Stakeholder Comments Template

Integration of Transmission Planning and Generation Interconnection Procedures (TPP-GIP Integration) Revised Straw Proposal, September 12, 2011

Submitted by	Company	Date Submitted
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This template is for submission of stakeholder comments on the topics listed below, covered in the TPP-GIP Integration Straw Proposal posted on September 12, 2011, and issues discussed during the stakeholder meeting on September 19, 2011.

Please submit your comments below where indicated. Your comments on any aspect of this initiative are welcome. If you provide a preferred approach for a particular topic, your comments will be most useful if you provide the reasons and business case.

Please submit comments (in MS Word) to TPP-GIP@caiso.com no later than the close of business on September 29, 2011.

1. Section 4 of the paper laid out several objectives for this initiative, including four previously-identified GIP issues to be included in scope. Please indicate whether your organization believes these objectives are appropriate and complete. If your organization believes the list to be incomplete, please specify what additional objectives the ISO should include.

SDG&E Comment:

SDG&E's overall comment regarding the CAISO's September 12, 2011 TPP-GIP Integration Straw Proposal is that the CAISO's tariff provisions and rules governing generator interconnection and transmission planning should address the urgent need to eliminate generators "squatting" in the interconnection queue which have very little or no prospect of being developed, and which also unjustly and unreasonably impede the viability of otherwise economic generation developers. The long-overdue reforms reflect terms and conditions of FERC-jurisdictional service that are not serving their intended objective and unduly discriminate against generators proposing projects that will serve the public interest.

Objective 1 suggests the TPP and GIP will only be integrated "as far as possible." It is not clear what the CAISO means by "as far as possible." There should be no ambiguity in the CAISO's responsibility for providing just and reasonable terms and conditions of FERC-jurisdictional tariffs: The CAISO should integrate the TPP and GIP as fully as is needed to perform economic evaluations of feasible alternatives that lead to the alternatives that are most cost-effective for ratepayers.

Objective 5 appears to be written from the perspective of generators when it should be written from the perspective of CAISO consumers. Since CAISO consumers will pay for deliverability network upgrades identified in the CAISO's TPP and for Delivery Network Upgrades identified in the existing GIP, it is CAISO consumers—not new generation resources—that need "greater certainty" that the identified upgrades are in fact "need[ed];" i.e., that these upgrades are the most cost-effective way (relative to alternatives) of providing the transmission infrastructure that will allow California to meet its 33% Renewable Portfolio Standard (RPS) requirements.

SDG&E also questions whether the "least regrets" methodology described in Objective 5 will actually protect CAISO consumers. The concept of "finding the upgrades needed to support multiple feasible resource scenarios" is highly influenced by the character of the selected resource scenarios. For example, if four out of five resource scenarios differ in only small ways, then the same deliverability network upgrades would appear four out of five times. But this result is meaningless, and potentially detrimental to consumers, if these four scenarios are less likely to materialize than the fifth scenario. So far, SDG&E has not seen a logical or objective method for identifying "least regrets" deliverability network upgrades. SDG&E suggests removing the concept of "least regrets" from the discussion of objectives.

2. The revised straw proposal presents a timeline describing how the new TPP-GIP process would work. Please comment on the overall process design in terms of how well it meets the objectives of this initiative and how workable it is from a practical perspective. If you see ways it can be improved please offer concrete suggestions.

SDG&E comment: The timeline for the new TPP-GIP integration process should take into consideration the existing GIP milestones for financial security posting after each study phase (which identifies projects that will continue in the process). These security postings are currently due 90 days after Phase I and 180 days after Phase II.

3. Please comment on the following specific aspects of the design of the proposed new TPP-GIP process, and offer concrete suggestions for improvement where needed.

    a. The study assumptions proposed for each of the two GIP study phases.

        SDG&E comment: SDG&E has previously suggested that the existing GIP study process needs to be changed. The current deliverability study process uses assumptions regarding existing fossil-fired dispatch that are illogical (e.g., fossil-fired generation in the vicinity of the interconnecting generation is running at full output while fossil-fired generation with similar operating costs in other locations is decremented to accommodate the interconnecting generation, nuclear generation is assumed to run at 80% of nameplate when history shows they nearly always operate at 100% of nameplate) and inconsistent across interconnection studies (e.g., the CAISO uses an entirely different fossil-fired dispatch pattern to study generators interconnecting in the southern part of the state than it does to study generators interconnecting in the northern part of the state – yet economics inextricably link the operation of all of these units).

        Further the existing GIP study process identifies Delivery Network Upgrades without any economic determination of whether the identified upgrades are likely to provide consumers with economic benefits (relative to other alternatives for meeting California's 33% RPS requirement) that exceed the costs of the upgrades.

        Given the severe limitations of the existing GIP, SDG&E has previously suggested that identification of deliverability network upgrades be moved from the GIP to the TPP. In this way, economic discipline can be brought to bear on the process for identifying deliverability network upgrades.

        SDG&E understands that Ormat is also proposing that the identification of deliverability network upgrades take place in the TPP rather than in GIP. SDG&E joins Ormat in this proposal.

    b. The information available to interconnection customers at each decision point in the process.

    c. The "soft" nature of the GIP cost caps, whereby interconnection customers and ratepayers will have shared responsibility for upgrade costs that exceed the cost cap. Comment on both (i) the appropriateness of sharing

this cost responsibility, and (ii) the ISO's specific proposal for how the costs would be shared.

SDG&E comment: If the identification of deliverability network upgrades is moved from the GIP to the TPP as recommended by SDG&E and Ormat, then there would be no basis for CAISO consumers to accept any share of costs for deliverability network upgrade costs that are not included in the transmission plan that results from the TPP. By definition, if a deliverability network upgrade is not identified through the TPP, it is not economically beneficial for consumers; i.e., there would be more economical alternatives for meeting California's 33% RPS requirement.

4. In the revised straw proposal, the ISO identifies four options by which allocation of ratepayer funded upgrades could be allocated.

   a. Please rank the options, Option 3A, 3B, 3C, or 3F, from 1 (most appropriate) to 4 (least appropriate) your organization believes to be the most appropriate means for determining the allocation of ratepayer funded upgrades. Please explain the reasons for your preference? If there other options the ISO should consider, please describe them and explain why they could be superior to the other options.

SDG&E comment: SDG&E prefers option 3A, provided a workable set of pre-established first-come/first-serve milestones can be established. Such milestones could include (i) evidence of a signed PPA, (ii) approval of the PPA by applicable regulatory authorities, (iii) demonstrated site control, (iv) proven financing capability, and (v) receipt of key construction permits for the generation facility.

SDG&E believes the auction approach has theoretical merit because it forces each individual interconnecting generator to make its own commercial assessment of what Resource Adequacy (RA) counting rights are worth, as well as what the realistic prospects for ultimate project success are. SDG&E, however, shares the concern of some stakeholders that the auctions may not be competitive [because … PAS: can we briefly state why?]and that as a result, inefficient decisions would follow.

Option 3F has the advantage that LSEs would, arguably, be less likely than developers to tie-up RA counting rights on generation projects that are unlikely to get built. However, apportioning RA counting rights to LSEs creates potential conflicts among the LSEs

over the RA counting rights for resource development areas of high interest. (This drawback has already been demonstrated for the current allocation of import RA counting rights among LSEs, the "analogous…process" mentioned in the CAISO's Revised Straw Proposal.) The Investor Owned Utilities' management of RA counting rights would also be subject to CPUC review and oversight. Finally, SDG&E believes that a well-structured and rigorously enforced first-come/first-serve milestone approach would minimize the risk that weak developers would tie-up the RA counting rights awarded under Option 3A.

b. Based on stakeholder feedback during the September 19 stakeholder meeting, many parties stated the ISO would likely need to utilize more than one of the identified options. Please provide comment regarding what combination of these options will best facilitate the efficient allocation of ratepayer funded transmission capacity. Please provide as much detail as possible.

SDG&E comment: SDG&E believes that a well-structured and rigorously enforced first-come/first-serve milestone approach (Option 3A) would obviate the need to use "more than one of the identified options." Moreover, layering on multiple options adds complexity, cost and time to the implementation process.

c. If Option 3A is selected, what are appropriate milestones to determine which projects are the "first comers?" In particular, some stakeholders have suggested that only projects with signed PPA should be allowed to qualify. Please comment on the appropriateness of this criterion and any others that might be needed.

SDG&E comment: The existence of a signed PPA would seem to be a minimum threshold requirement. As noted above, SDG&E believes additional milestones should be established. These could include: approval of the PPA by applicable regulatory authorities, demonstrated site control, proven financing capability and receipt of key construction permits for the generation facility.

d. If Option 3B is selected, what is the appropriate metric and methodology upon which pro rata shares should be determined?

e. If Option 3C is selected, then how should such an auction be conducted? Specifically, the ISO seeks comments regarding whether an auction

should be an open bid or closed bid and held in a single round or an iterative bidding process? Please provide as much detail as possible.

1. Should the ISO conduct separate auctions for large projects and small projects? If so, how should the ISO determine how much transmission capacity should available in each auction?

f. If Option 3F is selected, how shall transmission capacity be allocated to the LSEs? In particular, is the existing methodology for allocating import capacity to LSEs for RA (tariff section 40.4.6.2) applicable in the present context? If not, how should it be adapted?

SDG&E comment: Apportioning RA counting rights to LSEs creates potential conflicts among the LSEs over the RA counting rights for resource development areas of high interest. This drawback has already been demonstrated for the current allocation of import RA counting rights among LSEs –- the current allocation of import RA counting rights among LSEs is the "analogous…process" mentioned in the CAISO's Revised Straw Proposal.

g. All of the options provided could create opportunities to buy/sell allocations of capacity created by ratepayer funded projects. Is there a need for the ISO to set up rules to prohibit or manage such sales?

SDG&E comment: No. RA counting rights are a right with economic value and market participants should be free to value and exchange those rights on whatever terms make commercial sense.

5. In cases where an IC pays for a network upgrade and later ICs benefit from these network upgrades, the ISO has proposed two options, Options 3E and 3G to resolve the "first mover-late comer" problem.

a. Does the ISO need to select one of these options or should both be implemented? If both, please explain or give an example of how the two could work together.

SDG&E comment: SDG&E does not support Option 3G. If a deliverability network upgrade is not included in the CAISO's TPP, then, by definition, CAISO consumers are economically better off without the upgrade. Accordingly, CAISO consumers should not bear any of the upgrade costs, even if for a short period of time.

Option 3E seems like a logical progression for merchant transmission. However, SDG&E believes FERC's existing NOPR concerning transmission cost allocation is likely to result in rules that will control how "late comers" can obtain access to the RA counting rights made available by merchant transmission (this is the "participant funding" issue currently being debated at FERC).

b. If only one option is to be chosen, which option does your organization favor and why?

SDG&E comment: Option 3E. Option 3E shields CAISO consumers from the costs of deliverability network upgrades that are not included in the CAISO's TPP.

c. In option 3G, should the "late comer" be responsible for paying back ratepayers for the portion of the network upgrades already covered by ratepayers or simply take over paying for the portion of the network upgrades covered by ratepayers moving forward?

SDG&E comment: SDG&E does not support Option 3G, but if it is implemented, SDG&E believes it should only be implemented on a going-forward basis and not retrospectively.

6. In order to transition from the current framework to the new framework, the ISO proposes that the entire existing queue including Clusters 3 and 4 proceed under the original structure, and that Cluster 5 would proceed using the new rules.

a. Does your organization support this transition approach? If not, please indicate how it should be modified and provide the justification for your proposal.

SDG&E comment: SDG&E does not support a GIP-TPP integration proposal under which Clusters 3 and 4 proceed under the existing GIP; or under which Cluster 4, Phase 1 would proceed under the provisions of the CAISO's September 19, 2011 Draft Technical Bulletin concerning "*Generation Interconnection Procedures, Revision to Cluster 4, Phase 1 Study Methodology*."[1] Indeed, the Delivery Network Upgrades identified in Clusters 1 and 2 considerably exceed the transmission infrastructure additions that

[1] In "Step 2" of this procedure the "Cluster 3 delivery network upgrades and costs will be carried forward to the Cluster 4 cost allocation stage." But the Cluster 3 delivery network upgrades are already excessive in scope and cost as compared to the transmission infrastructure that is needed to support California's 33% RPS requirement.

are needed to support California's 33% RPS requirement. A fundamental remake of the entire GIP is urgently needed.

As noted above, SDG&E agrees with Ormat that the deliverability analysis needs to be moved out of the GIP and into the TPP. This should be done for all of the generation in Clusters 3 and 4 on a mandatory basis and for generation in Clusters 1 and 2 on a voluntary, opt-in basis.

b. Given the potential size of clusters 3 and 4, if these clusters proceed under the existing rules is there a need to create new rules that would strengthen the incentives for less viable projects to drop out of the queue rather than proceed into the GIP phase 2 study process? If so, please offer concrete suggestions and explain why your suggestions would be effective and reasonable.

SDG&E comment: Moving the GIP deliverability analysis into the TPP as described above has the same effect as option 3A, only for a much larger amount of prospective generation. Given the vast size of the current CAISO interconnection queue, and the much smaller 33% RPS requirement, many generators seeking interconnection will be faced with the prospect of absorbing the costs of deliverability network upgrades in order to obtain full RA deliverability. These generators will then be forced to make tough decisions as to whether, with these transmission costs, their generation projects will be sufficiently profitable to justify moving forward. This provides an orderly and economically rationale way of sorting out the generation projects with the most value to consumers.

7. Some stakeholders expressed interest in determining only the reliability upgrades and costs in the GIP studies and to consider the need for delivery upgrades in the TPP. The ISO seeks comment regarding the feasibility/desirability of separating the assessment of reliability and delivery upgrades in this manner. In particular, how would this approach improve the process of identifying delivery upgrades that ICs would be required to pay for?

SDG&E comment: The CAISO's current TPP-GIP integration proposal would be implemented beginning with Cluster 5. While this proposal is certainly needed for Cluster 5 and later clusters, the real problem is with Clusters 1 through 4. Moving the deliverability analysis for generators in these clusters out of the GIP and into the TPP would impose economic discipline on the process for identifying deliverability network upgrades. Unlike the existing GIP, the TPP contains provisions under which the

CAISO compares the economic benefits of transmission infrastructure additions (relative to alternatives for supporting the state's 33% RPS requirement) to the cost of the additions. The deliverability network upgrades identified in the TPP would be far smaller in scope and cost than what comes out of the existing GIP.

Interconnecting generators meeting the first-come/first-serve milestones contemplated by option 3A would not be confronted with the large Delivery Network Upgrade funding hurdles that indiscriminately compromise the viability of otherwise economic generation developers. Interconnecting generators not meeting the first-come/first-serve milestones contemplated by option 3A would have to absorb the costs of building transmission to make the generators fully deliverable. This provides a strong locational signal to seek interconnection in areas where the existing transmission system already provides RA deliverability.

SDG&E has previously proposed a mechanism by which interconnecting generators not meeting the first-come/first-serve milestones could self-select the amount of deliverability network upgrades they are willing to absorb. The CAISO would produce an analysis which shows the costs of accommodating different portions of RA deliverability interest above the levels reflected in the TPP, up to the full amount of RA deliverability interest.[2] The analysis would produce results which can be thought of as a location specific "supply curve" for RA deliverability, with cumulative cost on the vertical axis and cumulative amounts of RA deliverability along the horizontal axis. This analysis would also take place in "Stage 2" of the CAISO's proposed process.

Under SDG&E's proposal, each interconnecting generator that finds itself outside the locations and RA deliverability quantities in the TPP would specify the maximum cost they are willing to absorb in order to obtain RA deliverability at their indicated interconnection location.[3] (An "energy only" interconnecting generator would, by definition, be willing to absorb $0.) The CAISO would construct a location specific "demand curve" based on the requested RA deliverability quantities and associated $/MW costs that the generators are willing to absorb. Comparing the supply curve to the demand curve, the CAISO would determine which interconnection requests can be accommodated at the indicated willingness to pay and notify the successful developers.

[2] As stated earlier, SDG&E believes it is essential that non-viable generation in the CAISO's generator interconnection queue be removed.

[3] Interconnecting generators would make this selection based on whatever information the generator chooses to rely on including the generator's own assessment of (i) how much RA deliverability will be requested by other generators in the same location, and (ii) the amount, type and timing of new generation that will actually get built in that location.

The following table provides an illustrative example of how SDG&E's proposal would work at a location where (i) the RA deliverability for the resources within the TPP is fully committed, and (ii) the CAISO generator interconnection queue contains another 1150 MW of proposed new generation seeking full deliverability.

"Supply Curve" Published by the CAISO							
RA Deliverability Solution	**Amount of RA Deliverability Provided (MW)**	**Estimated Cost (millions)**		**Cumulative RA Deliverability Provided (MW)**	**Cumulative Cost (millions)**		
Implement RAS	100	$25		100	$25		
Add Static VAR Compensation at new location	100	$75		200	$100		
New line on new double-circuit towers	300	$350		500	$450		
Add second line on double-circuit towers	300	$75		800	$525		
New transformer at new location	100	$50		900	$575		
Build a third line	300	$250		1200	$825		
"Demand Curve" Based on Generators' Submissions to the CAISO							
Generators in Interconnection Queue above RA Quantity Identified in 33% RPS Portfolio	**Requested Amount of RA Deliverability (MW)**	**Maximum Cost that Generator is Willing to Absorb to Obtain Requested RA Deliverability (millions)**	**$/MW**	**Cumulative Amount of Requested RA Deliverability (MW)**	**Cumulative Amount of Cost that Generators are Willing to Absorb (millions)**	**Corresponding Cumulative Cost from "Supply Curve" (millions)**	**Can RA Deliverability Solution be Implemented Consistent with Generators' Willingness to Absorb Cost?**
Generator D	200	$175	875,000	200	$175	$100	Yes
Generator F	200	$150	750,000	400	$325	$450	Yes [a/]
Generator C	100	$65	650,000	500	$390	$450	Yes [a/]
Generator E	150	$85	566,667	650	$475	$525	Yes [a/]
Generator G	200	$105	525,000	850	$580	$575	Yes
Generator A	100	$40	400,000	950	$620	$825	No
Generator B	200	$30	150,000	1150	$650	$825	No
Total	1150						

[a/] When generator G is evaluated, the requested amount of RA deliverability for generators F, C and E can be accommodated at those generators' indicated willingness to absorb costs.

8. Stakeholders have expressed concerns about the appropriate time to restudy the needs for and costs of network upgrades when projects drop out of the queue. Therefore the ISO seeks concrete suggestions for when and how restudies should be conducted.

SDG&E comment: SDG&E believes the timing of the CAISO's GIP (as modified to move deliverability analysis into the TPP) needs to be coordinated with the timing of the CAISO's annual TPP. This provides an orderly annual process under which the TPP would be updated to reflect changes in generation development expectations; e.g., prospective renewable generation that drops out of the CAISO queue would change the expected pattern of renewable resource development to achieve California's 33% RPS requirement. This changed pattern could result in elimination of certain previously-identified deliverability network upgrades (where significant financial commitments have not been made) and/or the addition of new deliverability network upgrades.

SDG&E believes the CAISO's TPP-GIP integration proposal lays out coordinated timelines.

9. Please offer any other comments on the revised straw proposal, including any suggestions for improvement of the proposal or other issues your organization believes the ISO must address in this initiative.

SDG&E comment: While SDG&E supports moving the deliverability analysis from the GIP to the TPP, it is also important that the CAISO provide a clear method of distinguishing between deliverability network upgrades and Reliability Network Upgrades. Reliability Network Upgrades should be limited to those upgrades that allow an interconnected generator to operate at full output under the assumption that the CAISO's congestion management protocols are exercised.