

CAISO 2018 Interconnection Process Enhancements Comments on Scope

Submitted by	Company	Date Submitted
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First Solar, Inc. (First Solar) appreciates the opportunity to provide input into the scope of the upcoming 2018 Interconnection Process Enhancements (IPE) initiative at the CAISO.

I. Background on First Solar

First Solar designs, manufactures and sells PV solar modules with an advanced thin-film semiconductor technology. First Solar is the world’s largest thin-film PV solar module manufacturer, with net sales of just under \$3 billion in 2016. The company also develops, designs and constructs PV solar power systems throughout the world, using its vertically-integrated structure across the supply chain to deliver meaningful PV solar energy solutions to a variety of energy problems worldwide. First Solar is headquartered in the United States, has been in business for over ten years, and its stock trades on the NASDAQ. The company is currently the only pure-play renewable energy company in the S&P 500 Index.

First Solar’s experience and technology has resulted in a significant number of operating solar generation resources in the United States, including about a third of the currently-operating solar PV generation fleet supplying the State of California. For California alone, First Solar has constructed over twenty generating facilities that operate to serve the state, including two of the largest solar facilities in the world, the 550 MW Desert Sunlight project and the 550 MW Topaz project.

II. Comments

A. Transparency

Several of First Solar’s proposed topics for this initiative are associated with transparency issues in the CAISO’s processes. The lack of information available undermines the ability of interconnection

customers to make siting and development decisions to best fit what the grid can accommodate, leaving the CAISO with a large queue of projects that may not be optimal, or ultimately viable. With increased visibility into the available deliverability, processes, and technological requirements, interconnection customers will be able to better anticipate grid conditions and tailor their projects appropriately, making for a much more efficient interconnection study process.

1. Availability of deliverability

Interconnection customers have little to no information on how much deliverability is available for different areas on the grid. As IOUs and other procuring entities prefer generation that can satisfy resource adequacy requirements, generators depend on deliverability to be able to offer this capacity and to be marketable. Generators should have more insight into how much deliverability is available at different points of the grid, and more importantly, how much deliverability is available before the next significant upgrade would be triggered. This will help generators decide where best to interconnect to meet the conditions of the grid, efficiently make use of available capacity, and also reduce need for unnecessary or uneconomic upgrades. In the straw proposal for the 2017 Expedited GIDAP Enhancements initiative, the CAISO expressed concerns about later queued projects relying on network upgrades of parked projects. Improving the transparency of deliverability allocations will improve interconnection planning and likely reduce both the number of projects that need to park and the number of later queued projects that rely on the upgrades triggered by the earlier queued projects.

Providing this information would not be new. Previously, the IOUs filed Transmission Ranking Cost Reports (TRCR) with the CPUC, reports which provided interconnection customers with this information on the transmission system. The lack of information like that contained in TRCR has created a void that leaves interconnection customers without this data that is essential to making development decisions. The CAISO is in the position to provide improved transparency into the transmission system and deliverability, and should do so now that it is so closely tied its transmission planning process to its interconnection process.

2. Process issues

More generally, interconnection customers do not have an insight into the processes in which the CAISO allocates deliverability. The Business Practice Manual does not always reflect current processes, as there is confusion surrounding how the various clusters are allocated deliverability and how the annual deliverability allocation process is conducted. This limits the ability of generators to provide meaningful comments on some of these processes. For a generation attribute as important as deliverability, it is imperative that the interconnection customers be able to readily access the

procedures that the CAISO uses internally for allocation to ensure that all customers, both serial and cluster projects, are on a level playing field when developing their projects to meet the CAISO's criteria.

3. Technological requirements

Finally, First Solar is interested in greater transparency as to the timing of the technical information requested as part of interconnection process. Interconnection customers would benefit from having the standards and requirements easily available so they can anticipate the types of questions the CAISO and the IOUs will be asking. Providing for standardization across the state with the CAISO taking the lead in setting forth the technical data and information required would improve transparency and efficiency. As the grid needs more technical support from interconnecting variable energy resources, increased specificity on technical requirements will be essential.

A. Longer-term solution to parking issues

First Solar appreciates the CAISO addressing the misalignment between the interconnection study process and the procurement process in the recent 2017 Expedited GIDAP Enhancements initiative. While this initiative looks promising in supporting projects coming out of parking in November, the CAISO needs to develop a long-term solution to parking timing. The procurement landscape does not support the current framework, as entities continue to wait for regulatory signals concerning CCAs, RPS, and the value of energy-only projects. Even once the procurement uncertainty is resolved, projects will still require additional time to engage in competitive solicitations while retaining the ability to seek TP deliverability, given the need to have a Phase II study in hand before being able to participate in most competitive solicitations. The CAISO designed its time-in-queue requirements to extend seven years for a reason – it can take that long even for the most sophisticated and efficient developer to navigate permitting, regulatory and contracting hurdles. There must be another solution to allow projects to preserve accessibility to TP deliverability without forcing all to leave the queue or becoming an energy-only project just three years into the cycle. Even if energy-only projects are embraced more fully in the procurement process, deliverability should still remain an option throughout the seven-year development cycle.

Providing at least an additional year of guaranteed parking, free of any narrow criteria, for all projects moving forward will alleviate some of these issues. Interconnection customers have less than a year to market their projects because of the timing of Phase II studies and affidavit before having to show meaningful progress towards commercial viability, namely being shortlisted or obtaining a PPA. A longer-term solution of a longer parking period will allow these projects to continue to develop and

market their projects before being forced to convert to energy-only, a designation that renders them unmarketable. At the same time as providing more time for marketing projects, the CAISO should tighten up the loophole created by the option to balance sheet finance a project (see below).

B. Energy-only: forced conversion and returning for deliverability

Under the current GIDAP structure, projects are forced to convert to energy-only if they are not allocated deliverability immediately following their one year of parking. It is not appropriate to convert a project so early, since doing so essentially strips the project of marketability because of the strong likelihood that it will not receive deliverability in the future. The current procurement landscape and the lack of value given to energy-only projects justify a longer lead time before any forced conversion. The tariff should allow projects to continue to proceed with development while retaining possibility of receiving deliverability for longer periods of time.

Not only is this forced conversion detrimental to the generator, it is also inefficient for the CAISO. These projects have already been studied as if they have full-capacity deliverability status in the interconnection studies. A conversion requires new studies and essentially “releases” deliverability that has already been studied for. Well-studied projects are forced into new rounds of studies as if they have never been studied.

Deliverability is an attribute that should be allocated as projects receive PPAs to sell their energy and all interconnection customers should have annual opportunity to secure deliverability. More importantly, during this annual opportunity, any project should be able to come back and ask for more deliverability on equal footing with other projects that have received PPAs. We suggest that projects retain the possibility to obtain deliverability and only once they are shortlisted or obtain a PPA are they allocated deliverability. The CAISO’s rules heavily benefit new entrants to the queue when it comes to the annual allocation process, and the implicit presumption that new entrants are somehow more viable and therefore should receive preference should be revised. The current annual deliverability process requires projects to wait for the current queue cluster to be studied in Phase II and for deliverability to first be allocated to those projects. This ultimately takes two years for a project to get any potential allocation, even though it is described as “annual,” wasting a significant portion of the time-in-queue limitation when the customer could be marketing the project. The CAISO’s annual allocation process for projects that are forced to convert to energy-only creates a bias for removing projects from deliverability based on the erroneous presumption that an older project is not good and that the new projects will be better. This is not true in the current procurement landscape where slower

procurement means that projects will be slower to develop. While the CAISO currently uses the ranking system to determine which projects get eligibility in the first round should there not be enough available, this system may also be useful for keeping projects eligible and providing a ranking system for *all* projects seeking deliverability.

C. Forfeiture is punitive and distributed to the wrong entities

The CAISO's current forfeiture amounts are excessive to the point of being punitive. Requiring interconnection customers to have "skin in the game" is a legitimate reason to require high deposits and ensures that serious generators are moving forward to cover associated interconnection facilities and network upgrade costs, but it is not necessary to require large forfeiture to meet this same goal. With high deposits, generators are required to acquire serious funding for their projects, which helps ensure that they are legitimate and plan to move forward with their projects. Withdrawals are often due to market conditions outside of the generator's control, not because the project was not viable, and it is therefore not just to punish the generators financially for needing to withdraw from the queue. Generators should only be required to cover the costs of new studies or mitigation costs associated with their withdrawal, as was previously the case under the CAISO's rules.

Previously, the CAISO had refunded any deposits, except for those costs that the PTO "prudently incurs or irrevocably has committed to be incurred" due to necessary studies.¹ The new forfeiture rules, which include the loss of more than just study costs, were intended to prevent late withdrawals from the queue, to disincentivize nonviable projects from entering the queue, and to alleviate the backlog of nonviable projects.² When the CAISO implemented these new rules, the FERC recognized the need "for increased financial commitments to more efficiently manage the queue" but that "the purpose was not to impose sanctions."³ These forfeitures today are operating as sanctions, however, because interconnection customers withdraw not because they are not viable but because of market conditions outside of their control and because the lack transparency into the interconnection process provides them with imperfect information that they have relied on in their interconnection.

Contrary to the CAISO's intention, however, large forfeiture amounts give projects an incentive to stay in the queue, contradicting the desire of the CAISO to encourage projects to self-select out of the

¹ California ISO, Large Generator Interconnection Procedures of the California Independent System Operator Corporation, ER04-445-000 (Jan 20, 2004), Original Sheet No. 897. http://www.caiso.com/Documents/CaliforniaISOsLargeGeneratorInterconnectionProceduresinDocketNo_ER04-445-000_et al_.pdf.

² California ISO, Generator Interconnection Process Reform, ER08-1317-000 (July 2008), pg. 8.

³ 124 FERC P61,292 par 159.

queue if there are development challenges. The CAISO should make it easier for projects to exit the queue, a policy which is directly in line with CAISO's desire to clear out the queue.

In addition to the forfeitures being excessive, these forfeited funds go to entities that are not associated with the study process: scheduling coordinators. Just as the CAISO should reevaluate the appropriateness of the amount of forfeiture and matching this to the actual costs associated with withdrawal, the CAISO should ensure that these funds are used to mitigate any negative effects of the withdrawals. Alternatively, forfeited deposits could be used to actually fund the PTO upgrades that they have been posted for. Later queued projects that may be relying on these projects to fund network upgrades could inherit the costs if no GIA was signed, or the PTO may inherit the cost responsibility, if the withdrawing generator has executed a GIA. It would be most appropriate for the CAISO to use these forfeited amounts to support funding the actual upgrades in this case, since some entity will have to pay for them.

When the CAISO originally filed for this tariff change it did not provide strong reasoning for this method, and the FERC recognized this as problematic when it approved the CAISO's proposal, stating that it was "not an ideal solution."⁴ Now this process has become particularly problematic as forfeitures are increasingly caused by a tariff misalignment and not a lack of viability. The distribution of these funds in an unideal way further emphasizes the punitive nature of these forfeitures following a withdrawal forced by the early conversion of a project to energy-only deliverability status.

2. Affidavits

As fewer power purchase agreements are available in the current procurement landscape, developers must evaluate the approach they will take to ensure their project is developed. The ability to select balance sheet financing on the annual deliverability allocation affidavit has created issues by allowing too many projects that will never build without a power purchase agreement and have no intention of doing so to remain in the queue without progressing towards completion. We suggest that the option to balance-sheet finance be removed as part of the means for receiving credit towards commercial viability. Alternatively, the CAISO should develop much more rigorous standards around what it means to agree to balance sheet finance a project that weed out projects that don't have the

⁴ FERC stated that, "Therefore, while not an ideal solution, we find the CAISO's proposal to distribute forfeited security to scheduling coordinators and their market participants in proportion to their contributions to the grid management charge to be just and reasonable and not unduly discriminatory, and we approve the CAISO's proposal." 124 FERC P61,292 Par 160

ability to build without a PPA. The standards should be applied to all projects that have already selected the option to balance sheet finance, however, the CAISO should also offer amnesty to projects for a one-time change in designation without risk of adverse consequences. Relatedly, the CAISO needs to reevaluate the ranking system and what attributes are deserving of points. Balance-sheet financing, in its current form, should not be worth any points since there are no mechanisms in place to ensure that the developer has the wherewithal to actually move forward and build the project.

III. Conclusion

First Solar looks forward to engaging with the CAISO on this initiative and appreciates the opportunity to comment on the scope.