Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your written comments on the 2018 IPE stakeholder initiative Revised Straw Proposal posted on July 10, 2018.

Submit comments to InitiativeComments@CAISO.com

Comments are due July 31, 2018 by 5:00pm

The straw proposal posted on July 10, 2018 and the presentation discussed during the July 17, 2018 stakeholder meeting can be found on the CAISO webpage at the following link: http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx

Please use this template to provide your written comments on the Issue Paper topics listed below and any additional comments you wish to provide. The numbering is based on the sections in the Issue Paper for convenience.

High-level comments

First Solar appreciates the breadth and complexity of the issues the CAISO is taking on in this stakeholder process and the time and effort of staff to drill into the issues and propose reforms that continue to improve the generator interconnection process and align it with shifting market and policy drivers. There are a number of important interrelated issues that we believe require further analysis and vetting with stakeholders before they are ready to be presented to the CAISO board as a final proposal.

The CAISO's revised straw proposal assumes another round of stakeholder comments in some areas, and the engagement with stakeholder on the July 17 call also invited additional ideas and suggestions that will require another round of evaluation. In addition, the CAISO has indicated that it is developing its FERC Order 845 compliance plan concurrently with the interconnection process enhancements initiative and intends address "related issues in future publications and consultation with stakeholders." Issues that are intertwined with Order 845 compliance should be aligned with the timing for that filing and addressed holistically alongside the reforms the CAISO is considering in this initiative.

Specifically, we believe that the following topics require further vetting, as contemplated in the CAISO's revised straw proposal: a number of topics related to energy-only projects, including ability to re-enter the queue for full capacity deliverability and fund upgrades, coordinating with LSE procurement processes and how allocation groups 4 and 5 get structured, per questions posed in the revised straw proposal at pp. 13 – 14 (topic 4.1), performance and diagnostic minimum requirements for inverter-based generation (topic 6.4); interconnection financial security and cost responsibility (topic 7); and the reliability network upgrade reimbursement cap and options for determining the maximum cost responsibility (topic 7.7).

For these topics, there are too many interrelated changes with consequences that are not well understood at this point, and too many open questions and important policy choices, for the July 10 revised straw proposal to be considered a final proposal. We urge the CAISO to set an in-person workshop to discuss these issues with stakeholders, perhaps with a panel format to facilitate a careful examination and informed discussion by stakeholders and the CAISO of these complex topics.

As the CAISO has noted in its revised straw proposal, the drivers for requiring deliverability for renewable developers may be shifting. There is a push to evaluate how the grid can support the development of a greener ancillary services product, so as the effective load carrying capability assessment gets refined at the CPUC and greater attention is turned to improving the use of renewable resources to supply essential reliability services, the discussion of how best to refine interconnection rules to facilitate the opportunities and retain commercial viability for competitive projects is a critical one. We believe these reasons offer further support for the concept of a workshop to fully explore concepts and solutions.

In addition, Order 845 sets out principles that FERC is seeking to achieve as it requires further reforms of interconnection rules, including predictability on cost exposure for interconnection customers that is so critical to financing projects. It would be useful to conduct the workshop with a review and reaffirmation of the principles we are collectively trying to achieve as the CAISO pursues its modifications.

Finally, between the two drafts the CAISO has posted – its original May 9, 2018 straw proposal and its July 10, 2018 revised straw proposal, and the proposed modifications suggested during the stakeholder call, it is very challenging to decipher exactly what the CAISO is intending to propose when it takes its full package to the Board. It would be very valuable if the CAISO would issue a comprehensive final proposal that clearly captures the changes the CAISO is proposing to make in one document for final review and comment by stakeholders.

With these overarching comments in mind, First Solar also offers the following specific comments below.

4. Deliverability

4.1, 4.2, 4.3, 4.5 and 9.2 Transmission Plan Deliverability Allocation (combined topics)

a. Allocation Ranking Groups (one through seven)

In general, First Solar believes that the new structure is beneficial and will lead to improvements in the transmission plan deliverability allocation process. However, we do believe that questions remain related to defining the energy-only categories, and the CAISO's revised straw proposal sets out important questions that deserve discussion among stakeholder related to questions like alignment with LSE contracting. Because the restructuring of the ranking process depends on decisions about the definition and framing of the energy-only groups, we suggest that the CAISO take further input in those areas before making a final decision on the groups.

b. Specific Topics:

i. Overall TPD Allocation Process

Broad definition of the counterparty: With respect to Allocation Groups One and Two, First Solar agrees with the comments raised on the July 17 stakeholder call that qualifying the definition should be broadened to include a PPA with any entity willing to sign one, not just a load serving entity. Load will be the ultimate beneficiary, and the CAISO's rules should allow the use of creative contracting as the procurement landscape in California continues to shift and more entities are procuring products under different types of instruments and in smaller quantities.

First Solar is starting to see more creative financing and buyer structures already, particularly in the commercial and industrial sectors. The function of intermediate aggregators may well grow and there is no reason the CAISO's rules should limit a qualifying agreement or process to one involving an LSE. CAISO should be agnostic as to what entity is the counterparty or potential counterparty to a PPA.

Contingent deliverability: First Solar also believes that PPAs and shortlist negotiations that require a product that relies on deliverability only if deliverability is forthcoming via the CAISO's transmission plan deliverability allocation process should qualify to meet the commercial viability criteria. As we have noted in prior comments, it is highly unlikely that a project developer would commit to a PPA that requires deliverability without actually having obtained an allocation through the CAISO's process.

ii. Elimination of Balance sheet financing terminology

First Solar generally supports the decision to eliminate the option to elect to balance sheet finance as a means of demonstrating commercial viability to support a COD change beyond the time-in-queue limitations. We appreciate the CAISO's response to our previous comments and the CAISO's willingness to modify its proposal to account for stakeholder comments. First Solar supports allowing an interconnection customer to elect to proceed to develop without a PPA after receiving Phase II study results, but suggests the following additional clarifications and modifications:

1) **Timing of election:** CAISO has indicated that the only time a project can declare it will proceed without a PPA is in the "seeking TPD affidavit and allocation cycle immediately following the project's Phase II study." We believe that is too soon to make this election and suggest that the project be given a year to market the project before making the election.

   As the CAISO is aware, the timing of receipt of the Phase II study results is often virtually simultaneous with the deadline for the affidavits. Project developers deciding whether to proceed without a PPA (electing Allocation Group Three) should be afforded the opportunity to take the risk of proceeding without a PPA to protect deliverability, and the interconnection customer won't know whether there's any deliverability to go at risk for at the time the CAISO requires the initial affidavit.

   While we agree that interconnection customers should be time restricted as to when they are allowed to elect to proceed without a PPA, what the CAISO is proposing now does not seem like a workable option.

2) **Parking**: We note the CAISO's comment on page 15 that a parked project may be able to elevate itself into Group One or Two in the next round if it is able to improve its commercial status. In parentheses CAISO, indicates improving commercial status means "executed a PPA." Since CAISO also mentions Group Two, it seems that improvement of commercial status also includes being shortlisted, and we request that CAISO clarify this portion of its proposal. First Solar believes, as noted in comment 1 above, that the election to proceed without a PPA should not occur until the year following receipt of the Phase II study results. We suggest that this elevation associated with improving commercial status apply if the project decides to park for a second year.

3) **Delay not caused by the interconnection customer**. We appreciate the adjustment to allow delay for COD beyond 7 years if it is due to a PTO delay, but believe that it should be expanded to include delays caused by affected systems or any other reason outside of the interconnection customer's control.

4) **Alignment with PPA COD**: First Solar raised the issue of COD alignment with PPA COD requirements for Group 3 projects in its prior comments, and the CAISO responded that the CAISO tariff already provides an opportunity for COD extensions to align with a project's PPA (see p. 11). However, on page 15, the CAISO seems to contradict this response in its last bullet where it states that there will be no COD extensions beyond 7 years in the queue "under any circumstances except a PTO delay."

   When an interconnection customer elects to proceed without a PPA, it is taking on extra risk. However, it is likely that the interconnection customer will continue to pursue selling the project, and the tariff should allow for the COD in the GIA to be aligned with the COD specified in a PPA if one is ultimately signed, even if the interconnection customer has elected to proceed without a PPA. As we noted before, we believe there is benefit to extending this current tariff provision to Group 3 projects and request that the CAISO clarify that this alignment will be permitted, even if allowing the alignment between the PPA and GIA CODs extends the COD for the project beyond 7 years in the queue.

4.4 Change in Deliverability Status to Energy Only

First Solar remains strongly opposed to requiring projects that are forcibly converted to energy-only status to remain responsible for delivery network upgrade costs. Depriving a project of the right to use the upgrades it pays for is not reasonable. The CAISO's timelines and requirements for demonstrating commercial viability to retain deliverability are aggressive and challenging, particularly in this procurement climate. We urge CAISO to consider other ways to address the concern it identifies about projects using conversion requirements to reduce cost responsibility and then withdrawing. Requiring a project to continue to fund upgrades it is not permitted to use is not a reasonable proposition.

4.6 Options to "Transfer" Deliverability

First Solar suggests that in addition to the options to transfer identified by CAISO in its July 10 draft, it also include the ability to transfer deliverability if an interconnection customer has projects that have the same owner, are at the same point of interconnection and have the same technology type, but where they were the result of different interconnection requests. This can mean transfer among projects from different clusters as well as projects within the same cluster that are associated with separate interconnection requests and queue numbers, as long as the POI and technology type is the same.

5. Energy Storage

5.2 Replacing Entire Existing Generator Facilities with Storage

First Solar notes that in its July 10 draft the CAISO indicates it is developing its compliance plan concurrently with IPE and intends to address related issues in future publication with stakeholders. However, it is not clear exactly what modifications the CAISO is proposing to its current tariff, if any, associated with this topic. First Solar requests clarification as to what modifications CAISO is proposing.

6. Generator Interconnection Agreements

6.1 Suspension Notice

First Solar has no further comments following the CAISO's clarifications.

6.2 Affected Participating Transmission Owner

First Solar believes this issue is still under development and suggests that it be added to the list of topics taken up after another round of comments.

6.4 Ride-through Requirements for Inverter based Generation

First Solar appreciates the CAISO providing the redlined draft language for Appendix H. We believe that the language is a good start but would benefit from a discussion with stakeholders to ensure that it captures what the CAISO is intending and that the operators of facilities with these technologies agree that the language accomplishes what the CAISO intends. We suggest this would be best done in a workshop environment. For example, we are not clear on what the CAISO is intending in paragraph A(i)(3) – it seems to us that the facility should be required to return to its pre-event condition after the event, and the language should capture that, and then describe the ramping capability that is desired for facility's rate of return in the timeline desired. In another example, in section (iii) the point of interconnection is changed out for the "high voltage side of the substation transformer" but later in that paragraph the term "point of interconnection" is used again – it is unclear what is intended with this change and whether it should be consistent. Given the CAISO's suggestion in its July 10 revised straw proposal that additional specific requirements would be forthcoming, we urge the CAISO to provide those and discuss them in a workshop before taking the proposal to the Board for approval.

7. Interconnection Financial Security and Cost Responsibility

7.1 Maximum Cost Responsibility for NUs and Potential NUs

First Solar suggests that additional process is needed to complete this element of the proposal. This is a complicated and significant area where there is potential to create immense uncertainty for projects late in the process that would make it very difficult for projects to market products with any cost certainty and obtain financing. We urge the CAISO to schedule a workshop to carefully review alternatives and select reforms that achieve the balance between cost and timing certainty, clear process for the interconnecting PTOs, ratepayer protection and commercial viability for interconnection customers.

7.3 Eliminate Conditions for Partial IFS Recovery Upon Withdrawal

First Solar is supportive of this proposal, and seeks clarification that it applies to all projects, including those that elect to proceed as a Group Three project (proceeding to develop without a PPA).

7.5 Shared SANU and SANU Posting Criteria Issues

CAISO solicited stakeholder feedback on the question of cost allocation methodology. First Solar agrees with the CAISO that the methodology should be consistent across all PTOs. We also agree that each project should not be required to post based on 100% allocation for the SANU where multiple projects are joining to build the SANU. However, we do not agree that the costs should be included in the calculation of the maximum cost responsibility and believe that this issue should be further vetted with stakeholders consistent with our comments above.

7.7 Reliability Network Upgrade Reimbursement Cap

When the CAISO supported its original proposed $60,000 cap in its filing at FERC, it calculated it to allow for coverage of a certain percentage of costs, allowing for "full cash repayment of RNUs for the majority of projects" and providing "incentive for interconnection customers to avoid siting their projects in locations where the costs of RNUs needed to support the interconnections will be inappropriately high." (Tariff Amendment to Integrate Transmission Planning and Generator Interconnection Procedures, May 25, 2012 (ER12-1855). CAISO's filing also indicated the intent was to protect ratepayers against excessive costs without imposing an undue burden on developers (*Id*. at p. 57), and FERC approved the reimbursement cap based on this balance of interests. In calculating the cap, CAISO used data from Clusters 1 and 2. (Exhibit No. ISO-1 to CAISO's May 25, 2012 filing, p. 4).

First Solar requests that the CAISO refresh its evaluation of the cap based on more recent cluster studies. The system needs and upgrade demands have changed, and as the assumptions driving new transmission development have remained at the 33% RPS target the CAISO has not approved new policy lines in the last couple of transmission plans. At the same time, the plans for attaining the GHG reduction goals in the state count on greater amounts of renewable development supplying load in California, so meeting the diverse goals while sustaining a manageable interconnection process remains very challenging.

We also suggest that the CAISO consider an option for allowing an interconnection customer that has funded a significant upgrade, such as paying for a new switchyard, to obtain cost recovery from later projects that may benefit from the upgrade. We suggest that the CAISO consider adding this option for customers who fund upgrades that provide room for additional deliverability and where the costs exceed the cost cap. Since the later projects capture the value of the larger upgrade and ratepayers otherwise have no responsibility for the value provided to the later project, it makes sense that the costs that are not reimbursed to the earlier project should be covered by later projects that can get reimbursed for the costs.

Finally, First Solar has observed that elements previously categorized as delivery network upgrades are now being shifted over to reliability network upgrades and creating cost pressure on the cap. How different elements are categorized will obviously have a material effect on the calculation of costs between fully reimbursable costs and capped reimbursements, so we would appreciate understanding more fully the CAISO's process for evaluating which elements are categorized as RNUs versus DNUs.

8. Interconnection Request

8.4 Project Name Publication

No further comments.

9. Modifications

9.1 Timing of Technology Changes

We urge the CAISO to reconsider the proposal by EDF-R and sPower regarding additive fuel type changes, at least with respect to storage technologies. As the demand for PV with storage increases and costs shift with technological improvements, the CAISO's interconnection process should facilitate an interconnection customer's ability to respond to the demand in a timely and cost-effective manner. The CAISO could mitigate the concern it expresses on page 52 of the July

10 revised straw proposal by restricting downsizing to eliminate the original fuel type after the time-in-queue limit has been reached to avoid the potential "loophole" it is concerned about.

10. Additional Comments

First Solar appreciates the CAISO's response under "Affected System Options" that CAISO is awaiting a decision from the two FERC proceedings where the issues is pending before making modifications to its process. However, we do not believe that a limit on the maximum forfeiture of Phase I postings was an issue reviewed in these proceedings. We reiterate our suggestion that CAISO consider a limit on forfeitures to mitigate the financial risk associated with withdrawals associated with the inability to reasonably resolve affected system issues, First Solar suggests that a limit be placed on the maximum forfeiture amount of Phase I postings so that rather than 50% at risk there is a limit of $150,000 or $250,000 if the withdrawal is due to negative results from the Affected Systems or Phase II results. Phase I results can be extensive since projects are studied on top of a large queue, or substantial clusters driving those Phase I costs, and now potential network upgrades are increasing the exposure. Therefore, interconnection customers can only guess at what withdrawals will reduce those costs sufficiently to be financially viable following Phase II when the affected system results are known.

CAISO could join this issue with the review of financial security postings already underway in this stakeholder process.