Stakeholder Comments
Draft Technical Bulletin – GIP Cluster 4 Phase 1 Study Methodology
Stakeholder Teleconference
September 26, 2011

Item No.	Submitter (Name and Company)	Comment Submitted	ISO Response
1.	*Chifong Thomas, BrightSource Energy, Inc.*	1) Mapping and Geographical Study Areas – In Step 1 of the revised methodology, the CAISO plans to compare the GIP study areas to the geographical regions set forth in the CPUC LTPP resource portfolios. It is unclear, however, how the CAISO will define the study areas considering the discrepancy between the methodology used in Portfolios (defined by more than 20 CREZs) and QC3 (approximately 5-6 study groups) that do not necessarily overlap. BrightSource assumes that the CAISO will have to map the geographical regions it uses for GIP studies to the geographical regions used under the CPUC portfolios. In order to ensure transparency of the process, BrightSource requests that the CAISO publish its proposed mapping of the study regions in the GIP process to the geographical regions in the resource portfolios and allow Stakeholders to comment on that mapping methodology prior to the study. At the very least, the CAISO should publish its methodology and the results of the mapping. The CAISO indicated that the study methodology would be in the Phase I study reports, but BrightSource does not believe that would provide sufficient transparency. Once the study is already completed, there is no meaningful opportunity for Stakeholders to have any input if there is disagreement or confusion about how the mapping was done. Particularly, when cost allocations of Delivery Network Upgrades are no longer assigned according to flow impact but according to $/MW cost of each group pro rata with the project sizes, the CAISO's alignment of the GIP study group with CPUC portfolio becomes extremely important, since the manner of allocation will directly impact the cost cap of each project. The Stakeholders have a right to understand the study methodology prior to its implementation, and the CAISO has not explained this portion of its proposal in the Technical Bulletin.	As discussed during the stakeholder call, the cluster 4, phase 1 GIP study groups will roughly align with the cluster 3 group study report groupings.

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2.	*Chifong Thomas, BrightSource Energy, Inc.*	2) Request for Sample Calculation – While BrightSource appreciates the CAISO's efforts to describe the new methodology in writing and chart form, there is some continuing confusion about the methodology and the results that it can yield. Therefore, BrightSource requests that the CAISO provide a sample calculation of study results for a geographical area in the GIP process, where the new methodology would be applied. This example should also include the mapping process for the GIP geographical region with the relevant geographical regions for the LTPP resource portfolios.	BrightSource appears to be asking for an entire analysis of a study area. Although the ISO has not provided an entire analysis of a study area it has described the process during five hours of stakeholder calls and published two papers on the methodology.
3.	*Chifong Thomas, BrightSource Energy, Inc.*	3) Clarification of Methodology Where Cluster 4 Project Contributes to Upgrades in Another Geographical Region - In its prior comments, BrightSource raised an issue regarding how the CAISO would treat projects that triggered upgrades in more than one geographical region, and the CAISO has not answered this question in the Technical Bulletin. Because the methodology used in QC3 attributes the cost of specific upgrades to a specific project based on its flow impact, a project in QC3 may trigger upgrades in regions other than where that project is located. For example, in the QC3 study results, there were some upgrades in PG&E area that projects in SCE and SDG&E service areas are also assigned cost responsibilities. On the opposite side, it is possible that the projects in one study area will not be assigned all of the costs for an upgrade. This approach is different from the proposed methodology for QC4 where all projects in the same group will be pay pro-rata share according to their sizes. The CAISO has not adequately explained how this issue will be taken into account, and BrightSource would like the CAISO to provide an explanation.	In the QC3 study results, there were some upgrades in PG&E area that projects in SCE and SDG&E service areas are also assigned cost responsibilities. These costs will be accounted for in the $/MW costs assigned to QC4 projects in similar areas. Regarding the comment, "it is possible that the projects in one study area will not be assigned all of the costs for an upgrade". The QC4 methodology will not assign all of the costs of an upgrade to the projects in a particular study area if the costs of that project were spread across multiple areas in QC3. The costs will be spread across the areas similar to QC3 results.
4.	*Chifong Thomas,*	Conclusion	BrightSource's proposal to undertake an entirely

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	BrightSource Energy, Inc.	BrightSource appreciates the CAISO's efforts to try to tackle the difficult issues presented by the interconnection queue process, and generally, BrightSource does not object to the CAISO's proposal to use the revised Cluster 4 methodology, as long as it applies the same methodology to Cluster 3 or separates Clusters 3 & 4 on separate tracks to ensure just and reasonable terms and conditions. The CAISO should, however, clarify several aspects of the revised methodology, and should ensure that the revised study process and results are transparent to all Stakeholders prior to the completion of the Cluster 4, Phase I study.	new phase I study for cluster 3 would unduly delay overall interconnection processing and is unnecessary for cluster 3. The ISO interprets BrightSource's proposal for a new cluster 3 phase 1 study to be based on the assumption that Cluster 3 customers incur harm if Cluster 4 customers are not exposed to the full brunt of delivery network upgrades that might be triggered under Phase I study modeling that assumes operation of the total MW quantity of Cluster 4. The ISO has stated in the conference call discussions that the ISO does not share the opinion that the GIP mandates that the full MW quantity of Cluster 4 be modeled to identify Cluster 4 Phase 1 delivery network upgrades; the basis of the ISO's reasoning is outlined in the Technical Bulletin. The ISO also conveyed in the conference call that this approach is not unprecedented, as the ISO has adjusted the MW amount studied in past interconnection studies.
5.	*Nancy Rader & Darisuh Shirmohammadi,*	CalWEA supported the CAISO originally proposed special methodology for performing Phase 1 technical study of QC-4 projects and continues to support that methodology after the CAISO proposed changes to that methodology as presented in its draft technical bulletin of 9/19/2011 on this matter. In addition, we	The ISO does not believe that it could incorporate the additional study and posting parameters that CalWEA's proposes under the

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	California Wind Energy Association	would like to ask the CAISO to pay attention to CalWEA's proposal on "meet the readiness milestones or park" criteria (as we have proposed in response to Question 4a of the CAISO revised straw proposal on TPP-GIP integration) as a way of responsibly and systematically screening out projects in QC-4 based on their readiness before allowing them to enter into Phase II studies. Based on our proposal, the CAISO would consider establishing readiness milestones, in addition to Phase 1 IFS deposit, for projects to enter into Phase 2 studies. The CAISO should then allow projects that cannot meet the readiness milestones to "park" for one cycle until the next cluster cycle. Based on our "meet the readiness milestones or park" proposal, the CAISO should require a project to meet two out of the following readiness milestones before the project is allowed to enter Phase II studies: 1. Demonstrate environmental permit for the project; 2. Demonstrate final site control for the project; 3. Demonstrate proof of project financing; 4. Demonstrate proof of access right to the POI substation; 5. Demonstrate equipment purchase order; 6. Have one year of recorded local meteorological data based on local measurement; 7. Have an approved PPA; and 8. Make an additional 50% deposit above its Phase 1 IFS deposit requirement. Projects not meeting the two readiness milestones would then be "parked" for one year and studied in the next year's study process if they can then meet the required milestones – otherwise, they would have to leave the queue. A project that is parked would also postpone its Initial IFS posting requirement by one year and its unused study deposit will be used for its study in the next year's cluster cycle.	GIP; as most of the additional parameters would conflict with those outlined in the GIP. The ISO is evaluating CalWEA's proposal points as part of the TPP-GIP stakeholder initiative.

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		We believe that the application of the readiness screen proposed here to the projects in Queue Cluster 4 (QC-4) will make the size of project that enter into Phase 2 studies to be more reasonable. It will also allow projects that will be parked to have one more chance to show their readiness before they are forced to leave the CAISO interconnection queue.	
	TomIsham PDS Consulting, PLC	1. It isn't real clear at what point the reliability upgrades and the delivery upgrades are coordinated. I thought that reliability upgrades were determined first and then based on those results, the deliverability upgrades were determined. It doesn't make sense to study them both in parallel when the reliability upgrades could be entirely different than the delivery upgrades or the reliability upgrades could solve the delivery upgrades or that the delivery upgrade results could be entirely different with and without the reliability system upgrades included.	Reliability upgrades are required to reliably connect the generation. Delivery upgrades are those upgrades beyond the Reliability upgrades needed to allow the deliverability of the generation. Reliability upgrades are typically modeled in the network before the deliverability assessment is performed. The fourth step of the process does not necessarily represent the sequence of events. Some reliability upgrades like breaker replacements do not affect the deliverability assessment results and can be done after the deliverability assessment. Some reliability upgrades like the looped substation to connect the generation need to be modeled in the deliverability assessment, but cost estimates can be done in parallel with the deliverability assessment.
	TomIsham PDS Consulting, PLC	2. In Section 2.3 of the flowchart, for example, if the new DNU costs were associated with 500MW of new generation in order to equal the CPUC ceiling but there were 3000MW of new queued generation from C4, how do you know that the DNU costs for the selected 500MW would be the same if a totally	In the example given, 500 MW is being added to the Cluster 3 generation amount in order to reach an amount of generation in that area

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		different 500MW of queued generation were selected? It looks like some of the study areas you referred to are large enough that the network upgrades required could be significantly different based on the locations of the generation you used.	equivalent to the CPUC ceiling amount. Therefore the population of generation driving the transmission costs is the combination of Cluster 3 and the 500 MW. The methodology requires that the C3 $/MW are representative of C4, so presumably C3 has about 3000 MW in this example. Adding 500 MW to C3 in the example would not be expected to significantly change the major upgrade requirements or the total magnitude of transmission costs due to the Cluster 3 generation plus the 500 MW.
6.	*Joscelyn Wong, Pacific Gas & Electric*	PG&E appreciates the CAISO efforts to work with the PTOs on this methodology. PG&E supports the use of proxy costs for the Cluster 4 Phase 1 delivery network upgrade costs. Per discussions with the CAISO, PG&E will be performing various studies to identify the reliability network upgrades for Cluster 4. These include, but are not limited to, transient stability, voltage analysis, and short circuit studies. In addition, project specific upgrades, i.e. switching stations, will be determined by PG&E for the Phase 1 study reports. The proposed changes to the Cluster 4 methodology are encouraging in that the cost estimates assigned to ICs look to be reasonable, which will hopefully encourage non-viable projects to exit the process. However, given the current rules of using the lesser of $7.5 million, $20,000/MW, or 15% of the total as the posting requirement, PG&E is concerned that the $20,000/MW is the posting requirement that will apply to the majority of projects in Cluster 4, which might not be sufficient to encourage non-viable projects to exit the queue.	The PG&E proposed posting requirements are prohibited by our current Tariff.

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		Therefore, PG&E suggests that the CAISO examine ways to ensure that the hurdles are adequate so that only the most viable projects remain in Cluster 4. One approach could be to remove the $20,000/MW posting requirement, and instead make the requirement the lower of $7.5 million or 15% of the total estimated upgrade cost.	
7.	*Joscelyn Wong, Pacific Gas & Electric*	PG&E Recommendations: • Cost estimates developed in Cluster 4 Phase 1 should not be used to set cost caps for generators. The proposal should modify the current procedure such that Cluster 4 Phase 2 results set cost caps for generators. • The proposal should contain some form of abandoned plant cost protection for PTOs in the event that costs exceed the cost cap. If cost caps are too low, then the Participating Transmission Owner (PTO) is exposed to financial risk should generation fail to materialize. The Cluster 4 Phase 1 interconnection financial security posting should be set by the lower of 1) 15% of the network upgrade estimate or 2) $7.5 million, but not on $20k/MW. This will help ensure that non-viable projects are encouraged to exit the process in a timely manner.	Using the Phase 1 cost estimates is required by our current Tariff.
8.	*Joscelyn Wong, Pacific Gas & Electric*	PG&E Questions: • Will projects be allowed to make changes between clusters 1 and 2? E.g. move from Full Capacity to Energy Only, reduce project size, etc? PG&E notes that the CAISO's related initiative on coordinating the TPP and the GIP could have implications for generators in Cluster 4. Because the current TPP/GIP integration proposal will apply to generation projects in Cluster 5 and beyond, the transition to the new process could constitute an unintended incentive for Cluster 4 projects to remain in the study process.	Changes between the phase 1 and phase 2 study currently allowed by our Tariff will continue to be allowed for Cluster 4.
9.	*Gary Holdsworth,*	SCE's support is based on the CAISO's assurances that it will work with SCE	The ISO is working with all of the PTOs on the

	Southern California Edison	in the few identified cluster study sub-groups that will require continued application of the conventional deliverability study methodology, such as the East of Pisgah sub-group, which is an area that has the following characteristics: 1) the amount of QC3 interconnection requests in MW does not provide for a representative sample size for proxy cost-per-MW extrapolation to QC4 nor do the QC3 resources exceed the amount provided for in the CPUC resource portfolios; and 2) the amount of QC4 interconnection requests in MW far surpasses the amount of system capability. These are the same circumstances that would lead to continued use of the conventional deliverability assessment methodology as outlined in the two bullet points under Step 1 (page 6 in the Draft Technical Bulletin), that state that the current deliverability assessment methodology would be necessary because of an insufficient price signal that could occur because either of the following: 1) there were no material generation in QC3 but considerable generation in QC4, or 2) when the voltage levels of interconnection requests in QC3 are different than the voltage levels of interconnection requests in QC4. SCE appreciates the CAISO addressing its concerns in this regard, because for the proposed Cluster 4 Phase I deliverability assessment methodology to be effective, the derived QC3 cost-per-MW price signal needs to be sufficiently representative of the resource base in QC4. Where this is	implementation of this methodology. The revised methodology to be used for Cluster 4 phase 1 study does require, under some specified conditions, the use of our standard methodology.

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		clearly not the case, such as in East of Pisgah, the appropriate response would be to perform the deliverability assessment the conventional way.	