

Stakeholder Comments Template

Subject: Small and Large Generator Interconnection Procedures Draft Final Proposal and Meeting

Submitted by	Company	Date Submitted
Will Plaxico wplaxico@axiopower.com (888) 728-1117 x55	Axio Power, Inc.	8/4/2010

This template was created to help stakeholders submit written comments on topics related to the July 20, 2010 Small and Large Generator Interconnection Procedures Draft Final Proposal and July 27, 2010 Small and Large Generator Interconnection Procedures Stakeholder Meeting. Please submit comments and thoughts (in MS Word) to dkirrene@caiso.com no later than 5:00 pm PDT August 4, 2010.

Please add your comments where indicated responding to the questions raised. Your comments will be most useful if you provide the business case or other reasons why you support particular aspects of the proposal. Any other comments on the proposal are also welcome. The comments received will assist the ISO with the development of the FERC filing of modified tariff language.

Overall Assessment of the ISO Proposal

In September, the ISO Board of Governors will be asked to authorize a filing at FERC of tariff language to implement the elements of the Draft Final Proposal (with possible modifications in response to this round of comments).

1. Do you support ISO Board approval of the proposal? Why or why not?

On whole we are supportive of the proposal. We have specific experience as interconnection customers through both the CLGIP and SGIP processes, including both CAISO and PTO WDAT processes, and recognize the challenges and administrative complexities both entities face maintaining a separate serial SGIP process. Through first-hand experience, we also recognize that the results and outcomes now available to SGIP projects in the current process may not always be desirable (e.g. hypothetical cost exposure scenarios for upgrades that have been allocated to clustered LGIP projects, but the PTOs are obligated to include in an SGIA because of the fact that SGIP projects are slotted-in serially between LGIP clusters.

Despite our support for this process, in addition to our proposed modifications included herein, we do feel strongly that other issues tabled for later proceedings need to be

revisited as soon as possible, specifically issues associated with per-unit cost estimates and the conflicting interests:

- of the PTOs to include sufficient contingency in those figures given the maximum cost responsibility implications
- of interconnection customers to avoid overly-excessive carrying costs associated with financial security requirements required in order to proceed with the study process

We firmly believe these issues will only be exacerbated when smaller, previous SGIP projects:

- are required to post financial security during the study process for the first time
 - are saddled with inflated financial security requirements but do not have the same scale potential as LGIP projects to amortize those significant carrying costs over
2. Do you believe the proposal accomplishes the objectives this initiative was intended to address? If not, please explain.

Largely yes, though unlike some other parties in the small generator development community, we have some concern that maintaining an independent study process will only create grey area and administrative burden that will lead back to the same challenges now facing CAISO and the PTOs administering studies under the current tariff provisions.

We feel that once transitional “growing pains” are overcome and the transitional delay has come and gone, the small generator development community will recognize the benefits of a cluster process (shared cost allocation for lumpy upgrades, more certainty regarding study time frames, elimination of grey area regarding tariff treatment for projects relative to LGIP projects, etc.). However, this projection for a positive outcome assumes:

- the per-unit cost estimates and financial security cap issues are addressed
- CAISO and the PTOs are actually able to achieve the 420 day study cycle included as part of his proposal. This point will be critical, because if these abbreviated study time frames are not achievable, the small generator community will not be satisfied with the reformed process.

3. Do you believe the proposal reflects an appropriate balance of the various stakeholder interests and concerns raised in this process? If not, please explain.

Yes. The only exception to this is the fact that the PTOs should ensure that they engage stakeholders when they reform their WDAT procedures and specifically address the concerns from the small generator community that smaller, truly “in-basin” projects sized exclusively to offset load and not export power onto the sub-transmission system are not subject to longer than necessary study processes.

The PTOs incentives are aligned on this topic given that they will be developing and owning projects in this segment as well through the utility owned generation (UOG) components of their recently announced wholesale PV programs, so they would benefit themselves by pointing this out to the small generator community.

Proposed Study Deposit Amounts and/or Processing Fees

1. In general, do you support the proposed study deposit amounts and/or processing fees?

Yes. We propose two modifications.

2. If not, what modifications are needed and why?

First, we agree with the narrative in the draft final proposal that suggests tying study deposit \$ amount to MW size will encourage developers to “right size” their projects from the start and improve study accuracy as a result. We don't agree, however that this should be capped at \$250,000. This same incentive to right size projects should be applied to much larger projects as well. For example, a 1.5 GW PV project currently being studied as part of QC2 is arguably not “right-sized” nor particularly credible or viable in our minds. This project will, however, have impacts on the results of the phase 1 study for QC2. While cost allocation for those impacts will largely be allocated based on contributions of those impacts pro rata/MW as we understand, it would still seem appropriate to require a project of this magnitude to post a larger study application deposit than a 200 MW project.

Second, it should be clarified that if projects pass the fast-track screens (including any modified fast-track screens such as those proposed herein) they probably should not be subject to a minimum \$50,000 study deposit. That would likely be considered an unnecessary cost burden for small projects (e.g. 1-2 MWs) and will likely lead to more pushback from the small generator community.

Proposed Annual Cluster Study Track

1. In general, do you support the ISO's proposal to study projects of any size in a single, unified cluster?

Yes, with an exception discussed below.

2. If not, what modifications are needed and why?

As discussed during the last stakeholder workshop, we encourage the PTOs to explore ways to interconnect large numbers of smaller projects (e.g. 1 to 5 MW) which are truly “in-basin” and sized solely to offset load rather than export a large portion of their capacity at given times onto the sub-transmission system. It is not clear to us if this approach is most appropriate, but as SCE commented they are in fact considering study process implications for this type of project. As stated above, we believe that the small generator development community and PTO incentives are largely aligned as the PTOs will all be developing and owning these type of projects through their individual PV programs. Furthermore, when contracting for third-party developed and owned projects under those programs, the PTOs will not want to see small pools of projects proposed because the lion's share of projects are held up in lengthy cluster study processes.

3. If you do not support a single cluster approach in any form, what would be your preferred alternative and why?

We support a single cluster approach and do not have a preferred alternative.

Second Application Window – Scoping Meeting

1. In general, do you support the ISO's proposal to open a second application window to receive interconnection requests for the purpose of receiving a scoping meeting?

Yes, in general we support all instances where the ISO and PTOs provide more information prior to application in order to help make developers aware of any obvious fatal flaws (e.g. publishing prior studies from withdrawn projects in a timely manner). Access to a scoping meeting at other points during the year could be beneficial so developers could get some limited information that might help them with their development efforts prior to the start date of the actual study the following year. Per our following comments, we would only oppose this if the ISO and PTOs thought it would add such an administrative burden that it would slow down the annual cluster study process, as we think it is critical that if the SGIP process is rolled into a combined GIP cluster study process, the ISO and PTOs must be able to complete those cluster studies within the projected timeframe 420 day time frame (and do so with sufficient accuracy as well as without pushing back at requests from developers to have sufficient access to engineering resources to ask follow-up questions regarding issues identified within studies etc.)

2. If not, what modifications are needed and why?

None.

Second Application window – Enter Cluster at Phase II

1. In general, do you support the ISO's proposal to open a second application window to receive interconnection requests for the purpose of waiving the Phase I study and entering the cluster for study at the Phase II study?

We have some concerns that this could add grey area to the process, administrative complications, etc. that would lead us back to the same point we collectively find ourselves in now.

2. If not, what modifications are needed and why?

This interest could be better addressed with a process in the PTO WDAT tariffs that address the concerns of developers of small, truly "in-basin", load-serving projects as described above.

Second Application Window – Enter Cluster at Phase II Criteria

1. In general, do you support the ISO's proposed criteria to qualify a project to waive the Phase I study and enter the cluster at the Phase II study?

No comments.

2. If not, what modifications are needed and why?

Coordination with the Transmission Planning Process

1. In general, do you support the ISO's proposal to reevaluate certain network upgrades in the Transmission Planning Process?

No comments.

2. If not, what modifications are needed and why?
3. If a network upgrade is selected for reevaluation by the Transmission Planning Process should the associated generation project proceed with a Large Generator Interconnection Agreement that contains a provision to allow for later amendment of the Large Generator Interconnection Agreement if warranted by the Transmission Planning Process reevaluation results? Why or why not?

Independent Study Processing Track

1. In general, do you support the ISO's Independent Study Processing Track proposal?

In general, we have concerns that the availability of an independent study processing track could create sufficient administrative and technical complexity that could put the process back in the same (overburdened) place it is today.

We recommend instead an expansion of the fast-track process without any MW size cap, but replaced with something like an expansion of the rule 21 criteria for determining projects have negligible impacts. E.g. revise and expand this criteria to be "if a project's peak capacity does not exceed 30% of the minimum load on a given feeder during that time of peak production (e.g. in the case of PV in California, peak PV output can occur during light spring load conditions). The exact metrics deserve technical review, however, we include them here as an example for discussion as they have been mentioned several times by members of the small generator community but, to our knowledge have not been seriously discussed as part of this process to date.

Also, as discussed during the stakeholder workshop and commented on by SCE, we encourage the PTOs to consider the needs for and potential for some form of geographic separation of truly "in-basin" projects within their WDAT processes. While those types of projects may raise a different host of administrative and technical issues (e.g. 15x1 MW projects on the same distribution feeder) in the aggregate those projects might be addressed independent of the proposed cluster studies given their geographic location relative to load centers. If the PTOs are willing to provide more background to the development community on these considerations, it would help to provide comfort to small generator advocates that have voiced numerous concerns about this proposed reform, which has arguably been triggered by a different type of project in the 10-20 MW segment that is not necessarily sized to exclusively serve load but will rather export some power onto the sub transmission system at times.

2. What modifications are needed and why?

See above.

3. What specific aspects of a developer's project development process make it impossible for a developer to demonstrate eligibility for the Independent Study Processing Track at the time of the Interconnection Request?

No comments.

Fast Track less than 2 MW

1. Should the ISO remove the 10th screen from the Fast Track? Why or why not?
2. Should the ISO increase the size limit for Fast Track qualification? If so, would you support a 5MW size limit or a different value? Explain your reasons.

Yes. As described above, we suggest that the fast-track qualifications have no size limit, rather they are based upon something like the modified rule 21 criteria discussed above and mentioned several times by the small generator community.

Method to Determine Generator Independence

1. In general, do you support the ISO's proposed method to determine generator independence?

No comments.

2. If not, what approach would you propose for determining generator independence? Explain why your proposed approach is superior to the ISO's proposal.
3. If you prefer completely eliminating the independence criterion to qualify for the Independent Study Processing Track, how would you address the concern about impacts of Independent Study Processing Track projects on other interconnection customers (including cluster projects) in higher queue positions?

Deliverability Proposal

One-Time – Enter Cluster 4

1. In general, do you support the ISO's proposal to allow a one-time deliverability assessment to obtain Full Capacity during cluster 4?

Yes.

2. If not, what modifications would you support and why?

Annual – Available Transmission

1. In general, do you support the ISO's proposal to provide an annual opportunity for qualified projects to request and obtain Full Capacity using available transmission?

Yes.

2. If not, what modifications would you support and why?

Financial Security Postings

1. In general, do you support the ISO's financial security postings proposal?

We propose a couple of modifications based upon specific project examples, described below.

2. What modifications are needed and why?

Proposed Modification #1: make "not to exceed" caps for network upgrade financial security apply to the cumulative financial security requirement, inclusive of both financial security associated with network upgrades as well as security associated with distribution upgrades/interconnect facilities.

Example Rationale: We are familiar with an instance where the Interconnection Customer (IC) was required to post a very substantial, multimillion dollar security associated with projected distribution upgrades. At the same time, exposure for network upgrades was limited to \$850,000. While the IC was required to post an \$8MM security for the distribution upgrades, we were also required to post the minimum \$500,000 financial security associated with network upgrades. It seems that the intent of the minimum security requirements is to ensure developers have sufficient skin in the game to proceed in the study process. In this specific case, the \$8MM security is plenty of skin in the game. Requiring the addition of just 15% of the \$850,000 network upgrade exposure (e.g. for a total security of \$8MM + \$127,500) would be sufficient skin in the game to ensure the IC has credible intentions with the project.

Proposed Modification #2: apply a "not to exceed cap" to financial security associated with distribution upgrades/interconnect facilities.

Example Rationale: in the same instance described above, a 100MW project was assessed cost responsibility for approximately \$40MM in distribution upgrades. Under current tariff provisions, the project was required to post an \$8MM security (20%) of this \$40MM basis. Had the "not to exceed cap" in current tariff provisions associated with financial security requirements for Network Upgrades exposure applied (\$20k/MW), the financial security associated with distribution upgrades would have been limited to \$2MM. While it is certainly reasonable to expect adequate security to ensure developers have sufficient skin in the game as a prerequisite to proceed with the study process, the \$20,000/MW cap should be viewed as sufficient to balance competing objectives of ensuring projects which proceed with the study process are credible while not subjecting those projects to excessive security carrying costs.

More importantly, we provide further rationale for the need for a "not to exceed" cap to apply to the financial security requirements associated with distribution upgrades. In the same example, the PTO acknowledged that a very conservative (and high cost) plan of service was included in the Phase I study for distribution upgrades. The PTO acknowledged that a much lower cost alternative was available, but responded there is no tariff mechanism in place to revise a Phase I study based upon issues noted by the

IC during the results meeting. The PTO responded to the IC request with the following: (bold and underline added for emphasis)

*the conservative Plan of Service for... the purpose of the Phase I study [is] to establish the **cost cap**. We will not re-open the study assumptions regarding this plan of service. We will be happy to re-assess this issue in Phase II when we see what the base case for Phase II looks like and begin to do more detailed analysis and engineering. ... we will not be issuing a revision or addendum that would make any adjustments to [IC's] maximum cost responsibility*

We certainly understand the PTO's (perceived) viewpoints, including:

- given the volume of interconnection requests, they do not have time to provide higher-resolution cost estimates (with less contingency) during the phase 1 study
- they have to include sufficient contingency in their per-unit cost estimates when **maximum cost responsibility** implications are a factor
- interconnection customers should not be overly concerned about phase 1 results if it appears very obvious those results are likely to improve in the phase 2 study
- interconnection customers have to have some skin in the game to encourage credible, economically viable projects while discouraging uncredible, non-economically viable projects

However, we note the following issues with these viewpoints, which would be addressed by including a “not-to-exceed” cap for financial security associated with (arguably questionable) estimates included in phase 1 studies for distribution upgrades:

- the inflated figures included in the phase 1 studies for distribution upgrades and interconnect facilities are actually **rough, order of magnitude nonbinding cost estimates** which served limited benefit to interconnection customers regarding ultimate maximum cost responsibility because they are for distribution upgrades/interconnect facilities, not network upgrades
- the inflated figures only serve to add excessive carrying costs to projects by substantially increasing financial security requirements

Possible solutions to address our concerns include:

Possible Solution	Assessment of Possible PTO Buy-In
The PTOs could use less conservative plan of service assumptions and less conservative per unit cost estimates when they are to be used for nonbinding cost estimates that do not serve maximum cost responsibility purposes (for distribution upgrades and interconnect facilities).	This would add some administrative complexity to the study process, and the PTOs will likely suggest they have to use conservative assumptions so as not to disappoint interconnection customers at later stages of the study process in the event that higher cost estimates are included in phase 2 facility studies
A mechanism could be put in place that would allow for interconnection customer	The PTOs would probably face both credible as well as un-credible requests to

comment and PTO/ISO revision of the phase 1 study in the event obvious issues are identified by the interconnection customer which led to more substantial than appropriate projected upgrades in the phase I study	reopen phase 1 studies, which would slow down the process and the PTOs would object to. Nonetheless, including some mechanism for the PTOs to address their issues they themselves acknowledge would be a reasonable middle- ground solution
Not to exceed \$ and/or \$/MW caps similar to those in place for financial security requirements associated with network upgrades could be implemented for financial security requirements associated with distribution upgrades/interconnect facilities.	In order to balance both the PTOs concerns and those concerns of interconnection customers, establishing cost caps on financial security requirements associated with distribution upgrades/interconnect facilities would allow the PTOs to continue to use the same conservative per unit cost estimates and conservative plan of service assumptions they currently use in phase 1 studies. However, if higher than expected basis' are included for distribution upgrades in a phase 1 study, the interconnection customer could still proceed with the phase 2 study without incurring unreasonable carry costs while balancing process needs that the developer must have sufficient skin in the game to discourage non-economically viable projects.

Proposed Modification: make any changes to security requirements apply retroactively to projects in earlier, ongoing clusters in the study process, e.g. a developer with a financial security posted that would benefit from modifications should be able to reduce the financial security posted accordingly.

Transition Plan

1. In general do you support the ISO's proposed transition plan?

We have one significant area of concern with the proposed transition plan, specifically the proposed addition of SGIP projects into the phase II study with QC1 and QC2. We are concerned this will distort the phase 1 study results for QC1 and QC2 projects, and QC1 and QC2 will not have sufficient cost exposure protection to mitigate this risk because cost figures for distribution upgrades in their phase 1 study do not serve as maximum cost responsibility caps.

To emphasize further: it is a fallacy to label figures provided in phase 1 studies for distribution upgrades - for example upgrades to SCE's sub-transmission level "distribution system" - as providing "maximum cost responsibility" benefits. There are

specific instances where the addition of SGIP projects into the phase 2 study for QC1 and QC2 will trigger additional reliability distribution upgrades, even if those SGIP project additions are studied as energy only. As such, the addition of SGIP projects into the cluster would be the detriment of QC1 and QC2 projects that have made substantial good faith financial commitments to proceed through the existing study process.

While these issues are largely related to SCE and PG&E WDAT projects, because SCE has stated its intent to mirror these tariff changes in their WDAT tariff, this is certainly relevant fodder for consideration as part of this CAISO stakeholder process.

2. What modifications are needed to all you to support the ISO's transition plan? We understand CAISO's rationale for trying to provide a near-term opportunity for Energy Only SGIP projects to proceed within a cluster study. However, *we propose that all SGIP projects that do not meet the criteria to remain in the serial study process be included in QC4.* CAISO could also consider pushing forward the QC4 study start date in order to address likely concern from the small generator community about the long lead time prior to having an opportunity to have projects included in a cluster study.

It is worth pointing out - it has been our experience that all small generators would be unwise to forgo the opportunity to achieve full deliverability status, as the IOUs have substantially discounted those projects in the traditional RFP process, and the IOUs have included language in their standard offer contracts that obligates parties that do not currently have full deliverability to pursue all avenues available to achieve deliverability in the future so project capacity can count towards IOU resource accuracy requirements. As such, developers that understand these implications will want to be studied as part of the QC4 anyways, as that is the first opportunity they will have available to secure full deliverability and ultimately be able to market power to utilities with RA benefits included.

What aspect of the ISO's Draft Final Proposal do you find most favorable?

The proposal will ultimately reduce study time frames and eliminate gray area with treatment of serial SGIP projects relative to clustered LGIP projects.

What aspect of the ISO's Draft Final Proposal do you find least favorable? Please provide the business case or other rationale for your answer.

The addition of SGIP projects into the QC1/QC2 phase 2 study.

Do you have any additional comments that you would like to provide?

First, it has been our experience in the cluster study process that it would be beneficial if interconnection customers were provided with a draft cluster study and provided a reasonable timeframe to comment on any glaring issues in the study that could be revisited prior to the PTOs publishing a final study. The response to date from the PTOs request to this has been a) no tariff mechanism is in place to accommodate such requests and b) the PTOs are too overburdened to reopen studies as they may have previously done under the serial study processes. Given that this process should

reduce the resource burden associated with volume of studies that PTOs have to perform, it would be appropriate to consider the addition of the tariff mechanism for this type of draft review by ICs in the event obvious issues are uncovered in the phase 1 study by ICs.

Second, it is critical that CAISO and the PTOs revisit per unit costs factors included in the cluster studies. Specifically, while reform for the transition cluster to include caps for financial security obligations associated with network upgrade exposure was welcome, additional consideration needs to be given to similar caps for figures associated with distribution upgrades and interconnection facilities.