Stakeholder Comments Template

Subject: Modifications to the Small Generator Interconnection Procedures Issues Paper and Meeting

This template was created to help stakeholders submit written comments on topics related to the April 1, 2010 Modifications to the Small Generator Interconnection

Submitted by	Company	Date Submitted
Please fill in name, email address, and contact number of specific person who can respond to any questions about these comments.	*SDG&E*	*April 26, 2010*

Procedures Issue Paper and April 12, 2010 Small Generator Interconnection Procedures Stakeholder Meeting. Please submit comments and thoughts (in MS Word) to dkirrene@caiso.com no later than the close of business on April 27, 2010.

The ISO is interested in knowing the importance and urgency of the issues identified through this stakeholder process. The issues identified below are further described in the Issues Paper. Please rate the importance of each issue as high, medium or low by checking the check box. In addition, please identify the urgency for getting each of the identified issues resolved. Check the urgent check box for issues that should be resolved in a FERC filing this year. Check the not urgent check box if the issue could be resolved beyond year-end. The information provided will assist the ISO in determining the scope of this stakeholder effort.

Study Process Issues		
	Importance	**Urgency**
2.1.1 Time required for the SGIP study process	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
2.1.2 SGIP serial study process coordination with the studies under the large generation interconnection procedures (LGIP)	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
2.1.3 Avoiding delays caused by the increasing volume of SGIP projects	☐ high ☒ medium ☐ low	☐ urgent ☒ not urgent
2.1.4 Detail and necessity of the feasibility study Must add thermal power flow studies to the scope, short circuit alone is not sufficient to identify	☒ high ☐ medium ☐ low	☐ urgent ☒ not urgent

feasibility of a project.		
2.1.5 Interconnection request data requirements	☒ high ☐ medium ☐ low	☐ urgent ☒ not urgent
2.1.6 Should the SGIP accommodate re-studies? YES	☐ high ☐ medium ☒ low	☐ urgent ☒ not urgent
2.1.7 Availability of the current base case data for use by project developers The cases would be available after the studies are done, however a NDA needs to be signed by the developer before the case could be released to them.	☐ high ☒ medium ☐ low	☐ urgent ☒ not urgent
2.1.8 Delays and uncertainty in study results caused by projects that withdraw (SGIP and LGIP)	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
Comments:	Delays and uncertainty in study results caused by projects that withdraw and also by coordinating the SGIP studies with the lengthier LGIP study process.	
Solution Ideas:		
Deliverability Issues Related to Interconnecting Small Generation		
2.2.1 Should SGIP have an option for deliverability? Yes, and SGIP should **not** require the project to go through the LGIP process just to be included in the Deliverability Assessment studies.	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
2.2.2 Should there be an opportunity to have "partial deliverability"? Yes	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
2.2.3 Should there be a later opportunity to change deliverability status after generator is commercially operational? The study methodology for identifying the Deliverability after the interconnection studies are completed	☐ high ☒ medium ☐ low	☐ urgent ☒ not urgent

should be defined before deciding to answer this question. Would this also apply to LGIP?		
2.2.4 How would a change in policy affect existing generation and/or existing projects in the queue?	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
Comments:	SDG&E emphasizes that the purpose of the CAISO Deliverability Assessment is to satisfy CPUC's requirement for RA qualification. It should not be intended to replace the thermal power flow studies that are usually done as part of the reliability assessment performed in an impact study. Preliminarily, SDG&E believes that many of the proposed revisions at issue in this SGIP reform process apply primarily to prospective resources. For example, issues around site control, application fees, queue position, and cost certainty are relevant only to new and prospective resources. SDG&E believes a separate, expedited track to address issues germane to existing, small and distribution level resources is also necessary. Nowhere is this more applicable than in regards to deliverability assessments and RA credit. Accordingly, SDG&E's comments will separately address deliverability issues for existing, on-line and operational resources, and issues for new or prospective resources. <u>Operational Small Transmission and/or Distribution-Level SGIP Resources</u> At present, the CAISO Tariff Section 40.4.6.1 requires that before determining an RA resource's Net Qualifying Capacity (NQC), the CAISO will ensure that the RA resource "is available to serve the aggregate of Load by means of a deliverability study." If the resource seeking to count for RA is 20 MW or less, Section 1.3.8 of the CAISO's SGIP requires that "An Interconnection Customer . . . . that desires to have a Deliverability Assessment performed for the Small Generating Facility *shall be required* to have its Interconnection Request processed under the Large Generator Interconnection Procedures (LGIP)." Combined, the Tariff sections require that: 1) to count for RA, a resource must undergo a CAISO-conducted Deliverability Assessment, and 2) any resource seeking a Deliverability Assessment, regardless of size, must be processed under the CAISO's LGIP. The deliverability study evaluates whether there is sufficient system capacity to deliver a proposed resource's output to serve system load	

	under peak conditions. Whether a proposed 600MW resource's capacity is deliverable at peak is an important consideration. However, it is irrational to require a 1 to 2 MW distribution-level resource buried deep in a load pocket to run through a process designed specifically for large resources. SDG&E is pleased the SGIP reform issue paper recognizes this square-peg/round-hole dilemma, and appears to propose a separate deliverability assessment possibility within the SGIP process. Going forward, new resources less than 20MW electing a full capacity option should have their deliverability assessed in a process less cumbersome, costly and time consuming than the LGIP. Further, SDG&E would suggest that very small (1-5 MW) generation projects that are located in load pockets, particularly those that are meant to primarily serve on-site load, should be exempt from a study provided the IOU has or will perform an interconnection study prior to allowing the subject generator to interconnect with its system SDG&E is confident a more streamlined process for prospective resources will emerge from this reform process. However, that refined process may not quickly capture existing small resources already operational and connected to the grid, yet precluded under current practices from receiving RA credit. SDG&E believes a distribution study, however streamlined, is superfluous in the case of this class of resource. Small generation resources connected electrically close to load on distribution circuits are almost always "deliverable" because they usually reduce, not increase, loading on distribution circuits. Additionally, through the WDAT, SDG&E (as the UDC) performs a rigorous technical review before allowing such resources to interconnect to the distribution system. SDG&E believes these factors should establish a rebuttable presumption that all currently operational resources interconnected to the distribution system are deliverable, and should be certified as RA resources. This deemed deliverability for existing resources would obviate the need for an after the fact deliverability study. If the CAISO believes there is a deliverability problem with a given generator, then it can conduct the deliverability analysis and present the results to the CPUC to rebut the presumption in favor of deliverability. <u>New and Prospective Resources</u> SDG&E's interpretation of the SGIP tariff and the FERC order 2003 is that under the SGIP the PTO is obligated to identify the Network Upgrades that mitigate reliability criteria violations that are associated with the interconnection of new generation. The funding of Delivery Network Upgrades is optional to the Interconnecting Customers and if they do choose to fund those Delivery Network Upgrades they will be reimbursed upon the project's Commercial Operation Date. Before

	SDG&E moves forward to the next phase of the SGIP project studies, SDG&E requests the CAISO's concurrence with SDG&E's interpretation, or the CAISO's reasoning if it does not concur with SDG&E's understanding. SDG&E's understanding in regards to cost responsibility for the Small Generator Interconnection upgrades is that: ▪ The SGIP tariff (and CAISO's interpretation of the SGIP) treats an SGIP project as inherently an Energy Only (EO) project. A SGIP project that wants to select Full Capacity (FC) deliverability status needs to go through the LGIP process since only LGIP process provides the option of FC or EO deliverability status. ▪ Energy Only projects are not responsible for funding Delivery Network Upgrades. Energy Only projects are only responsible for Interconnection Facilities and Reliability Network Upgrades. ▪ Cost Responsibility for Network Upgrades for Energy Only SGIP projects are treated the same as for Energy Only LGIP projects. Consistent with SGIA Article 5 it is clear that the developer will be reimbursed for the network upgrades (without any differentiation between Delivery Network Upgrades and Reliability Network Upgrades because SGIP projects are treated as EO and therefore there are no Delivery Network Upgrades identified) that it chooses to fund. FERC's intention evidenced in Order No. 2003 was to reduce interconnection time and costs for interconnection customers and transmission providers, preserve reliability, increase energy supply, lower wholesale prices for customers by increasing the number and types of new generation that will compete in the wholesale electricity market, and facilitate development of non-polluting alternative energy sources. Thus, FERC provided that the obligation to finance any upgrade beyond the Point of Interconnection is ultimately the responsibility of the Transmission Owner that is hosting the generation project. SGIA Article 5 (Cost Responsibility for Network Upgrades) states that: *The Participating TO shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. Unless the Participating TO elects to pay for Network Upgrades, the actual cost of the Network Upgrades, including overheads, shall be borne* ***initially*** *by the Interconnection Customer. [Emphasis*

	added] SGIA Article 5.3 (Transmission Credits) provides that *No later than thirty (30) days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the ISO and the Participating TO to receive Firm Transmission Rights as defined in and as available under the ISO Tariff at the time of the election in accordance with the ISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 5.3.1.* SGIA Article 5.3.1 (Repayment of Amounts Advanced for Network Upgrades) provides that *Upon the Commercial Operation Date, the* ***Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the cost of Network Upgrades****. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for dollar basis either through (1) direct payments made on a levelized basis over the five year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. [Emphasis added]*
Solution Ideas:	▪ Deem existing, operational transmission and distribution level SGIP resources deliverable for purposes of RA eligibility. The CAISO can rebut the presumption of a given generator's deliverability by conducting a deliverability analysis and presenting results to the CPUC indicating that unit is not deliverable at its CPUC determined NQC. ▪ Revise the SGIP tariff to provide an option for the developers to choose EO vs. FC for deliverability status. Also it should be clarified that even in EO cases PTO is obligated to identify the Network Upgrades that mitigate reliability criteria violations that are associated with the interconnection of the new generation

	projects when fully dispatched (since this was an issue that CAISO and SDG&E staff had differences of opinion). ▪ Revise the SGIP tariff to identify, consistent with SGIA Article 5, that the developer may elect to fund Delivery Network Upgrades and will be refunded if it chooses to fund the upgrades. ▪ Revise the SGIP tariff to identify, consistent with SGIA Article 5, the developer will be reimbursed for the cost of network upgrades (Reliability Network Upgrades and IC-elected Delivery Network Upgrades)		
Issues relating to Cost Certainty			
2.3.1 Developers desire cost certainty Cost certainty is a complex issue; it depends on the scope of the project and the level of the regulatory approval that may be required.	☐ high ☒ medium ☐ low	☐ urgent	☒ not urgent
2.3.2 How to minimize the impacts caused by projects that drop out of the queue? This is outside of the control of the CAISO and PTOs. There are unlimited number of scenarios to be considered to foresee all possibilities but very limited time to finish the studies and evaluation of the project's impact.	☐ high ☒ medium ☐ low	☐ urgent	☒ not urgent
2.3.3 Accuracy of the per unit construction cost estimates Cost estimates should be provided on a case by case basis. Based on the experience with the Unit Cost estimates for the Transition Cluster it seems that the unit costs would not provide a meaningful value for decision making especially in SGIP project	☐ high ☒ medium ☐ low	☐ urgent	☒ not urgent

economics. Since each interconnection location has its own specific condition which affects the cost, they should be evaluated as such.		
2.3.4 Effects of adding cost certainty measures to the overall SGIP timeline	☐ high ☒ medium ☐ low	☐ urgent ☐ not urgent
Comments:		
Solution Ideas:	Revise	
Issues related to Eligibility Criteria		
2.4.1 LGIP projects broken up into multiple SGIP projects Should be allowed if project meets the tariff criteria	☐ high ☒ medium ☐ low	☐ urgent ☒ not urgent
2.4.2 Real vs. Speculative projects Should not matter if project meets the tariff criteria	☐ high ☒ medium ☐ low	☐ urgent ☒ not urgent
2.4.3 Generation MW size Should not increase the level from the current 20 MW – leave it as is.	☐ high ☐ medium ☐ low	☐ urgent ☐ not urgent
2.4.4 MW Increases to existing projects If the project size goes above 20 MW it should go through the LGIP process. This would change the basis that other developers used for sizing their project. If changed, there will be impacts to other projects in the Queue.	☐ high ☐ medium ☐ low	☐ urgent ☐ not urgent
2.4.5 Site Control YES	☒ high ☐ medium ☐ low	☐ urgent ☐ not urgent
Comments:	▪ As long as the project proposed by the IC meets the eligibility criteria, regardless of business strategy or intent, the number of SGIP projects submitted by an IC should not matter or be limited ▪ Increases to MW size allowed as long as there are not material impacts to other projects in the Queue.	

Solution Ideas:	▪ SGIP tariff to be revised to allow that as long as the project proposed by the IC meets the eligibility criteria, regardless of business strategy or intent, the number of SGIP projects submitted by an IC should not matter or be limited ▪ Site control required at ISIS and IFAS stage in the SGIP, not for IFES (Feasibility Study).		
Issues related to application and study fees			
2.5.1 Appropriateness of amount of study deposits Deposit levels should match the 3-study LGIP (pre GIPR) tariff requirements. The $1,000 is too low and creates an easy gate for entering the SGIP queue.	☐ high ☒ medium ☐ low	☐ urgent	☐ not urgent
Comments:			
Solution Ideas:	▪ Revise the SGIP tariff to require study deposits that match the deposit requirements from the 3-study LGIP pre GIPR.		
Small Generator Interconnection Agreement Issues			
2.6.1 Pace of SGIA completion	☒ high ☐ medium ☐ low	☒ urgent	☐ not urgent
2.6.2 Detail of the SGIA	☒ high ☐ medium ☐ low	☒ urgent	☐ not urgent
Comments:			
Solution Ideas:			
Miscellaneous SGIP tariff issues			
2.7.1 Detail of the SGIP tariff	☒ high ☐ medium ☐ low	☒ urgent	☐ not urgent
2.7.2 Clarity of SGIP tariff definitions	☒ high ☐ medium ☐ low	☒ urgent	☐ not urgent
Comments:	▪ Technical data required with submittal of IR is inadequate to perform the ISIS and IFAS studies.		
Solution Ideas:	▪ Revise SGIP tariff so that Interconnection Request (IR) form and the level of Technical Data requirements portion of IR matches that of the LGIP. ▪ Revise SGIP technical data requirements for Feasibility Study (IFES) to require only the preliminary technical data necessary to complete the IFES.		

	▪ Revise SGIP technical data requirements for ISIS and IFAS to require all the technical data necessary to complete these studies.

Additional Issues that should be considered

Please include additional issues here.	☐ high ☐ medium ☐ low	☐ urgent ☐ not urgent
Deliverables and analysis required for each study phase	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
IC funding of and PTO reimbursement for costs of Delivery Network Upgrades	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent
Integration of LGIP and SGIP study timelines.	☒ high ☐ medium ☐ low	☒ urgent ☐ not urgent

Comments:

SDG&E has performed two feasibility studies for the two SGIP projects in the ISO Queue for its area and has entered into the ISIS study phase for these projects. It is extremely important that the CAISO and SDG&E have a clear and common understanding of the deliverables and the analyses involved in the next phase of the studies for these customers.

The SGIP Feasibility Study Agreement states:

6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed [Emphasis added]:

6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;

6.3 Initial review of grounding requirements and electric system protection;

6.4 preliminary identification of financial impacts, if any, on Local Furnishing Bonds; and

6.5 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.

7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later

	changes the purpose for which the Small Generating Facility is being installed. [Emphasis added] Based on the IFS Agreement (above excerpts), for the analysis the project should be fully dispatched ("identify ANY potential adverse system impact" and "model the impact…regardless of purpose").
Solution Ideas:	▪ Revise SGIP tariff to reflect ○ SGIP projects will have an option for deliverability Status ○ SGIP developers will be reimbursed for network Upgrades ○ Feasibility Study will be an streamlined thermal & short circuit only analysis ○ Detailed project data is required before the ISIS stage ○ One queue per geographic area means all projects regardless of size and the interconnection voltage will be included in the study per their position in the queue

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

The following are SDG&E's proposed approach for addressing the Deliverability Assessment as it pertains to the Small Generation projects (existing & proposed) on a distribution system:

- Deem distribution level resources deliverable for RA purposes.
  - When all existing generation combined at maximum output on a distribution substation will not cause any backflow onto the transmission system during system peak conditions. There is no need for a deliverability study because the generation is only an offset to load for transmission modeling purposes and any potential distribution problems will have been addressed by the distribution utility.
  - When a new generator combined with all existing generation (all at their maximum outputs) on a distribution substation will not cause any backflow onto the transmission system during system peak conditions.

- The CAISO can require a deliverability study if all generation combined at maximum output on a distribution substation will cause backflow onto the transmission system during system peak conditions

- Conduct a one-time, expedited deliverability assessment for any distribution substations that the CAISO decides a deliverability study is needed for existing

generation because of possible backflow onto the transmission system during system peak conditions.

- Reform existing process for new and prospective resources to include a deliverability assessment option inside the SGIP (as opposed to having to go through the LGIP) process.

- SDG&E recommends that the Deliverability Assessment be a stand alone study not as part of the LGIP or SGIP process.