Attachment 2

Stakeholder Process: Generator Interconnection Procedures Phase 2

Summary of Submitted Comments

Stakeholders have submitted four rounds of written comments to the ISO on the following dates:

- Round One: Issue Paper, 2/24/11, Comments received 3/10/11
- Round Two: Straw Proposal, 4/14/11, Comments received 5/5/11
- Round Three: Draft Final Proposal, 5/27/11, Comments received 6/10/11
- Round Four: Revised Draft Final Proposal, 6/30/11, Comments received 7/14/11
- Round Five: Addendum to Revised Draft Final Proposal, 7/26/11

Parties that submitted written comments: BAMx ("Bay Area Municipal Transmission Group"), CalWEA ("California Wind Energy Association"), LSA ("Large-scale Solar Association"), Clean Coalition, California Municipal Utilities Association ("CMUA"), First Solar, GenOn, Ormat, PG&E ("Pacific Gas & Electric"), SCE ("Southern California Edison"), SDG&E ("San Diego Gas & Electric"), Six Cities, Wellhead, NextEra, LS Power, Independent Energy Producers ("IEP"), California Public Utilities Commission (CPUC), Clean Coalition, Energy Producers and Users Coalition ("EPUC"), Invenergy

Parties that participated in meetings or conference calls: Customized Energy Solutions, FERC, NRG, JP Morgan, WPTF, Six Cities, NCPA, CDWR, SCE, PG&E, CPUC, Citigroup Energy, Brightsource Energy, Metropolitan Water District, Iberdrola, Tenaska, California Energy Commission, SMUD, City of Riverside, Capital Power, Phoenix Consulting, NRG Energy, Thompson Coburn, IREC, City of San Francisco, Flynn RCI, EON Consulting, ZGlobal

Stakeholder comments are posted at: http://www.caiso.com/2b21/2b21a4fe115e0.html

Other stakeholder efforts include:

- Four stakeholder meetings (discussed issues paper, straw proposal, draft final proposal, revised draft final proposal)
- One stakeholder call (addendum to revised draft final proposal)
- Twelve stakeholder working group meetings
- Numerous client services outreach calls

Management Proposal	Generally or Conditionally Supports	Does not Support	Management Response
Items being presented for Board decision (Items that require Tariff changes)			
1. <u>Generators interconnecting to non-participating transmission owner facilities in ISO balancing authority area</u> - Develop procedures to perform deliverability studies when a generator is connecting to the transmission facilities of a non-participating transmission owner that is located inside the ISO balancing authority area.	SCE, PG&E, Clean Coalition, Six Cities, LSA SDG&E(procedures should apply to any generator requesting full deliverability, including those outside the ISO balancing authority area) Invenergy (need to clarify that non-participating transmission owner interconnection projects seeking deliverability would be eligible for the deliverability network upgrade cost refunds, and that existing projects and projects currently proceeding through the non-participating transmission owner interconnection process are eligible for the deliverability study) CalWEA (support with following clarifications: 1) Existing projects in non-participating transmission owner system will have opportunity to request deliverability on ISO system; 2) projects in non- participating transmission owner system will be eligible for refund of network upgrade costs on ISO system incurred in interconnection study process; and 3) studies already conducted by a participating transmission owner for a project interconnecting to a non-participating transmission owner facility in balancing authority area sufficiently satisfy requirement for "ISO participation")	N/A	From inception of this issue it was defined as applying to non-participating transmission owners within the ISO footprint. SDG&E's and others' comment to allow deliverability of projects outside the ISO balancing authority area would revise one of the foundational tenets of deliverability within the ISO and would require a significantly greater stakeholder process than the phase 2 timeline allows. Regarding CalWEA's and Invenergy's comments: (1) Existing projects in a non-participating transmission owner system were not considered in phase 2 and there is not a simple "yes" or "no" answer. Studies are needed. Existing projects in a non-participating transmission owner system can be included in phase 3 if stakeholders desire to do so; 2) the ISO agrees that non-participating transmission owner interconnection projects seeking deliverability would be eligible for deliverability network upgrade cost refunds; this was intended in the proposal and was clarified in the proposal addendum; and 3) ISO agrees that participating transmission owner affected system studies for reliability Network Upgrades that are in process or have been completed for a project not yet online and currently in

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			interconnect process with a non-participating transmission owner in the ISO balancing authority area would satisfy the requirement for "ISO participation."
2. <u>Triggers for Financial Security Posting Deadlines</u> – Financial postings are triggered by the date that the study report is finalized. Postings then are required to happen at a certain number of days after the study is final. There can be instances where there are errors in the reports. A key issue that was discussed in phase 2 of the stakeholder process is when does an error become material enough that it should change the date trigger? The ISO proposes changes to the steps in both the phase 1 and phase 2 posting processes, and proposes to create the concept of "substantial error" to reflect errors which might trigger a revision of a report. The new steps in the ISO study process will allow the interconnection customer to review and comment on draft study reports.	PG&E, Six Cities SCE (there is a discrepancy in the proposal regarding construction delays that would constitute a substantial error as being either six months or one year) SDG&E (language on errors and omissions in study reports provides too much detail and could be problematic to implement) Wellhead (clarifications are good but deadlines must be linked to later of report issuance or posting of reports/data to web-site) LSA and CalWEA (request additional time to prepare comments before the results meeting)	N/A	Regarding SCE's comment, the ISO will clarify in the tariff language that the text on page 24 of the revised draft final proposal is correct in that delays by more than one year constitute a substantial error. SDG&E is concerned that too much detail could be problematic. The ISO has recognized this concern and believes that the proposal strikes the right balance. Regarding the comment by Wellhead, the ISO proposes to set the trigger at the date the report is finalized and issued to the interconnection customer. In response to comments by LSA and CalWEA, the ISO has added an additional two days to the schedule to allow stakeholders to provide written comments to the ISO.
3. <u>Definitions of start of construction and other transmission construction phases and posting requirements at each milestone</u> – Include new provisions to allow generation projects to post the third and final security posting based on the separate and discreet generation phases being built.	SCE, Tenaska PG&E (participating transmission owner discretion is needed to determine whether a transmission project can be phased) SDG&E (supports and provided suggested edits to applicable tariff provisions)	Six Cities (customers should have to post full amount of security at outset and not be allowed to defer posting for phased transmission projects) LSA & CalWEA (customer should be explicitly entitled to stage postings based on estimated start	The ISO believes that the risk associated with phased posting of security is relatively low compared to the benefits to the developer to be able to phase their 100% security deposits to align with the transmission facilities. Some stakeholders have proposed more explicit tariff language while

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	Wellhead (clarifications are okay and customer should have sole option to separate transmission project into phases)	date for each upgrade and participating transmission owner should try to match the timing of upgrades with each phase of the transmission project)	others have proposed greater flexibility. The ISO proposal provides for the determination to be made on a case by case basis during contract negotiations.
4. <u>Information provided by ISO through internet postings</u> – Develop new tariff guidelines to clearly state what information the ISO considers to be confidential and must be posted to a protected ISO web site.	Stakeholders are supportive of the tariff language clarification	No stakeholders have indicated they "do not support" the proposed tariff revision.	The ISO believes these new guidelines will improve the interconnection process.
5. <u>Reduction in generator size for permitting or other extenuating circumstances</u> – Allow developers to reduce the MW size of their project by 5% after execution of the interconnection agreement for any reason (also referred to as "substantial performance"), and greater than 5% for environmental or permitting reasons on a case by case basis.	SCE, PG&E, Wellhead, Clean Coalition, Six Cities Stakeholders requested clarification on what the "source" for the generation project MW level is, to establish the minimum MW size that must achieve commercial operation to stay within the 5% safe harbor	SDG&E (reduction in size could be deemed a material modification if reduction impacts other network upgrades, and suggests ISO provide more specific language about material modifications and what is permissible and at what stages they can be evaluated) LSA & CalWEA (support a 20% reduction in size for any reason. If the size reduction occurs before execution of the interconnection agreement, the ISO should reflect the change in the phase 2 study if possible) Tenaska (the 5% threshold is too low and should be 15-25%)	The ISO does not believe it is practical at this time to outline all potential conditions under which the ISO might allow a greater than 5% reduction in the MW size of the facility. The issue is largely a fact-specific matter that will depend on the actual conditions and whether conditions beyond the interconnection customer's control prohibit construction at the MW level specified in the interconnection agreement. A "safe harbor" greater than 5% would weaken incentives for customers to "right-size" projects and increase risk for ratepayers. Size reductions greater than 5% should be subject to case-by-case ISO review and approval – as is proposed by the ISO. The ISO clarified in the addendum that the reference MW level would be the MW capacity noted in appendix B of the project's interconnection request. There is no need to revise the phase 2 study report, and doing so would only

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			add confusion to the interconnection process.
6. Repayment of interconnection customer funding for network upgrades associated with phased generation facility – Develop new tariff guidelines to allow a phased generation project to be repaid for network upgrades based on when the commercial operation date of the generating facility is placed in service and the sequence of corresponding network upgrades specified in the interconnection agreement is achieved.	SCE, PG&E, Clean Coalition Six Cities (repayment should only begin when all network upgrades are in place)	SDG&E (project should be repaid at the commercial operation date of the generator irrespective of completion of network upgrades; and should submit multiple interconnection requests rather than a phased project structure under a single interconnection request) Tenaska, Wellhead, LSA, CalWEA (proposal is headed in right direction but repayment should begin at commercial operation date of the generating facility regardless of in service date of the transmission) CalWEA (not clear how network upgrades for each generation-project phase would be identified for reimbursement purposes. ISO has not explained why, if "commercial operation date" for project phases includes completion of network upgrades for that phase, the same would not apply to "commercial operation date" for an entire non-phased generation project.)	The ISO clarifies its position on repayment based on FERC's Order 2003-C which details how transmission credits are applied to interconnection customers who upfront fund network upgrades. The order at paragraph 694 states the customer will start receiving transmission credits once the generating unit achieves commercial operation date and delivery service begins. It is the ISO's view that the most analogous interconnection service in the ISO footprint to "delivery service" applies to the circumstance when the participating transmission owner has built the network upgrades necessary for the generator to achieve the delivery status requested in the interconnection request (either energy only deliverability status—which pertains to reliability network upgrades or full capacity deliverability status, which pertains to both reliability and delivery network upgrades). In addition, the ISO understands that the participating transmission owner repayment will not begin until the transmission is placed into the transmission access charge and that the transmission must be in service before it can be placed into the transmission access charge. The repayment schedule for each phased project would be identified in the interconnection agreement.

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			Repayment provisions for phased generation projects also apply to non-phased generation projects.
7. <u>Accommodate qualifying facility conversions, repowering, deliverability at distribution level and other special circumstances associated with small projects, including potential modifications to independent study process and fast track study process</u> – (1) Add provisions explaining how a review would be conducted to determine whether a repowering or reconfiguring generation project will be subject to interconnection procedures,(2) add provisions as to how a review would be conducted when a qualifying facility converts to a participating generator status using the affidavit approach, (3) add new tariff procedures to allow the fast track study process to apply to existing facilities of 5 MW or less, (4) add new tariff guidelines to apply technical and business criteria for facilities using the independent study process, and (5) clarify how resources can maintain their deliverability when repowering or reconfiguring.	SCE, Wellhead, Tenaska, SDGE PG&E (a different set of screens needs to be developed for the fast track to study impacts to the grid or other generators in the queue) CPUC (Partial deliverability concept should be added for distribution level resources) Energy Producers (clarify how resources can maintain their deliverability, clarify that the section 25 affidavit approach can be used by a qualifying facility converting to participating generator agreement status, proposes the fast track be expanded for resources under 20 MW instead of 5 MW) LSA (Supports with the following changes: Amend the behind the meter proposal to state – 1) ISO should clearly state that generator capacity that could be tripped by an expansion breaker can be any generation capacity in the facility, 2) the deliverability level studied in the interconnection studies should be clearly stated, and 3) what is meant by "take place" in the "technical criteria" under Path 4) CalWEA (deliverability level studied in interconnection studies should be clearly	Clean Coalition (Proposal should prohibit customers from using fast track process to continually increase the project size by 5 MW), LS Power (clarify that resources entering fast track can or cannot get back in queue to be studied for deliverability)	For stakeholders requesting how facilities can maintain deliverability, the ISO clarified this concern in the addendum. The ISO agrees with the premise behind PG&E's concern over the screens and will address it in phase 3 next year as there was not enough time to fully explore this in phase 2 as this comment came in late in the process. For the CPUC concern over deliverability, the ISO proposal allows projects entering the ISO queue to request partial deliverability. For projects in the participating transmission owners' distribution network, the wholesale distribution access tariff process should be used to explore additional flexibility. For Energy Producers, the ISO agrees that the section 25 approach can be used by a qualifying facility converting to participating generator status. The ISO maintains the 20 MW threshold is too high for the fast track process and has discussed this issue during work group sessions. For LSA, 1) the revised draft final proposal allows the flexibility if the ISO

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	stated, in both the studies and interconnection agreement, to prevent later confusion; and, limits placed on behind the meter capacity expansion - 25% of the project or 100 MW).		and participating transmission owner agree to trip any generating capacity in the facility. 2) ISO agrees and implementation details can be put in the business practice manual. And 3) the ISO means physically installing the equipment as LSA notes. Regarding CalWEA's comment, the ISO is concerned that behind the meter capacity expansions greater than 100 MW would require reliability upgrades. Regarding Clean Coalition's comment, the existing screens are sufficient to address additional expansion. Only after the first 5 MW expansion achieves commercial operation could the next five MW expansion apply for fast track and the screens will determine whether it qualifies.
8. <u>Second and third financial security posting requirements to offset participating transmission owner funded network upgrades (incorporating ISO's interconnection procedures 2010 tariff waiver into generator interconnection procedures)</u> - Add tariff provisions to allow an interconnection customer to be relieved of the obligation to post the second and third financial security postings for network upgrades that the participating transmission owner has committed to upfront fund on behalf of the interconnection customer.	SCE, PG&E, Tenaska, SDG&E (agrees when the participating transmission owner elects to upfront fund network upgrades the interconnection customer should not have to post security) LSA and CalWEA (explicitly state the amount of the initial financial security posting that would be reduced to reflect any lower costs in the phase 2 study results below the phase 1 costs used to set that posting)	CPUC and Wellhead (should be discussed in the separate initiative to integrate the generator interconnection procedures and the transmission planning process)	The CPUC and Wellhead request that the topic of voluntarily electing to upfront fund network upgrades should be discussed as part of the separate initiative to integrate the generator interconnection procedures and the transmission planning process. The ISO believes that this topic needs to be addressed now and not be deferred to another initiative on a slower timeline. The ISO will incorporate the LSA and CalWEA comment into the phase 2 tariff amendment.
9. <u>Revise interconnection agreement insurance requirements</u> – Revise	SCE, Wellhead, Tenaska, LSA	N/A	PG&E's comments on revising additional terms are noted and were not

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interconnection agreement insurance requirements to relieve the ISO from procuring insurance to align interconnection customer insurance requirements to construction, and to require the participating transmission owner to tender insurance information only when requested by the interconnection customer.	PG&E (suggests changes to insurance coverage for travel and construction)		able to be fully discussed in the time given, as the comments came in at the end of the stakeholder process. Their issue can be addressed in phase 3.
10. Adjusted versus non-adjusted dollars in interconnection study reports and interconnection agreements – Standardize the use of time-adjusted dollar calculations used by the participating transmission owners in the calculation of interconnection and study cost reports.	SCE, PG&E, Tenaska, LSA	SDG&E (believes no changes are needed, as SDG&E currently provides cost estimates in years spent)	The ISO believes customers will benefit from uniform study format showing present dollar cost and dollar cost adjusted for year the transmission asset is built.
11. Financial responsibility cap and maximum cost responsibility – Clarify that the interconnection customer's maximum cost responsibility is the lower of the phase 1 or phase 2 interconnection study cost estimates.	SCE, PG&E, Tenaska, Clean Coalition, LSA	SDG&E (Phase 1 cost estimates should not be used as an interconnection cost cap)	The ISO does not share SDG&E's view that the phase I cost cap should be eliminated. A cost cap provides cost certainty to the developer. The concept of the phase 1 or phase 2 cost estimates and a cap has been a major tenet of the cluster interconnection approach since 2009.
12. "Posting cap" to financial security postings of participating transmission owner's interconnection facilities – Clarify that the financial security posting requirements for the participating transmission owner's interconnection facilities is the same as for the participating transmission owner's network upgrade financial security posting requirements.	SCE, PG&E, Tenaska, LSA CalWEA (supports with the following definition: 1) The scope of participating transmission owner interconnection facilities should only include those facilities that the interconnection customer could not build on its own (i.e., facilities that will be placed on participating transmission owner-owned property), with no deposit requirements assigned to facilities beyond this first structure; and 2) the interconnection customer can build the rest	SDG&E (does not see need for a posting cap for the security for the participating transmission owner's interconnection facilities)	The ISO agreed to add a posting cap because phase I estimates use only standardized estimates and do not include facts specific to the interconnection customer's particular interconnection. CalWEA's point 1) is a new idea that was just introduced in their final written comments a few weeks ago and has not been vetted with stakeholders, and point 2) is too detailed a provision to be included in tariff language.

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	or contract separately with the participating transmission owner or any other qualified entity to build the remaining facilities)		
13. Interconnection agreement suspension rights – Amend the suspension provisions to specify limited conditions where the interconnection customer may suspend construction of common upgrades—limited to situations where those upgrades were not identified at the time of the interconnection customer's phase 2 study report.	SCE, PG&E, Tenaska SDG&E (suspension proposal needs to be made clearer)	Six Cities (interconnection customers should not be permitted to suspend in circumstances where the suspension will give rise to increased risk of abandonment at the expense of transmission customers) LSA & CalWEA (oppose the clarification and would rather leave it to future case-by-case determination)	The clarification adds important guidance and clarification for interconnection customers as to the scope of the existing right to suspend under the cluster process.
14. Participating transmission owner 100% abandoned plant recovery – Add new abandoned plant provisions to acknowledge that the participating transmission owner is required under certain circumstances to upfront finance network upgrades if an interconnection customer withdraws, if a change in the base case causes additional network upgrades to be constructed above the maximum cost responsibility of the generators, or if through the transmission planning process additional network upgrades are required that had not been set forth in the interconnection agreement.	SCE, PG&E, CalWEA SDG&E (is unclear how the scenario would play out when the participating transmission owner is required to upfront fund because actual costs are higher than the interconnection customer's maximum cost responsibility) LSA (Support, but contingent on removal of contingency and other adders to participating transmission owner per-unit costs that inflate study cost estimates)	CPUC (should be discussed in the separate initiative to integrate the generator interconnection procedures and the transmission planning process) Tenaska (language needs to address how customer should not have to cover future upgrade costs if it withdraws prior to executing an interconnection agreement) Six Cities & BAMx (Shifting the risk of abandoned plant costs to transmission customers undermines the incentives for the participating transmission owners to exercise effective project management)	The provision seeks to clarify that participating transmission owners will be covered for prudently incurred costs of network upgrades they are required to fund and build under certain circumstances, in the event those upgrades are later abandoned. This provision would not supersede FERC's authority to review and approve the prudency of participating transmission owner expenditures, and therefore does not shift additional risk for imprudently incurred expenses onto ratepayers.
15. Partial deliverability as interconnection option – Add provisions to allow an interconnection customer to select	SCE, PG&E, Tenaska, Clean Coalition LSA & CalWEA (support partial	SDG&E (current language needs to address: "If phase 1 study report allocates costs for full deliverability	The network upgrades cost cap is the lower of phase 1 and phase 2 network upgrades cost. If the reduction in

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partial deliverability as an option in the study process.	deliverability option, but does not support ISO's position that phase I cost cap would not be adjusted if customer reduces deliverability to avoid the network upgrade)	what would be their level of deliverability for a lower level of network upgrade allocation?")	deliverability level results in lower delivery network upgrades cost, the phase 2 study results will reflect that. The posting requirement will be re-calculated between phase 1 and phase 2 based on engineering judgment to provide immediate financial relief if the customer reduces the deliverability. SDG&E requests the ISO to determine partial deliverability at different level of network upgrades. Such a determination is not practical within the study timeline. Furthermore, it does not provide more guidance to the interconnection customer than what the ISO already has. Currently, both the phase 1 and phase 2 studies provide the deliverable MW for a particular generator group if the most expensive component of the delivery network upgrade is removed.
16. <u>Technical requirements under interconnection agreement</u> – Apply the same technical requirements for both small (up to 20 MW) and large (greater than 20 MW) asynchronous generators that connect to the ISO grid.	SCE, Clean Coalition PG&E (suggests review of NERC standard FAC-001 for possible conflicts with transmission owners' responsibilities) LSA (proposal should note how requirements are different when projects connect at the distribution level)	N/A	WECC standard FAC-001 requires the transmission owners to document, maintain and publish facility connection requirements, which shall address, among others, system protection and coordination and voltage, reactive power and power factor control. In case the transmission owner's requirements conflict with technical requirement under ISO tariff, the ISO tariff applies. The proposal only addresses interconnections to the ISO controlled grid. The ISO has clarified in the

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			stakeholder meetings that distribution level interconnection are handled by a participating transmission owner's wholesale distribution access tariff and may have different technical requirements.
17. Off-peak deliverability assessment – Amend the tariff to state that the off-peak deliverability assessments are performed for informational purposes only.	PG&E, Wellhead, Tenaska, LSA, CalWEA	SCE (suggests further review in the separate initiative to integrate the generator interconnection procedures and the transmission planning process)	The ISO agrees with SCE's comment. An off-peak study is performed as part of the transmission planning process.
18. Operational partial and interim deliverability assessment – Add new tariff authority to perform an operational partial and interim deliverability assessment as part of the cluster phase 2 interconnection study.	SCE, PG&E, Wellhead LSA & CalWEA (annual assessment should give priority for awards of existing deliverability to full capacity customers over those seeking deliverability through separate annual ISO assessment) First Solar (Submitted revised text for a method for allocating deliverable partial capacity)	N/A	The priority that LSA and CalWEA desire is provided in the proposal. Projects in the 2013 annual full capacity deliverability study will have lower priority than cluster 5 but higher priority than cluster 6 in allocating interim partial deliverability. The ISO has included First Solar's proposed text in its final proposal through the addendum.