e.g.: (1) any re-studies needed to confirm the lack of need for these upgrades; and (2) process for reductions to developer cost responsibility and IFS posting requirements.

### **Specific assumptions and findings**

The CAISO should provide more information about the assumptions in the Study.

For example, the CAISO should explain the 7% DFAX threshold, compared to the 5% of DFAX threshold we understand that CAISO uses to determine generator contribution to facility overloads in interconnection studies generally.

In addition, the document provides wide ranges of capacity dropouts (over 1,000 MW between upper and lower bounds) needed to avoid the identified upgrades. What are the key contributors to these ranges, i.e., what is the CAISO methodology for backing down generators and determining these numbers? Have there been any dropouts of effective projects (i.e.,  $DFAX \geq 7\%$ ) since the C1/C2 Phase II Studies were conducted?

LSA also requests information on alternative solutions considered. It appears that the identified upgrades are needed only to mitigate overloads on the Lugo-Victorville line. Did CAISO consider upgrading the Lugo-Victorville path to mitigate the identified overloads in lieu of the Delivery Network Upgrades identified on p. 2? If not, please explain why this upgrade would not be a realistic and more cost-effective alternative than the identified upgrades.

Finally, In every case studied except one, the generation reductions that would make the identified Network Upgrades no longer necessary exceeds the amount of Cluster 1 and 2 capacity in the East of Lugo and Eastern Areas – about 1600 MW. (The exception case is a special one that assumes a different network upgrade [series compensation] and assumes a set of highly effective generators.) Doesn't this imply that the identified upgrades were required *before* the addition of the Cluster 1 and 2 capacity? If this is the case, why were Clusters 1 and 2 responsible for these upgrades in the first place?

### **Additional information requested**

LSA requests that the CAISO provide the following information about the effective generation projects for each upgrade identified, to assist stakeholders in interpreting the Study results:

- A list of the 13,500 MW of projects with  $DFAX \geq 7\%$  with respect to these upgrades, including the Queue position, NQC and DFAX for each. (Note that Effectiveness Factors (similar to the DFAX) is provided for operating projects in the CAISO's annual Local Capacity Technical Studies.)

- The GIA status of the projects with GIAs, i.e., whether any of those projects have issued suspension notices to the CAISO.
- The PPA status for these projects, in aggregated terms (e.g., aggregated by effectiveness factors, county, and/or region) if needed to protect developer confidentiality.