California Independent
System Operator Corporation

August 4, 2014

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: California Independent System Operator Corporation
Docket No. ER14- ___-000

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements and to Satisfy Requirements of Order No. 792

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") submits this tariff amendment ("FPA 205 tariff filing") to improve the efficiency and flexibility of its generator interconnection process by enhancing its two non-cluster study processes: (1) the independent study process, which allows generators that can demonstrate that they are independent of other projects in the queue to be studied serially outside of the cluster studies; and (2) the fast track process, which allows qualifying small generators to interconnect through a significantly streamlined set of procedures.[1] The CAISO also proposes tariff revisions to satisfy the requirements of the Commission's Order No. 792, including tariff revisions regarding the fast track process.[2] These proposed modifications constitute the third set of planned tariff revisions to emerge from the CAISO's Interconnection Process Enhancements ("IPE") stakeholder

[1] The CAISO submits this filing pursuant to section 205 of the Federal Power Act ("FPA"), 16 U.S.C. § 824d. Capitalized terms not otherwise defined herein have the meanings set forth in the CAISO tariff, and references to specific sections, articles, and appendices are references to sections, articles, and appendices in the current CAISO tariff as revised or proposed in this filing, unless otherwise indicated.

[2] *Small Generator Interconnection Agreements and Procedures*, Order No. 792, 145 FERC ¶ 61,159 (2013) ("Order No. 792"), *order clarifying compliance procedures*, Order No. 792-A, 146 FERC ¶ 61,214 (2014) ("Order No. 792-A"). On the same day that the CAISO is submitting this FPA 205 tariff filing, the CAISO is also separately submitting a filing pursuant to section 206 of the FPA to comply with Order No. 792.

initiative, which commenced in 2013. The proposed changes reflect the CAISO's and stakeholders' experience with implementing the independent study and fast track process, and seek to improve these processes to make them more accessible and transparent to generation developers, as well as more feasible and efficient to manage for the CAISO and its transmission owners. The proposed changes are broadly supported by stakeholders.

The CAISO requests that the Commission accepts the tariff revisions contained in this filing effective as of November 4, 2014.

I. Executive Summary

The goal of the IPE initiative is to identify and implement further improvements to the CAISO's generator interconnection process, in order to better meet the needs of developers, transmission owners, the CAISO, and ratepayers in California's rapidly evolving generation marketplace. Two of the areas that the CAISO and its stakeholders identified as in need of improvement were the independent study and fast track processes under the CAISO tariff.

The independent study process is used to evaluate interconnection requests outside of the queue cluster study process for interconnection customers that are able to demonstrate that their generating facilities are electrically independent of other projects in the queue. The independent study process is intended to permit such interconnection requests to be studied serially and achieve commercial operation on an expedited basis. However, the CAISO and stakeholders have determined that the existing rules for the independent study process should be revised and clarified in order to better achieve these goals. Based on extensive discussions in a working group devoted to the topic and the larger IPE stakeholder group, the CAISO proposes to revise its tariff provisions on the independent study process to:

- Implement expanded criteria for independent study process eligibility that provide better assurances that interconnection customers have both a need to be studied and the ability to perform under that process, and to ensure that the generating facility's proposed commercial operation date is achievable.

- Revise the provisions on the determination of electrical independence in order to (1) allow interconnection requests that are self-evidently independent to proceed directly to the study process, (2) reduce delays and uncertainties in the commencement of tests for electrical independence, and (3) give the CAISO sufficient time to evaluate whether the revised electrical independence requirements are met.

- Revise the flow impact test for identifying electrically impacted transmission facilities in order to simplify and clarify the flow impact test and to align it with the overall intent of the independent study process.

- Clarify and modify the provisions on behind-the-meter capacity expansions of existing generating facilities in order to make the provisions easier to understand, eliminate unnecessary requirements, and be consistent with good utility practice.

- Improve the existing short circuit test and add new tests to better ensure that the interconnection request is electrically independent.

- Combine the existing system impact study and facilities study into a single study that is more efficient and straightforward and provides a shorter timeline for interconnection.

- Clarify the provisions regarding requests for partial capacity or full capacity deliverability status and asynchronous generating facilities.

The fast track process is intended to permit qualifying small generators to interconnect to the CAISO controlled grid more quickly and through a more streamlined process and to improve the overall efficiency of the overall interconnection process. However, the CAISO's and stakeholders' experience with this process have shown that it should be enhanced to better serve these purposes. The fast track process also needs to be modified to satisfy the requirements of Order No. 792, which mandates changes to transmission providers' tariffs.[3] Consequently, based on extensive discussions in a working group devoted to the subject and the larger IPE stakeholder group, the CAISO and stakeholders propose to revise the CAISO tariff provisions on the fast track process to:

- Eliminate the processing fee and increase the study deposit to reflect the additional work that the CAISO and participating transmission owners will perform under the revised fast track process, and shorten the timeline for processing a fast track interconnection request.

- Revise the initial screens the generating facility must pass in order to participate in the fast track process to better ensure the safety and reliability of the CAISO controlled grid.

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[3] As with previous orders regarding its *pro forma* interconnection procedures, Order No. 792 provides that independent system operators or regional transmission organizations such as the CAISO can demonstrate that any variances from those *pro forma* revisions meet the "independent entity variation" standard.

- Revise the provisions regarding the customer options meeting and the supplemental review process to provide a transparent and meaningful opportunity to proceed with a fast track interconnection if the interconnection customer fails the initial screens.

The CAISO also proposes to revise its tariff as follows to include provisions based on Order No. 792 that do not concern the fast track process:

- Add provisions to give an interconnection customer with a small generating facility the option of requesting from the transmission provider a pre-application report providing existing information about system conditions at a possible point of interconnection.

- Add provisions to specifically include energy storage devices in the definitions of "generating facility" and "small generating facility."

To the extent the existing CAISO tariff provisions related to Order No. 792 differ from the *pro forma* tariff revisions included in that order, the CAISO explains below why such variances meet the "consistent with or superior to" standard, and to the extent the proposed CAISO tariff provisions related to Order No. 792 differ from the *pro forma* tariff revisions, the CAISO explains why such variances meet the "independent entity variation" standard. Also, attachment C to this filing consists of a table that explains, section by section, whether the CAISO tariff provisions are the same as or differ from the *pro forma* tariff revisions contained in Order No. 792, and in cases where they differ, how the applicable standard has been satisfied.

II. Background

A. The IPE Initiative

California's ambitious renewable portfolio standard and the associated changes in the generation development marketplace have made it increasingly important over the past several years for the CAISO to identify ways to better administer its generation interconnection queue.[4] The CAISO's overriding goal has been to tailor its procedures to best promote the achievement of California's energy policy goals while ensuring that they continue to be grounded in principles of fairness and non-discrimination. Because of the rapid evolution of the generation development marketplace in California, achieving these goals has

[4] There were approximately 250 projects in the interconnection queue as of July 18, 2014. *See* http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx (CAISO website page listing projects in the queue).

required the CAISO to engage in a process of continuous review and updates to its generator interconnection tariff procedures.[5]

In April 2013, the CAISO launched a stakeholder process aimed at improving its generator interconnection process, the IPE initiative.[6] The IPE initiative is the most recent in a series of stakeholder processes that the CAISO has conducted over the past several years in order to meet its commitment to improving its interconnection process.[7] The IPE initiative originally consisted of fifteen topics. Of these, eight topics relating to queue management and capacity downsizing issues were filed with and approved by the Commission in late 2013[8] and the summer of 2014.[9] Another two topics are being addressed in this tariff amendment.[10] The final two topics will be the subject of amendments to be filed with the Commission later this year.[11]

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[5] The generator interconnection process and related provisions are set forth primarily in section 25 of the CAISO tariff and the interconnection procedures and *pro forma* generator interconnection agreements ("GIAs") contained in appendices to the tariff: the small generator interconnection procedures ("SGIP") for projects in the serial study process (appendix S); small generator interconnection agreement ("SGIA") for interconnection requests processed under appendix S (appendix T); large generator interconnection procedures ("LGIP") for projects in the serial study process (appendix U); large generator interconnection agreement ("LGIA") for interconnection requests processed under appendix U (appendix V); interconnection procedures in effect prior to July 1, 2005 (appendix W); generator interconnection procedures ("GIP") for projects in a queue cluster study process prior to cluster five (appendix Y); LGIA for interconnection requests processed under appendix Y in a queue cluster window (appendix Z); LGIA for interconnection requests processed under appendix Y in a serial study group that tendered or executed the LGIA on or after July 3, 2010 (appendix BB); LGIA for interconnection requests processed under appendix Y in a queue cluster window that tendered or executed the LGIA on or after July 3, 2010 (appendix CC); generator interconnection and deliverability allocation procedures ("GIDAP") for projects in a queue cluster study process in cluster five and subsequent clusters (appendix DD); LGIA for interconnection requests processed under the GIDAP (appendix EE); SGIA for interconnection requests processed under the GIDAP (appendix FF); and one-time generator downsizing opportunity (appendix GG). Unless otherwise specified or the context otherwise requires, a GIA can be either an LGIA or an SGIA.

[6] Further background information on the IPE initiative is provided in the CAISO's September 30, 2013 tariff amendment filing in Docket No. ER13-2484 to implement the first set of tariff revisions to come from that initiative.

[7] The other stakeholder processes include Generation Interconnection Process Reform held in 2008-09, Generation Interconnection Procedures Phase 1 held in 2010, and Generation Interconnection Procedures Phase 2 ("GIP-2") held in 2011 and early 2012. In addition, the CAISO began Generator Interconnection Procedures Phase 3 ("GIP-3") in 2012 but deferred that initiative based on stakeholder feedback in order to develop a one-time generator downsizing opportunity.

[8] California Independent System Operator Corp., 145 FERC ¶ 61,172 (2013).

[9] California Independent System Operator Corp., 148 FERC ¶ 61,077 (2014).

[10] The CAISO papers regarding these two topics included a draft final proposal issued on

Due to the technical and policy issues involved in addressing the independent study and fast track process topics this tariff amendment concerns, the CAISO organized working groups to develop proposals regarding those two topics. Each working group included both engineers and participants with policy expertise from the participating transmission owners and the CAISO. In addition, other stakeholders with technical and policy expertise, including the development community, were encouraged to participate and a number of them chose to take part.

Each working group held meetings approximately every two weeks from August 2013 through early 2014. These meetings produced a set of proposed changes to the independent study and fast track process that were then presented to the entire IPE stakeholder group for its review.[12] There was broad agreement within each stakeholder working group about the proposed changes, which are reflected in the tariff revisions contained in this filing.

B. The Independent Study Process

The GIDAP contains an independent study process for evaluating interconnection requests outside of the queue cluster study process for interconnection customers that choose and are able to demonstrate that their generating facilities are electrically independent of other projects.[13] The independent study process is intended to benefit generating facilities eligible for that process by allowing them to be studied on a serial and expedited basis, thereby permitting them to achieve commercial operation on an earlier schedule than would normally be possible under the cluster study process. The independent study process is also meant to improve the overall efficiency of the GIDAP process by exempting projects that can be studied on their own from the need to be included in the phase I and phase II interconnection studies for cluster projects. The independent study process can be particularly beneficial to small generating facilities that are effectively independent from other generating

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March 25, 2014 ("draft final proposal") and a memorandum to the CAISO Governing Board issued on May 21, 2014 ("Board memorandum"). For ease of reference, the draft final proposal is provided in attachment D and the Board memorandum in attachment E to this filing.

[11] Of the three IPE topics not covered by the discussion above, two are being addressed through the CAISO's business practice manuals, and the third was withdrawn based on a lack of stakeholder concern.

[12] Further information regarding the stakeholder process for this tariff amendment is provided in section IV of this transmittal letter.

[13] GIDAP section 4. Details regarding the independent study process are discussed in section III of this transmittal letter.

facilities in the queue due to their electrical remoteness, or because of their minor-to-nonexistent impact on the CAISO controlled grid due their size.

As discussed below, however, the CAISO and stakeholders determined in the IPE initiative that the independent study process should be enhanced so it can serve its intended purposes and benefit generating facilities and the GIDAP process to a greater extent than is currently possible.

C. The Fast Track Process

The GIDAP includes a fast track process for evaluating interconnection requests outside of the queue cluster study process of qualifying interconnection customers with small generating facilities.[14] The purpose of the fast track process is to benefit such customers by permitting them to interconnect to the CAISO controlled grid more quickly and through a more streamlined process than would be possible under the queue cluster study process. Like the independent study process, the fast track process is meant to improve the overall efficiency of the GIDAP process by exempting qualifying projects from inclusion in the phase I and phase II interconnection studies for cluster projects.

However, as discussed below, the CAISO and stakeholders determined in the IPE initiative that the fast track process should be enhanced to better serve its intended purposes and provide a greater benefit to eligible small generating facilities.

D. Order No. 792

On November 22, 2013, several months after the start of the IPE stakeholder process for the tariff revisions contained in this filing, the Commission issued Order No. 792. The CAISO subsequently adapted its IPE initiative based on the direction provided in that order.

In Order No. 792, the Commission amended its *pro forma* small generator interconnection procedures and *pro forma* small generator interconnection agreement set forth in Order No. 2006.[15] The Commission made these amendments in order to:

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[14] GIDAP section 5. In order to be eligible for the fast track process, the generating facility must be no larger than 5 MW and meet other eligibility requirements. GIDAP section 5.1. Further details regarding the fast track process are discussed in section III of this transmittal letter.

[15] *Standardization of Small Generator Interconnection Agreement and Procedures*, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, *order on reh'g*, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), *order on clarification*, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006).

(1) incorporate provisions to give an interconnection customer the option of requesting from the transmission provider a pre-application report providing existing information about system conditions at a possible point of interconnection;

(2) revise the eligibility threshold for participation in the fast track process;

(3) revise the customer options meeting and the supplemental review following failure of the initial fast track screens so that the supplemental review is performed at the discretion of the interconnection customer and includes minimum load and other screens to develop if a small generating facility may be interconnected safely and reliably;

(4) revise the *pro forma* small generator interconnection procedures facilities study agreement to allow the interconnection customer the opportunity to provide comments to the transmission provider on the upgrades required for interconnection;

(5) revise the *pro forma* small generator interconnection procedures and *pro forma* small generator interconnection agreement to specifically include energy storage devices; and

(6) clarify certain sections of the *pro forma* small generator interconnection procedures and *pro forma* small generator interconnection agreement.[16]

The Commission provided *pro forma* tariff revisions in Order No. 792 to implement each of these amendments.[17]

The Commission explained that a public utility transmission provider could submit a filing pursuant to section 205 of the FPA to demonstrate that either a proposed variation from the *pro forma* tariff revisions in Order No. 792, or a previously approved variation from the *pro forma* tariff revisions that has been substantively affected by Order No. 792, meets one of the standards for variance provided for in Order No. 792.[18] The Commission permitted transmission

[16] Order No. 792 at P 1.

[17] *Id.* at appendices C and D.

[18] Order No. 792-A at P 3.

providers to show that a previously approved variation is "consistent with or superior to" the *pro forma* small generator interconnection procedures and agreement.[19] The Commission also permitted independent system operators ("ISOs") and regional transmission organizations ("RTOs") to propose variations that meet the "independent entity variation" standard, because "an ISO or RTO has different operating characteristics depending on its size and location and is less likely to act in an unduly discriminatory manner than a transmission provider that is also a market participant."[20] Therefore, the Commission found that an ISO or RTO should have "greater flexibility [than a non-independent transmission provider] to customize its interconnection procedures and agreements to accommodate regional needs."[21]

The Commission previously applied the independent entity variation standard to the CAISO in its order approving the CAISO's GIP, which included revisions to the fast track process that diverged from the fast track process set forth in the Commission's *pro forma* small generator interconnection procedures. The Commission explained that, under the independent entity variation standard, the CAISO "is not required to demonstrate, and we are not required to find, that the proposal at hand is the only or even the best approach."[22] Instead, the Commission is "required to review the proposal under the independent entity variation standard to ensure CAISO adopts just and reasonable rates, terms and conditions."[23] The Commission's review "is complete if [it] determine[s] that the proposal filed by the CAISO is just and reasonable and not unduly discriminatory or preferential."[24] For the reasons set forth below in section III.B of this transmittal letter, the CAISO's proposed variations from the Order No. 792 *pro forma* language meet this standard.

This filing includes tariff revisions proposed pursuant to section 205 of the FPA that satisfy the requirements of Order No. 792, including the independent entity variation standard described above. In Order No. 792, the Commission also directed each public utility transmission provider to comply with the order in

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[19] Order No. 792 at P 270.

[20] *Id.* at P 274.

[21] *Id. See also California Independent System Operator Corp.*, 133 FERC ¶ 61,223, at P 73 (2010) (explaining that the independent entity variation standard "allows more flexibility than is otherwise provided under the 'consistent with or superior to' standard that applies to non-independent entities").

[22] California Independent System Operator Corp., 133 FERC ¶ 61,223, at P 71.

[23] *Id.*

[24] *Id.*

a filing submitted pursuant to section 206 of the FPA.[25] The CAISO is separately submitting a compliance filing today pursuant to section 206.

III. Proposed Tariff Revisions

The CAISO proposes to enhance the independent study process and the fast track process, and to satisfy the requirements of Order No. 792, through the tariff revisions discussed below. With one exception, all of these tariff revisions are being made to the GIDAP (appendix DD) and to the LGIA and SGIA under the GIDAP (appendices EE and FF, respectively), because all new requests by interconnection customers to take part in the independent study process and the fast track process will be pursuant to the GIDAP. The one exception is that the CAISO proposes to make a revision in the Master Definitions Supplement contained in appendix A to the CAISO tariff, which is applicable to the entire tariff, to revise the definition of a Generating Facility to include electric storage devices in accordance with Order No. 792.[26]

A. Revisions to the Independent Study Process

An interconnection customer that seeks to take part in the independent study process under the existing GIDAP must demonstrate that its interconnection request is eligible for that process.[27] The most significant of these eligibility criteria is to show that the interconnection customer's proposed generating facility is electrically independent of interconnection requests included in an existing queue cluster, so as to avoid conflicts with the CAISO's cluster studies.[28] An interconnection request is considered to be electrically independent if it (1) either passes a flow impact test or qualifies as a behind-the-meter capacity expansion to an existing facility and (2) passes a short circuit test.[29] After the eligibility requirements are met, the generating facility is studied in a process that consists of a system impact study and a facilities study.[30] If the interconnection customer requests partial capacity or full capacity deliverability

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[25] Order No. 792 at PP 269-70; Order No. 792-A at P 3.

[26] The CAISO's filing under section 206 of the FPA that is being submitted today to comply with Order No. 792 contains a subset of the proposed tariff revisions contained in this FPA 205 tariff filing – namely, the CAISO tariff revisions that are identical to *pro forma* tariff revisions contained in Order No. 792.

[27] GIDAP section 4.1.

[28] GIDAP section 4.1.3.

[29] GIDAP section 4.2.

[30] GIDAP sections 4.4, 4.5.

status, a separate deliverability assessment is performed as part of the next scheduled phase I and phase II interconnection studies for queue clusters.[31]

The CAISO proposes tariff revisions to enhance each of these components of the independent study process.

1. Criteria for Independent Study Process Eligibility

Under the existing GIDAP, the eligibility criteria to participate in the independent study process include the requirement that the interconnection customer show that inclusion in a queue cluster will not accommodate the desired commercial operation date for the generating facility. As part of this showing, the interconnection customer must demonstrate that the desired commercial operation date is physically and commercially achievable by satisfying at least two of three listed criteria.[32] The CAISO proposes to revise these eligibility requirements to state that the interconnection customer must satisfy all three of the existing criteria and also satisfy both of the following new criteria:

(1) The proposed point of interconnection must be to either (i) an existing facility on the CAISO controlled grid that does not require any expansion in order to accommodate the interconnection of the generating facility; or (ii) a facility approved in the transmission planning process or identified as necessary through interconnection studies performed for other interconnection customers that is fully permitted, is under construction at the time the interconnection request is made, and is expected to be in service by the requested commercial operation date of the generating facility.[33]

(2) With respect to any reliability network upgrades that are anticipated to be needed to interconnect the generating facility, and that are already part of an existing plan of service or have been identified through interconnection studies performed for other interconnection customers, or have been identified in the transmission planning process, such reliability network upgrades must be either in service

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[31] GIDAP section 4.6.

[32] GIDAP section 4.1.1. These criteria relate to the customer's ability to demonstrate the achievement of permitting, equipment procurement, and financing milestones.

[33] Proposed GIDAP section 4.1.1(iv). In this filing, references to a proposed GIDAP section mean a new section the CAISO proposes to add to the GIDAP, and references to a revised GIDAP section mean an existing section of the GIDAP that the CAISO proposes to revise.

> or under construction and have a completion date no later than the requested commercial operation date of the generating facility.[34]

The CAISO proposes to require that customers satisfy all five of these eligibility criteria in order to provide greater assurances that interconnection customers seeking to be studied under the independent study process have both a need to be studied and the ability to perform under that process, and to ensure that the generating facility's proposed commercial operation date is achievable based on the requested point of interconnection. In particular, the two new criteria that the CAISO proposes to add are meant to ensure that any network upgrades expected to be needed for the generating facility will be in service by the time that the customer expects to begin commercial operation.

In order to allow sufficient time to evaluate whether these enhanced eligibility criteria have been satisfied, the CAISO proposes to increase, from 15 business days to 30 calendar days, the amount of time within which it will assess and inform an interconnection customer whether it has satisfied the eligibility criteria and has demonstrated site exclusivity.[35]

2. Determination of Electrical Independence

The CAISO proposes to revise the GIDAP provisions regarding the determination of electrical independence and the timing of that determination.

First, the GIDAP has been modified to state that an interconnection request will qualify for the independent study process without having to demonstrate electrical independence if, at the time the interconnection request is submitted, there are no other active interconnection requests in the same study area as the current queue cluster or the independent study process. This new provision will streamline the independent study process for interconnection requests that are alone in a study area and thus are self-evidently electrically independent from other projects in the queue.[36]

The timeline of the independent study process is dependent on the timing of the tests for determining electrical independence. In this regard, the existing GIDAP states that the available base cases that are being used for the most recent queue cluster will be used as the starting base cases for the tests for determining electrical independence.[37] Also, under the existing flow impact test,

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[34] Proposed GIDAP section 4.1.1(v).

[35] Revised GIDAP section 4.1.4.

[36] Revised GIDAP section 4.2.

[37] GIDAP section 4.2.

if the current queue cluster studies or earlier-queued independent process studies have not yet determined which transmission facilities electrically impacted by the generating facility being tested require network upgrades and the CAISO cannot reasonably anticipate whether such transmission facilities will require network upgrades from other data, then the CAISO will wait to conduct the independence analysis until sufficient information exists to make that determination.[38] The CAISO and stakeholders determined that this existing process can introduce delays and uncertainties in the commencement of tests for electrical independence. Therefore, the GIDAP has been revised to specify that the tests will utilize study results for active interconnection requests in the same study area, including phase I interconnection study results for generating facilities in the current queue cluster and any system impact study (or combined system impact and facilities study) results for earlier-queued generating facilities being studied in the independent study process.[39]

The existing GIDAP states that the CAISO will inform an interconnection customer whether it has satisfied the electrical independence requirements within 15 business days of receiving the interconnection request. The CAISO proposes to revise this timeline to within 30 calendar days of receiving the data necessary to determine whether the interconnection customer has satisfied the electrical independence requirements.[40] The CAISO also proposes to specify that, for a proposed generating facility in a study area with active interconnection requests in the current queue cluster or the independent study process, this 30-calendar day period will commence when the phase I interconnection study results are available for the current queue cluster and all system impact studies (or combined system impact and facilities studies) have been completed for all earlier-queued interconnection study process interconnection requests in the same study area.[41] These GIDAP revisions are necessary to give the CAISO sufficient time to evaluate whether the revised electrical independence requirements have been met.

a. Flow Impact Test

The existing GIDAP states that the flow impact test identifies the transmission facility closest to the proposed point of interconnection of the generating facility being tested that will be electrically impacted, as a result of network upgrades identified or reasonably expected to be needed either by (i)

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[38] GIDAP section 4.2.1.1(i).

[39] Revised GIDAP section 4.2.

[40] Revised GIDAP section 4.1.5.

[41] *Id.*

generating facilities currently being studied in a queue cluster or (ii) earlier-queued generating facilities currently being studied through the independent study process.[42]

As the CAISO and market participants gained experience with the independent study process, it became apparent that the independent study process is overly complicated and does not align with the overall intent of the process, which is to study qualifying projects requesting energy-only deliverability status in an expedited process where only reliability network upgrades are determined, and to separately study projects requesting full capacity deliverability status for delivery network upgrades in the standard cluster study process with other projects in the next scheduled cluster study. In other words, a project requesting full capacity deliverability status would go through a two-step process, first being studied as energy-only under the independent study process timeline and separately being studied for full capacity deliverability status under the standard cluster timeline. This would allow an eligible project to come more quickly on-line as energy-only and to achieve full capacity deliverability status through the standard cluster study process. The CAISO and stakeholders have developed enhancements to the flow impact test so that it better serves these goals.

First, the CAISO proposes to revise the flow impact test to specify that it identifies the closest transmission facility that will be electrically impacted as a result of reliability network upgrades identified or reasonably expected to be needed in order to alleviate power flow concerns caused either by (i) generating facilities currently being studied in a queue cluster or (ii) earlier-queued generating facilities currently being studied through the independent study process.[43]

The revised GIDAP language refers specifically to reliability network upgrades because applying the flow impact test to the other main category of network upgrades – delivery network upgrades – creates unnecessary hurdles to the interconnection of projects under the independent study process as energy-only resources. Testing for electrical independence based on delivery network upgrades is not required since a project requesting full capacity deliverability status will go through a separate deliverability assessment.

The revised GIDAP language refers to alleviating power flow concerns in order to describe the flow impact test more precisely. For the same reasons, the CAISO also proposes to make similar revisions to the rest of the GIDAP section. Further, the CAISO proposes to specify that if the flow impact on a reliability

[42] GIDAP section 4.2.1.1(i).

[43] Revised GIDAP section 4.2.1.1(i).

network upgrade identified pursuant to the criteria set forth in the section cannot be tested due to the nature of that upgrade, then the flow impact test will be performed on the limiting element(s) causing the need for the upgrade.[44]

b. Behind-the-meter Capacity Expansion

The CAISO proposes several clarifications and modifications to the GIDAP provisions that set forth the criteria for evaluating an interconnection request under the independent study process relating to a behind-the-meter capacity expansion of an existing generating facility.[45] These proposed enhancements are based on experience the CAISO has gained in processing behind-the-meter expansion requests, and on its discussions with stakeholders regarding the subject.

(i) Clarification of Size Limit

The CAISO clarifies that the existing size limit of an incremental increase in capacity due to behind-the-meter expansion includes any prior behind-the-meter expansions implemented pursuant to the GIDAP.[46] This ensures that the purpose of the behind-the-meter expansion provisions – to allow limited additions to existing facilities that do not change the overall output of the facilities to the grid – will be met.

(ii) Replacement of Requirement for a Separate Expansion Breaker with an Automatic Generation Tripping Scheme

The CAISO proposes to delete the existing requirement that the expanded capacity for the generating facility be placed behind a separate breaker (the expansion breaker) such that the expansion can be metered separately at all times.[47] Instead, the CAISO proposes to require the interconnection customer to install an automatic generator tripping scheme sufficient to ensure that the total output of the generating facility, including the behind-the-meter expansion, does not at any time exceed the capacity studied in the generating facility's original interconnection request. The CAISO also proposes to add related GIDAP language stating that the CAISO will have the authority to trip the generating equipment subject to the automatic tripping scheme or take any other actions

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[44] *Id.*

[45] GIDAP section 4.2.1.2.

[46] Revised GIDAP section 4.2.1.2(i)(1).

[47] Revised GIDAP section 4.2.1.2(i)(3).

necessary to limit the output of the generating facility to prevent it from exceeding the originally studied capacity.[48]

These provisions serve the same purpose in ensuring that the total output of the generating facility cannot exceed the originally studied capacity at any time (unless specifically requested by the CAISO).[49] However, by requiring an automatic generation tripping scheme rather than a separate breaker for the expansion capacity, customers will have more flexibility to configure their behind-the-meter expansions.

(iii) Deliverability Status of Behind-the-meter Expansion

The CAISO proposes to modify and clarify the behind-the-meter expansion process in order to eliminate confusion regarding the deliverability status of behind-the-meter expansion.

Pursuant to the proposed GIDAP revisions, the deliverability status (full capacity, partial capacity, or energy-only) of the original generating facility will remain the same after the behind-the-meter expansion, while the expansion will have energy-only deliverability status. The original generating facility and the expansion will be metered separately from one another and will be assigned separate resource IDs.[50]

However, the CAISO proposes to clarify that if the original generating facility has full capacity deliverability status and the expansion will use the same technology as the original generating facility, the interconnection customer may elect to have the original generating facility and the expansion metered together, in which case both the original generating facility and the expansion will have partial capacity deliverability status and a separate resource ID will not be established for the behind-the-meter capacity expansion.[51] This provides customers with more flexibility to configure their behind-the-meter expansion

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[48] Proposed GIDAP section 4.2.1.2(i)(3).

[49] GIDAP section 4.2.1.2(i)(4). The CAISO proposes to delete that existing language and to add the proposed GIDAP section 4.2.1.2(i)(3) language discussed above. The CAISO also proposes to delete GIDAP section 4.2.1.2(i)(5), because the first sentence of that section is redundant of proposed GIDAP section 4.2.1.2(i)(3) and the second sentence of the section has been moved to proposed GIDAP section 4.2.1.2(ii)(3).

[50] Revised GIDAP section 4.2.1.2(ii)(1).

[51] Proposed GIDAP section 4.2.1.2(ii)(2). An interconnection customer that desires to have full capacity deliverability status for its proposed expansion should proceed through the general (*i.e.*, non-behind-the-meter) independent study process or the cluster study process.

capacity additions while continuing to ensure that the behind-the-meter process cannot be used as a mechanism to increase a generator's existing deliverability.

(iv) Requests by Stakeholders for Additional Modifications

Stakeholders requested several modifications to the CAISO's proposal for behind-the-meter expansion, in addition to the modifications discussed above.

First, some stakeholders argued that the proposal should be modified to allow behind-the-meter expansions to be eligible for the annual full capacity deliverability option.[52] Similarly, some stakeholders also asserted that the behind-the-meter expansion proposal should be modified to allow behind-the-meter capacity to count toward an increase in the net qualifying capacity of the expanded generating facility above the net qualifying capacity of the original generating facility.[53]

In response to these assertions, the CAISO explained that the behind-the-meter expansion process is designed to add generation behind-the-meter that can supplement the production of the original generating facility's capacity, but not to raise the total production levels of the expanded generating facility to levels greater than the capability of the original generating facility. The behind-the-meter expansion process is also designed for quick additions of limited amounts of supplemental generation behind the meter of an existing generating facility without having to study the expansion for issues related to reliability and deliverability. To increase a generator's deliverability, or count added capacity as an increase in net qualifying capacity, would require a comprehensive reliability and deliverability study of any additional capacity, just as the standard independent study process and the queue cluster study process require for any new generating facility. The behind-the-meter expansion proposal was not intended to be a means to bypass the established study requirements for reliability and deliverability.[54]

Further, some stakeholders argued that the behind-the-meter expansion proposal should be modified to allow such expansion through a "material

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[52] GIDAP section 9.2.

[53] The existing GIDAP states that a request for behind-the-meter expansion will not operate as a basis under the CAISO tariff to increase the net qualifying capacity of the generating facility beyond the rating which pre-existed the interconnection request. In this filing, the CAISO proposes to move this provision from the second sentence of GIDAP section 4.2.1.2(i)(5) to proposed GIDAP section 4.2.1.2(ii)(3).

[54] Board memorandum at 6.

modification" assessment.[55] This issue was raised late in the stakeholder process. Also, the CAISO has been holding stakeholder discussions related to the interconnection of energy storage facilities and has committed to accept requests for project modifications for "bolt-on" energy storage projects and to make a determination of materiality on a case-by-case basis. This will allow the CAISO to gain experience in performing material modification assessments on projects seeking to incorporate energy storage and guide future enhancements to the material modification assessment process. Stakeholders that desire to discuss the material modification assessment process further can do so within the CAISO's ongoing energy storage interconnection stakeholder initiative.[56]

c. Additional Tests of Electrical Independence

In addition to the proposed revisions discussed above regarding the flow impact test and the review of requests for behind-the-meter capacity expansion, the CAISO proposes the following revisions as to additional tests for determining electrical independence.

(i) Short Circuit Test

Under the existing GIDAP, a generating facility in the independent study process will pass the short circuit test if its short circuit contribution is less than 100 amperes.[57] This 100-ampere threshold can be too restrictive in certain areas and does not serve the intent of testing electrical independence across a diverse topology. To address this issue, the CAISO proposes to revise the short circuit test so it is based on a proportional threshold instead of the existing fixed threshold. Pursuant to the revisions, the generating facility will pass the short circuit test if: (i) the combined short circuit contribution from all the active interconnection requests in the independent study process in the same study area is less than five percent of the available capacity of the circuit breaker upgrade identified in the first part of the flow impact test (GIDAP section 4.2.1.1(i)); and (ii) total fault duty on each circuit breaker upgrade identified for the current queue cluster and active independent study process interconnection

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[55] A material modification is defined in the CAISO tariff as a modification that has a material impact on the cost or timing of an interconnection request with a later queue priority date. Generators are permitted to make modifications to their facilities without submitting an interconnection request if those modifications are deemed to be non-material. *See* CAISO tariff appendix A, definition of Material Modification.

[56] Board memorandum at 6. Materials related to that stakeholder process are available on the CAISO website at http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorageInterconnection.aspx

[57] GIDAP section 4.2.2.

requests in the same study area is less than 80 percent of the nameplate capacity of the respective circuit breaker upgrade.[58]

(ii) Transient Stability and Reactive Support Tests

The CAISO proposes transient stability and reactive support tests as additional tests for determining electrical independence. The generating facility will pass the transient stability test if the generating facility has requested interconnection in a study area where transient stability issues are not identified for active interconnection requests in the current queue cluster or independent study process.[59] The generating facility will pass the reactive support test if the generating facility has requested interconnection in a study area where reactive support needs are not identified as requiring reliability network upgrades for active interconnection requests in the current queue cluster or independent study process.[60] Although less likely to drive the need for mitigation than short-circuit duty concerns, transient stability and reactive support issues do sometimes drive network upgrades. It is important that the CAISO conduct these tests in order to determine whether requests for independent study processing will contribute to the need for such upgrades, which would mean that they are not electrically independent from other projects in the queue.

3. Combined System Impact and Facilities Study

Under the existing GIDAP, the CAISO performs a system impact study and a separate facilities study on each generating facility in the independent study process.[61] The CAISO and stakeholders have determined that it is more efficient and straightforward, and allows a shorter timeline for interconnection, to perform these two studies together. Therefore, the CAISO proposes to revise the GIDAP to combine the system impact and facilities studies into a single study.[62]

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[58] Revised GIDAP section 4.2.2.

[59] Proposed GIDAP section 4.2.3.

[60] Proposed GIDAP section 4.2.4.

[61] GIDAP sections 4.4, 4.5.

[62] Revised GIDAP section 4.4. As part of the effort to combine of the two studies, the CAISO has moved provisions regarding the facilities study from GIDAP section 4.5 to GIDAP section 4.4 and has deleted GIDAP section 4.5. The CAISO has also included references to the system impact and facilities study in revised GIDAP sections 2.4.3, 3.5.1.1(b) and -(c), 4.1.5, 4.2, 4.3, 6.8.1, 10.2, 11.2.2, 11.2.3.1, 11.2.3.2, 11.2.4.1, 11.2.4.2, 11.3.1.1, 11.3.1.2, 11.3.1.4.1, 11.3.1.4.2, 11.3.1.5.1, 11.3.1.5.2, 11.3.1.6, 11.3.2.2, 13.1.1, 13.2, revised GIDAP appendix 6 and appendices A and B thereto, and new GIDAP section 5.5.1.5. In addition, the CAISO has replaced the capitalized terms System Impact Study and Facilities Study with the lower-case term system impact and facilities study throughout the GIDAP.

The existing GIDAP gives the CAISO 90 calendar days in most circumstances to complete each separate study and transmit the results to the interconnection customer.[63] Because the combined study will require more time to complete than each separate study does, but will require less total time than if the two studies are performed one after the other, the CAISO proposes to revise the GIDAP to state that the combined study will be completed and the results transmitted to the interconnection customer within 120 calendar days after the execution of the independent study process study agreement.[64]

The CAISO also proposes to add language to the GIDAP regarding the interconnection customer's provision of written comments on the system impact and facilities study report.[65] This new language mirrors existing language in the GIDAP regarding the interconnection customer's provision of written comments on the phase I and phase II interconnection study reports.[66]

The CAISO is also proposing to update its interconnection financial security provisions for interconnection customers in the independent study process to account for the impact of combining the system impact and facilities studies. The CAISO's current financial security provisions require that customers in both queue cluster studies and the independent study process make a series of three escalating postings. These previsions, however, are premised on customers receiving two separate study reports – phase I and phase II interconnection study reports for queue customers and system impact and facilities study reports for independent study customers – that establish the timing and amount of the first two postings, respectively.[67] The third posting is based on the start of construction activities.[68] Because independent study process customers will, under this proposal, only receive a single study report that corresponds to both the phase I and phase II interconnection study reports

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[63] Specifically, the CAISO has 90 calendar days after the execution of an independent study process study agreement to complete the system impact study and transmit the results to the interconnection customer. GIDAP section 4.4.4. In cases where network upgrades are identified, the CAISO has 90 calendar days after the interconnection customer posts interconnection financial security to complete the facilities study. (In cases where no network upgrades are identified, the CAISO has 60 calendar days after the interconnection customer posts interconnection financial security to complete the facilities study. GIDAP section 4.5.3.)

[64] Revised GIDAP section 4.4.3.

[65] Revised GIDAP section 4.4.4.

[66] *See* GIDAP sections 6.7, 8.7.

[67] *See* GIDAP sections 11.2, 11.3.1.

[68] *See* GIDAP section 11.3.2.

for queue cluster customers, there is no reason to require those customers to make three discrete postings. Instead, the CAISO is proposing to combine the initial and second postings for independent study process customers so that they will have two posting obligations: an initial posting, due 120 days after the issuance of the system impact and facilities study report, in an amount equal to the current second posting amount, and a second posting, which will be identical to the existing third posting.[69] Combining the initial and second postings will not result in any change in the overall amount of interconnection financial security that an interconnection study process customer is required to post.

Finally, the CAISO proposes to add to GIDAP section 4.6 a statement clarifying that if an independent study process customer wishes to receive a deliverability assessment, it will be required to post interconnection financial security in accordance with the rules for interconnection customers in queue clusters.

4. Clarifications Regarding Requests for Partial Capacity or Full Capacity Deliverability Status

The CAISO proposes two clarifications applicable to interconnection customers under the independent study process that request partial capacity or full capacity deliverability status.

First, the CAISO clarifies that such interconnection customers will be deemed to have selected option (A) under the GIDAP and will have a deliverability assessment performed as part of the next scheduled phase I and phase II interconnection studies for the queue cluster study performed for the next queue cluster window that opens after the CAISO received the request for partial capacity or full capacity deliverability status.[70]

Second, the CAISO clarifies that such an interconnection customer must still negotiate and execute a generator interconnection agreement reflecting energy-only deliverability status pursuant to the requirements of the GIDAP. Upon the completion of the deliverability assessment, the interconnection customer's generator interconnection agreement will be amended as appropriate

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[69] *See* revised GIDAP sections 11.3, 11.3.1, 11.3.1.1, 11.3.1.2, 11.3.1.4.1, 11.3.2, 11.3.2.1, 11.3.2.3.

[70] Revised GIDAP section 4.6. Option (A) means that the generating facility requires transmission plan deliverability to be able to continue to commercial operation, and that the interconnection customer is required to make an initial posting of interconnection financial security for the cost responsibility assigned to it in the phase I interconnection study for reliability network upgrades and local delivery network upgrades, but not for area delivery network upgrades. GIDAP section 7.2.

to reflect the results thereof.[71] This is consistent with the purpose of the independent study process to provide a quicker path to achieving energy-only operation, while still allowing a customer to obtain full-capacity deliverability status, if it wishes to do so, through the full cluster study process.

5. Clarification Regarding Asynchronous Generating Facilities

The existing GIDAP LGIA and SGIA each require that an asynchronous generating facility operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the defined point of interconnection in order to maintain a specified voltage schedule, if the phase II interconnection study shows that such a requirement is necessary to ensure safety or reliability.[72]

The CAISO proposes to clarify that this requirement applies to an asynchronous generating facility studied under the independent study process in all cases, not just those in which the phase II interconnection study shows that the requirement is necessary to ensure safety or reliability.[73] This clarification will ensure than each asynchronous generating facility under the independent study process is within the power factor range of 0.95 leading to 0.95 lagging even in the absence of a phase II interconnection study, which is not performed for a generating facility in the independent study process with energy-only deliverability status.[74] By electing to use the independent study process, an interconnection customer will receive the benefit of an expedited process that does not include a phase II interconnection study. Absent assessing the need for the resource to operate within a specified power factor range through such a study, and based on the CAISO's experience that in the majority of cases its studies conclude that such a requirement is necessary, it is reasonable to apply this requirement as a default rule.

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[71] Proposed GIDAP section 4.8.

[72] Appendix EE at appendix H, section A(iii); appendix FF at attachment 7, section A(iii).

[73] Revised appendix EE at appendix H, section A(iii); revised appendix FF at attachment 7, section A(iii).

[74] See GIDAP section 2.4.3 ("For Interconnection Requests processed under the Independent Study Process, the Interconnection Studies consist of . . . as applicable to Full Capacity or Partial Capacity Deliverability Status, Phase I and Phase II Interconnection Studies . . .").

B. Order No. 792-Related Revisions, Including Revisions to the Fast Track Process

1. The CAISO Proposes to Incorporate a Pre-application Report Process to Address Interconnections to a Networked Transmission System

In Order No. 792, the Commission directed each public utility transmission provider to include tariff language regarding a process that allows prospective interconnection customers to request a pre-application report.[75] The Commission explained that this directive would provide an interconnection customer with an opportunity to request information that can benefit the interconnection process by helping the interconnection customer make more informed siting decisions and may diminish the practice of requesting multiple interconnection requests for a single project, which would benefit both transmission providers and interconnection customers.[76]

The CAISO proposes to incorporate tariff revisions governing the pre-application report process into the GIDAP that meet the independent entity variation standard. These tariff revisions differ from the *pro forma* tariff revisions set forth in Order No. 792 in that they incorporate information categories that apply to the networked transmission system under the CAISO's operational control as opposed to a radial distribution circuit.[77]

Specifically, the CAISO's proposed pre-application report tariff revisions vary somewhat from the *pro forma* tariff revisions adopted in Order No. 792 with respect to information categories that the interconnection customer must provide in a written request and the CAISO will include in a pre-application report. The CAISO proposes to replace the *pro forma* provision that requires an interconnection customer to provide a meter number or pole number with a requirement that the interconnection customer identify a single point of interconnection that is either an existing substation or a transmission line under

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[75] Order No. 792 at PP 28-82. These provisions are set forth in sections 1.2.2 through 1.2.4 (including the subsections therein) of the *pro forma* small generator interconnection procedures. *Id.* at appendix C.

[76] *Id.* at P 37.

[77] In its order accepting the GIP, the Commission recognized that, while its *pro forma* small generator interconnection procedures contemplated interconnection of small generators at the distribution level, in California distribution-level interconnections are generally handled pursuant to the terms of a participating transmission owner's wholesale distribution access tariff ("WDAT"), not the CAISO tariff. *California Independent System Operator Corp.*, 133 FERC ¶ 61,223, at P 115.

CAISO operational control.[78] In all other respects, the CAISO has kept the information categories from Order No. 792 that an interconnection customer must provide as part of a written request for a pre-application report.[79] The CAISO's proposed language meets the independent entity variation standard in that it provides interconnection customers with the ability to request information about a point of interconnection on the CAISO controlled grid consistent with the directives of Order No. 792.

Likewise, the CAISO proposes variations from the *pro forma* tariff revisions contained in Order No. 792 that meet the independent entity variation standard, in order to provide interconnection customers with information in the pre-application report that focuses on the fact that the point of interconnection on the CAISO controlled grid will be a substation or a transmission line under CAISO operational control.[80] In particular, the CAISO proposes to provide the following information in a pre-application report:

- Electrical configuration of the substation, including information of transmission lines terminating in the substation, transformers, buses and other devices, if the proposed point of interconnection is a substation.

- Existing aggregate generation capacity (in MW) interconnected to a substation or circuit (*i.e.*, amount of generation online) likely to serve the proposed point of interconnection.

- Aggregate queued generation capacity (in MW) for a substation or circuit (*i.e.*, amount of generation in the queue) likely to serve the proposed point of interconnection.

- Based on the proposed point of interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit issues, instability issues, facility loading issues, or voltage issues.

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[78] Compare section 1.2.2.3 of the *pro forma* small generator interconnection procedures contained in Order No. 792, with proposed GIDAP section 1.3.1.3.

[79] Compare sections 1.2.2.1, 1.2.2.2, and 1.2.2.4-1.2.2.8 of the *pro forma* small generator interconnection procedures contained in Order No. 792, with proposed GIDAP sections 1.3.1.1, 1.3.1.2, and 1.3.1.4-1.3.1.8.

[80] Compare sections 1.2.3-1.2.3.3 and 1.2.3.13 of the *pro forma* small generator interconnection procedures contained in Order No. 792, with proposed GIDAP sections 1.3.2-1.3.2.4.

Including this information in the pre-application report will provide interconnection customers with the ability to understand potential constraints at proposed points of interconnection and make informed siting decisions based on any potential grid issues that may affect the proposed point of interconnection. For example, knowing the electrical configuration of the substation and existing and queued generation will make the interconnection customer aware either that there are open bays at the substation or that the interconnection may require new bays or a new switching station. Having this knowledge will also mitigate the possibility that the interconnection customer will submit multiple interconnection requests for the same project.

The CAISO also proposes to consolidate some of the information categories identified in the *pro forma* tariff revisions in Order No. 792 by committing to provide information regarding the electrical configuration of the substation, including information on transmission lines terminating in the substation, transformers, buses and other devices.[81] In addition, other information categories for the pre-application report identified in the *pro forma* revisions in Order No. 792 would not in all cases apply to an interconnection to the CAISO controlled grid, and therefore the CAISO has not included those information categories in the GIDAP.[82] The information categories identified by the CAISO in its proposed tariff language provide sufficient detail for an interconnection customer to obtain a good understanding of whether reliability or deliverability network upgrades may be necessary to interconnect a proposed small generating facility.

The CAISO also proposes to add language to the GIDAP to specify that the CAISO will coordinate with participating transmission owners to prepare a pre-application report because participating transmission owners will be the primary source of much of this information.[83] This language also explains, consistent with Order No. 792, what constitutes "readily available" information and what information is not "readily available" for purposes of the pre-application report.[84]

In sum, the CAISO's proposed pre-application report process will achieve the Commission's objective in Order No. 792 of allowing an interconnection customer to obtain information about a proposed point of interconnection that will

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[81] Compare sections 1.2.3.4, 1.2.3.5, and 1.2.3.9 of the *pro forma* small generator interconnection procedures contained in Order No. 792, with proposed GIDAP section 1.3.2.1.

[82] See sections 1.2.3.6-1.2.3.8 and 1.2.3.9-1.2.3.12 of the *pro forma* small generator interconnection procedures contained in Order No. 792.

[83] Proposed GIDAP section 1.3.1.

[84] *See* Order No. 792 at P 63.

assist the interconnection customer in making more informed siting decisions and diminish the likelihood that the interconnection customer may submit multiple interconnection requests for a single project.

2. The Existing GIDAP Includes Fast Track Eligibility Thresholds that Are Consistent with or Superior to Those Adopted by Order No. 792

In Order No. 792, the Commission adopted fast track interconnection eligibility thresholds that (1) modify fast track eligibility for inverter-based machines based on individual system and generator characteristics; (2) limit eligibility for lines below 5 kV; and (3) make all projects interconnecting to lines greater than 69-kV ineligible for the fast track process. Order No. 792 maintained a 2 MW eligibility threshold for both synchronous and induction machines.[85]

The CAISO submits that the fast track eligibility thresholds set forth in the existing GIDAP are consistent with or superior to the eligibility thresholds adopted by Order No. 792. The GIDAP provides that an interconnection customer may request interconnection of a proposed generating facility under the fast track process if the facility is no larger than 5 MW and is requesting energy-only deliverability status.[86] The GIDAP also requires that the interconnection customer's resource meet the codes, standards, and certification requirements of appendices 9 and 10 of the GIDAP, or that the applicable participating transmission owner notify the CAISO that it has reviewed the design for or tested the proposed resource and has determined that the proposed resource may interconnect consistent with reliability criteria and good utility practice.[87] Further, the GIDAP permits an existing resource to take advantage of the fast track process if it is reconfiguring or repowering in a manner that increases the gross generating capacity by not more than 5 MW.[88]

The CAISO is not proposing any changes to its current fast track eligibility thresholds because its current tariff provisions are consistent with or superior to

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[85] *Id.* at PP 102-10. These provisions are set forth in sections 1.1.1 and 2.1, and attachment 1 (definition of Fast Track Process), of the *pro forma* small generator interconnection procedures. *Id.* at appendix C.

[86] GIDAP section 5.1. Energy–only deliverability status means Interconnection Customer is responsible only for the costs of Reliability Network Upgrades and is not responsible for the costs of Delivery Network Upgrades.

[87] Appendix 9 identifies various standards and codes. Appendix 10 relates to certification of equipment packages.

[88] GIDAP section 5.1.

those adopted in Order No. 792 in that they allow a greater number of resources to potentially qualify for eligibility to use fast track interconnection procedures.

In 2010, the CAISO proposed to increase the size threshold for resources seeking to use fast track interconnection procedures to accommodate the fact that the economics of project development did not support interconnection of a resource that is 2 MW or smaller to the CAISO controlled grid.[89] The CAISO explained that from a transmission engineering perspective, a 5 MW generating facility is relatively small and generally would cause no greater impact than a 2 MW generator, such that including 5 MW facilities in the fast track process would not jeopardize the safety and reliability of the CAISO controlled grid. The CAISO proposed to continue to require proposed resources seeking to interconnect using a fast track process to meet the codes, standards, and certification requirements contained in appendices 9 and 10 of the GIP. These are the same as the codes, standards, and certification requirements set forth in attachments 3 and 4 of the *pro forma* small generator interconnection procedures.

The Commission accepted the CAISO's proposed modifications to the fast track eligibility threshold.[90] Among other findings, the Commission determined that the CAISO's proposal to increase the eligibility threshold was a "reasonable approach to attract a broader range of potential interconnection customers to this process, while ensuring the safety and reliability of the proposed interconnection and the transmission grid at-large."[91] The Commission also explained that it "accept[ed] the CAISO's statement that, from a transmission engineering perspective, a 5 MW generating facility that satisfies the Fast Track screens is relatively small and generally would cause no greater impact than a 2 MW generator to [the] safety and reliability of the CAISO-controlled transmission grid."[92] For these reasons, the CAISO proposes to retain the 5 MW threshold in the GIDAP as a means to continue to attract greater numbers of resources to the fast track interconnection process.

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[89] *See* transmittal letter for CAISO tariff amendment, Docket No. ER11-1830-000, at 19-24 (Oct. 19, 2010). In this tariff amendment, the CAISO proposed to include the 5 MW threshold in the GIP (appendix Y to the CAISO tariff). The GIP and GIDAP provisions regarding the 5 MW threshold are the same.

[90] *California Independent System Operator Corp.*,133 FERC ¶ 61,223.

[91] *Id.* at P 114.

[92] *Id.* at P 115.

3. The CAISO Proposes Enhancements to Its Fee and Study Deposit Requirements, Initial Screening Process, Customer Options Meeting, and Supplemental Review Process that Meet the Independent Entity Variation Standard

In Order No. 792, the Commission adopted reforms to the customer options meeting and supplemental review process following an interconnection customer's failure of a fast track screen. These reforms require transmission providers to apply three screens in the supplemental review process to assess if a fast track interconnection process is still possible: (1) a minimum load screen; (2) a power quality and voltage screen; and (3) a safety and reliability screen. The reforms also require that transmission providers undertake certain processes by specific timeframes to ensure that the fast track process occurs in an efficient and timely manner.[93] These revisions are intended to enhance the transparency and consistency of the fast track process, particularly in regions with increasing penetrations of small generating facilities.[94] The Commission also sought to balance the benefits of interconnecting resources under the quicker, less costly fast track process with the needs of transmission providers to protect the safety and reliability of their systems.[95]

Order No. 792 also articulated specific processes to follow the supplemental review if (1) the proposed interconnection passes the supplemental review screens and does not require construction of facilities by the transmission provider on its own system; (2) the review identifies interconnection facilities or minor modifications to the transmission provider's system for the proposed interconnection to pass the supplemental review screens; and (3) the proposed interconnection requires more than interconnection facilities or minor modifications to the transmission provider's system to pass the supplemental review screens.[96]

As discussed below, the CAISO proposes enhancements to its fast track screens that comprise the initial review as well as to the customer options meeting and supplemental review process, if an interconnection customer fails the fast track screens. The CAISO's enhancements consolidate applicable screens from the supplemental review process as part of the initial review and

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[93] Order No. 792 at PP 111-88. These provisions are set forth in sections 2.3 and 2.4 (including subsections therein) of the *pro forma* small generator interconnection procedures. *Id.* at appendix C.

[94] *Id.* at P 117.

[95] *Id.*

[96] *Id*. at PP 181-88.

propose a supplemental review process to permit an interconnection customer to proceed with an interconnection under the fast track process even if the interconnection customers fails the initial review. The CAISO also proposes to modify the fee and timeframes associated with the initial review under the fast track process. Consistent with the goals of the Order No. 792 reforms, the CAISO expects these revisions to provide a more transparent process for interconnection customers while continuing to ensure that the fast track process results in safe and reliable interconnections. Further, interconnection customers will benefit from being subject to the enhanced screens as part of the initial review, because doing so will provide them with information near the start of the fast track process that will allow them to better gauge the financial viability of their projects up-front. Having such information early on in the screening process is particularly important for interconnections to the high-voltage transmission network, such as the CAISO controlled grid, because if upgrades are necessary to mitigate the impact of such interconnections, they are almost always significantly more expensive than those required to facilitate distribution-level interconnections. These enhancements will also benefit customers by ensuring that the fast track process goes forward promptly.

In sum, the CAISO has proposed changes to its fast track process that will allow an interconnection customer that passes the initial fast track screens to execute an interconnection agreement within approximately 120 calendar days of submitting a complete interconnection request and study deposit. For interconnection customers that fail the fast track screens and elect to proceed with a supplemental review, they may obtain an assessment establishing their cost of interconnection within approximately 180 days of submitting a complete interconnection request and study deposit. The CAISO believes the changes described below will enhance its ability to manage interconnection requests using the fast track process and provide interconnection customers with a viable alternative to submitting to an interconnection study through the queue cluster if their projects are 5 MW or smaller in size.

(i) Revisions to the Fee and Study Deposit Requirements

The CAISO proposes to eliminate the non-refundable processing fee and instead require a $25,000 study deposit to initiate the fast track interconnection process.[97] This proposed deposit is intended to cover processing costs as well as the costs of increased study work that the CAISO and participating transmission owners propose to undertake as part of the revised initial fast track screening process. If the CAISO and applicable participating transmission owner complete the work at a cost less than the deposit, the CAISO will return the

[97] Revised GIDAP section 5.1(ii).

remainder to the interconnection customer.[98] The CAISO also proposes to extend the initial review period under the fast track process from 15 business days to 30 calendar days in order to accommodate the increased amount of work to perform as part of the initial review process.[99]

(ii) Revisions to the Screens Under the Initial Review Process

As part of the initial review process, the CAISO proposes to make the following enhancements to the screens for the interconnection customer to proceed under a fast track interconnection:

- The CAISO proposes to allow fast track interconnections only to existing substations with a vacant switch rack position.[100] This provision is intended to expedite the study necessary by avoiding the need to undertake an assessment of what additional protective schemes the participating transmission owner must deploy to detect faults when an interconnection taps into a transmission line. The provision also will promote reliability by providing the CAISO with more control to mitigate the impact of a fault on a transmission line.

- With regard to the existing fast track screen assessing the peak load on a radial transmission circuit, the CAISO proposes to modify the source of this peak-load data if no telemetry on the circuit exists. The CAISO proposes to use data from power flow cases from the latest completed queue cluster study.[101] This information is the most recent data available and best aligns with the CAISO's assessment of reliability impacts, or lack thereof, which may occur as a result of the interconnection. The CAISO proposes to eliminate this screen when no load on the circuit exists.

- The CAISO proposes to eliminate an existing screen involving the interconnection of a proposed generating facility to the load side of spot network protectors.[102] This screen is more suitable for interconnection at distribution-level voltages that are much lower than the voltages of transmission facilities under the CAISO's operational control. The CAISO

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98 *See* GIDAP sections 3.5.1.1 and 3.5.1.2.

99 Revised GIDAP section 5.2.

100 Revised GIDAP section 5.3.1.1.

101 Revised GIDAP section 5.3.1.2.

102 Revised GIDAP section 5.3.1.3.

does not process interconnection requests at those voltages. In its place, the CAISO proposes to assess whether interconnecting the generating facility in the aggregate with other generating facilities will cause a violation of voltage standards set forth in the CAISO's planning standards.[103] These standards are available on the CAISO's website. For purposes of this screen, the CAISO proposes to use data from power flow cases from the latest completed queue cluster study. This information is the most recent data available and best aligns with the CAISO's assessment of reliability impacts, or lack thereof, which may occur as a result of the interconnection.

- The CAISO proposes to assess whether interconnecting the generating facility in the aggregate with other generating facilities will cause increases of power flows on the CAISO controlled grid to increase by five percent or more. Based on its engineering judgment, the working group selected five percent as a typical reflection of stressed conditions.[104] For purposes of this screen, the CAISO proposes to use data from power flow cases from the latest completed queue cluster study.[105] This information is the most recent data available and best aligns with the CAISO's assessment of reliability impacts, or lack thereof, which may occur as a result of the interconnection.

- The CAISO proposes to assess whether the generating facility in aggregate with other generating facilities does not contribute to more than 5 percent of the transmission circuit's maximum fault current.[106] The CAISO is proposing to reduce the maximum threshold from 10 percent to five percent to ensure existing relay settings and coordination are not adversely affected due to the proposed resource interconnection. In the CAISO's engineering judgment, the existing 10 percent threshold for short circuit interrupting capability infringes on typical operating margins on the CAISO controlled grid, and could lead to failure of relay operations. The lower threshold of 5 percent will help ensure safety and reliability in absence of a detailed short circuit study. For purposes of this screen, the CAISO proposes to use the short circuit study data from the latest queue cluster study. This information is the most recent data available and best

[103] The planning standards are available on the CAISO website at http://www.caiso.com/Documents/TransmissionPlanningStandards.pdf. The CAISO's voltage standards are contained in section II(3) of that document.

[104] *See, e.g.*, GIDAP sections 4.2.1.1(ii) and -(iii) (applying five-percent threshold in flow impact test under independent study process).

[105] Proposed GIDAP section 5.3.1.4

[106] Revised GIDAP section 5.3.1.5.

aligns with the CAISO's assessment of reliability impacts, or lack thereof, which may occur as a result of the interconnection.

- The CAISO proposes to reduce from 87.5 percent to 80 percent the threshold by which a generating facility may exceed the short circuit interrupting capability of transmission protective devices and equipment.[107] The proposed 80 percent threshold determined by the working group for the fast track process provides an additional safety margin in the screening process to account for the effects of electrical resistance and reactance on protective devices. This threshold also ensures safety and reliability in the absence of a detailed short circuit study. For purposes of this screen, the CAISO proposes to use the short circuit study data from the latest queue cluster study. This information is the most recent data available and best aligns with the CAISO's assessment of reliability impacts, or lack thereof, which may occur as a result of the interconnection.

- The CAISO proposes to not allow fast track interconnection in areas where the CAISO knows there are transient stability limitations, voltage and thermal limitations, or other known reliability limitations that apply to generating units located in the same general electrical vicinity.[108] This new provision replaces an existing screen that limits aggregate generation to 10 MW on circuits where there are known transient stability limitations. The participants in the working group for the fast track process agreed that prohibiting fast track interconnection where reliability limitations are present, rather than allowing fast track interconnection of up to 10 MW where known transient stability limitations exist, will help enhance the safety and reliability of the CAISO's transmission system in the absence of technical studies.

- The CAISO is proposes that if a resource passes the fast track screens, the CAISO will undertake a further assessment to identify any needed facilities to interconnect the resource. The CAISO proposes to complete this assessment within 60 calendar days. The applicable participating transmission owner will provide the interconnection customers with an interconnection agreement within 15 business days after completing this assessment.[109] The CAISO's fast track working group determined that to interconnect a resource that passes the fast track screens, the CAISO and applicable participating transmission owners will need to conduct an

[107] Revised GIDAP section 5.3.1.6.

[108] Revised GIDAP section 5.3.1.7.

[109] Revised GIDAP section 5.3.2.

assessment to define the scope of the interconnection that will be reflected in the interconnection agreement. The proposed 60-calendar day assessment period is an estimate of the time necessary to perform this assessment before providing the interconnection customer with an interconnection agreement that reflects any necessary interconnection facilities. This assessment will also ensure that the interconnection customer only pays for the facilities needed to complete the interconnection in a safe and reliable manner.

- The CAISO proposes that if an interconnection fails the fast track screens, the CAISO and participating transmission owners will provide the interconnection customer with copies of all data underlying their conclusion and offer to convene a customer options meeting within 10 business days.[110] This will allow the customer to take part in a customer options meeting promptly and with all available information in hand.

The initial review screens the CAISO is proposing subsume the power quality and voltage screen and safety and reliability screens that Order No. 792 directed transmission providers to undertake as part of the supplemental review. The CAISO has excluded the minimum load screen discussed as part of the supplemental review process in Order No. 792 because it does not apply to a networked transmission system like the CAISO controlled grid. The CAISO's proposal incorporates these screens and other revisions into the initial review under the fast track interconnection process in order to permit the CAISO to make a more informed and prompt decision about whether it can support a safe and reliable interconnection using the fast track interconnection process. These revisions will accomplish the fundamental objectives of Order No. 792 to enhance transparency and consistency of the fast track interconnection process as well as balance the benefits of interconnecting resources to interconnect on an expedited basis with the needs of transmission providers to protect the safety and reliability of their systems.

(iii) Revisions to the Customer Options Meeting and Supplemental Review Process

The CAISO proposes revisions to the customer options meeting and supplemental review process that will ensure interconnection customers have a transparent path in the event they fail the initial review under the fast track process. In connection with the customer options meeting, the CAISO proposes to allow an interconnection customer to either: (1) elect to modify its interconnection request that may permit a conclusion that the generating facility pass the fast track screens; (2) perform a supplemental review to identify

[110] Revised GIDAP section 5.3.3.

interconnection facilities and any reliability network upgrades to permit the interconnection to proceed; or (3) withdraw its interconnection request without prejudice to the interconnection customer resubmitting the interconnection request.[111]

With respect to the supplemental review process, the CAISO proposes to use this process as an expedited means for an interconnection customer that fails the initial fast track review to still achieve an interconnection without the need to resubmit its request in the queue cluster or independent study processes. Specifically, the CAISO proposes the following steps:

- If an interconnection customer requests a supplemental review, the CAISO will provide a good faith, non-binding estimate of the costs within 15 business days.[112]

- The interconnection customer will have 15 business days thereafter to agree to the supplemental review and submit a deposit.[113]

- Within 10 business days of receiving the deposit for the supplemental review, the CAISO and participating transmission owner will initiate an assessment to determine whether reliability network upgrades and interconnection facilities are necessary to interconnect the resource safely and reliably.[114] The GIDAP specifies what the assessment will include.[115] The CAISO will complete the assessment within 90 calendar days.[116]

- If requested by the interconnection customer, the CAISO will hold a results meeting based on this assessment. The CAISO will also provide the interconnection customer with the opportunity to discuss and provide written comments on the CAISO's assessment.[117]

Finally, the CAISO is proposing to add language to make clear that customers electing the supplemental review assessment will be required to post

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[111] Revised GIDAP section 5.4.

[112] Revised GIDAP section 5.5.

[113] *Id.*

[114] Revised GIDAP section 5.5.1.

[115] Proposed GIDAP section 5.5.1.1.

[116] Proposed GIDAP section 5.5.1.2.

[117] Proposed GIDAP section 5.5.1.3.

and maintain interconnection financial security utilizing the provisions relevant to the independent study process.[118] Consistent with principles of fairness and non-discrimination, fast-track customers that need upgrades to safely and reliably interconnect their projects should be responsible for posting security for such upgrades in the same manner as other CAISO interconnection customers.

The CAISO asks the Commission to approve these revisions to the customer options meeting and supplemental review process under the independent entity variation standard. The CAISO's proposed changes to the customer option meeting and supplemental review processes provide a transparent and meaningful opportunity to proceed with a fast track interconnection even if a generating facility fails the initial review screens.

4. The Existing GIDAP Permits Interconnection Customers to Provide Written Comments Regarding Any Required Upgrades

In Order No. 792, the Commission directed transmission providers to permit interconnection customers to provide written comments on any required upgrades in the facilities study. [119]

The GIDAP includes existing tariff language that is consistent with or superior to the *pro forma* tariff revisions contained in Order No. 792. The GIDAP already provides an opportunity for the interconnection customers to submit written comments on both the phase I and phase II interconnection study reports and then take part in a results meeting to discuss the interconnection study results and associated cost responsibility. The CAISO prepares minutes of the results meeting and shares these with the interconnection customer to confirm their accuracy. [120] The existing GIDAP also provides the opportunity for the CAISO to issue an addendum to the phase I or phase II interconnection study report within 15 business days following the results meeting in order to address the interconnection customer's comments.[121] These GIDAP provisions largely track the *pro forma* tariff revisions in Order No. 792 that provide an opportunity for interconnection customers to comment on a facilities study. The GIDAP provisions already contain all the components directed by the Commission: the opportunity for interconnection customers to review a final report and supporting

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[118] Proposed GIDAP section 5.5.1.5.

[119] Order No. 792 at PP 203-09. These provisions are set forth in sections 9.0 and 10.0 of the Facilities Study Agreement contained in attachment 8 to the *pro forma* small generator interconnection procedures. *Id.* at appendix C.

[120] GIDAP sections 6.7, 8.7.

[121] GIDAP section 6.8.

materials, the opportunity to submit comments on the report and discuss the report at a results meeting, and the opportunity to obtain a response to any comments.

The CAISO, however, also proposes to extend the right of an interconnection customer to submit written comments in response to a system impact and facilities study performed as part of the independent study process.[122] The CAISO is proposing this change under the independent entity variation standard because the CAISO's proposed language does not track the Commission's *pro forma* language verbatim.

5. Tariff Revisions to Account for the Interconnection of Storage Devices Under the CAISO's Interconnection Procedures

Order No. 792 directed transmission providers to specifically define electric storage devices as generating facilities that can take advantage of generator interconnection procedures. Order No. 792 also directed that transmission providers should measure the capacity of a small generating facility based on the capacity specified in the interconnection request, which may be less than the maximum capacity that a device is capable of injecting into the transmission provider's system.[123]

The CAISO proposes to incorporate the tariff revisions set forth in Order No. 792 into the definition of the term Generating Facility in appendix A of the CAISO tariff. The CAISO also proposes to amend the definition of a Generating Facility in appendices EE and FF, which contain the *pro forma* SGIA and LGIA subject to the GIDAP. Finally, the CAISO proposes to incorporate (with minor variations to refer to the CAISO instead of the transmission provider) the Commission's *pro forma* tariff revisions regarding the evaluation of a resource's maximum rated capacity to determine if the resource is a small generating facility into section 3.1 of the GIDAP. The CAISO requests that the Commission accept these tariff revisions under the independent entity variation standard.

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[122] See the discussion of revised GIDAP section 4.4.4 above in section III.A.3 of this transmittal letter.

[123] Order No. 792 at PP 227-31. These provisions are set forth in section 4.10.3 and attachment 1 (definition of Small Generating Facility) of the *pro forma* small generator interconnection procedures and in attachment 1 (definition of Small Generating Facility) of the *pro forma* small generator interconnection agreement. *Id.* at appendices C and D.

6. The Order No. 792 Provisions Relating to Network Resource Interconnection Service Are Based on a Design Paradigm Different from the Design of the GIDAP

Order No. 792 directed each transmission provider to require an interconnection customer wishing to interconnect a small generating facility using network resource interconnection service to do so under the transmission provider's LGIP and to execute an LGIA.[124]

This directive in Order No. 792 is based on a design paradigm different from the design of the existing GIDAP. The CAISO understands network resource interconnection service to mean a service that allows an interconnection customer to integrate its resource into the transmission provider's system in a manner comparable to the transmission provider's resources. For purposes of the CAISO, this means interconnection service comparable to interconnection service offered to all other customers. As discussed above, the CAISO has consolidated its small and large generator interconnection procedures in the GIDAP. Section 2.4.2 of the GIDAP already allows an interconnection customer to connect its generating facility to the CAISO controlled grid and be eligible to deliver the resource's output using the available capacity of the CAISO controlled grid. This provision applies to both small and large generator resources. For this reason, the CAISO is not proposing any changes to this language. The CAISO requests that the Commission accept its existing tariff provisions under the consistent with or superior to standard to satisfy the directives relating to network resource interconnection service in Order No. 792.

C. Miscellaneous Changes

The CAISO proposes miscellaneous changes to a number of GIDAP provisions.[125] These changes have been made to correct typographical errors, incorrect use of defined terms, and inaccurate cross-references, and to make the GIDAP provisions more clear.

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[124] *Id*. at PP 235-36. These provisions are set forth in section 1.1.1 and attachment 1 (definitions of Network Resource and Network Resource Interconnection Service) of the *pro forma* small generator interconnection procedures. *Id.* at appendix C. Order No. 792 also included certain minor clarifications that are addressed in the table included in attachment C to this FPA 205 tariff filing. *Id.* at PP 246-47, 261, and appendix C.

[125] Revised GIDAP sections 4, 4.1.3, 4.1.6, 4.2.1.1(ii) and -(iii), 4.2.1.2(ii)(2), 4.2.1.2(ii)(3), 4.3, and 5.1; GIDAP appendix 6, title and sections 2.0, 4.0, 8.0, and 9.0, and appendix A; appendix EE title page; appendix EE, appendix H, section A(i)(5); appendix FF, attachment 7, sections A(i)(5) and -(7).

IV. Stakeholder Process

The stakeholder process that resulted in this filing included:

- A series of six papers issued by the CAISO;
- The development of draft tariff provisions and revised draft tariff provisions;
- Seven stakeholder meetings and conference calls to discuss the CAISO papers and the draft tariff provisions; and
- Seven opportunities to submit written comments on the CAISO papers and the draft tariff provisions.[126]

The CAISO Governing Board authorized the preparation and filing of this tariff amendment at its May 29, 2014 meeting.[127]

All stakeholders either fully supported, or supported with qualifications, the CAISO's proposals with regard to the topics this tariff amendment concerns. The CAISO has addressed issues raised by stakeholders in the applicable portions of this transmittal letter above.

V. Effective Date

The CAISO requests that the Commission accept the tariff revisions contained in this filing effective as of November 4, 2014.

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[126] Materials regarding the IPE stakeholder process are available on the CAISO website at http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx. A list of key dates in the stakeholder process that are relevant to this tariff amendment is provided in attachment F to this filing.

[127] Materials related to the Board's authorization to prepare and submit this filing are available on the CAISO website at http://www.caiso.com/informed/Pages/BoardCommittees/BoardGovernorsMeetings.aspx.

VI. Communications

Correspondence and other communications regarding this filing should be directed to:

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VII. Service

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with scheduling coordinator agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VIII. Contents of Filing

In addition to this transmittal letter, this filing includes the following attachments:

Attachment A	Clean CAISO tariff sheets incorporating this tariff amendment
Attachment B	Red-lined document showing the revisions contained in this tariff amendment
Attachment C	Table comparing tariff revisions set forth in Order No. 792 and tariff revisions proposed in this filing
Attachment D	Draft final proposal
Attachment E	Board memorandum
Attachment F	List of key dates in the stakeholder process

IX. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission accept the tariff revisions proposed in the filing effective as of November 4, 2014.

Respectfully submitted,

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Attachment A – Clean Tariff Sheets

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

Appendix A

Master Definition Supplement

* * *

- Generating Facility

An Interconnection Customer's Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

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Appendix DD

Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

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Table of Contents

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Section 1 Objectives And Applicability

1.1 Objectives And Applicability

The objective of this Generation Interconnection and Deliverability Allocation Procedures (GIDAP) is to implement the requirements for both Small and Large Generating Facility interconnections to the CAISO Controlled Grid and to provide a process for allocating Transmission Plan Deliverability for Interconnection Requests starting with Queue Cluster 5 and for subsequent Queue Clusters. This GIDAP applies to Interconnection Requests that are either assigned to Queue Cluster 5 and subsequent Queue Clusters, or submitted for the Independent Study Process, or Fast Track Process after [*effective date of tariff amendment*]. The two exceptions to this rule of limited applicability are (i) the annual reassessment process set forth in Section 7.4, which shall apply to all CAISO Interconnection Customers in Queue Clusters, and (ii) the annual Generator Downsizing Process set forth in Section 7.5 which shall apply to all eligible Interconnection Customers, regardless of which interconnection procedures under the CAISO Tariff they are subject to.

1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, will have the same meaning where used in this GIDAP. References to the GIDAP are to this Appendix DD.

1.3 Pre-Application

1.3.1 An Interconnection Customer with a proposed Small Generating Facility may submit a formal written request form along with a non-refundable fee of $300 to the CAISO for a pre-application report on a proposed project at a specific site. The CAISO shall provide the pre-application data described in section 1.3.2 to the Interconnection Customer within 20 Business Days of receipt of the completed request form and payment of the $300 fee. The CAISO shall coordinate with the Participating TO to complete the pre-application report. At the request of the CAISO the Participating TO shall provide any readily available information necessary to complete the pre-application report. Readily available information shall mean information that the Participating TO currently has on hand. The Participating TO is not required to create new information but is required to compile, gather, and summarize information that it has on hand in a format that presents the information in a manner that informs the Interconnection Customer regarding issues related to its proposed Small Generating Facility. If providing any item in the pre-application report would require the Participating TO to perform a study or analysis beyond gathering and presenting existing information, then the information shall be deemed not readily available. The pre-application report produced by the CAISO is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the CAISO's system. The written pre-application report request form shall include the information in sections 1.3.1.1 through 1.3.1.8 below to clearly and sufficiently identify the location of the proposed Point of Interconnection that is under CAISO operational control.

1.3.1.1 Project contact information, including name, address, phone number, and email address.

1.3.1.2 Project location (street address with nearby cross streets and town).

1.3.1.3 Single proposed Point of Interconnection that is either an existing substation or a transmission line under CAISO operational control.

1.3.1.4 Generator Type (e.g., solar, wind, combined heat and power, etc.)

1.3.1.5 Size (alternating current kW/MW)

1.3.1.6 Single or three phase generator configuration

1.3.1.7 Stand-alone generator (no onsite load, not including station service – Yes or No?)

1.3.1.8 Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW/MW (if available) and specify if the load is expected to change.

1.3.2 Subject to section 1.3.1, the pre-application report will include the following information:

1.3.2.1 Electrical configuration of the substation, including information of transmission lines terminating in the substation, transformers, buses and other devices, if the proposed Point of Interconnection is a substation.

1.3.2.2 Existing aggregate generation capacity (in MW) interconnected to a substation or circuit (i.e., amount of generation online) likely to serve the proposed Point of Interconnection.

1.3.2.3 Aggregate queued generation capacity (in MW) for a substation or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Interconnection.

1.3.2.4 Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit issues, instability issues, facility loading issues, or voltage issues.

1.3.3 The pre-application report need only include existing data. A pre-application report request does not obligate the CAISO to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the CAISO cannot complete all or some of a pre-application report due to lack of available data, the CAISO shall provide the Interconnection Customer with a pre-application report that includes the data that is available. There are many variables studied as part of the interconnection review process, and data provided in the pre-application report may become outdated at the time of the submission of the complete Interconnection Request. Notwithstanding any of the provisions of this section, the CAISO shall, in good faith, include data in the pre-application report that represents the best available information at the time of reporting.

* * *

2.4.3 The Interconnection Studies.

For Interconnection Requests in Queue Cluster 5 and subsequent Queue Clusters, the Interconnection Studies consist of a Phase I Interconnection Study, a reassessment conducted prior to the commencement of a Phase II Interconnection Study, a Phase II Interconnection Study, and an update to the Phase II Interconnection Study report to reflect the results of a reassessment conducted after the TP Deliverability allocation process for the Queue Cluster.

For Interconnection Requests processed under the Independent Study Process, the Interconnection Studies consist of a system impact and facilities study, and, as applicable to Full Capacity or Partial Capacity Deliverability Status, Phase I and Phase II Interconnection Studies and a reassessment.

* * *

Section 3 Interconnection Requests

3.1 General

Pursuant to CAISO Tariff Section 25.1, an Interconnection Customer shall submit to the CAISO an Interconnection Request in the form of Appendix 1 to this GIDAP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

The Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. The Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

An Interconnection Customer with a proposed Small Generating Facility shall be evaluated using the maximum rated capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system. However, if the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system is limited (e.g., through use of a control system, power relay(s), or other similar device settings or adjustments), then the Interconnection Customer must obtain the CAISO's agreement, with such agreement not to be unreasonably withheld, that the manner in which the Interconnection Customer proposes to implement such a limit will not adversely affect the safety and reliability of the CAISO's system. If the CAISO does not so agree, then the Interconnection Request must be withdrawn or revised to specify the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system without such limitations. Furthermore, nothing in this section shall prevent the CAISO from considering an output higher than the limited output, if appropriate, when evaluating system protection impacts.

*** * ***

3.5.1.1 Use of Interconnection Study Deposit.

The CAISO shall deposit all Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies and to meet and otherwise communicate with Interconnection Customers with respect to their Interconnection Requests.

Except for proposed Generating Facilities processed under the Fast Track Process set forth in Section 5, the Interconnection Study Deposits shall be refundable as follows:

(a) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 on or before thirty (30) calendar days following the Scoping Meeting, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest

earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceed the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

(b) Should an Interconnection Request made under Section 3.5.1 be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 more than thirty (30) calendar days after the Scoping Meeting, but on or before thirty (30) calendar days following the Results Meeting (or the latest date permitted under this for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study or the system impact and facilities study for Generating Facilities processed under the Independent Study Process, the CAISO shall refund to the Interconnection Customer the difference between (i) the Interconnection Customer's Interconnection Study Deposit and (ii) the greater of the costs the CAISO and Participating TOs have incurred on the Interconnection Customer's behalf or one-half of the original Interconnection Study Deposit up to a maximum of $100,000, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal.

Interconnection Customers in Queue Cluster 5 who have provided the Study Deposit may receive a refund of the Interconnection Study Deposit, less actual costs expended on the Interconnection Studies to date, by withdrawing from the Queue within ten (10) calendar days after July 25, 2012.

(c) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 at any time more than thirty (30) calendar days after the Results Meeting (or the latest date permitted for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study, or the system impact and facilities study for proposed Generating Facilities processed under the Independent Study Process, the Interconnection Study Deposit shall be non-refundable.

(d) Upon execution of a GIA by an Interconnection Customer, the CAISO and the applicable Participating TOs, or the approval by FERC of an unexecuted GIA, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceeds the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

Notwithstanding the foregoing, an Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request during an Interconnection Study Cycle shall be obligated to pay to the CAISO all costs in excess of the Interconnection Study Deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. The CAISO will reimburse the applicable Participating TO(s) or third parties, as applicable, for all work performed on behalf of the withdrawn Interconnection Request at the CAISO's direction. The Interconnection Customer must pay all monies due before it is allowed to obtain any Interconnection Study data or results.

All non-refundable portions of the Interconnection Study Deposit that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf shall be treated in accordance with CAISO Tariff Section 37.9.4. In addition, any funds received by the CAISO from a Participating TO, pursuant to a requirement in the Participating TO's wholesale distribution tariff for funds to be distributed by the CAISO, shall be treated in accordance with CAISO Tariff Section 37.9.4.

*** * ***

Section 4 Independent Study Process

The CAISO, in coordination with the applicable Participating TO(s), will study Interconnection Requests eligible for treatment under this Independent Study Process independently from other Interconnection Requests.

In the event of a conflict between this Section 4 and another provision of this GIDAP, Section 4 shall govern.

4.1 Criteria for Independent Study Process Eligibility

Any Interconnection Request that meets the following criteria will be processed under the Independent Study Process:

4.1.1 The Interconnection Customer must provide, along with its Interconnection Request, an objective demonstration that inclusion in a Queue Cluster will not accommodate the desired Commercial Operation Date for the Generating Facility. As part of this demonstration, the Interconnection Customer must show that the desired Commercial Operation Date is physically and commercially achievable, by demonstrating all of the following:

(i) The Interconnection Customer has obtained, or has demonstrated the ability to obtain, all regulatory approvals and permits needed to complete construction in time to meet the Generating Facility's requested Commercial Operation Date.

(ii) The Interconnection Customer is able to provide, or has demonstrated the ability to obtain, a purchase order for generating equipment specific to the proposed Generating Facility, or a statement signed by an officer or authorized agent of the Interconnection Customer demonstrating that the Interconnection Customer has a commitment for the supply of its major generating equipment in time to meet the Commercial Operation Date through a purchase agreement to which the Interconnection Customer is a party.

(iii) The Interconnection Customer can provide reasonable evidence of adequate financing or other financial resources necessary to make the Interconnection Financial Security postings required in Sections 11.2 and 11.3.

(iv) The Point of Interconnection proposed by the Interconnection Customer must be to either: (1) an existing facility on the CAISO Controlled Grid that does not require any expansion in order to accommodate the interconnection of the Generating Facility; or (2) a facility approved in the Transmission Planning Process or identified as necessary through Interconnection Studies performed for other Interconnection Customers that is fully permitted, is under construction at the time the Interconnection Request is made, and is expected to be in service by the requested Commercial Operation Date of the Generating Facility.

(v) With respect to any Reliability Network Upgrades that are anticipated to be needed to interconnect the Generating Facility, and that are already part of an existing plan of service or have been identified as necessary through Interconnection Studies performed for other Interconnection Customers, or have been identified in the Transmission Planning Process, such Reliability Network Upgrades must be either in service or under construction and have a completion date no later than the requested Commercial Operation Date of the Generating Facility.

4.1.2 The Interconnection Customer must demonstrate Site Exclusivity.

4.1.3 The proposed Generating Facility must be electrically independent of Interconnection Requests included in an existing Queue Cluster, pursuant to Section 4.2. In addition, the proposed Generating Facility must be electrically independent of any other Generating Facility that is currently being studied under an earlier-queued Independent Study Process Interconnection Request.

4.1.4 The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.1 and 4.1.2 within thirty (30) calendar days of receiving the Interconnection Request.

4.1.5 The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.3 within thirty (30) calendar days of receiving the data necessary to determine whether the Interconnection Customer has satisfied such requirements. For a proposed Generating Facility in a study area with active Interconnection Requests in the current Queue Cluster or the Independent Study Process, such 30-calendar day period will commence when the Phase I Interconnection Study results are available for the current Queue Cluster and all system impact studies (or combined system impact and facilities studies) have been completed for all earlier-queued Independent Study Process Interconnection Requests in the same study area.

4.1.6 Any Interconnection Request that does not satisfy the criteria set forth in Sections 4.1.1, 4.1.2, and 4.1.3 shall be deemed withdrawn, without prejudice to the Interconnection Customer submitting a request at a later date, unless the Interconnection Customer notifies the CAISO in writing within ten (10) Business Days that it wishes the CAISO to hold the Interconnection Request for inclusion in the next Queue Cluster Window, in which event the CAISO will do so.

4.2 Determination of Electrical Independence

An Interconnection Request will qualify for the Independent Study Process without having to demonstrate electrical independence pursuant to this Section 4.2 if, at the time the Interconnection Request is submitted, there are no other active Interconnection Requests in the same study area in the current Queue Cluster or in the Independent Study Process.

Otherwise, an ach Interconnection Request submitted under the Independent Study Process must pass all of the tests for determining electrical independence set forth in this Section 4.2 in order to qualify for the Independent Study Process. These tests will utilize study results for active Interconnection Requests in the same study area, including Phase I Interconnection study results for Generating Facilities in the current Queue Cluster and any system impact study (or combined system impact and facilities study) results for earlier queued Generating Facilities being studied in the Independent Study Process.

4.2.1 Flow Impact Test/Behind-the-Meter Capacity Expansion Criteria

An Interconnection Request shall have satisfied the requirements of this Section if it satisfies, alternatively, either the set of requirements set forth in Section 4.2.1.1 or the set of requirements set forth in Section 4.2.1.2.

4.2.1.1 Requirement Set Number One: General Independent Study Requests:

The CAISO, in coordination with the applicable Participating TO(s), will perform the flow impact test for an Interconnection Request requesting to be processed under the Independent Study Process as follows:

(i) Identify the transmission facility closest, in terms of electrical distance, to the proposed Point of Interconnection of the Generating Facility being tested that will be electrically impacted, either as a result of Reliability Network Upgrades identified or reasonably expected to be needed in order to alleviate power flow concerns caused by Generating Facilities currently being studied in a Queue Cluster, or as a result of Reliability Network Upgrades identified or reasonably expected to be needed to alleviate power flow concerns caused by earlier queued Generating Facilities currently being studied through the Independent Study Process. If the current Queue Cluster studies or earlier queued Independent Study Process studies have not yet determined which transmission facilities electrically impacted by the Generating Facility being tested require Reliability Network Upgrades to alleviate power flow concerns, and the CAISO cannot reasonably anticipate whether such transmission facilities will require such Reliability Network Upgrades from other data, then the CAISO will wait to conduct the independence analysis under this section until sufficient information exists in order to make this determination. If the flow impact on a Reliability Network Upgrade identified pursuant to these criteria cannot be tested due to the nature of the Upgrade, then the flow impact test will be performed on the limiting element(s) causing the need for the Reliability Network Upgrade.

(ii) The incremental power flow on the transmission facility identified in Section 4.2.1.1(i) that is caused by the Generating Facility being tested will be divided by the lesser of the Generating Facility's size or the transmission facility capacity. If the result is five percent (5%) or less, the Generating Facility shall pass the flow impact test. If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

(iii) If the Generating Facility being tested under the flow impact test is reasonably expected to impact transmission facilities that were identified, per Section 4.2.1.1(i), when testing one or more earlier queued Generating Facilities currently being studied through the Independent Study Process, then an additional aggregate power flow test shall be performed on these earlier identified transmission facilities. The aggregate power flow test shall require that the aggregated power flow of the Generating Facility being tested, plus the flow of all earlier queued

Generating Facilities currently being studied under the Independent Study Process that were tested against the transmission facilities described in the previous sentence, must be five (5) percent or less of those transmission facilities' capacity.

However, even if the aggregate power flow on any transmission facility tested pursuant to this section (iii) is greater than five (5) percent of the transmission facility's capacity but the incremental power flow as a result of the Generating Facility being tested is one (1) percent or less than of the transmission facility's capacity, the Generating Facility shall pass the test.

If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

The Generating Facility being tested must pass both this aggregate test as well as the individual flow test described in Section 4.2.1.1(ii), in no particular order.

4.2.1.2 Requirement Set Number Two: for Requests for Independent Study of Behind-the-Meter Capacity Expansion of Generating Facilities

This Section 4.2.1.2 applies to an Interconnection Request relating to a behind-the-meter capacity expansion of a Generating Facility. Such an Interconnection Request submitted under the Independent Study Process will satisfy the requirements of Section 4.2.1 if it satisfies all of the following technical and business criteria:

(i) Technical criteria.

1) The total nameplate capacity of the existing Generating Facility plus the incremental increase in capacity does not exceed in the aggregate one hundred twenty-five (125) percent of its previously studied capacity and the incremental increase in capacity does not exceed, in the aggregate, including any prior behind-the-meter capacity expansions implemented pursuant to this Section 4.2.1.2, one hundred (100) MW.

2) The behind-the-meter capacity expansion shall not take place until after the original Generating Facility has achieved Commercial Operation and all Reliability Network Upgrades for the original Generating Facility have been placed in service. An Interconnection Request for behind-the-meter capacity expansion may be submitted prior to the Commercial Operation Date of the original Generating Facility.

3) The Interconnection Customer must install an automatic generator tripping scheme sufficient to ensure that the total output of the

Generating Facility, including the behind-the-meter capacity expansion, does not at any time exceed the capacity studied in the Generating Facility's original Interconnection Request. The CAISO will have the authority to trip the generating equipment subject to the automatic generator tripping scheme or take any other actions necessary to limit the output of the Generating Facility so that the total output of the Generating Facility does not exceed the originally studied capacity.

(ii) Business criteria.

1) The Deliverability Status (Full Capacity, Partial Capacity or Energy-Only) of the original Generating Facility will remain the same after the behind-the-meter capacity expansion. The capacity expansion will have Energy-Only Deliverability Status, and the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs, except as set forth in (2) below.

2) If the original Generating Facility has Full Capacity Deliverability Status and the behind-the-meter capacity expansion will use the same technology as the original Generating Facility, the Interconnection Customer may elect to have the original Generating Facility and the behind-the-meter capacity expansion metered together, in which case both the original Generating Facility and the behind-the-meter capacity expansion will have Partial Capacity Deliverability Status and a separate Resource ID will not be established for the behind-the-meter capacity expansion.

3) A request for behind-the-meter expansion shall not operate as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the Interconnection Request.

4) The GIA will be amended to reflect the revised operational features of the Generating Facility's behind-the-meter capacity expansion.

5) An active Interconnection Customer may at any time request that the CAISO convert the Interconnection Request for behind-the-meter capacity expansion to an Independent Study Process Interconnection Request to evaluate an incremental increase in electrical output (MW generating capacity) for the existing Generating Facility. The Interconnection Customer must accompany such a conversion request with an appropriate Interconnection Study Deposit and agree to comply with other sections of Section 4 applicable to an Independent Study Process Interconnection Request.

4.2.2 Short Circuit Test

The Generating Facility shall pass the short circuit test if (i) the combined short circuit contribution from all the active Interconnection Requests in the Independent Study Process in the same study area is less than five (5) percent of the available capacity of the circuit breaker upgrade identified in Section 4.2.1.1 and; (ii) total fault duty on each circuit breaker upgrade identified for the current Queue Cluster and active Independent Study Process Interconnection Requests in the same study area is less than eighty (80) percent of the nameplate capacity of the respective circuit breaker upgrade.

4.2.3 Transient Stability Test

The Generating Facility shall pass the transient stability test if the Generating Facility has requested interconnection in a study area where transient stability issues are not identified for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

4.2.4 Reactive Support Test

The Generating Facility shall pass the reactive support test if the Generating Facility has requested interconnection in a study area where reactive support needs are not identified as requiring Reliability Network Upgrades for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

4.3 Scoping Meeting

Within five (5) Business Days after the CAISO notifies the Interconnection Customer that the Generating Facility associated with its Interconnection Request has satisfied the electrical independence test set forth in Section 4.2, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. With input from the Participating TO, the CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s)' service territory or of any other Affected System(s) so as to potentially affect such third parties, and, if such is the case, the CAISO shall invite the affected Participating TO(s) and/or Affected System Operator(s), in accordance with Section 3.7, to the Scoping Meeting by informing such third parties, as soon as practicable, of the time and place of the scheduled Scoping Meeting.

The purpose of the Scoping Meeting shall be to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose, technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues. The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO, and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The CAISO shall prepare minutes from the meeting, and provide an opportunity for other attendees and the Interconnection Customer to confirm the accuracy thereof. The Scoping Meeting may be omitted by agreement of the Interconnection Customer, Participating TO, and the CAISO.

The CAISO shall, no later than five (5) Business Days after the Scoping Meeting (or agreement to forego such Scoping Meeting), provide the Interconnection Customer with an Independent Study Process Study Agreement (in the form set forth in Appendix 6 to the GIDAP), which shall contain an outline of the scope of the system impact and facilities study and a non-binding good-faith estimate of the cost to perform the study. The Interconnection Customer shall return the executed Independent Study Process Study Agreement or request an extension of time for good cause within thirty (30) Business Days thereafter, or the Interconnection Request shall be deemed withdrawn.

4.4 System Impact and Facilities Study

4.4.1 The system impact and facilities study will consist of a short circuit analysis, a stability analysis, a power flow analysis, an assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds, and a proposed resolution, and any other studies that are deemed necessary.

4.4.2 The system impact and facilities study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested Interconnection Service. The system impact and facilities study shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the study, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds. The system impact and facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Reliability Network Upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

4.4.3 The system impact and facilities study will be completed and the results transmitted to the Interconnection Customer within one hundred twenty (120) calendar days after the execution of an Independent Study Process Study Agreement. The Interconnection Customer shall execute the agreement(s) and deliver them to the CAISO, and shall make its initial posting of Interconnection Financial Security in accordance with Section 11.2, or its Interconnection Request shall be deemed withdrawn.

4.4.4 If requested by the Interconnection Customer, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the system impact and facilities study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the system impact and facilities study report is provided to the Interconnection Customer.

Should the Interconnection Customer provide written comments on the system impact and facilities study report within ten (10) Business Days of receipt of the report, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the report, whichever is sooner, the CAISO will address the written comments in the Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible. The Interconnection Customer may submit, in

writing, additional comments on the final system impact and facilities study report up to three (3) Business Days following the Results Meeting.

4.4.5 For Interconnection Requests under the Independent Study Process, the postings of Interconnection Financial Security described in Section 11.3 will be based on the cost responsibility for Network Upgrades, and Participating TO's Interconnection Facilities set forth in the system impact and facilities study.

4.6 Deliverability Assessment

Interconnection Customers under the Independent Study Process that request Partial Capacity or Full Capacity Deliverability Status will be deemed to have selected Option (A) under Section 7.2 and will have a Deliverability Assessment performed as part of the next scheduled Phase I and Phase II Interconnection Studies for the Queue Cluster study performed for the next Queue Cluster Window that opens after the CAISO received the request for Partial Capacity or Full Capacity Deliverability Status. If the Deliverability Assessment identifies any LDNUs and ADNUs that are triggered by the Interconnection Request, the Interconnection Customer will be responsible to pay its proportionate share of the costs of those Upgrades, pursuant to Sections 6, 7 and 8, and for posting Interconnection Financial Security pursuant to the rules for Interconnection Customers in Queue Clusters pursuant to Section 11. If the Generating Facility (or increase in capacity of an existing Generating Facility) achieves its Commercial Operation Date before the Deliverability Assessment is completed and before any necessary Delivery Network Upgrades are in service, the proposed Generating Facility (or increase in capacity) will be treated as an Energy-Only Deliverability Status Generating Facility until such Delivery Network Upgrades are in service. This Section shall not apply to Interconnection Customers requesting behind-the-meter capacity expansion under Section 4.2.1.2. Separate rules regarding the Deliverability Status of such requests are set forth in that Section.

4.7 Extensions of Commercial Operation Date

Extensions of the Commercial Operation Date for Interconnection Requests under the Independent Study Process will not be granted except for circumstances beyond the control of the Interconnection Customer.

4.8 Generator Interconnection Agreement

An Interconnection Customer in the Independent Study Process that requests Partial Capacity or Full Capacity Deliverability Status must still negotiate and execute a GIA reflecting Energy-Only Deliverability Status pursuant to the requirements and timelines set forth in Section 13. Upon the completion of the Deliverability Assessment per Section 4.6, the Interconnection Customer's GIA will be amended as appropriate to reflect the results thereof.

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Section 5 Fast Track Process

5.1 Applicability and Initiation of Fast Track Process Request

Applicability to a proposed Generating Facility. An Interconnection Customer may request interconnection of a proposed Generating Facility to the CAISO Controlled Grid

under the Fast Track Process if the Generating Facility is no larger than 5 MW and is requesting Energy-Only Deliverability Status and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Appendices 9 and 10 of this GIDAP, or if the applicable Participating TO notifies the CAISO that it has reviewed the design for or tested the proposed Small Generating Facility and has determined that the proposed Generating Facility may interconnect consistent with Reliability Criteria and Good Utility Practice.

Applicability to an existing Generating Facility. If the Interconnection of an existing Generating Facility meets the qualifications for Interconnection under CAISO Tariff Section 25.1(d) or (e) but, at the same time, the Interconnection Customer also seeks to repower or reconfigure the existing Generating Facility in a manner that increases the gross generating capacity by not more than 5 MW, then the Interconnection Customer may request that the Fast Track Process be applied with respect to the repowering or reconfiguration of the existing Generating Facility that results in the incremental increase in MW.

Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with:

(i) a completed Interconnection Request as set forth in Appendix 1;

(ii) a study deposit of $25,000; and

(iii) a demonstration of Site Exclusivity. For the Fast Track Process, such demonstration may include documentation reasonably demonstrating a right to locate the Generating Facility on real estate or real property improvements owned, leased, or otherwise legally held by another.

The CAISO shall review and validate the Fast Track Process Interconnection Request pursuant to Section 5.2.

In the event of a conflict between this Section 5 and another provision of this GIDAP, Section 5 shall govern.

5.2 Initial Review

Within thirty (30) Calendar Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the Interconnection Customer of the results in a report that provides the details of and data underlying the Participating TO's determinations under the screens.

5.3 Screens

5.3.1 The proposed Generating Facility must pass the following screens to be eligible for Interconnection under this Fast Track Process:

5.3.1.1 The proposed Generating Facility's Point of Interconnection must be on the CAISO Controlled Grid. The proposed Generating Facility must interconnect to an existing substation with a vacant switch rack position.

5.3.1.2 For interconnection of a proposed Generating Facility to a radial transmission circuit on the CAISO controlled grid, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.

This screen will not be required for a proposed interconnection of a Generating Facility to a radial transmission circuit with no load.

In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, the CAISO shall use power flow cases from the latest completed Queue Cluster studies (either Phase I or Phase II) to perform this screen.

5.3.1.3 The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not cause the violation of voltage standards, as set forth in CAISO Planning Standards, on any part of the CAISO Controlled Grid.

The CAISO will use power flow cases from the most recently completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.4 The proposed Generating Facility, in the aggregate with other Generating Facilities on the transmission circuit shall not cause the power flow on any part of the CAISO-Controlled Grid to increase by five (5) percent, and shall not exceed eighty (80) percent of the same facility's normal rating.

The CAISO shall use power flow cases from the latest completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.5 The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not contribute more than five (5) percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

The CAISO shall use the short circuit study data from the latest completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.6 The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed eighty (80) percent of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds eighty (80) percent of the short circuit interrupting capability.

The CAISO shall use the short circuit study data from the most recently completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.7 The Generating Facility shall not be permitted to interconnect pursuant to the process set forth in this Section 5 in an area where there are known transient stability limitations, voltage and thermal limitations, or any other known reliability limitations (e.g., existing or

new Special Protection Systems) applicable to generating units located in the general electrical vicinity (*e.g.*, three or four transmission busses from the Point of Interconnection).

5.3.2 If the proposed interconnection passes the screens, the Interconnection Request shall be approved subject to a further assessment to identify Interconnection Facilities. This assessment will be performed within sixty (60) calendar days after informing the Interconnection Customer that it has passed the screens. Within fifteen (15) Business Days after completing this assessment, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

5.3.3 If the proposed interconnection fails the screens, then in accordance with Section 5.2, the CAISO and Participating TO will provide the Interconnection Customer with copies of all data underlying this conclusion. The CAISO and Participating TO will also offer to convene a Customer Options meeting within ten (10) Business Days of its determination in accordance with Section 5.4.

5.4 Customer Options Meeting

If the Interconnection Request fails the screens in Section 5.3, the CAISO and Participating TO shall offer to convene a customer options meeting with the CAISO and Participating TO to review the screen analysis and related results and possible Interconnection Customer facility modifications that may permit the Small Generating Facility to be connected safely and reliably. At the time of notification of the CAISO and Participating TO's determination, or at the customer options meeting, the CAISO and Participating TO will, as appropriate:

(i) Offer the Interconnection Customer the opportunity to submit modifications to its Generating Facility that the CAISO and Participating TO conclude may allow the Generating Facility to pass the Fast Track screens; or

(ii) Offer to perform a supplemental review to determine the scope and cost of the Reliability Network Upgrades required to interconnect the Generating Facility.

5.4.1 Within five (5) Business Days of the customer options meeting the Interconnection Customer shall provide the CAISO with its election on how to proceed with its Interconnection Request. If the Interconnection Customer choses to withdraw its Interconnection request it may do so without prejudice to the Interconnection Customer resubmitting its Interconnection Request for processing in either a Queue Cluster or under the Independent Study Process.

5.5 Supplemental Review

If the Interconnection Customer requests a supplemental review, the CAISO shall provide a non-binding good faith estimate of the cost of the supplemental review within fifteen (15) Business Days of receiving the Interconnection Customer's election. The Interconnection Customer shall agree in writing within fifteen (15) Business Days of receiving the cost estimate, and submit a deposit for the estimated costs in an amount reasonably determined by the CAISO and Participating TO. The Interconnection Customer shall be responsible for the CAISO and Participating TO's actual costs for conducting the supplemental

review. The Interconnection Customer must pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the CAISO and Participating TO will return such excess, without interest, within twenty (20) Business Days of the invoice.

5.5.1 Within ten (10) Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will initiate an assessment to determine what facilities would be necessary to reliably and safely connect the Generating Facility.

5.5.1.1 This assessment will consist of a short circuit analysis, a stability analysis, a power flow analysis and any other studies that are deemed necessary to determine whether upgrades to the Participating TO's electric system are necessary to safely and reliably interconnect the Small Generating Facility. The assessment shall specify and estimate the cost of the associated equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the study. This assessment shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Reliability Network Upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

5.5.1.2 This assessment shall be completed with ninety (90) calendar days following receipt from the Interconnection Customer of the deposit for supplemental review.

5.5.1.3 If requested by the Interconnection Customer within ten (10) Business Days following completion of the assessment, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the assessment. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the assessment is provided to the Interconnection Customer.

Should the Interconnection Customer provide written comments on the assessment within ten (10) Business Days of receipt of the assessment, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the assessment, whichever is sooner, the CAISO will address the written comments in the Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible. The Interconnection Customer may submit, in writing, additional comments on the final assessment up to three (3) Business Days following the Results Meeting

5.5.1.4 The Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution within fifteen (15) Business Days after confirmation that the Interconnection Customer has agreed to pay for the identified Interconnection Facilities and Network Upgrades.

5.5.1.5 The Interconnection Customer shall be required to post and maintain Interconnection Financial Security pursuant to the provisions applicable to Interconnection Requests in the Independent Study Process. For this purpose, references to the system impact and facilities study shall be read as references to the assessment conducted pursuant to the supplemental review.

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6.8.1 Substantial Error or Omissions; Revised Study Report

Should the CAISO discover, through written comments submitted by an Interconnection Customer or otherwise, that a final Phase I or Phase II Interconnection Study Report (which can mean a final Phase I or Phase II Interconnection Study Report for cluster studies or a final system impact and facilities report for the Independent Study Process) contains a substantial error or omission, the CAISO will cause a revised final report to be issued to the Interconnection Customer. A substantial error or omission shall mean an error or omission that results in one or more of the following:

(i) understatement or overstatement of the Interconnection Customer's cost responsibility for either Network Upgrades or Participating TO Interconnection Facilities by more than five (5) percent or one million dollars ($1,000,000), whichever is greater; or

(ii) results in a delay to the schedule by which the Interconnection Customer can achieve Commercial Operation, based on the results of the final Interconnection Study, by more than one year.

A dispute over the plan of service by an Interconnection Customer shall not be considered a substantial error or omission unless the Interconnection Customer demonstrates that the plan of service was based on an invalid or erroneous study assumption that meets the criteria set forth above.

* * *

10.2 Interconnection Customers in the Independent Study Process.

(a) RNUs and LNUs. the maximum value for the Interconnection Customer's Financial Security for RNUs shall be established by the costs for such Network Upgrades assigned to the Interconnection Customer in the final system impact study and facilities study report.

For such Interconnection Customers choosing Full Capacity or Partial Capacity Deliverability status, the maximum value of LDNUs shall be established by the lesser of the costs for such Network Upgrades assigned to the Interconnection Customer in the final Phase I Interconnection Study or the final Phase II Interconnection Study.

(b) ADNUs. Interconnection Customers selecting Option (A) do not post Interconnection Financial Security for ADNUs. The cost estimate provided in the Phase I Interconnection Studies establishes the basis for the initial Interconnection Financial Security posting under Section 11.2 for Interconnection Customers selecting Option (B). The Phase II Interconnection Studies shall refresh the cost estimate for ADNUs and shall provide the basis for second and third Interconnection Financial Postings as specified in Section 11.

The ADNU cost estimates provided any study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs However, subsequent to the Interconnection Customer's receipt of its Phase II Interconnection Study report, an Interconnection Customer having selected Option (B) may have its ADNU adjusted in the reassessment process undertaken under Section 7.4

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11.2 Interconnection Financial Security-Initial Posting for Queue Cluster Customers

11.2.1 Each Interconnection Customer in a Queue Cluster shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; (ii) a posting relating to the Participating TO's Interconnection Facilities.

11.2.2 Timing of Postings. The postings set forth in this Section shall be made on or before ninety (90) calendar days after issuance of the final Phase I Interconnection Study report for Interconnection Customers in a Queue Cluster.

Revised Cluster Study Reports. If the CAISO revises a final Phase I Interconnection Study report pursuant to Section 6.8, the initial postings will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final Phase I Interconnection Study Report or forty (40) calendar days after issuance of the revised final Phase I Interconnection Study Report.

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11.2.3 Posting Amount for Network Upgrades.

11.2.3.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for RNUs.

The posting amount for such RNUs shall equal the lesser of fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for RNUs and LDNUs.

The posting amount for such RNUs and LDNUs shall equal the lesser of fifteen percent (15%) of the total RNU and LDNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for RNUs, LDNUs and ADNUs.

The posting amount for such RNUs, LDNUs and ADNUs shall equal the lesser of fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

11.2.3.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for RNUs.

The posting amount for such RNUs shall equal the lesser of (i) fifteen percent (15%) of the total RNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

In addition, if an Interconnection Customer switches its status from Full Capacity Deliverability Status or Partial Capacity Deliverability Status to Energy-Only Deliverability Status within ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the required Interconnection Financial Security for Network Upgrades shall, for purposes of this section, be additionally capped at an amount no greater than the total cost responsibility assigned to the Interconnection Customer in the Phase I Interconnection Study for Reliability Network Upgrades.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for RNUs and LDNUs.

The posting amount for such RNUs and LDNUs shall equal the lesser of (i) fifteen percent (15%) of the total RNU and LDNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for RNUs, LDNUs and ADNUs.

The posting amount for such RNUs, LDNUs and ADNUs shall be equal to the lesser of (i) fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

11.2.4 Posting Amount for Participating TO Interconnection Facilities.

11.2.4.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO's Interconnection Facilities or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

11.2.4.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO's Interconnection Facilities, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

* * *

11.3 Interconnection Financial Security-Second and Third Postings for Queue Cluster Customers and Initial and Second Postings for Independent Study Process Customers

11.3.1 Second Posting for Queue Cluster Customers; Initial Posting for Independent Study Process Customers

11.3.1.1 Each Interconnection Customer in a Queue Cluster shall make second postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a second posting relating to the Network Upgrades; and (ii) a second posting relating to the Participating TO's Interconnection Facilities. The cost responsibility estimates for calculating the second and third Interconnection Financial Security postings for Interconnection Customers in Queue Clusters shall be set forth in the Phase II Interconnection Study report.

Each Interconnection Customer in the Independent Study Process shall make initial postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; and (ii) a posting relating to the Participating TO's Interconnection Facilities. The cost responsibility estimates for calculating the initial Interconnection Financial Security Posting shall be set forth in the System Impact and Facilities Study report.

11.3.1.2 Timing of Posting

The second postings for Interconnection Customers in a Queue Cluster shall be made on or before one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report.

The initial postings for Interconnection Customers in the Independent Study Process shall be made or on or before one hundred twenty (120) calendar days after the CAISO provides the results of the System Impact and Facilities Study.

Revised Cluster Study Reports. If the CAISO revises a final Phase II Interconnection Study report pursuant to Section 6.8, the second postings will be due by the later of one hundred-eighty (180) calendar days after issuance of the original final Phase II Interconnection Study report or sixty (60) calendar days after issuance of the revised final Phase II Interconnection Study report.

Revised Independent Study Track Reports. If the CAISO revises the final System Impact and Facilities Study report pursuant to Section 6.8, the initial postings will be due by the later of one hundred-twenty (120) calendar days after the issuance of the original final System Impact and Facilities Study report or thirty (30) calendar days from the issuance of the revised System Impact and Facilities Study report.

*** * ***

11.3.1.4.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster or an Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs in either the final Phase II Interconnection Study report, or for Independent Study Process Interconnection Customers, the system impact and facilities study. In no event shall the total amount posted be less than $100,000.

2) For Interconnection Customers who have Option (A) Generating Facilities, the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study.

However, in no event shall the total amount posted be less than $100,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $1 million or (ii) the sum of:

(a) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study; plus,

(b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the

Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $100,000.

11.3.1.4.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs in the, final Phase II Interconnection Study, system impact and facilities study. In no event shall the total amount posted be less than $500,000.

2) For Interconnection Customers, who have Option (A) Generating Facilities the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study.

However, in no event shall the total amount posted be less than $500,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $15 million or (ii) the sum of:

(a)thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study; plus

(b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $500,000.

* * *

11.3.1.5 Posting Amount for Participating TO Interconnection Facilities.

11.3.1.5.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or system impact and facilities study. In no event shall the total amount posted be less than $100,000.

11.3.1.5.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or system impact and facilities study. In no event shall the total amount posted be less than $500,000.

*** * ***

11.3.1.6 Early Commencement of Construction Activities

If the start date for Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer is prior to one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster or prior to one hundred twenty (120) calendar days after issuance of the final system impact and facilities study report for Interconnection Customers in the Independent Study Process, that start date must be set forth in the Interconnection Customer's GIA, and the Interconnection Customer shall make its second posting of Interconnection Financial Security pursuant to Section 11.3.2 rather than Section 11.3.1.

* * *

11.3.2 Third Posting for Queue Cluster Customers and Second Posting for Independent Study Process Customers

*** * ***

11.3.2.1 Network Upgrades

With respect to the Interconnection Financial Security Instrument for Network Upgrades, the Interconnection Customer shall modify this Instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs, LDNUs and ADNUs as determined in Section 11.3.1.4.1 for Small Generator Interconnection Customers or in Section 11.3.1.4.2 for Large Generator Interconnection Customers.

An Interconnection Customer whose Option (B) Generating Facility was not allocated TP Deliverability and elects to have a party other than the applicable Participating TO(s) construct an LDNU or ADNU is not required to make this posting for its cost responsibilities for such LDNU or ADNU. However, such Interconnection Customer will be required to demonstrate its financial capability to pay for the full cost of construction of its share, as applicable, of the LDNU or ADNU pursuant to Section 24.4.6.1 of the CAISO

Tariff. An Interconnection Customer's election to have a party other than an applicable Participating TO construct an LDNU or ADNU does not relieve the Interconnection Customer of the responsibility to fund or construct such LDNU or ADNU. Upon the Interconnection Customer's demonstration to the CAISO that the Interconnection Customer has expended the amount of the avoided posting requirement on construction of the LDNU or ADNU described here, the Interconnection Customer's prior posting for these facilities will be returned to the Interconnection Customer, unless the Participating TO and Interconnection Customer agree to an alternative arrangement.

11.3.2.2 Participating TO Interconnection Facilities

With respect to the Interconnection Financial Security Instrument for Participating TO Interconnection Facilities, the Interconnection Customer shall modify this instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study for Interconnection Customers in a Queue Cluster, or the final system impact and facilities study for Interconnection Customers in the Independent Study Process.

11.3.2.3 Separation of Posting

If an Interconnection Customer's Network Upgrades and/or Interconnection Facilities are separated into two or more specific components and/or can be separated into two or more separate and discrete phases of construction and the Participating TO is able to identify and separate the costs of the identified discrete components and/or phases of construction, then the Participating TO, the CAISO, and the Interconnection Customer may negotiate, as part of the Generator Interconnection Agreement, a division of the the Interconnection Financial Security posting required by this Section 11.3.2 into discrete Interconnection Financial Security amounts and may establish discrete milestone dates (however, outside dates must be included) for posting the amounts corresponding to each component and/or phase of construction related to the Network Upgrades and/or Interconnection Facilities described in the Generator Interconnection Agreement.

* * *

13.1.1 If the Interconnection Customer requested Full Capacity Deliverability Status or Partial Deliverability Status, then within thirty (30) Calendar Days after the CAISO provides the updated Phase II Interconnection Study report (or by an earlier date, if all parties agree) which includes the allocation of TP Deliverability to the Interconnection Customer, the applicable Participating TO shall tender a draft GIA, together with draft appendices. If the Interconnection Customer requested Energy-Only Deliverability Status, then within thirty (30) Calendar Days following the results meeting for the final Phase II Interconnection Study (or by an earlier date, if all parties agree), Facilities Study, or system impact and facilities study, the applicable Participating TO shall tender a draft GIA, together with draft appendices . The draft GIA shall be in the form of the FERC-approved form of GIA set forth in CAISO Tariff Appendix EE or Appendix FF, as applicable. The Interconnection Customer shall provide written comments, or notification of no comments, to the draft appendices to the applicable Participating TO(s) and the CAISO within (30) calendar days of receipt.

* * *

13.2 Negotiation

Notwithstanding Section 13.1, at the request of the Interconnection Customer, the applicable Participating TO(s) and CAISO shall begin negotiations with the Interconnection Customer concerning the appendices to the GIA at any time after the CAISO provides the Interconnection Customer with the final Phase II Interconnection Study report. The applicable Participating TO(s) and CAISO and the Interconnection Customer shall negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than one hundred twenty (120) calendar days after the CAISO provides the Interconnection Customer with the final Phase II Interconnection Study report, or the system impact and facilities study report. If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to Section 13.1 and request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to Section 15.5. If the Interconnection Customer requests termination of the negotiations, but, within one hundred twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, fails to request either the filing of the unexecuted GIA or initiate Dispute Resolution, it shall be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed and returned the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to Section 15.5 within one hundred twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, it shall be deemed to have withdrawn its Interconnection Request. The CAISO shall provide to the Interconnection Customer a final GIA within ten (10) Business Days after the completion of the negotiation process and receipt of all requested information.

* * *

Appendix 6
INDEPENDENT STUDY PROCESS STUDY AGREEMENT

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to the Independent Study Process; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection Procedures in CAISO Tariff Appendix DD or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies in accordance with the CAISO Tariff.

3.0 The scope of the applicable Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section 6.1.2 of the GIDAP and modifications to the proposed Commercial Operation Date of the Generating Facility permitted by the GIDAP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in the .

5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in the GIDAP.

6.0 The Interconnection Customer shall provide an Interconnection Study Deposit and other Interconnection Financial Security for the performance of the Interconnection Studies in accordance with the provisions of Sections 3.5.1 and 11 of the GIDAP.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIDAP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIDAP.

7.0 Pursuant to Section 3.7 of the GIDAP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the system impact and facilities study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the Interconnection Studies, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the system impact and facilities study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system

upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Studies in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

* * *

Appendix A

ASSUMPTIONS USED IN CONDUCTING THE SYSTEM IMPACT AND FACILITIES STUDY

The system impact and facilities study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on , subject to any modifications in accordance with Section 6.1.2 of the GIDAP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability Status requested (Full Capacity, Partial Capacity, or Energy-Only)

* * *

Appendix B Data Form, Pre- System Impact and Facilities Study

DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE SYSTEM IMPACT AND FACILITIES STUDY

*** * ***

Appendix EE

Large Generator Interconnection Agreement

for Interconnection Requests Processed under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD of the CAISO Tariff)

Article 1. Definitions

* * *

Generating Facility shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

* * *

Governing Independent Study Process Interconnection Studies shall mean the engineering study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System, which shall consist primarily of a Facilities Study as described in Section 4.5 of the Generation Interconnection Procedures, a System Impact Study as described in Section 4.4 of the Generation Interconnection Procedures, or a system impact and facilities study as described in Section 4.4 of the GIDAP.

* * *

Interconnection Study shall mean

(i) For Interconnection Requests processed under the cluster study process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the GIDAP, which shall consist primarily of a system impact and facilities study as described in Section 4.4 of the GIDAP.

* * *

2.3 Termination Procedures.

2.3.1 Written Notice. This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Default. A Party may terminate this LGIA in accordance with Article 17.

2.3.3 Suspension of Work. This LGIA may be deemed terminated in accordance with Article 5.16, if applicable.

2.3.4 Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

*** * ***

5.16 [If this LGIA is executed by an Interconnection Customer for an Interconnection Request under the Independent Study Process, this Article 5.16 shall state "Not Used" and shall contain no other provisions.]

Suspension. The Interconnection Customer reserves the right, upon written notice to the Participating TO and the CAISO, to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Phase II Interconnection Study as common to multiple generating facilities, with the condition that the Participating TO's electrical system and the CAISO Controlled Grid shall be left in a safe and reliable condition in accordance with Good Utility Practice and the Participating TO's safety and reliability criteria and the CAISO's Applicable Reliability Standards. In such event, the Interconnection Customer shall be responsible for all reasonable and necessary costs which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

Network Upgrades common to multiple generating facilities, and to which the Interconnection Customer's right of suspension shall not extend, consist of Network Upgrades identified for:

(i) generating facilities which are the subject of all Interconnection Requests made prior to the Interconnection Customer's Interconnection Request;
(ii) generating facilities which are the subject of Interconnection Requests within the Interconnection Customer's queue cluster; and
(iii) generating facilities that are the subject of Interconnection Requests that were made after the Interconnection Customer's Interconnection Request but no later than the date on which the Interconnection Customer's Phase II Interconnection Study Report is issued, and have been modeled in the Base Case at the time the Interconnection Customer seeks to exercise its suspension rights under this Article.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4 of this LGIA. The suspension period shall begin on the date the suspension is requested, or the date of the written notice to the Participating TO and the CAISO, if no effective date is specified.

*** * ***

Appendix H

INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit. Generating units that are replaced, however, shall meet the requirements of this Appendix H.

A. Technical Requirements Applicable to Asynchronous Generating Facilities

i. Low Voltage Ride-Through (LVRT) Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

5. The requirements of this Section A.i of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

* * *

iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95

lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

*** * ***

Appendix FF

Small Generator Interconnection Agreement for Interconnection Requests Processed Under the Generator Interconnection and Deliverability Allocation Procedures

(Appendix DD to the CAISO Tariff)

*** * ***

Attachment 1
Glossary Of Terms

* * *

Interconnection Study –

(i) For Interconnection Requests processed under the Cluster Study Process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO pursuant to the GIDAP, which shall consist primarily of a system impact and facilities study as described in Section 4.4 of the GIDAP, and, as applicable to Full Capacity Deliverability Status or Partial Deliverability Status, Phase I and Phase Interconnection Studies as described in Section 2.4.3 of the GIDAP.

* * *

Small Generating Facility – The Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

* * *

Attachment 7

Interconnection Requirements for an Asynchronous Small Generating Facility

Attachment 7 sets forth requirements and provisions specific to all Asynchronous Generating Facilities. All other requirements of this Agreement continue to apply to all Asynchronous Generating Facility interconnections.

A. Technical Standards Applicable to Asynchronous Generating Facilities

i. Low Voltage Ride-Through (LVRT) Capability

A Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Attachment 7 or single-phase faults exceeding the duration described in Section A.i.2 of this Attachment 7.

5. The requirements of this Section A.i of this Attachment 7 do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

7. Asynchronous Generating Facilities may meet the requirements of this Section A of this Attachment 7 through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Attachment 7 apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

ii. Frequency Disturbance Ride-Through Capacity

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the WECC Under Frequency Load Shedding Relay Application Guide or successor requirements as they may be amended from time to time.

iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this SGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this SGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

iv. Supervisory Control and Data Acquisition (SCADA) Capability

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

v. Power System Stabilizers (PSS)

Power system stabilizers are not required for Asynchronous Generating Facilities.

Attachment B – Marked Tariff Sheets

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

Appendix A

Master Definition Supplement

* * *

- Generating Facility

An Interconnection Customer's Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

* * *

Appendix DD

Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

* * *

Table of Contents

* * *

Section 1 Objectives And Applicability

1.1 Objectives And Applicability

The objective of this Generation Interconnection and Deliverability Allocation Procedures (GIDAP) is to implement the requirements for both Small and Large Generating Facility interconnections to the CAISO Controlled Grid and to provide a process for allocating Transmission Plan Deliverability for Interconnection Requests starting with Queue Cluster 5 and for subsequent Queue Clusters. This GIDAP applies to Interconnection Requests that are either assigned to Queue Cluster 5 and subsequent Queue Clusters, or submitted for the Independent Study Process, or Fast Track Process after [*effective date of tariff amendment*]. The two exceptions to this rule of limited applicability are (i) the annual reassessment process set forth in Section 7.4, which shall apply to all CAISO Interconnection Customers in Queue Clusters, and (ii) the annual Generator Downsizing Process set forth in Section 7.5 which shall apply to all eligible Interconnection Customers, regardless of which interconnection procedures under the CAISO Tariff they are subject to.

1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, will have the same meaning where used in this GIDAP. References to the GIDAP are to this Appendix DD.

1.3 Pre-Application

1.3.1 An Interconnection Customer with a proposed Small Generating Facility may submit a formal written request form along with a non-refundable fee of $300 to the CAISO for a pre-application report on a proposed project at a specific site. The CAISO shall provide the pre-application data described in section 1.3.2 to the Interconnection Customer within 20 Business Days of receipt of the completed request form and payment of the $300 fee. The CAISO shall coordinate with the Participating TO to complete the pre-application report. At the request of the CAISO the Participating TO shall provide any readily available information necessary to complete the pre-application report. Readily available information shall mean information that the Participating TO currently has on hand. The Participating TO is not required to create new information but is required to compile, gather, and summarize information that it has on hand in a format that presents the information in a manner that informs the Interconnection Customer regarding issues related to its proposed Small Generating Facility. If providing any item in the pre-application report would require the Participating TO to perform a study or analysis beyond gathering and presenting existing information, then the information shall be deemed not readily available. The pre-application report produced by the CAISO is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the CAISO's system. The written pre-application report request form shall include the information in sections 1.3.1.1 through 1.3.1.8 below to clearly and sufficiently identify the location of the proposed Point of Interconnection that is under CAISO operational control.

1.3.1.1 Project contact information, including name, address, phone number, and email address.

1.3.1.2 Project location (street address with nearby cross streets and town).

1.3.1.3 Single proposed Point of Interconnection that is either an existing substation or a transmission line under CAISO operational control.

1.3.1.4 Generator Type (e.g., solar, wind, combined heat and power, etc.)

1.3.1.5 Size (alternating current kW/MW)

1.3.1.6 Single or three phase generator configuration

1.3.1.7 Stand-alone generator (no onsite load, not including station service – Yes or No?)

1.3.1.8 Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW/MW (if available) and specify if the load is expected to change.

1.3.2 Subject to section 1.~~2~~3.1, the pre-application report will include the following information:

1.3.2.1 Electrical configuration of the substation, including information of transmission lines terminating in the substation, transformers, buses and other devices, if the proposed Point of Interconnection is a substation.

1.3.2.2 Existing aggregate generation capacity (in MW) interconnected to a substation or circuit (i.e., amount of generation online) likely to serve the proposed Point of Interconnection.

1.3.2.3 Aggregate queued generation capacity (in MW) for a substation or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Interconnection.

1.3.2.4 Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit issues, instability issues, facility loading issues, or voltage issues.

1.3.3 The pre-application report need only include existing data. A pre-application report request does not obligate the CAISO to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the CAISO cannot complete all or some of a pre-application report due to lack of available data, the CAISO shall provide the Interconnection Customer with a pre-application report that includes the data that is available. There are many variables studied as part of the interconnection review process, and data provided in the pre-application report may become outdated at the time of the submission of the complete Interconnection Request. Notwithstanding any of the provisions of this section, the CAISO shall, in good faith, include data in the pre-application report that represents the best available information at the time of reporting.

* * *

2.4.3 The Interconnection Studies.

For Interconnection Requests in Queue Cluster 5 and subsequent Queue Clusters, the Interconnection Studies consist of a Phase I Interconnection Study, a reassessment conducted prior to the commencement of a Phase II Interconnection Study, a Phase II Interconnection Study, and an update to the Phase II Interconnection Study report to reflect the results of a reassessment conducted after the TP Deliverability allocation process for the Queue Cluster.

For Interconnection Requests processed under the Independent Study Process, the Interconnection Studies consist of a ~~System~~ system ~~Impact~~ impact and facilities s~~S~~tudy~~, a Facilities Study~~, and, as applicable to Full Capacity or Partial Capacity Deliverability Status, Phase I and Phase II Interconnection Studies and a reassessment.

* * *

Section 3 Interconnection Requests

3.1 General

Pursuant to CAISO Tariff Section 25.1, an Interconnection Customer shall submit to the CAISO an Interconnection Request in the form of Appendix 1 to this GIDAP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

The Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. The Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

An Interconnection Customer with a proposed Small Generating Facility shall be evaluated using the maximum rated capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system. However, if the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system is limited (e.g., through use of a control system, power relay(s), or other similar device settings or adjustments), then the Interconnection Customer must obtain the CAISO's agreement, with such agreement not to be unreasonably withheld, that the manner in which the Interconnection Customer proposes to implement such a limit will not adversely affect the safety and reliability of the CAISO's system. If the CAISO does not so agree, then the Interconnection Request must be withdrawn or revised to specify the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system without such limitations. Furthermore, nothing in this section shall prevent the CAISO from considering an output higher than the limited output, if appropriate, when evaluating system protection impacts.

* * *

3.5.1.1 Use of Interconnection Study Deposit.

The CAISO shall deposit all Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies and to meet and otherwise communicate with Interconnection Customers with respect to their Interconnection Requests.

Except for proposed Generating Facilities processed under the Fast Track Process set forth in Section 5, the Interconnection Study Deposits shall be refundable as follows:

(a) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 on or before thirty (30) calendar days following the Scoping Meeting, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest

earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceed the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

(b) Should an Interconnection Request made under Section 3.5.1 be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 more than thirty (30) calendar days after the Scoping Meeting, but on or before thirty (30) calendar days following the Results Meeting (or the latest date permitted under this for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study or the ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study for Generating Facilities processed under the Independent Study Process, the CAISO shall refund to the Interconnection Customer the difference between (i) the Interconnection Customer's Interconnection Study Deposit and (ii) the greater of the costs the CAISO and Participating TOs have incurred on the Interconnection Customer's behalf or one-half of the original Interconnection Study Deposit up to a maximum of $100,000, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal.

Interconnection Customers in Queue Cluster 5 who have provided the Study Deposit may receive a refund of the Interconnection Study Deposit, less actual costs expended on the Interconnection Studies to date, by withdrawing from the Queue within ten (10) calendar days after July 25, 2012.

(c) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 at any time more than thirty (30) calendar days after the Results Meeting (or the latest date permitted for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study, or the ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study for proposed Generating Facilities processed under the Independent Study Process, the Interconnection Study Deposit shall be non-refundable.

(d) Upon execution of a GIA by an Interconnection Customer, the CAISO and the applicable Participating TOs, or the approval by FERC of an unexecuted GIA, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceeds the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

Notwithstanding the foregoing, an Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request during an Interconnection Study Cycle shall be obligated to pay to the CAISO all costs in excess of the Interconnection Study Deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. The CAISO will reimburse the applicable Participating TO(s) or third parties, as applicable, for all work performed on behalf of the withdrawn Interconnection Request at the CAISO's direction. The Interconnection Customer must pay all monies due before it is allowed to obtain any Interconnection Study data or results.

All non-refundable portions of the Interconnection Study Deposit that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf shall be treated in accordance with CAISO Tariff Section 37.9.4. In addition, any funds received by the CAISO from a Participating TO, pursuant to a requirement in the Participating TO's wholesale distribution tariff for funds to be distributed by the CAISO, shall be treated in accordance with CAISO Tariff Section 37.9.4.

* * *

Section 4 Independent Study Process

The CAISO, in coordination with the applicable Participating TO(s), will study Interconnection Requests eligible for treatment under this Independent Study Process independently from other Interconnection Requests.

In the event of a conflict between this Section 4 and another provision of this GIDAP, Section 4 shall govern.

4.1 Criteria for Independent Study Process Eligibility

Any Interconnection Request that meets the following criteria will be processed under the Independent Study Process:

4.1.1 The Interconnection Customer must provide, along with its Interconnection Request, an objective demonstration that inclusion in a Queue Cluster will not accommodate the desired Commercial Operation Date for the Generating Facility. As part of this demonstration, the Interconnection Customer must show that the desired Commercial Operation Date is physically and commercially achievable, by demonstrating all~~at least two~~ of the following:

(i) The Interconnection Customer has obtained, or has demonstrated the ability to obtain, all regulatory approvals and permits needed to complete construction in time to meet the Generating Facility's requested Commercial Operation Date.

(ii) The Interconnection Customer is able to provide, or has demonstrated the ability to obtain, a purchase order for generating equipment specific to the proposed Generating Facility, or a statement signed by an officer or authorized agent of the Interconnection Customer demonstrating that the Interconnection Customer has a commitment for the supply of its major generating equipment in time to meet the Commercial Operation Date through a purchase agreement to which the Interconnection Customer is a party.

(iii) The Interconnection Customer can provide reasonable evidence of adequate financing or other financial resources necessary to make the Interconnection Financial Security postings required in Sections 11.2 and 11.3.

(iv) The Point of Interconnection proposed by the Interconnection Customer must be to either: (1) an existing facility on the CAISO Controlled Grid that does not require any expansion in order to accommodate the interconnection of the Generating Facility; or (2) a facility approved in the Transmission Planning Process or identified as necessary through Interconnection Studies performed for other Interconnection Customers that is fully permitted, is under construction at the time the Interconnection Request is made, and is expected to be in service by the requested Commercial Operation Date of the Generating Facility.

(v) With respect to any Reliability Network Upgrades that are anticipated to be needed to interconnect the Generating Facility, and that are already part of an existing plan of service or have been identified as necessary through Interconnection Studies performed for other Interconnection Customers, or have been identified in the Transmission Planning Process, such Reliability Network Upgrades must be either in service or under construction and have a completion date no later than the requested Commercial Operation Date of the Generating Facility.

4.1.2 The Interconnection Customer must demonstrate Site Exclusivity.

4.1.3 The proposed Generating Facility must be electrically independent of Interconnection Requests included in an existing Queue Cluster, pursuant to Section 4.2., and, iIn addition, the proposed Generating Facility must be electrically independent of any other Generating Facility that is currently being studied under an earlier-queued Independent Study Process Interconnection Request.

4.1.4 The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.1 and 4.1.2 of the within thirtyfifteen (3015) calendarBusiness Ddays of receiving the Interconnection Request.

4.1.5 The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in that it be electrically independent of other Interconnection Requests, pursuant to Sections 4.1.32 of the , within thirtyfifteen (3015) calendarBusiness Ddays of receiving the data necessary to determine whether the Interconnection Customer has satisfied such requirementsInterconnection Request. For a proposed Generating Facility in a study area with active Interconnection Requests in the current Queue Cluster or the Independent Study Process, such 30-calendar day period will commence when the Phase I Interconnection Study results are available for the current Queue Cluster and all system impact studies (or combined system impact and facilities studies) have been completed for all earlier-queued Independent Study Process Interconnection Requests in the same study area.

4.1.6 Any Interconnection Request that does not satisfy the criteria set forth in Sections 4.1.1, 4.1.2, and 4.1.3 shall be deemed withdrawn, without prejudice to the Interconnection Customer submitting a request at a later date, unless the Interconnection Customer notifies the CAISO in writing within ten (10) Business Days that it wishes the CAISO to hold the Interconnection Request for inclusion in the next Queue Cluster Window, in which event the CAISO will do so.

4.2 Determination of Electrical Independence

An Interconnection Request will qualify for the Independent Study Process without having to demonstrate electrical independence pursuant to this Section 4.2 if, at the time the Interconnection Request is submitted, there are no other active Interconnection Requests in the same study area in the current Queue Cluster or in the Independent Study Process.

Otherwise, an Each Interconnection Request submitted under the Independent Study Process must pass both the flow impact test andall of the short circuit tests for determining electrical independence set forth in this Section 4.2 in order to qualify for the Independent Study Process. These tests will available power flow and short circuit Base Cases that are being used for the most recent Queue Cluster will be used as the starting Base Cases for these testsutilize study results for active Interconnection Requests in the same study area, including Phase I Interconnection study results for Generating Facilities

in the current Queue Cluster and any system impact study (or combined system impact and facilities study) results for earlier queued Generating Facilities being studied in the Independent Study Process.

4.2.1 Flow Impact Test/Behind-the-Meter Capacity Expansion Criteria

An Interconnection Request shall have satisfied the requirements of this Section if it satisfies, alternatively, either the set of requirements set forth in Section 4.2.1.1 or the set of requirements set forth in Section 4.2.1.2.

4.2.1.1 Requirement Set Number One-: General Independent Study Requests:

The CAISO, in coordination with the applicable Participating TO(s), will perform the flow impact test for an Interconnection Request requesting to be processed under the Independent Study Process as follows:

(i) Identify the transmission facility closest, in terms of electrical distance, to the proposed Point of Interconnection of the Generating Facility being tested that will be electrically impacted, either as a result of Reliability Network Upgrades identified or reasonably expected to be needed in order to alleviate power flow concerns caused by Generating Facilities currently being studied in a Queue Cluster, or as a result of Reliability Network Upgrades identified or reasonably expected to be needed to alleviate power flow concerns caused by earlier queued Generating Facilities currently being studied through the Independent Study Process. If the current Queue Cluster studies or earlier queued Independent Study Process studies have not yet determined which transmission facilities electrically impacted by the Generating Facility being tested require Reliability Network Upgrades to alleviate power flow concerns, and the CAISO cannot reasonably anticipate whether such transmission facilities will require such Reliability Network Upgrades from other data, then the CAISO will wait to conduct the independence analysis under this section until sufficient information exists in order to make this determination. If the flow impact on a Reliability Network Upgrade identified pursuant to these criteria cannot be tested due to the nature of the Upgrade, then the flow impact test will be performed on the limiting element(s) causing the need for the Reliability Network Upgrade.

(ii) The incremental power flow on the transmission facility identified in Section 4.2.1.1(i) that is caused by the Generating Facility being tested will be divided by the lesser of the Generating Facility's size or the transmission facility capacity. If the result is five percent (5%) or less, the Generating Facility shall pass the flow impact test. If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

(iii) If the Generating Facility being tested under the flow impact test is reasonably expected to impact transmission facilities that were identified, per Section 4.2.1.1(i), when testing one or more earlier queued Generating Facilities currently being studied through the Independent

Study Process, then an additional aggregate power flow test shall be performed on these earlier identified transmission facilities. The aggregate power flow test shall require that the aggregated power flow of the Generating Facility being tested, plus the flow of all earlier queued Generating Facilities currently being studied under the Independent Study Process that were tested against the transmission facilities described in the previous sentence, must be five (5) percent or less of those transmission facilities' capacity.

However, even if the aggregate power flow on any transmission facility tested pursuant to this section (iii) is greater than five (5) percent of the transmission facility's capacity but the incremental power flow as a result of the Generating Facility being tested is one (1) percent or less than of the transmission facility's capacity, the Generating Facility shall pass the test.

If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

The Generating Facility being tested must pass both this aggregate test as well as the individual flow test described in Section 4.2.1.1(ii), in no particular order.

4.2.1.2 Requirement Set Number Two: for Requests for Independent Study of Behind-the-Meter Capacity Expansion of Generating Facilities

This Section 4.2.1.2 applies to an Interconnection Request relating to a behind-the-meter capacity expansion of a Generating Facility. Such an Interconnection Request submitted under the Independent Study Process will satisfy the requirements of Section 4.2.1 if it satisfies all of the following technical and business criteria:

(i) Technical criteria.

1) The total nameplate capacity of the existing Generating Facility plus the incremental increase in capacity does not exceed in the aggregate one hundred twenty-five (125) percent of its previously studied capacity and the incremental increase in capacity does not exceed, in the aggregate, including any prior behind-the-meter capacity expansions implemented pursuant to this Section 4.2.1.2, one hundred (100) MW.

2) The behind-the-meter capacity expansion shall not take place until after the original Generating Facility has achieved Commercial Operation and all Reliability Network Upgrades for the original Generating Facility have been placed in service. An Interconnection Request for behind-the-meter capacity expansion may be submitted prior to the Commercial Operation Date of the original Generating Facility.

~~3) The expanded capacity for the Generating Facility has been placed under a separate breaker (the expansion breaker) such that the expansion can be metered separately at all times. With the consent of the CAISO and the applicable Participating TO(s), the Interconnection Customer may make the Generating Facilities that will be tied to the expansion breaker a mixture of original and expanded facilities such that the total installed capacity behind the expansion breaker is equal to or greater than the planned amount of behind-the-meter capacity expansion.~~

3) The Interconnection Customer must install an automatic generator tripping scheme sufficient to ensure that the total output of the Generating Facility, including the behind-the-meter capacity expansion, does not at any time exceed the capacity studied in the Generating Facility's original Interconnection Request.

~~4) Unless specifically requested by the CAISO, the total output of the Generating Facility does not exceed its originally studied capacity at any time.~~ The CAISO will have the authority to trip the generating equipment subject to the automatic generator tripping scheme or take any other actions necessary to limit the output of the Generating Facility so that ~~expansion breaker if~~ the total output of the Generating Facility does not exceed~~s~~ the originally studied capacity.

~~5The processing of an Interconnection Request for behind-the-meter expansion under the Independent Study Process shall not result in any increase in the rated Generating Facility electrical output (MW capacity) beyond the rating which pre-existed the Interconnection Request. Further, the processed Interconnection Request shall not operate as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the Interconnection Request.~~

(ii) Business criteria.

1) The Deliverability Status (Full Capacity, Partial Capacity~~Deliverability~~ or Energy-Only) of the original Generating Facility will remain the same after the behind-the-meter capacity expansion. The capacity expansion will have Energy-Only~~is the same as the~~ Deliverability Status, and the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs, except as set forth in (2) below. ~~specified for the formally studied Generating Facility.~~

2) If the original Generating Facility has Full Capacity Deliverability Status and the behind-the-meter capacity expansion will use the same technology as the original Generating Facility, the Interconnection Customer may elect to have the original Generating Facility~~Capacity~~ and the behind-the-meter capacity expansion metered together, in which case both the original Generating Facility

and the behind-the-meter capacity expansion will have Partial Capacity Deliverability Status and a separate Resource ID will not be established for the behind-the-meter capacity expansion.

3) A request for behind-the-meter expansion shall not operate as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the Interconnection Request.

42) The GIA will beis amended to reflect the revised operational features of the Generating Facility's behind-the-meter capacity expansion.

53) An activeThe Interconnection Customer may at any time request that the CAISO convert the Interconnection Request for behind-the-meter capacity expansion to an Independent Study Process Interconnection Request to evaluate an incremental increase in electrical output (MW generating capacity) for the existing Generating Facility. The Interconnection Customer must accompany such a conversion request with an appropriate Interconnection Study Deposit and agree to comply with other sections of Section 4 applicable to an Independent Study Process Interconnection Request.

4.2.2 Short Circuit Test

The Generating Facility shall pass the short circuit test Iif (i) the combined short circuit contribution from all the Generating Facility (existing or proposed) being tested at the transmission facility identified in Section 4.2.1(i) active Interconnection Requests in the Independent Study Process in the same study area is less than five (5) percent of the available capacity of the circuit breaker upgrade identified in Section 4.2.1.1 and; (ii) total fault duty on each circuit breaker upgrade identified for the current Queue Cluster and active Independent Study Process Interconnection Requests in the same study area is less than eighty (80) percent of the nameplate capacity of the respective circuit breaker upgrade.100 amperes, the Generating Facility shall pass the short circuit test.

4.2.3 Transient Stability Test

The Generating Facility shall pass the transient stability test if the Generating Facility has requested interconnection in a study area where transient stability issues are not identified for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

4.2.4 Reactive Support Test

The Generating Facility shall pass the reactive support test if the Generating Facility has requested interconnection in a study area where reactive support needs are not identified as requiring Reliability Network Upgrades for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

4.3 Scoping Meeting

Within five (5) Business Days after the CAISO notifies the Interconnection Customer that ~~if~~ the Generating Facility associated with its Interconnection Request has satisfied the electrical independence test set forth in Section 4.2, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. With input from the Participating TO, the CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s)' service territory or of any other Affected System(s) so as to potentially affect such third parties, and, if such is the case, the CAISO shall invite the affected Participating TO(s) and/or Affected System Operator(s), in accordance with Section 3.7, to the Scoping Meeting by informing such third parties, as soon as practicable, of the time and place of the scheduled Scoping Meeting.

The purpose of the Scoping Meeting shall be to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose, technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues. The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO, and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The CAISO shall prepare minutes from the meeting, and provide an opportunity for other attendees and the Interconnection Customer to confirm the accuracy thereof. The Scoping Meeting may be omitted by agreement of the Interconnection Customer, Participating TO, and the CAISO.

The CAISO shall, no later than five (5) Business Days after the Scoping Meeting (or agreement to forego such Scoping Meeting), provide the Interconnection Customer with an Independent Study Process Study Agreement (in the form set forth in Appendix 6 to the GIDAP), which shall contain an outline of the scope of the system impact and facilities study~~ies~~ and a non-binding good-faith estimate of the cost to perform the ~~studies~~study. The Interconnection Customer shall return the executed Independent Study Process Study Agreement or request an extension of time for good cause within thirty (30) Business Days thereafter, or the Interconnection Request shall be deemed withdrawn.

4.4 System Impact and Facilities Study

4.4.1 The system impact and facilities ~~-~~study will consist of a short circuit analysis, a stability analysis, a power flow analysis, an assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds, and a proposed resolution, and any other studies that are deemed necessary.

4.4.2 The system impact and facilities study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested Interconnection Service., ~~including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the Interconnection.~~ The system impact and ~~/~~facilities study shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the

study, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds. The system impact and /facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Reliability Network Upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

4.4.3 The system impact study shall provide a list of Interconnection Facilities and Reliability Network Upgrades that are required as a result of the Interconnection Request along with a non-binding goodfaith estimate of cost responsibility and the amount of construction time required. The goodfaith estimate will be based on the Per Unit Costs as described in Section 6.4.

4.4.43 The system impact and/ facilities study will be completed and the results transmitted to the Interconnection Customer within one hundred twentyninety (12090) calendar days after the execution of an Independent Study Process Study Agreement. The Interconnection Customer shall execute the agreement(s) and deliver them to the CAISO, and shall make its initial posting of Interconnection Financial Security in accordance with Section 11.2, or its Interconnection Request shall be deemed withdrawn.

4.4.54 If requested by the Interconnection Customer, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the system impact and facilities study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the system impact and facilities study report is provided to the Interconnection Customer.

Should the Interconnection Customer provide written comments on the system impact and facilities study report within ten (10) Business Days of receipt of the report, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the report, whichever is sooner, the CAISO will address the written comments in the Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible. The Interconnection Customer may submit, in writing, additional comments on the final system impact and facilities study report up to three (3) Business Days following the Results Meeting.

4.4.65 For Interconnection Requests under the Independent Study Process, the initial postings of Interconnection Financial Security described in Section 11.3.2 will be based on the cost responsibility for Network Upgrades, and Participating TO's Interconnection Facilities set forth in the system impact and facilities study. If the system impact study is waived, then such posting will be based upon the cost responsibility set forth in the facilities study described in Section 4.5.

4.5 Facilities Study

4.5.1 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the system impact study, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds. The facilities study shall also identify (1) the electrical switching configuration of the

~~equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.~~

~~**4.5.2** The facilities study may be waived if the system impact study does not identify any Interconnection Facilities and Reliability Network Upgrades.~~

~~**4.5.3** The facilities study will be completed within ninety (90) calendar days after the Interconnection Customer posts Interconnection Financial Security in accordance with Section11.2 where Network Upgrades are identified. In cases where no Network Upgrades are identified and the required facilities are limited to Interconnection Facilities only, the facilities study will be completed within sixty (60) calendar days after the Interconnection Customer posts Interconnection Financial Security in accordance with Section 11.2.~~

~~**4.5.4** If requested by the Interconnection Customer within ten (10) Business Days of the date of the facilities study report, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the facilities study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the facilities study report is provided to the Interconnection Customer.~~

~~**4.5.5** For Interconnection Requests under the Independent Study Process, the second posting and third postings of Interconnection Financial Security described in Section 11.3 will be based on the cost responsibility for Network Upgrades and the Participating TO's Interconnection Facilities set forth in the facilities study.~~

4.6 Deliverability Assessment

Interconnection Customers under the Independent Study Process that request Partial Capacity or Full Capacity Deliverability Status will be deemed to have selected Option (A) under Section 7.2 and will have a Deliverability Assessment performed as part of the next scheduled Phase I and Phase II Interconnection Studies for the Queue Cluster~~s~~ study performed for the next Queue Cluster Window that opens after the CAISO received the request for Partial Capacity or Full Capacity Deliverability Status. If the Deliverability Assessment identifies any LDNUs and ADNUs that are triggered by the Interconnection Request, the Interconnection Customer will be responsible to pay its proportionate share of the costs of those Upgrades, pursuant to Sections 6, 7 and 8, and for posting Interconnection Financial Security pursuant to the rules for Interconnection Customers in Queue Clusters pursuant to Section 11. If the Generating Facility (or increase in capacity of an existing Generating Facility) achieves its Commercial Operation Date before the Deliverability Assessment is completed and before any necessary Delivery Network Upgrades are in service, the proposed Generating Facility (or increase in capacity) will be treated as an Energy-Only Deliverability Status Generating Facility until such Delivery Network Upgrades are in service. This Section shall not apply to Interconnection Customers requesting behind-the-meter capacity expansion under Section 4.2.1.2. Separate rules regarding the Deliverability Status of such requests are set forth in that Section.

4.7 Extensions of Commercial Operation Date

Extensions of the Commercial Operation Date for Interconnection Requests under the Independent Study Process will not be granted except for circumstances beyond the control of the Interconnection Customer.

4.8 Generator Interconnection Agreement

An Interconnection Customer in the Independent Study Process that requests Partial Capacity or Full Capacity Deliverability Status must still negotiate and execute a GIA reflecting Energy-Only Deliverability Status pursuant to the requirements and timelines set forth in Section 13. Upon the completion of the Deliverability Assessment per Section 4.6, the Interconnection Customer's GIA will be amended as appropriate to reflect the results thereof.

* * *

Section 5 Fast Track Process

5.1 Applicability and Initiation of Fast Track Process Request

Applicability to a proposed Generating Facility. An Interconnection Customer may request interconnection of a proposed Generating Facility to the CAISO Controlled Grid under the Fast Track Process if the Generating Facility is no larger than 5 MW and is requesting Energy-Only Deliverability Status and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Appendices 9 and 10 of this GIDAP, or if the applicable Participating TO notifies the CAISO that it has reviewed the design for or tested the proposed Small Generating Facility and has determined that the proposed Generating Facility may interconnect consistent with Reliability Criteria and Good Utility Practice.

Applicability to an existing Generating Facility. If the Interconnection of an existing Generating Facility meets the qualifications for Interconnection under CAISO Tariff Section 25.1(d) or (e) but, at the same time, the Interconnection Customer also seeks to repower or reconfigure the existing Generating Facility in a manner that increases the gross generating capacity by not more than 5 MW, then the Interconnection Customer may request that the Fast Track Process be applied with respect to the repowering or reconfiguration of the existing Generating Facility that results in the incremental increase in MW.

Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with:

(i) a completed Interconnection Request as set forth in Appendix 1;

(ii) ~~a non-refundable processing fee of $500 and~~ a study deposit of $25~~1~~,000; and

(iii) a demonstration of Site Exclusivity. For the Fast Track Process, such demonstration may include documentation reasonably demonstrating a

right to locate the Generating Facility on real estate or real property improvements owned, leased, or otherwise legally held by another.

The CAISO shall review and validate the Fast Track Process Interconnection Request pursuant to Section 5.2.

In the event of a conflict between this Section 5 and another provision of this GIDAP, Section 5 shall govern.

5.2 Initial Review

Within ~~fifteen~~ thirty (~~15~~30) ~~Business~~ Calendar Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the Interconnection Customer of the results~~, and shall include with the notification copies of the analysis~~in a report that provides the details of and data underlying the Participating TO's determinations under the screens.

5.3 Screens

5.3.1 The proposed Generating Facility must pass the following screens to be eligible for Interconnection under this Fast Track Process:

5.3.1.1 The proposed Generating Facility's Point of Interconnection must be on the CAISO Controlled Grid.

The proposed Generating Facility must interconnect to an existing substation with a vacant switch rack position.

5.3.1.2 For interconnection of a proposed Generating Facility to a radial transmission circuit on the CAISO controlled grid, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.

This screen will not be required for a proposed interconnection of a Generating Facility to a radial transmission circuit with no load.

In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, the CAISO shall use power flow cases from the latest completed Queue Cluster studies (either Phase I or Phase II) to perform this screen.

5.3.1.3 The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not cause the violation of voltage standards, as set forth in CAISO Planning Standards, on any part of the CAISO Controlled Grid. ~~For interconnection of a proposed Generating Facility to the load side of spot network protectors, the proposed Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 percent of a spot network's maximum load or 50 kW. For purposes of this Section 5.3.1.3, a spot network shall be considered as a type of~~

~~distribution system found in modern commercial buildings for the purpose of providing high reliability of service to a single retail customer.~~

The CAISO will use power flow cases from the most recently completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

~~5~~.3.1.4 The proposed Generating Facility, in the aggregate with other Generating Facilities on the transmission circuit shall not cause the power flow on any part of the CAISO-Controlled Grid to increase by five (5) percent, and shall not exceed eighty (80) percent of the same facility's normal rating.

The CAISO shall use power flow cases from the latest completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.4~~5~~ The proposed Generating Facility, in aggregat~~eion~~ with other Generating Facilities ~~generation~~ on the transmission circuit, shall not contribute more than ~~10~~ five (5) percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

The CAISO shall use the short circuit study data from the latest completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.5~~6~~ The proposed Generating Facility, in aggregate with other Generating Facilities ~~generation~~ on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed ~~87.5~~eighty (80) percent of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds ~~87.5~~eighty (80) percent of the short circuit interrupting capability.

The CAISO shall use the short circuit study data from the most recently completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

5.3.1.6~~7~~ The Generating Facility shall not be permitted to interconnect pursuant to the process set forth in this Section 5 in an area where there are known transient stability limitations, voltage and thermal limitations, or any other known reliability limitations (e.g., existing or new Special Protection Systems) applicable~~The Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Generating Facility proposes to interconnect shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations~~ to generating units located in the general electrical vicinity (*e.g.*, three or four transmission busses from the Point of Interconnection).

5.3.2 If the proposed interconnection passes the screens~~and no Upgrades are reasonably anticipated~~, the Interconnection Request shall be approved subject to a further assessment to identify Interconnection Facilities. This assessment will be performed within sixty (60) calendar days after informing the Interconnection Customer that it has passed the screens. ~~-~~Within fifteen (15) Business Days ~~there~~after completing this assessment, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

5.3.3 If the proposed interconnection fails the screens ~~and no Upgrades are reasonably anticipated~~, then in accordance with Section 5.2, the CAISO and Participating TO will provide the Interconnection Customer with copies of all data underlying this conclusion. The CAISO and Participating TO will also offer to convene a Customer Options meeting within ten (10) Business Days of its determination in accordance with Section 5.4.~~but the CAISO and Participating TO determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution~~

~~**5.3.4** If the proposed interconnection passes the screens and Upgrades are reasonably anticipated, the CAISO and Participating TO shall provide the Interconnection Customer with the opportunity to attend a customer options meeting as described in Section 5.4.~~

5.4 Customer Options Meeting

~~If the CAISO and Participating TO determine the Interconnection Request cannot be approved without modifications at minimal cost; or a supplemental study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, within the five (5) Business Day period after the determination, the CAISO and Participating TO shall notify the Interconnection Customer and provide copies of all data and analyses underlying its conclusion. Within ten (10) Business Days of the CAISO and Participating TO's determination,~~ If the Interconnection Request fails the screens in Section 5.3, the CAISO and Participating TO shall offer to convene a customer options meeting with the CAISO and Participating TO to review the screen analysis and related results and possible Interconnection Customer facility modifications that may permit ~~be or the screen analysis and related results, to determine what further steps are needed to permit~~ the Small Generating Facility to be connected safely and reliably. At the time of notification of the CAISO and Participating TO's determination, or at the customer options meeting, the CAISO and Participating TO ~~shall~~will, as appropriate:

~~**5.4.1**~~ (i) Offer ~~to~~the Interconnection Customer the opportunity to submit ~~perform facility~~ modifications to its Generating Facility that the CAISO and Participating TO conclude may allow the Generating Facility to pass the Fast Track screens~~or modifications to the Participating TO's electric system (*e.g.*, changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system~~; or

~~**5.4.2**~~ (ii) Offer to perform a supplemental review ~~if the CAISO and Participating TO concludes that the supplemental review might determine that the~~to determine the scope and cost of the Reliability Network Upgrades required to interconnect the Generating Facility ~~continue to qualify for interconnection pursuant to the Fast Track Process, and provide a non-binding good faith estimate of the costs of such review.~~; or

~~**5.4.3** Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Request under the Independent Study Process or Cluster Study Process.~~

5.4.3~~14~~ Within five (5) Business Days of the customer options meeting the Interconnection Customer shall provide the CAISO with its election on how to proceed with its Interconnection Request. If the Interconnection Customer choses to withdraw its Interconnection request it may do so without prejudice to the Interconnection Customer resubmitting its Interconnection Request for processing in either a Queue Cluster or under the Independent Study Process.

5.5 Supplemental Review

If the Interconnection Customer ~~agrees to a~~requests a supplemental review, the CAISO shall provide a non-binding good faith estimate of the cost of the supplemental review within fifteen (15) Business Days of receiving the Interconnection Customer's election. T~~t~~he Interconnection Customer shall agree in writing within fifteen (15) Business Days of ~~the~~ receiving the cost estimate~~offer~~, and submit a deposit for the estimated costs in an amount reasonably determined by the CAISO and Participating TO. The Interconnection Customer shall be responsible for the CAISO and Participating TO's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the CAISO and Participating TO will return such excess, without interest, within twenty (20) Business Days of the invoice.

5.5.1 Within ten (10) Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will initiate an assessment to determine what facilities would be necessary to reliably and safely connect the Generating Facility.

5.5.1.1 This assessment will consist of a short circuit analysis, a stability analysis, a power flow analysis and any other studies that are deemed necessary to determine whether upgrades to the Participating TO's electric system are necessary to safely and reliably interconnect the Small Generating Facility. The assessment shall specify and estimate the cost of the associated equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the study. This assessment shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Reliability Network Upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

5.5.1.2 This assessment shall be completed with ninety (90) calendar days following receipt from the Interconnection Customer of the deposit for supplemental review.

5.5.1.3 If requested by the Interconnection Customer within ten (10) Business Days following completion of the assessment, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the assessment. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the assessment is provided to the Interconnection Customer.

Should the Interconnection Customer provide written comments on the assessment within ten (10) Business Days of receipt of the assessment, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the assessment, whichever is sooner, the CAISO will address the written comments in the

Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible. The Interconnection Customer may submit, in writing, additional comments on the final assessment up to three (3) Business Days following the Results Meeting

~~5.5.1.1 If so, then, within fifteen (15) Business Days of such a determination, the Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution.~~

5.5.1.~~2~~ 4 ~~If so, and Interconnection Customer facility modifications are required to allow the Generating Facility to be interconnected consistent with safety, reliability, and power quality standards, the~~ The Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution within fifteen (15) Business Days after confirmation that the Interconnection Customer has agreed to pay for the identified ~~modifications to the Participating TO's electric system~~Interconnection Facilities and Network Upgrades.

5.5.1.5 The Interconnection Customer shall be required to post and maintain Interconnection Financial Security pursuant to the provisions applicable to Interconnection Requests in the Independent Study Process. For this purpose, references to the system impact and facilities study~~, facilities study and/or system impact and facilities study~~ shall be read as references to the assessment conducted pursuant to the supplemental review.

~~5.5.1.3 If so, and Upgrades to the Participating TO's electric system are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and power quality standards, the Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution within fifteen (15) Business Days that requires the Interconnection Customer to pay the costs of such system modifications prior to interconnection.~~

~~5.5.2 If not, the Interconnection Request will be deemed withdrawn, without prejudice to the Interconnection Customer resubmitting its Interconnection Request for processing in either a Queue Cluster or under the Independent Study Process.~~

* * *

6.8.1 Substantial Error or Omissions; Revised Study Report

Should the CAISO discover, through written comments submitted by an Interconnection Customer or otherwise, that a final Phase I or Phase II Interconnection Study Report (which can mean a final Phase I or Phase II Interconnection Study Report for cluster studies or a final ~~System~~ system i~~I~~mpact and~~or~~ f~~F~~acilities report for the Independent Study Process) contains a substantial error or omission, the CAISO will cause a revised final report to be issued to the Interconnection Customer. A substantial error or omission shall mean an error or omission that results in one or more of the following:

(i) understatement or overstatement of the Interconnection Customer's cost responsibility for either Network Upgrades or Participating TO Interconnection Facilities by more than five (5) percent or one million dollars ($1,000,000), whichever is greater; or

(ii) results in a delay to the schedule by which the Interconnection Customer can achieve Commercial Operation, based on the results of the final Interconnection Study, by more than one year.

A dispute over the plan of service by an Interconnection Customer shall not be considered a substantial error or omission unless the Interconnection Customer demonstrates that the plan of service was based on an invalid or erroneous study assumption that meets the criteria set forth above.

* * *

10.2 Interconnection Customers in the Independent Study Process.

(a) RNUs and LNUs. the maximum value for the Interconnection Customer's Financial Security for RNUs shall be established by ~~the lesser of~~ the costs for such Network Upgrades assigned to the Interconnection Customer in the final ~~System~~ system ~~Impact~~ impact ~~Study report or final~~and ~~Facilities~~ facilities ~~Study~~ study report.

For such Interconnection Customers choosing Full Capacity or Partial Capacity Deliverability status, the maximum value of LDNUs shall be established by the lesser of the costs for such Network Upgrades assigned to the Interconnection Customer in the final Phase I Interconnection Study or the final Phase II Interconnection Study.

(b) ADNUs. Interconnection Customers selecting Option (A) do not post Interconnection Financial Security for ADNUs. The cost estimate provided in the Phase I Interconnection Studies establishes the basis for the initial Interconnection Financial Security posting under Section 11.2 for Interconnection Customers selecting Option (B). The Phase II Interconnection Studies shall refresh the cost estimate for ADNUs and shall provide the basis for second and third Interconnection Financial Postings as specified in Section 11.

The ADNU cost estimates provided any study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs However, subsequent to the Interconnection Customer's receipt of its Phase II Interconnection Study report, an Interconnection Customer having selected Option (B) may have its ADNU adjusted in the reassessment process undertaken under Section 7.4

* * *

11.2 Interconnection Financial Security-Initial Posting for Queue Cluster Customers

11.2.1 ~~The~~ Each Interconnection Customer in a Queue Cluster shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; (ii) a posting relating to the Participating TO's Interconnection Facilities.

11.2.2 Timing of Postings. The postings set forth in this Section shall be made on or before ninety (90) calendar days after issuance of the final Phase I Interconnection Study report

for Interconnection Customers in a Queue Cluster~~, or on or before sixty (60) calendar days after the CAISO provides the results of the System Impact Study for Interconnection Customers in the Independent Study Process~~.

Revised Cluster Study Reports. If the CAISO revises a final Phase I Interconnection Study report pursuant to Section 6.8, the initial postings will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final Phase I Interconnection Study Report or forty (40) calendar days after issuance of the revised final Phase I Interconnection Study Report.

~~Revised Independent Study Track Reports. If the CAISO revises a final System Impact Study report pursuant to Section 6.8, the initial postings will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final System Impact report or thirty (30) calendar days after issuance of the revised System Impact Study report~~.

11.2.3 Posting Amount for Network Upgrades.

11.2.3.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster ~~and each Interconnection Customer for a Small Generating Facility in the Independent Study Process~~ shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for RNUs.

The posting amount for such RNUs shall equal the lesser of fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for RNUs and LDNUs.

The posting amount for such RNUs and LDNUs shall equal the lesser of fifteen percent (15%) of the total RNU and LDNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for RNUs, LDNUs and ADNUs.

The posting amount for such RNUs, LDNUs and ADNUs shall equal the lesser of fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the

amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

11.2.3.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster ~~and each Interconnection Customer for a Large Generating Facility in the Independent Study Process~~ shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for RNUs.

The posting amount for such RNUs shall equal the lesser of (i) fifteen percent (15%) of the total RNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

In addition, if an Interconnection Customer switches its status from Full Capacity Deliverability Status or Partial Capacity Deliverability Status to Energy-Only Deliverability Status within ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the required Interconnection Financial Security for Network Upgrades shall, for purposes of this section, be additionally capped at an amount no greater than the total cost responsibility assigned to the Interconnection Customer in the Phase I Interconnection Study for Reliability Network Upgrades.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for RNUs and LDNUs.

The posting amount for such RNUs and LDNUs shall equal the lesser of (i) fifteen percent (15%) of the total RNU and LDNU cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for RNUs, LDNUs and ADNUs.

The posting amount for such RNUs, LDNUs and ADNUs shall be equal to the lesser of (i) fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

11.2.4 Posting Amount for Participating TO Interconnection Facilities.

11.2.4.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster ~~and each Interconnection Customer for a Small Generating Facility in the Independent Study Process~~ shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Participating TO's Interconnection Facilities or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

11.2.4.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster ~~and each Interconnection Customer for a Large Generating Facility in the Independent Study Process~~ shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study ~~or System Impact Study~~ for Participating TO's Interconnection Facilities, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

* * *

11.3 Interconnection Financial Security-Second and Third Postings for Queue Cluster Customers and Initial and Second Postings for Independent Study Process Customers

11.3.1 Second Posting for Queue Cluster Customers; Initial Posting for Independent Study Process Customers

11.3.1.1 ~~The~~ Each Interconnection Customer in a Queue Cluster shall make second postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a second posting relating to the Network Upgrades; and (ii) a second posting relating to the Participating TO's Interconnection Facilities. The cost responsibility estimates for calculating the second and third Interconnection Financial Security ~~P~~postings for Interconnection Customers in Queue Clusters shall be set forth in the Phase II Interconnection Study report ~~the System Impact Study, or the Facilities Study~~.

Each Interconnection Customer in the Independent Study Process shall make initial postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; and (ii) a posting relating to the Participating TO's Interconnection Facilities. The cost responsibility estimates for calculating the~~is~~ initial Interconnection Financial Security Posting shall be set forth in the System Impact and Facilities Study report.

11.3.1.2 Timing of Posting

The second postings for Interconnection Customers in a Queue Cluster shall be made on or before one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report ~~for Interconnection Customers in a Queue Cluster,~~.

The initial postings for Interconnection Customers in the Independent Study Process shall be made or on or before one hundred twenty (120) calendar days after the CAISO provides the results of the System Impact and Facilities Study ~~for Interconnection Customers in the Independent Study~~.

Revised Cluster Study Reports. If the CAISO revises a final Phase II Interconnection Study report pursuant to Section 6.8, the second postings will be due by the later of one hundred-eighty (180) calendar days after issuance of the original final Phase II Interconnection Study report or sixty (60) calendar days after issuance of the revised final Phase II Interconnection Study report.

Revised Independent Study Track Reports. If the CAISO revises the final System Impact and Facilities Study report pursuant to Section 6.8, the initial postings will be due by the later of one hundred-twenty (120) calendar days after the issuance of the original final System Impact and Facilities Study report or thirty (30) calendar days from the issuance of the revised System Impact and Facilities Study report.

* * *

11.3.1.4.1 Small Generator Interconnection Customers

~~For~~ Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster or an Interconnection Customer for a Small Generating Facility in the Independent Study Process~~, the second~~shall post an Interconnection Financial Security instrument ~~shall~~ that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs in either the final Phase II Interconnection Study report, or for Independent Study Process Interconnection Customers, the ~~System~~ system ~~Impact~~ impact ~~Study, or~~and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~. In no event shall the total amount posted be less than $100,000.

2) For Interconnection Customers who have Option (A) Generating Facilities, the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in ~~either~~ the ~~System~~ system ~~Impact~~ impact ~~Study or~~and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~.

However, in no event shall the total amount posted be less than $100,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $1 million or (ii) the sum of:

(a) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in ~~either~~ the ~~System~~ system ~~Impact~~ impact ~~Study or~~and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~; plus,

(b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $100,000.

11.3.1.4.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs in the, final Phase II Interconnection Study, ~~System~~ system ~~Impact~~ impact ~~Study, or~~ and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~. In no event shall the total amount posted be less than $500,000.

2) For Interconnection Customers, who have Option (A) Generating Facilities the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in ~~either~~ the ~~System~~ system ~~Impact~~ impact ~~Study or~~and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~.

However, in no event shall the total amount posted be less than $500,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $15 million or (ii) the sum of:

(a)thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for RNUs and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in ~~either~~ the ~~System~~ system ~~Impact~~ impact ~~Study or~~and ~~Facilities~~ facilities ~~Study~~study~~, whichever is lower~~; plus

(b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the

Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $500,000.

* * *

11.3.1.5 Posting Amount for Participating TO Interconnection Facilities.

11.3.1.5.1 Small Generator Interconnection Customers

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or ~~S~~system ~~I~~impact and ~~Facilities~~ facilities ~~Study~~study. In no event shall the total amount posted be less than $100,000.

11.3.1.5.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or ~~S~~system ~~I~~impact and ~~Facilities~~ facilities ~~Study~~study. In no event shall the total amount posted be less than $500,000.

*** * ***

11.3.1.6 Early Commencement of Construction Activities

If the start date for Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer is prior to one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster or prior to one hundred twenty (120) calendar days after issuance of the final ~~S~~system ~~I~~impact and ~~Facilities~~ facilities ~~Study~~ study report for Interconnection Customers in the Independent Study Process, that start date must be set forth in the Interconnection Customer's GIA, and the Interconnection Customer shall make its second posting of Interconnection Financial Security pursuant to Section 11.3.2 rather than Section 11.3.1.

* * *

11.3.2 Third Posting for Queue Cluster Customers and Second Posting for Independent Study Process Customers

*** * ***

11.3.2.1 Network Upgrades

With respect to the Interconnection Financial Security Instrument for Network Upgrades, the Interconnection Customer shall modify this Instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for RNUs, LDNUs and ADNUs as determined in Section 11.3.1.4.1 for Small Generator Interconnection Customers or in Section 11.3.1.4.2 for Large Generator Interconnection Customers.

An Interconnection Customer whose Option (B) Generating Facility was not allocated TP Deliverability and elects to have a party other than the applicable Participating TO(s) construct an LDNU or ADNU is not required to make ~~the third~~this posting for its cost responsibilities for such LDNU or ADNU. However, such Interconnection Customer will be required to demonstrate its financial capability to pay for the full cost of construction of its share, as applicable, of the LDNU or ADNU pursuant to Section 24.4.6.1 of the CAISO Tariff. An Interconnection Customer's election to have a party other than an applicable Participating TO construct an LDNU or ADNU does not relieve the Interconnection Customer of the responsibility to fund or construct such LDNU or ADNU. Upon the Interconnection Customer's demonstration to the CAISO that the Interconnection Customer has expended the amount of the avoided posting requirement on construction of the LDNU or ADNU described here, the Interconnection Customer's ~~second~~ prior posting for these facilities will be returned to the Interconnection Customer, unless the Participating TO and Interconnection Customer agree to an alternative arrangement.

11.3.2.2 Participating TO Interconnection Facilities

With respect to the Interconnection Financial Security Instrument for Participating TO Interconnection Facilities, the Interconnection Customer shall modify this instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study for Interconnection Customers in a Queue Cluster, or the final ~~S~~system ~~I~~impact and ~~Facilities~~ facilities ~~Study~~ study for Interconnection Customers in the Independent Study Process.

11.3.2.3 Separation of ~~Third~~ Posting

If an Interconnection Customer's Network Upgrades and/or Interconnection Facilities are separated into two or more specific components and/or can be separated into two or more separate and discrete phases of construction and the Participating TO is able to identify and separate the costs of the identified discrete components and/or phases of construction, then the Participating TO, the CAISO, and the Interconnection Customer may negotiate, as part of the Generator Interconnection Agreement, a division of the ~~third~~ the Interconnection Financial Security posting required by this Section 11.3.2 into discrete Interconnection Financial Security amounts and may establish discrete milestone dates (however, outside dates must be included) for posting the amounts corresponding to each component and/or phase of construction related to the Network Upgrades and/or Interconnection Facilities described in the Generator Interconnection Agreement.

* * *

13.1.1 If the Interconnection Customer requested Full Capacity Deliverability Status or Partial Deliverability Status, then within thirty (30) Calendar Days after the CAISO provides the updated Phase II Interconnection Study report (or by an earlier date, if all parties agree) which includes the allocation of TP Deliverability to the Interconnection Customer, the applicable Participating TO shall tender a draft GIA, together with draft appendices. If the Interconnection Customer requested Energy-Only Deliverability Status, then within thirty (30) Calendar Days following the results meeting for the final Phase II Interconnection Study (or by an earlier date, if all parties agree), Facilities Study, or ~~System~~ system

~~Impact~~ impact ~~Study if the~~and ~~Facilities~~ facilities ~~Study~~ study~~is waived~~, the applicable Participating TO shall tender a draft GIA, together with draft appendices . The draft GIA shall be in the form of the FERC-approved form of GIA set forth in CAISO Tariff Appendix EE or Appendix FF, as applicable. The Interconnection Customer shall provide written comments, or notification of no comments, to the draft appendices to the applicable Participating TO(s) and the CAISO within (30) calendar days of receipt.

* * *

13.2 Negotiation

Notwithstanding Section 13.1, at the request of the Interconnection Customer, the applicable Participating TO(s) and CAISO shall begin negotiations with the Interconnection Customer concerning the appendices to the GIA at any time after the CAISO provides the Interconnection Customer with the final Phase II Interconnection Study report. The applicable Participating TO(s) and CAISO and the Interconnection Customer shall negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than one hundred twenty (120) calendar days after the CAISO provides the Interconnection Customer with the final Phase II Interconnection Study report, or the system impact and f~~F~~acilities s~~S~~tudy report ~~(or System Impact Study report if the Facilities Study is waived)~~. If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to Section 13.1 and request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to Section 15.5. If the Interconnection Customer requests termination of the negotiations, but, within one hundred twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, fails to request either the filing of the unexecuted GIA or initiate Dispute Resolution, it shall be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed and returned the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to Section 15.5 within one hundred twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, it shall be deemed to have withdrawn its Interconnection Request. The CAISO shall provide to the Interconnection Customer a final GIA within ten (10) Business Days after the completion of the negotiation process and receipt of all requested information.

* * *

Appendix 6

~~GIDAP AGREEMENT FOR~~ INDEPENDENT STUDY PROCESS STUDY AGREEMENT

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to the Independent Study Process; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection Procedures in CAISO Tariff Appendix DD or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies~~-~~ in accordance with the CAISO Tariff.

3.0 The scope of the applicable Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section 6.1.2 of the GIDAP and modifications to the proposed Commercial Operation Date of the Generating Facility permitted by the GIDAP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in the .

5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in the GIDAP.

6.0 The Interconnection Customer shall provide an Interconnection Study Deposit and other Interconnection Financial Security for the performance of the Interconnection Studies in accordance with the provisions of Sections 3.5.1 and 11 of the GIDAP.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIDAP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIDAP.

7.0 Pursuant to Section 3.7 of the GIDAP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study results to an Affected System Operator and the Western Electricity

Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the ~~System Impact Study~~Interconnection Studies, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Studies~~y~~ in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

* * *

Appendix A

ASSUMPTIONS USED IN CONDUCTING THE SYSTEM IMPACT AND FACILITIES STUDY

The ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on , subject to any modifications in accordance with Section 6.1.2 of the GIDAP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability Status requested (Full Capacity, Partial Capacity~~Deliverability~~, or Energy-Only)

* * *

Appendix B Data Form, Pre- System Impact and Facilities Study

DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE SYSTEM IMPACT AND FACILITIES STUDY

*** * ***

Appendix EE

Large Generator Interconnection Agreement

for Interconnection Requests Processed under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD of the CAISO Tariff)

Article 1. Definitions

* * *

Generating Facility shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

* * *

Governing Independent Study Process Interconnection Studies shall mean the engineering study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System, which shall consist primarily of a Facilities Study as described in Section 4.5 of the Generation Interconnection Procedures, a System Impact Study as described in Section 4.4 of the Generation Interconnection Procedures, ~~a Facilities Study as described in Section 4.5 of the GIDAP,~~ or a ~~System Impact Study~~system impact and facilities study as described in Section 4.4 of the GIDAP.

* * *

Interconnection Study shall mean

(i) For Interconnection Requests processed under the cluster study process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the GIDAP, which shall consist primarily of ~~a facilities study as described in Section 4.5 of the GIDAP or~~ a system impact and facilities study as described in Section 4.4 of the GIDAP.

* * *

2.3 Termination Procedures.

2.3.1 Written Notice. This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

2.3.2 Default. A Party may terminate this LGIA in accordance with Article 17.

2.3.3 **Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16, if applicable.

2.3.4 Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

* * *

5.16 [If this LGIA is executed by an Interconnection Customer for an Interconnection Request under the Independent Study Process, this Article 5.16 shall state "Not Used" and shall contain no other provisions.]

Suspension. The Interconnection Customer reserves the right, upon written notice to the Participating TO and the CAISO, to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Phase II Interconnection Study as common to multiple generating facilities, with the condition that the Participating TO's electrical system and the CAISO Controlled Grid shall be left in a safe and reliable condition in accordance with Good Utility Practice and the Participating TO's safety and reliability criteria and the CAISO's Applicable Reliability Standards. In such event, the Interconnection Customer shall be responsible for all reasonable and necessary costs which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

Network Upgrades common to multiple generating facilities, and to which the Interconnection Customer's right of suspension shall not extend, consist of Network Upgrades identified for:

(i) generating facilities which are the subject of all Interconnection Requests made prior to the Interconnection Customer's Interconnection Request;
(ii) generating facilities which are the subject of Interconnection Requests within the Interconnection Customer's queue cluster; and
(iii) generating facilities that are the subject of Interconnection Requests that were made after the Interconnection Customer's Interconnection Request but no later than the date on which the Interconnection Customer's Phase II Interconnection Study Report is issued, and have been modeled in the Base Case at the time the Interconnection Customer seeks to exercise its suspension rights under this Article.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large

Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4 of this LGIA. The suspension period shall begin on the date the suspension is requested, or the date of the written notice to the Participating TO and the CAISO, if no effective date is specified.

*** * ***

Appendix H

INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit. Generating units that are replaced, however, shall meet the requirements of this Appendix H.

A. Technical Requirements Applicable to Asynchronous Generating Facilities

i. Low Voltage Ride-Through (LVRT) Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

5. The requirements of this Section A.i~~.~~ of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

* * *

iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

*** * ***

Appendix FF

Small Generator Interconnection Agreement for Interconnection Requests Processed Under the Generator Interconnection and Deliverability Allocation Procedures

(Appendix DD to the CAISO Tariff)

*** * ***

Attachment 1
Glossary Of Terms

* * *

Interconnection Study –

(i) For Interconnection Requests processed under the Cluster Study Process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO pursuant to the GIDAP, which shall consist primarily of ~~a Facilities Study as described in Section 4.5 of the GIDAP,~~ a ~~System~~ system ~~Impact~~ impact and facilities ~~Study~~ study as described in Section 4.4 of

the GIDAP, and, as applicable to Full Capacity Deliverability Status or Partial Deliverability Status, Phase I and Phase Interconnection Studies as described in Section 2.4.3 of the GIDAP.

* * *

Small Generating Facility – The Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

* * *

Attachment 7

Interconnection Requirements for an Asynchronous Small Generating Facility

Attachment 7 sets forth requirements and provisions specific to all Asynchronous Generating Facilities. All other requirements of this Agreement continue to apply to all Asynchronous Generating Facility interconnections.

A. Technical Standards Applicable to Asynchronous Generating Facilities

i. Low Voltage Ride-Through (LVRT) Capability

A Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Attachment 7 or single-phase faults exceeding the duration described in Section A.i.2 of this Attachment 7.

5. The requirements of this Section A.i. of this Attachment 7 do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

7. Asynchronous Generating Facilities may meet the requirements of this Section A of this Attachment 7 through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Attachment 7 apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

ii. Frequency Disturbance Ride-Through Capacity

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the WECC Under Frequency Load Shedding Relay Application Guide or successor requirements as they may be amended from time to time.

iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this SGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this SGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

iv. Supervisory Control and Data Acquisition (SCADA) Capability

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

v. Power System Stabilizers (PSS)

Power system stabilizers are not required for Asynchronous Generating Facilities.

Attachment C – Comparison Table

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

Attachment C – Table Comparing Tariff Revisions Set Forth in Order No. 792 and Tariff Revisions Proposed in this Filing

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
Small Generator Interconnection Procedures section:	GIDAP section:	
1.1.1	N/A	Order No. 792 provision not included in the revised GIDAP. The fast track eligibility thresholds under the existing GIDAP are more inclusive and allow for a larger number of resources to be eligible for the fast track interconnection process than the fast track eligibility thresholds adopted in Order 792. Accordingly, the existing GIDAP eligibility thresholds are consistent with or superior to those adopted in Order 792. (See section III.B.2 of transmittal letter for FPA 205 tariff filing.)
1.2.2	1.3.1	Same as Order No. 792 provision except: (1) omits introductory language in the first sentence that references existing provisions not contained in the GIDAP; (2) replaces the phrase "an Interconnection Customer may" with the clarifying phrase "An Interconnection Customer with a proposed Small Generating Facility may"; (3) replaces the generic term "Transmission Provider" with the specific term "CAISO"; (4) specifies that the $300 fee for a pre-application report will be provided to the CAISO; (5) adds language to specify that the CAISO will coordinate with participating transmission owners to prepare a pre-application report

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		because participating transmission owners will be the primary source of much of this information, and to explain, consistent with Order No. 792, what constitutes "readily available" information (see section III.B.1 of transmittal letter for FPA 205 tariff filing); and (6) adds the clarifying phrase "that is under CAISO operational control" to the end of the last sentence.
1.2.2.1	1.3.1.1	Same as Order No. 792 provision.
1.2.2.2	1.3.1.2	Same as Order No. 792 provision.
1.2.2.3	1.3.1.3	Replaces Order No. 792 provision requiring "[m]eter number, pole number, or other equivalent information identifying proposed Point of Interconnection, if available" with provision requiring a "single proposed Point of Interconnection that is either an existing substation or a transmission line under CAISO operational control." This revision meets the independent entity variation standard because it applies to the networked transmission system operated by the CAISO as opposed to a radial distribution circuit. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.2.4	1.3.1.4	Same as Order No. 792 provision.
1.2.2.5	1.3.1.5	Same as Order No. 792 provision except replaces "kW" with more detailed phrase "kW/MW".
1.2.2.6	1.3.1.6	Same as Order No. 792 provision.
1.2.2.7	1.3.1.7	Same as Order No. 792 provision.
1.2.2.8	1.3.1.8	Same as Order No. 792 provision except replaces "kW" with more detailed phrase

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		"kW/MW".
1.2.3	1.3.2	Does not include Order No. 792 language prior to the last sentence. This revision meets the independent entity variation standard because it provides a concise and sufficiently descriptive introduction to the listing of the information that will be included in in the pre-application report.
1.2.3.1	1.3.2.1	Replaces Order No. 792 provision with provision requiring "[e]lectrical configuration of the substation, including information of transmission lines terminating in the substation, transformers, buses and other devices, if the proposed Point of Interconnection is a substation." This revision meets the independent entity variation standard because it recognizes that the point of interconnection on the CAISO grid may be a substation. This information will provide interconnection customers with the ability to understand potential constraints at proposed points of interconnection and make informed siting decisions based on any potential grid issues that may affect the proposed point of interconnection. Knowing the electrical configuration of the substation and existing and queued generation will make the interconnection customer aware either that there are open bays at the substation or that the interconnection may require new bays or a new switching station. Having this knowledge will also mitigate the possibility that the interconnection customer will submit multiple interconnection requests for the same project. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.3.2	1.3.2.2	Same as Order No. 792 provision except replaces the phrase "interconnected to a substation/area bus, bank or circuit (i.e.,

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		amount of generation online)" with "interconnected to a substation or circuit (i.e., amount of generation online)". This revision meets the independent entity variation standard because it recognizes that the point of interconnection on the CAISO grid may be a substation. This information will provide interconnection customers with the ability to understand potential constraints at proposed points of interconnection and make informed siting decisions based on any potential grid issues that may affect the proposed point of interconnection. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.3.3	1.3.2.3	Same as Order No. 792 provision except replaces the phrase "for a substation/area bus, bank or circuit (i.e., amount of generation in the queue)" with "for a substation or circuit (i.e., amount of generation in the queue)". This revision meets the independent entity variation standard because it recognizes that the point of interconnection on the CAISO grid may be a substation. This information will provide interconnection customers with the ability to understand potential constraints at proposed points of interconnection and make informed siting decisions based on any potential grid issues that may affect the proposed point of interconnection. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.3.4 through 1.2.3.12	N/A	Order No. 792 provisions not included in the revised GIDAP. These revisions meet the independent entity variation standard because the CAISO has consolidated some of the information categories identified in the Order No. 792 provisions by committing to provide information regarding the electrical configuration of the substation, including information on transmission lines terminating

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		in the substation, transformers, buses and other devices. (See proposed GIDAP section 1.3.2.1.) In addition, other information categories for the pre-application report identified in the *pro forma* revisions in Order No. 792 would not in all cases apply to an interconnection to the CAISO controlled grid, and therefore the CAISO has not included those information categories in the GIDAP. The information categories identified by the CAISO in its proposed tariff language provide sufficient detail for an interconnection customer to obtain a good understanding of whether reliability or deliverability network upgrades may be necessary to interconnect a proposed small generating facility. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.3.13	1.3.2.4	Same as Order No. 792 provision except replaces the phrase "short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks" with "short circuit issues, instability issues, facility loading issues, or voltage issues." This revision meets the independent entity variation standard because it recognizes that the point of interconnection on the CAISO grid may be a substation. This information will provide interconnection customers with the ability to understand potential constraints at proposed points of interconnection and make informed siting decisions based on any potential grid issues that may affect the proposed point of interconnection. (See section III.B.1 of transmittal letter for FPA 205 tariff filing.)
1.2.4	1.3.3	Same as Order No. 792 provision except: (1) replaces the generic term "Transmission Provider" with the specific term "CAISO"; and

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		(2) replaces the phrase "The provision of information on 'available capacity' pursuant to section 1.3.3.4 does not imply that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process" with the simplified phrase "There are many variables studied as part of the interconnection review process."
2.1	N/A	Order No. 792 provision not included in the revised GIDAP. The fast track eligibility thresholds under the existing GIDAP are more inclusive and allow for a larger number of resources to be eligible for the fast track interconnection process than the fast track eligibility thresholds adopted in Order 792. Accordingly, the existing GIDAP eligibility thresholds are consistent with or superior to those adopted in Order 792. (See section III.B.2 of transmittal letter for FPA 205 tariff filing.)
2.3-2.4 (including subsections therein)	5.4-5.5 (including subsections therein)	The CAISO proposes enhancements to its fast track screens that comprise the initial review as well as to the customer options meeting and supplemental review process, if an interconnection customer fails the fast track screens. The CAISO's enhancements consolidate applicable screens from the supplemental review process as part of the initial review and propose a supplemental review process to permit an interconnection customer to proceed with an interconnection under the fast track process even if the interconnection customers fails the initial review. The CAISO also proposes to modify the fee and timeframes associated with the initial review under the fast track process. Consistent with the goals of the Order No. 792 reforms, the CAISO expects these

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		revisions to provide a more transparent process for interconnection customers while continuing to ensure that the fast track process results in safe and reliable interconnections. Further, interconnection customers will benefit from being subject to the enhanced screens as part of the initial review, because doing so will provide them with information near the start of the fast track process that will allow them to better gauge the financial viability of their projects up-front. The enhancements will also ensure that the fast track process goes forward promptly. The CAISO believes the proposed changes will enhance its ability to manage interconnection requests using the fast track process and provide interconnection customers with a viable alternative to submitting to an interconnection study through the queue cluster if their projects are 5 MW or smaller in size. (See section III.B.3 of transmittal letter for FPA 205 filing.)
3.1	N/A	Order No. 792 revision to add the phrase "or Distribution System" not included in the revised GIDAP. The CAISO does not operate a distribution system.
4.10.3	3.1	Same as Order No. 792 provision except: (1) replaces the phrase "The Interconnection Request shall be evaluated" with the clarifying phrase "An Interconnection Customer with a proposed Small Generating Facility shall be evaluated"; and (2) replaces the generic term "Transmission Provider" with the specific term "CAISO".
Attachment 1, definition of Fast Track Process	N/A	Order No. 792 provision not included in the revised GIDAP. The fast track eligibility thresholds under the existing GIDAP are more inclusive and allow for a larger number

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
		of resources to be eligible for the fast track interconnection process than the fast track eligibility thresholds adopted in Order 792. Accordingly, the existing GIDAP eligibility thresholds are consistent with or superior to those adopted in Order 792. (See section III.B.2 of transmittal letter for FPA 205 tariff filing.)
Attachment 1, definitions of Network Resource and Network Resource Interconnection Service	N/A	Order No. 792 provision not included in the revised GIDAP. The CAISO understands network resource interconnection service to mean a service that allows an interconnection customer to integrate its resource into the transmission provider's system in a manner comparable to the transmission provider's resources. For purposes of the CAISO, this means interconnection service comparable to interconnection service offered to all other customers. The CAISO has consolidated its small and large generator interconnection procedures in the GIDAP. Section 2.4.2 of the GIDAP already allows an interconnection customer to connect its generating facility to the CAISO grid and be eligible to deliver the resource's output using the available capacity of the CAISO grid. This provision applies to both small and large generator resources. Therefore, the CAISO does not propose to make any changes to this existing GIDAP language pursuant to Order 792 because the existing language satisfies the consistent with or superior to standard. (See section III.B.6 of transmittal letter for FPA 205 tariff filing.)
Attachment 1, definition of Small Generating	Appendix A, definition of Generating Facility; Appendix EE,	Same as Order No. 792 revision.

Order No. 792 Provision	New or Revised CAISO Provision	Description of CAISO Provision and Basis for Any Variation from Order No. 792 Provision
Facility	Article 1, definition of Generating Facility	
Attachment 8, Facilities Study Agreement, sections 9.0-10.0	N/A	Order No. 792 provision not included in the revised GIDAP. The existing GIDAP already provides an opportunity for the interconnection customers to submit written comments on both the phase I and phase II interconnection study reports. The CAISO is not proposing any changes to this existing language because it is consistent with or superior to the *pro forma* language set forth in Order 792. The CAISO, however, also proposes to extend the right of an interconnection customer to submit written comments in response to a system impact and facilities study performed as part of the independent study process. (See section III.B.4 of transmittal letter for FPA 205 tariff filing.)
Small Generator Interconnection Agreement:	Appendix FF SGIA:	
Article 3.3.5	Article 3.3.5	There is no need for the CAISO to make the Order No. 792 clarification of replacing "This" with "The" in the first word of the article, because the CAISO provision already begins with "The".
Attachment 1, definition of Small Generating Facility	Attachment 1, definition of Small Generating Facility	Same as Order No. 792 revision.

Attachment D – Draft Final Proposal

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

Interconnection Process Enhancements

Draft Final Proposal

Topics 4, 5, and 13

March 25, 2014

Table of Contents

Interconnection Process Enhancements

Draft Final Proposal for Topics 4, 5 and 13

1 Executive summary

In this paper the ISO offers its current proposals for the remaining three topics in the Interconnection Process Enhancements ("IPE") initiative – improve the independent study process (Topic 4), improve the fast track process (Topic 5), and clarity regarding the timing of transmission cost reimbursement (Topic 13). This paper includes a draft final proposal for Topics 4 and 5, and a second revised straw proposal for Topic 13.

The IPE initiative is the latest in a series of stakeholder processes that the ISO has conducted over the past several years to continuously review and improve its generation interconnection process and associated interconnection agreements.

The ISO launched the IPE initiative with the issuance of a scoping proposal paper on April 8, 2013. The scoping proposal accomplished two steps: first, it assembled a comprehensive list of potential GIP-related topics for consideration in this initiative; and second, it selected twelve topics from the comprehensive list of topics for proposed inclusion in the scope of the IPE initiative. Based on stakeholder feedback on the April 8 scoping proposal, the ISO added additional topics which resulted in a scope of fifteen topics for the IPE initiative.

Seven of the fifteen topics addressed queue management issues (*i.e.*, Topics 6-12[1]). The ISO took the proposals for Topics 6-11[2] to the September meeting of the ISO Board, received Board approval, and filed the associated tariff amendments on September 30, 2013 with the Federal Energy Regulatory Commission ("FERC") in Docket No. ER13-2484. FERC accepted those tariff amendments.

Two of the fifteen topics addressed generator project downsizing (Topic 1) and the risk of disconnection (Topic 2). The ISO presented proposals for these two topics to the ISO Board on November 7, 2013 and received Board approval. The ISO is currently working with stakeholders to develop the associated tariff amendment for filing with FERC.

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[1] These seven topics are: (6) provide for ability to charge customer for costs for processing a material modification request; (7) COD modification provision for SGIP projects; (8) length of time in queue provision for SGIP projects; (9) clarify that PTO not ISO tenders GIA; (10) timeline for tendering draft GIAs; (11) LGIA negotiations timeline; and (12) consistency of suspension definition between serial and cluster.

[2] Topic 12 was later withdrawn from the IPE initiative.

Through consultation with stakeholders it was ultimately determined that two of the fifteen topics – clarify tariff and GIA provisions related to dividing up GIAs into multiple phases or generating projects (Topic 3), and material modification requests (Topic 15) – could be addressed through the Business Practice Manual (BPM) change management process. The BPM effort on Topic 15 is complete; that work for Topic 3 is in progress.

In late 2013, discussions with stakeholders led the ISO to move Topic 14 (use of forfeited funds) into the Generator Interconnection and Deliverability Assessment Procedures ("GIDAP") reassessment initiative which is scheduled to go before the ISO Board at its May 2014 meeting.

Thus, of the original fifteen topics in the IPE initiative, the remaining topics are Topics 4, 5, and 13. These topics are the subject of this paper and draft final proposals are offered on Topics 4 and 5, and a second revised straw proposal is offered on Topic 13. At this point, the ISO anticipates taking topics 4 and 5 to the ISO Board in May and topic 13 to the Board in July.

2 Introduction

California's ambitious renewable portfolio standards and environmental goals have resulted in significant development of new generation projects in recent years, especially new renewable solar and wind projects. The majority of these projects request interconnection to facilities under the operational control of the ISO.[3] Successful completion of the interconnection process is a necessary step in the development of a new generation project and is one of the challenges faced by generation developers.

The ISO is committed to continuously reviewing potential enhancements to its generator interconnection process to reflect changes in the industry and to better accommodate the needs of interconnection customers. Pursuant to this commitment, the ISO has conducted a series of stakeholder processes over the past several years to improve the generator interconnection process. These include Generation Interconnection Process Reform ("GIPR") held in 2008-09, Generation Interconnection Procedures Phase 1 ("GIP 1") in 2010, Generation Interconnection Procedures Phase 2 ("GIP 2") in 2011, and Generation Interconnection Procedures Phase 3 ("GIP 3") in 2012.[4]

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[3] Some projects request interconnection to the distribution systems of the participating transmission owners through their wholesale distribution access tariffs ("WDATs").

[4] GIP 3 was started in early 2012 but later deferred while the one-time generator project downsizing initiative was pursued. In GIP 3 the ISO solicited stakeholder comments on the relative priority of issues that should be considered, on generator project downsizing as well as on a number of other topics. The ISO explained that only a limited number of topics would be included in the initial stakeholder effort to ensure timely resolution and implementation of those topics. Stakeholders expressed broad support for only one topic, the extent to which an interconnection customer could downsize the MW capacity of its proposed generating facility and retain its queue

The ISO launched the latest in this series of stakeholder processes to review and improve the generator interconnection process when it published the Interconnection Process Enhancements ("IPE") initiative scoping proposal on April 8, 2013.[5] Rather than follow the usual sequence of beginning an initiative with an issue paper, the ISO identified the development of a scoping proposal as a necessary first step. Its purpose was twofold. First, it assembled a comprehensive list of potential topics in one place from a number of sources including:

- During the course of the GIP 3 stakeholder process a list of twenty-seven potential topics (including generator project downsizing) was compiled for consideration;
- Outside of the GIP 3 stakeholder process, individual stakeholders suggested topics to the ISO;
- At the September 2012 ISO Board of Governors meeting, ISO Management committed to include two topics in the scope of this initiative in response to stakeholder interest: (1) future generator project downsizing policy, and (2) disconnection of an initial project phase of a generating project for failure of the project to complete a subsequent phase; and
- An ISO need to improve the queue management process.

Second, the scoping proposal selected a set of potential topics from the comprehensive list of topics mentioned above for proposed inclusion in the scope of the IPE initiative. This was necessary because the comprehensive list of topics (nearly fifty topics in total) represented a far larger set of topics than could be reasonably addressed within the scope of this initiative. To develop a subset of topics representing a more reasonable workload to include in the scope of this initiative, the ISO took into consideration the estimated level of effort and relative priority associated with each topic as well as its contribution to queue management efforts. This resulted in twelve topics that the ISO proposed in the April 8, 2013 scoping proposal for inclusion in the scope of the IPE initiative. Based on stakeholder feedback received following the release of the April 8 scoping proposal, the ISO expanded the scope of the IPE initiative by three topics and posted an issue paper on June 3, 2013 addressing the resulting scope of fifteen topics.[6]

Table 1 lists these fifteen topics.

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position (*i.e.*, generator project downsizing). As a result of this stakeholder feedback, the ISO deferred work on the other topics that did not receive such broad support and focused efforts on developing a one-time generator project downsizing opportunity through a separate stakeholder initiative. FERC accepted an ISO tariff amendment to implement one-time project downsizing opportunity effective December 2012.

[5] http://www.caiso.com/Documents/ScopingProposal-InterconnectionProcessEnhancements.pdf.

[6] The remaining topics, which the ISO did not initially recommend be in scope, are described in section 4 of the April 8, 2013 scoping proposal: http://www.caiso.com/Documents/ScopingProposal-InterconnectionProcessEnhancements.pdf

Table 1 – Scope of topics in the June 3 IPE issue paper	
Topic No.	**Topic Description**
1	Future downsizing policy
2	Disconnection of first phase of project for failure of second phase
3	Clarify tariff and GIA provisions related to dividing up GIAs into multiple phases or generating projects
4	Improve the Independent Study Process
5	Improve the Fast Track Process
6	Provide for ability to charge customer for costs for processing a material modification request
7	COD modification provision for SGIP projects
8	Length of time in queue provision for SGIP projects
9	Clarify that PTO and not ISO tenders GIA
10	Timeline for tendering draft interconnection agreements
11	LGIA negotiations timeline
12	Consistency of suspension definition between serial and cluster
13	Clarity regarding timing of transmission cost reimbursement
14	Distribution of forfeited funds
15	Material modification requests (formerly "Inverter/transformer changes")

Following release of the June 3, 2013 issue paper, the ISO held a stakeholder web conference on June 11, 2013 and stakeholders provided written comments on June 25, 2013.

As explained in both the April 8, 2013 scoping proposal and the June 3, 2013 issue paper, the ISO anticipated from the beginning of the IPE initiative that the pace of development of proposals for each topic may differ—*i.e.*, proposals for some topics may be developed rather quickly whereas more time may be needed to work with stakeholders and develop proposals for other topics. For example, the ISO expected that the pace of work on the queue management topics (*i.e.*, Topics 6-12) would enable the proposals for these topics to go to the ISO Board for approval earlier than the non-queue management topics in this initiative. Consistent with this approach, while the June 3, 2013 issue paper was a conventional issue paper for some of the fifteen topics in scope, it served as a straw proposal on others. Specifically, for the seven topics addressing queue management issues (*i.e.*, Topics 6-12[7]), the ISO offered straw proposals in the June 3, 2013 paper. For the remaining eight topics (*i.e.*, Topics 1-5[8] and 13-15[9]), the ISO was not prepared to offer a proposal in the June 3,

[7] These seven topics are: (6) provide for ability to charge customer for costs for processing a material modification request; (7) COD modification provision for SGIP projects; (8) length of time in queue provision for SGIP projects; (9) clarify that PTO not ISO tenders GIA; (10) timeline for tendering draft GIAs; (11) LGIA negotiations timeline; and (12) consistency of suspension definition between serial and cluster.

[8] These five topics are: (1) future downsizing policy; (2) disconnection of completed phase(s) of project due to failure to complete subsequent phase; (3) clarify tariff and GIA provisions related to dividing up GIAs into multiple phases; (4) improve the Independent Study Process; and (5) improve the Fast Track Process.

2013 issue paper and instead provided further analysis of the issues and suggested potential ideas and options for stakeholder consideration.

Following publication of the June 3, 2013 issue paper and receipt of stakeholder comments, the ISO posted a draft final proposal for Topics 6-12 on July 2, 2013. This was followed with a stakeholder web conference on July 10, 2013 and written stakeholder comments on July 16, 2013. The ISO took the proposals for Topics 6-11 to the September 2013 meeting of the ISO Board, received Board approval, and filed the associated tariff revisions with the Federal Energy Regulatory Commission (FERC) on September 30, 2013 in Docket No. ER13-2484.[10] As a result, Topics 6-11 were not addressed in the subsequent straw proposal paper published on July 18, 2013. The ISO's decision to withdraw Topic 12 from the IPE initiative was addressed in a paper published on November 8, 2013.

On July 18, 2013 the ISO published a straw proposal paper addressing Topics 1-5 and 13-15 (*i.e.,* the non-queue management topics). The July 18 paper offered straw proposals for Topics 1, 2, and 3. The July 18 paper also presented a straw proposal for Topic 15 (called "inverter/transformer changes" at the time, but renamed to "material modification review"); however, implementation of the proposal on Topic 15 was accomplished through the business practice manual change process rather than through tariff changes.[11] In the July 18 paper the ISO was not yet prepared to offer straw proposals on Topics 4, 5, 13, and 14; nevertheless, the discussion of these four topics provided additional analysis and, for some, offered options for stakeholder consideration (*e.g.,* for Topics 13 and 14). The ISO presented the July 18 paper during a stakeholder web conference held on August 8, 2013 and received written comments from stakeholders on August 22, 2013.

On September 12, 2013, the ISO published a draft final proposal for Topics 1 and 2. After receiving stakeholder feedback, the ISO made further refinements and modifications to the draft final proposal which it published in a pair of addendums – the first on September 24, 2013 and the second on October 21, 2013. The ISO Board approved the proposals for Topics 1 and 2 at its November 7, 2013 meeting. A stakeholder process to develop the associated tariff revisions subsequently ensued.

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[9] These three topics are: (13) clarification of timing of transmission cost reimbursement; (14) distribution of forfeited funds; and (15) material modification review.

[10] FERC accepted the tariff revisions in *California Independent System Operator Corporation*, 145 FERC ¶ 61,172 (2013), effective December 3, 2013 as requested by the ISO, subject to minor tariff revisions that the ISO subsequently filed on compliance with FERC's order.

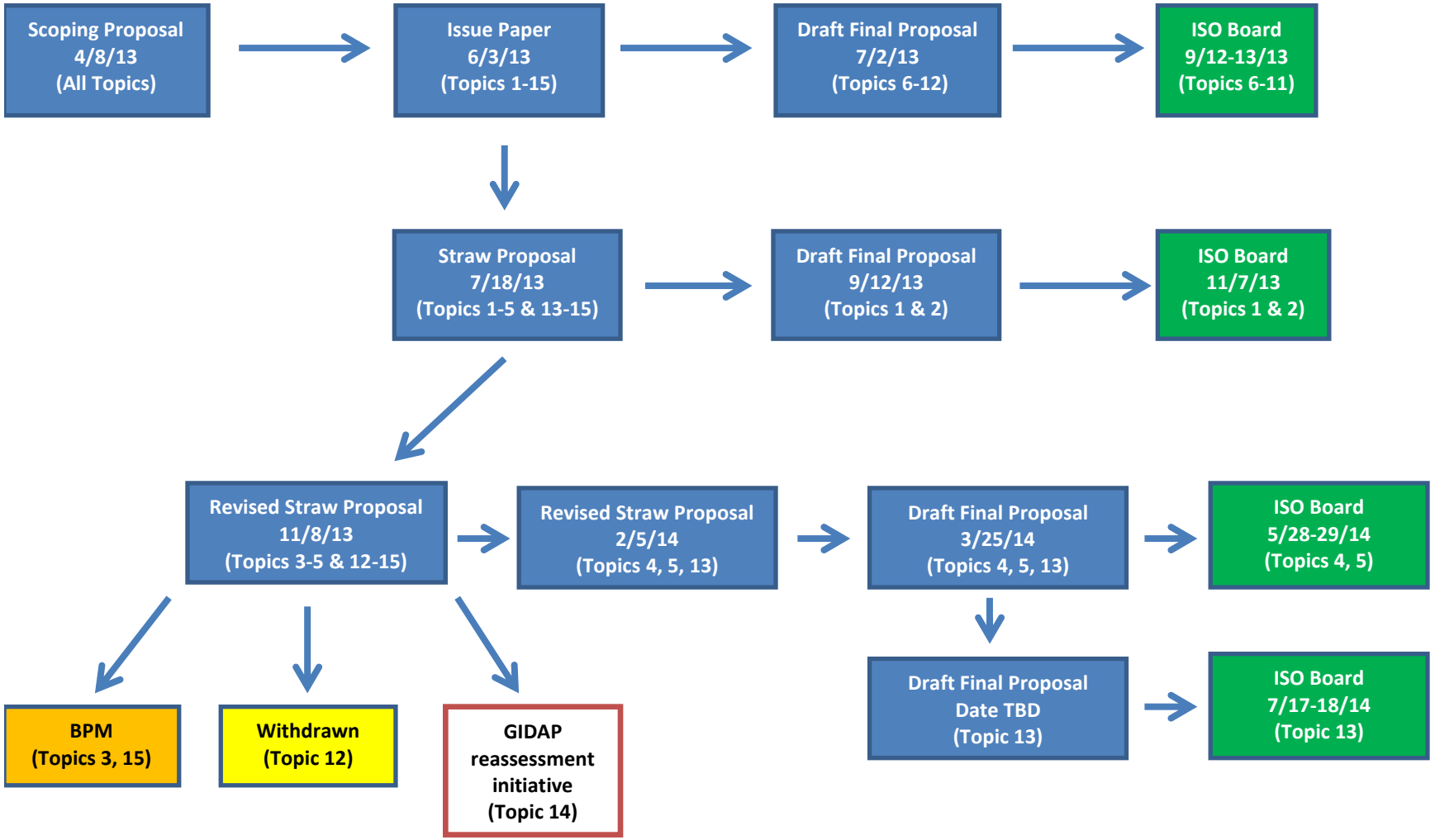
[11] In an effort to consult with stakeholders prior to initiating the BPM change management process in January 2014, the ISO began a series of stakeholder web conferences on topic 15, with the first such web conference held on October 29, 2013. The ISO submitted the resultant BPM changes into the BPM change management process as Proposed Revision Request (PRR) 700 on January 13, 2014. PRR 700 was approved in March 2014.

On November 8, 2013, the ISO published a paper addressing the remaining seven topics in the IPE initiative (*i.e.*, Topics 3-5 and 12-15). Initial or revised straw proposals were offered on Topics 3-5, 13, and 14. Although a straw proposal was already offered for Topic 15 in the July 18, 2013 paper, the ISO nonetheless included the topic once again in the November 8 paper to maintain clarity and restate its intention to address this topic through the BPM change management process. In the November 8 paper, the ISO also proposed to implement its proposal for Topic 3 through the BPM change management process. With respect to Topic 12, the ISO used the November 8 paper to clarify for stakeholders that the ISO was withdrawing the topic from further consideration in the IPE initiative.

At the time the November 8 paper was published, it was anticipated that proposals for those topics requiring tariff revisions (*i.e.,* Topics 4, 5, 13, and 14) would be presented to the ISO Board for approval at its March 2014 meeting; however, this plan was subsequently modified in two respects. First, discussions with stakeholders led the ISO to move Topic 14 (use of forfeited funds) into the GIDAP reassessment initiative which is scheduled to go before the ISO Board at its May 2014 meeting. This was done to consider the possibility of using such funds to offset increases in network upgrade funding requirements for customers remaining in the queue and for PTOs that result from project withdrawals. Second, it was determined that Topics 4, 5, and 13 could benefit from additional stakeholder feedback and that taking these three topics to an ISO Board meeting beyond March 2014 would make this possible. At this point, the ISO anticipates taking Topics 4 and 5 to the ISO Board in May and Topic 13 to the Board in July.

Consequently, this paper addresses the three remaining topics in the IPE initiative: Topics 4, 5, and 13. Draft final proposals are offered for Topics 4 and 5, and a second revised straw proposal is offered on Topic 13. The ISO anticipates that it will post a draft final proposal for Topic 13 in May.

As was stated early in the IPE initiative, the most efficient course has been to take the topics before the ISO Board as they are ready and not hold up their resolution until all 15 topics are resolved (*i.e.*, take the draft final proposals on the various topics to the Board in several tranches). The ISO believes that stakeholders both support and appreciate this multiple-tranche approach since it accelerates resolution of the topics that can be resolved more quickly and gives due consideration to the topics that require more deliberation. Figure 1 on the following page is intended to provide an overview of the progression of all 15 topics within the scope of this initiative by illustrating which topics are addressed in which papers, and which Board meeting is targeted for those topics requiring ISO Board approval.


Scoping Proposal
4/8/13
(All Topics)
Issue Paper
6/3/13
(Topics 1-15)
Draft Final Proposal
7/2/13
(Topics 6-12)
ISO Board
9/12-13/13
(Topics 6-11)
Straw Proposal
7/18/13
(Topics 1-5 & 13-15)
Draft Final Proposal
9/12/13
(Topics 1 & 2)
ISO Board
11/7/13
(Topics 1 & 2)
Revised Straw Proposal
11/8/13
(Topics 3-5 & 12-15)
Revised Straw Proposal
2/5/14
(Topics 4, 5, 13)
Draft Final Proposal
3/25/14
(Topics 4, 5, 13)
ISO Board
5/28-29/14
(Topics 4, 5)
BPM
(Topics 3, 15)
Withdrawn
(Topic 12)
GIDAP
reassessment
initiative
(Topic 14)
Draft Final Proposal
Date TBD
(Topic 13)
ISO Board
7/17-18/14
(Topic 13)

3 Stakeholder process next steps

Table 2 summarizes the anticipated stakeholder process schedule for these remaining three topics of the IPE initiative addressed in this paper.

Table 2 – Stakeholder process schedule

Step	Date	Milestone
Revised straw proposal (Topics 4, 5, 13)	February 5	Post revised straw proposal
	February 13	Stakeholder meeting (web conference)
	February 28	Stakeholder comments due
Draft final proposal[12] (Topics 4, 5, 13)	March 25	Post draft final proposal
	April 2	Stakeholder meeting (web conference)
	April 16	Stakeholder comments due
Board approval (Topics 4, 5)	May 28-29	ISO Board meeting
Draft final proposal (Topic 13)	(to be determined)	Post draft final proposal
	(to be determined)	Stakeholder meeting (web conference)
	(to be determined)	Stakeholder comments due
Board approval (Topic 13)	July 17-18	ISO Board meeting

4 Topics

This section presents the ISO's draft final proposals for Topics 4 and 5, and a second revised straw proposal for Topic 13, based on a consideration of stakeholder comments received on February 28 in response to the February 5 paper.

4.1 Topic 4 – Improve Independent Study Process

The purpose of the Independent Study Process (ISP) enhancement effort is to revisit the tests for independence and to align the process timeline with the overall ISP intent. To qualify under the ISP, the interconnection customer must provide, along with its interconnection request, an

[12] This paper includes a second revised straw proposal for Topic 13.

objective demonstration that inclusion in a queue cluster will not accommodate the desired commercial operation date (COD) for the generating facility. Under the existing process, an interconnection request submitted in the ISP will result in the generating facility having its electrical independence tested against the study results of projects in the most recently completed studies of the latest cluster as well as earlier ISP projects in the ISO queue. If the determination of electrical independence by the ISO and applicable participating transmission owners (PTOs) is not completed prior to the close of any given open cluster application window, the customer's ISP project will have to wait for the studies of the recently closed cluster application window to be far enough along to be able to determine its electrical independence against the projects in that latest cluster. The tariff revisions to improve the ISP will be made solely to the GIDAP, because all new requests by customers to take part in the ISP will be pursuant to the GIDAP.

4.1.1 ISP working group

In the June 3 issue paper the ISO proposed an ISP working group to take on the tasks outlined above. The PTOs perform the studies for reliability network upgrades under the direction of the ISO, and they perform the electrical independence test for projects seeking to enter the ISP. Consequently, the working group includes both engineers and participants with policy expertise from the PTOs and the ISO. This technical input is of vital importance to achieving a workable and technically sound resolution of the issues associated with the ISP. Additionally, participants from the generation development community with both technical and policy expertise were also encouraged to participate.

The ISP working group held bi-weekly meetings starting from July 29, 2013. The intent was to hold working group meetings on a bi-weekly basis until a final proposal is developed that has been vetted with the broader IPE stakeholder group. The ISP working group and the Fast Track working group typically held back-to-back working group meetings as most of the participants in one working group also participated in the other.

The ISP working group reviewed the existing process and identified the following areas as candidates for possible enhancement:

- Criteria for ISP eligibility
- Process and timeline enhancements
- Tests for electrical independence
- Clarification of behind-the-meter (BTM) expansion and its impact on the net qualifying capacity (NQC)

4.1.2 Stakeholder comments

On February 5, 2014 the ISO presented a revised straw proposal on this topic. Stakeholder comments received by February 28, 2014 are summarized below.

Pacific Gas and Electric Company (PG&E) –

PG&E supports the updated straw proposal. In particular, PG&E believes the CAISO's proposal to separately meter and trip behind-the-meter capacity expansions is an excellent solution to the deliverability/NQC status issue raised by LSA.

California Public Utilities Commission (CPUC) staff –

CPUC Staff support BTM expansion not impacting previously assigned deliverability status of a resource's pre-BTM expansion capacity. We believe that generation projects undergoing BTM expansion and independent study should be eligible to apply for additional deliverability available over the transmission network via the Annual Full Capacity Deliverability Option if this would be more efficient and timely than entering the next cluster study, provided that the project in question meets all reliability and other requirements applicable to customers seeking independent study, and to customers pursuing the Annual Full Capacity Deliverability Option.

ISO Response:

BTM expansion projects are not eligible for seeking Full Capacity Deliverability Status through the Annual Full Capacity (AFC) process. Allowing a BTM expansion project to go through the AFC Deliverability assessment would imply that the total output of the plant could exceed the originally studied Pmax. The BTM expansion process was designed to be relatively quick to implement, and as such does not allow for additional Network Upgrades. In order to meet these goals, the total output of the original project plus the BTM expansion project are capped at the original project's Pmax value while performing the reliability assessment. Thus the added capacity is not studied for reliability impacts in the same manner as other capacity additions on the system. Due to the limited nature of BTM studies the BTM expansion capacity cannot be increased without further reliability studies and the AFC Deliverability assessment cannot be used to increase the deliverability of the overall project.

Southern California Edison Company (SCE) –

In comments submitted on December 6, 2013, in response to the initial IPE Revised Straw Proposal on this topic, SCE stated its general agreement with the CAISO on refinements proposed up to that point in time regarding the ISP. SCE reaffirms its general support of the CAISO's proposed enhancements to improve the ISP. As an active participant in the ISP working group which helped develop the proposed ISP enhancements, SCE believes the latest proposal is generally a workable solution to address the major shortcomings of the current ISP process. However, SCE provides comments below in areas where it believes that further refinements are needed.

- Criteria for ISP eligibility: SCE has no further comment.

- Process and timeline enhancements: SCE concurs that if a combined System Impact Study (SIS) / Facility Study (FAC) agreement is executed, there is a significant savings in the time required to evaluate a project, and 120 calendar days should be sufficient time to complete both studies. However, 120 calendar days might not be sufficient time if the two studies are performed separately.
  If an Interconnection Customer (IC) seeking an ISP Interconnection, requests an SIS in order to assess its Interconnection Request (IR) before moving forward with an FAC, then it is necessary to identify the study duration for each of the studies. SCE proposes that the time allowed to perform the SIS be 90 calendar days and the duration to perform the FAC be 60-90 calendar days.

  Further, SCE appreciates the ISO including in the revised straw proposal the requirement proposed by SCE that the IC shall have no more than 90 calendar days to execute an Energy-Only GIA and that deferral of such time requirement is not allowed for a generating project studied through the ISP. Additionally, the ISO's willingness to clarify that an Energy-Only GIA will be amended when and if Full Deliverability studies are completed is helpful.

  ISO Response:

  ISP projects will be required to execute a combined System Impact Study (SIS) / Facility Study (FAC) agreement. This will be consistent with the intent of ISP to expedite the interconnection study.

- Tests for electrical independence. SCE has no further comment.
- Clarification on behind-the-meter ("BTM") expansion and its impact on net qualifying capacity "NQC"). SCE recommends that it be a requirement for BTM expansions that the expanded capacity be owned by the owning entity of the original generating facility (with a single Tax ID); and that the expansion could not be sold to a separate entity nor treated as a separate distinct project due to retail metering issues. In the event that the BTM expansion is for the purpose of sharing a generation tie-line, the configuration of mutual parties must be such that the Retail Service Provider's current Rules for Retail Metering are met. If there is a separate owner proposing the expansion, it is really a separate project and not an expansion of the original facilities. In such instances, the proposed project should be studied through the cluster interconnection process.

  ISO Response:

  The ISO agrees that BTM expansions are not eligible for separate ownership. With the joint operating constraints on the original plus expanded capacity being tied together, separate ownership could pose conflicting interests between separate owners and ISO Settlements does not allow this type of meter configuration with

multiple owners. Moreover, different ownership could pose opportunities to bypass the standard interconnection processes that the BTM process was not intended to facilitate. The ISO believes that this issue can be addressed through the BPM process.

Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (Six Cities) –

The Six Cities have no comments on the ISO's revised straw proposal for this topic at this time.

Large-scale Solar Association (LSA) –

LSA's comments on this issue are limited to the last topic listed above - Clarification on BTM expansion and its impact on NQC).

Enforcement of maximum output requirement

The Straw Proposal is somewhat confusing, as it simultaneously removes a requirement that BTM capacity be connected to a separate breaker but then imposes a requirement for an "automatic generation tripping scheme," which seems to be the same thing. During the stakeholder conference call about this element, the CAISO seemed to clarify that it would still require a plan from the developer to ensure that the combined maximum output of the original and BTM capacity would not exceed the Pmax of the original project, but that this assurance could be provided in another manner besides an automatic trip of the BTM capacity.

LSA supports additional flexibility in enforcing the maximum output limitation and requests that the CAISO clarify its intent more explicitly in the next proposal version.

ISO Response:

The ISO proposes to require an automatic generation tripping scheme as a means to guarantee that the total output of the plant never exceeds the originally studied Pmax. Further, the ISO proposes to allow the developer to choose how to implement this requirement; specifically, whether the tripping scheme is installed at the main plant breaker or at a separate breaker specific to the expansion capacity. Regardless, either option must ensure that total output of the plant never exceeds the originally studied Pmax. If the developer chooses not to connect the BTM expansion on a separate breaker, the automatic tripping scheme will have to trip the entire plant. Since in some cases it may not be practical to add a separate breaker for certain expansions, the ISO intends to eliminate the mandatory requirement for a separate breaker and give this choice to developers.

Deliverability of existing facility

LSA is very pleased to see that the CAISO has accepted LSA's prior comments and decided that the original project can retain its deliverability status after a BTM capacity addition, with the additional CAISO requirement that the BTM capacity be separately metered and have a separate Resource ID (i.e., be separately scheduled and settled).

However, LSA asks the CAISO to also be open to arrangements where BTM capacity is not separately metered but where the original project retains its deliverability status, with an NQC limit based on the deliverability for which the project was studied. For example, if a 100 MW solar project was studied at 85 MW in the Deliverability Assessment, a BTM capacity addition could safely be made without separate metering/scheduling as long as the maximum output is limited to the original 100 MW Pmax and the Qualifying Capacity does not exceed 85 MW.

ISO Response:

In order for the original project to preserve its deliverability status, the BTM expansion needs to have a separate resource ID and needs to be separately metered. Separately metered data by generator technology is required for forecasting purpose as well as for qualifying capacity calculations.

If the BTM expansion uses the same technology as the original project, then it may choose to interconnect without being metered separately, but the deliverability status of the entire project will then change from FCDS to PCDS. The requirement for the automatic tripping scheme, will still apply. The BTM capacity will not act as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the Interconnection Request. We have included this clarification in section 4.1.4.4 of the revised proposal.

Deliverability of BTM capacity

If the BTM capacity is separately metered and scheduled, LSA sees no reason why it cannot apply separately for deliverability under the annual Deliverability Study option. If (as LSA recommends above as an option) the BTM capacity is not separately metered/scheduled, the project should be allowed to apply to increase its NQC from the level studied before to a level that would award deliverability to the BTM capacity.

ISO Response:

BTM expansion projects are not eligible for seeking Full Capacity Deliverability Status through the Annual Full Capacity (AFC) process. Allowing a BTM expansion project to go through the AFC Deliverability assessment would imply that the total output of

the plant could exceed the originally studied Pmax. The BTM expansion process was designed to be relatively quick to implement, and as such does not allow for additional Network Upgrades. In order to meet these goals, the total output of the original project plus the BTM expansion project are capped at the original project's Pmax value while performing the reliability assessment. Thus, the added capacity is not studied for reliability impacts in the same manner as other capacity additions on the system. Due to the limited nature of BTM studies the BTM expansion capacity cannot be increased without further reliability studies and the AFC Deliverability assessment cannot be used to increase the deliverability of the overall project.

A BTM expansion cannot be counted towards an increase in the NQC of the original project because the original project has been granted deliverability "status" based on certain assumptions some of which are based on the size of a project. The deliverability assessment does not grant discrete "MW" of deliverability. It only grants a deliverability "status" for the entire project. No additional capacity can be counted towards an NQC increase unless it is studied for both deliverability and reliability. Therefore, if a developer wishes to expand its project in order to increase the NQC of its project, it should utilize the tariff mechanisms which include these comprehensive assessments (e.g., the cluster or non-BTM ISP study tracks).

<u>MMA requests</u>

LSA is puzzled by the Straw Proposal statement, and stakeholder conference call discussion, regarding the ability of developers to request BTM capacity additions through the MMA process, with use of the ISP required if there are any indications that a Network Upgrade (NU) of some kind might be needed.

First, this conclusion is contrary to CAISO statements in the Generation Interconnection Process Phase 2 (GIP-2) initiative where the BTM process was established, and contrary to statements of CAISO representatives in private meetings with developers that took place only recently.

Second, there is no apparent reason for the CAISO to take such a position. For example, the two possible issues of concern mentioned by SCE on the conference call – short-circuit duty (SCD) and Special Protection Schemes (SPSs) do not justify this position.

- The CAISO and PTOs already look at SCD concerns when assessing MMA requests today, so this is not a reason to reject the MMA approach.
- The CAISO and PTOs could easily check on whether the generation capacity limits for any SPS applicable to the existing project would be exceeded through the addition of the BTM capacity. Moreover, as pointed out by CalWEA on the conference call, since the combined output of the original and BTM capacity cannot exceed the level

studied for the original project, placing the SPS trip on the main breaker (to interrupt the capacity operating for both projects at that time) would not trip any more capacity than the Pmax of the original project.

Finally, if the MMA identifies any concerns at all – related to SCD, SPS, or in any other area where the CAISO or PTO are uncomfortable approving the request – then the request could be determined to be potential material and can then be processed through the regular interconnection-study process. The CAISO and PTO have complete discretion to make this determination, and this more rational approach would be far preferable to a blanket prohibition on use of MMA requests for BTM capacity additions.

ISO Response:

In ISO's response to stakeholder comments received on December 6, 2013, it was mentioned that "MMA is not intended to be used for adding capacity. Such expansions have to go through BTM expansion process". The ISO would like to clarify that this comment was intended for expansion at the existing generation facilities which have already achieved COD. Pursuant to CAISO tariff, Appendix DD, section 4.2.1.2(i)(2) "The behind-the-meter capacity expansion shall not take place until after the original Generating Facility has achieved Commercial Operation and all Reliability Network Upgrades for the original Generating Facility have been placed in service." Once a facility has gone into commercial operation it ceases to be involved with the interconnections process and the MMA process no longer applies.

It is not the intention of IPE Topic 4 to modify the existing MMA process as set forth in the ISO tariff.

Frontier Renewables (Frontier) –

Frontier's comments on this issue are limited to the last topic listed above - Clarification on BTM expansion and its impact on NQC. Frontier's comments cover three elements of the CAISO's BTM proposals – deliverability of the original facility, deliverability of the BTM capacity, and (of greatest concern) the ability to submit BTM addition requests through a Material Modification Assessment (MMA) request.

Frontier is considering addition of BTM capacity to one or more of its generation projects under development. Frontier has conducted extensive analysis of the potential for such capacity additions and met with CAISO executive management on November 26, 2013 to discuss this specific topic.

The CAISO representatives were very positive about the possibility of Frontier making this modification, and the discussion about the process for doing so was quite constructive. Frontier has been looking forward to working with the CAISO further and wants to ensure that the CAISO's implementation rules support such capacity additions, and are not modified to impede them.

Deliverability of existing facility

Frontier is very pleased to see that the CAISO has decided that the original project can retain its deliverability status after a BTM capacity addition, with the additional CAISO requirement that the BTM capacity be separately metered and have a separate Resource ID (i.e., be separately scheduled and settled).

However, Frontier has several concerns about this approach.

Frontier does not understand why production from the BTM capacity cannot be used to increase the NQC of the original project, as long as the original Pmax is not exceeded and the NQC is limited to the level that the original project was studied for. For example, if a project owner made an investment to increase the efficiency of the existing equipment such that the project's production increased in the hours when QC is calculated, the resulting higher NQC would apply (again, up to the level that the original project was studied for).

The fact that the additional project output in those hours comes from, e.g., energy previously produced by the project and stored using equipment installed under BTM provisions would not change the CAISO's ability to depend on the project overall to support load for Resource Adequacy purposes. If the tariff language for BTM additions does not support this concept, then the CAISO should request amendments that would.

This NQC enhancement should be available regardless of whether the BTM capacity is separately metered or not. If the project is separately metered, the CAISO can total the output of the two meters for purposes of calculating the overall QC. The CAISO should not care which part of the project is providing the energy during the applicable hours.

Finally, consistent with this position, Frontier believes that separate metering of the BTM capacity should be an option and not a requirement.

ISO Response:

Please refer to the response to LSA above under the "Deliverability for BTM Capacity" heading.

MMA requests

Frontier is surprised by the Straw Proposal statement, and stakeholder conference call discussion, regarding the ability of developers to request BTM capacity additions through the MMA process, with submission of a separate Interconnection Request (IR) and use of the ISP required only if there are any indications that a Network Upgrade (NU) of some kind might be needed. Frontier is concerned for the following reasons:

- Frontier was aware of the CAISO's statements in the GIP-2 process that BTM capacity additions could be proposed through the MMA process, and it sought and received

explicit confirmation at the meeting with CAISO executive management referenced above.

- During the meeting discussed above, the CAISO stated that the MMA process could be used for the contemplated BTM addition; in fact, the CAISO provided specific guidance for the contents of the MMA request, i.e., that the request should include details about the equipment, PSLF model, and protection schemes to limit Pmax to the studied output level.

Frontier asks the CAISO to confirm our understanding of the process. If any concerns are identified during the MMA analysis, the request would be determined to be potentially material, and it can then proceed through the regular interconnection-study process. This would allow projects with straightforward, no impact BTM additions to proceed through the MMA process rather than the costly and lengthy Independent Study Process.

If the ISP process is made a blanket requirement for BTM additions, which would both strengthen and stabilize the CAISO controlled grid as more renewable generators come online to meet state-mandated targets, that would severely discourage developers from pursuing them. In addition to the cost and time requirements generally, for practical purposes the requirement for a new IR (even if processed through the ISP) would jeopardize a project's ability to capture the Federal Investment Tax Credit that minimizes the cost burden to ratepayers.

ISO Response:

Please see the response to LSA above under the "MMA Requests" heading.

4.1.3 Proposed modifications to February 5 revised straw proposal

Based on stakeholder comments, the working group proposes to retain, without modification, the enhancements proposed in the February 5 revised straw proposal for two of the four areas listed previously in section 4.1.1 :

- Criteria for ISP eligibility
- Test for electrical independence

However, after a consideration of the stakeholder input received, the ISO is proposing modifications to the two of the four areas:

- Process and timeline enhancements
- Clarification on BTM expansion and its impact on NQC

A requirement to sign a combined study agreement for System Impact Study (SIS) and Facilities Study has been added the ISP timeline under section 4.1.4.2. In the original proposed timeline, 120 calendar days were provided for completion of System Impact Study (SIS) and Facilities Study after

the execution of an ISP study agreement. This combined study agreement is consistent with the intent of ISP to provide a shorter timeline for interconnection. For clarity, a complete draft final straw proposal is presented in the following section.

A clarification about requirement of separate metering and a new resource ID for the BTM expansion is added to section 4.1.4.4.

4.1.4 Draft final proposal

4.1.4.1 Criteria for ISP eligibility

Under the existing tariff, an interconnection customer that wishes to utilize the ISP must show that its desired COD is physically and commercially achievable by demonstrating that it satisfies at least two of the following criteria:

1. The interconnection customer has obtained, or has demonstrated the ability to obtain, all regulatory approvals and permits needed to complete construction in time to meet the generating facility's requested COD.
2. The interconnection customer is able to provide, or has demonstrated the ability to obtain, a purchase order for generating equipment specific to the proposed generating facility, or a statement signed by an officer or authorized agent of the interconnection customer demonstrating that the interconnection customer has a commitment for the supply of its major generating equipment in time to meet the COD through a purchase agreement to which the interconnection customer is a party.
3. The interconnection customer can provide reasonable evidence of adequate financing or other financial resources necessary to make the required interconnection financial security postings.[13]

The ISP working group recommends that all three criteria listed above must be satisfied (rather than only two of the criteria as under the existing tariff) and that the following two additional criteria must also be satisfied as part of the initial screening/validation process under the ISP:

4. The proposed POI cannot require any expansion, except for those upgrades already planned, and that will be in service by the time the proposed COD of the ISP project. The specific criteria are; the proposed point of interconnection must be to an existing facility on the ISO controlled grid or a transmission upgrade approved in the ISO transmission planning process (TPP) that has completed the permitting process and is currently under construction. The existing facility where the point of interconnection is proposed to be located must be able to accommodate the interconnection of the ISP project without requiring any expansion of the existing facility. The most updated

[13] ISO tariff appendix DD, section 4.1.1.

expected in-service date of any upgrade required to accommodate the proposed point of interconnection must be able to meet the proposed COD of the ISP project.

5. There is no network upgrade that is already part of an existing GIP/GIDAP or TPP plan, or that is known to the ISO or PTO through a study that is currently underway, that is needed to allow the project to reliably enter into commercial operation, is yet to be operational, and has a completion date that is later than the ISP's requested COD or is not yet fully permitted and currently under construction.

The proposed requirement to satisfy all five of these criteria is intended to provide greater assurances that projects seeking to exercise the option to be studied under the ISP truly have a need for this option rather than the standard interconnection process, have the ability to perform under this option, and the project's requested COD is achievable based on the requested point of interconnection and any network upgrades expected to be needed for the customer's project.

4.1.4.2 Process and timeline enhancements

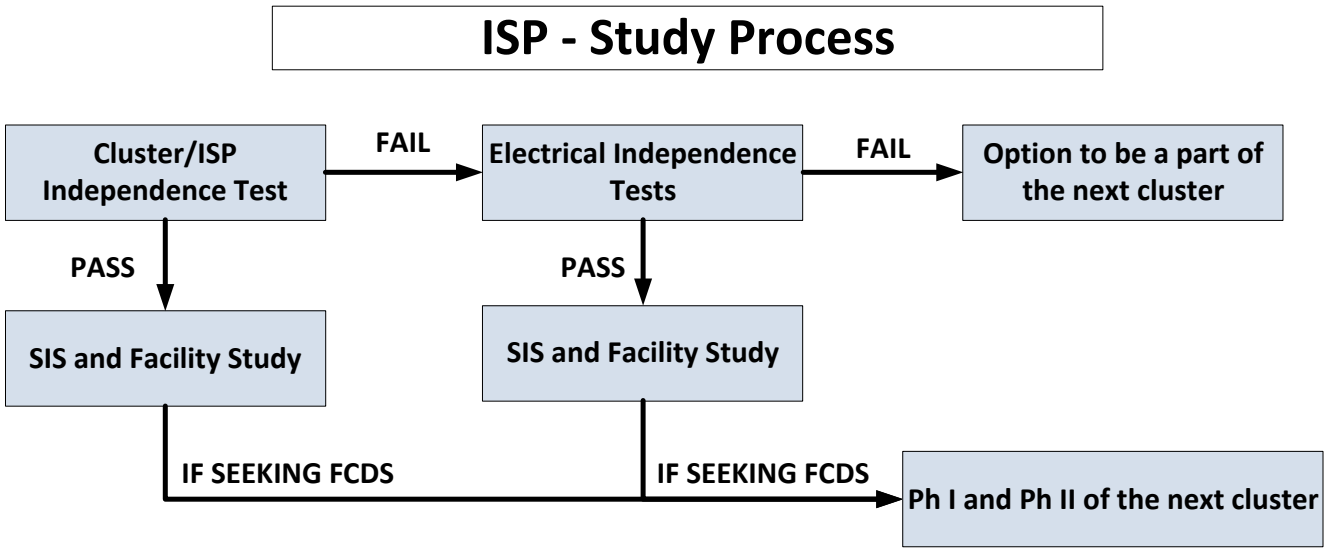
The following is a summary of enhancements proposed to the study process and timeline for projects which are deemed eligible for the ISP based on the criteria described in the previous section.

1. Cluster/ISP independence test – The working group recommends that an ISP project should be given an opportunity to go directly into a system impact study (SIS) if there are no other cluster projects or ISP projects under study in the study area, as defined in the current cluster study where the ISP project is seeking interconnection. If there are no other cluster projects that have yet to complete the phase II interconnection study process or other ISP projects that have yet to complete the SIS in the same cluster study area as the ISP project, then the ISP project will pass this test and will move forward with an SIS and a facilities study without having to satisfy the electrical independence test. After the SIS and facilities study are completed, the project will be eligible to start generator interconnection agreement (GIA) negotiations as an energy-only (EO) project.
2. Tests for electrical independence – If the ISP project is in a study area which has projects that have yet to complete the phase II interconnection study process or a SIS and thus fails the cluster/ISP independence test described above, then the phase I interconnection study results for the current cluster (*i.e.*, the last cluster which opened up before the ISP request was received) and/or SIS results of any previous ISP project in the same study area will be used to assess the electrical independence of the ISP project. If the ISP project passes all the tests for electrical independence (discussed below), then an SIS and facilities study will be performed. After the SIS and facilities study are completed, the ISP project will be eligible to start GIA negotiations as an EO project.

3. If the ISP project has requested FCDS or partial capacity deliverability status (PCDS), it will be studied for deliverability as part of the phase I and phase II interconnection studies for the next cluster (Next cluster refers to the cluster study performed for the queue cluster window that opens after the ISP FCDS request is received).
4. If an ISP project fails to satisfy any of the tests for electrical independence, it will be given an option to be part of the next cluster (Next cluster refers to the cluster study performed for the queue cluster window that opens after the ISP FCDS request is received) study or to withdraw.
5. A project requesting to participate in the ISP and seeking FCDS or PCDS will by default be an "Option A" project under the GIDAP and not be allowed to elect "Option B".
6. A project consisting of asynchronous generators that requests to participate in the ISP must provide 0.95 (lead/lag) power factor at the point of interconnection.
7. Following the completion of the SIS and facilities studies the ISO, Participating TO and interconnection customer shall meet the tariff timelines for GIA tendering, negotiation and execution of an Energy Only GIA consistent with Appendix D, Section 13. A deferral of such time requirement is not allowed for an ISP project. EO GIA will be amended to reflect Full Deliverability Study results whenever such studies are completed**.**

A simplified process flow diagram for a project in this improved ISP is provided in Figure 2:

Figure 2 – Proposed Process Enhancement to ISP



The following timeline is proposed for completing the SIS and facilities study:

- 30 calendar days to perform interconnection request validation and ISP eligibility screening
- 30 calendar days to perform the tests for electrical independence, once the necessary data becomes available (see below)
- 120 calendar days to complete the SIS and facilities study after the execution of an ISP Study Agreement (a combined study agreement needs to be signed by a project that wishes to participate in the ISP)

With respect to a project requesting to participate in the ISP in a study area with cluster projects in the current cluster, the timeline for conducting the tests for electrical independence will commence only when: (i) phase I interconnection study results of the current cluster are available and (ii) there are no ISP projects in the same study area that have not had their SIS completed.

ISP projects will be required to forego the suspension rights currently included in the ISO's pro forma GIAs.

Consider the following examples to further illustrate the process timeline.

Example 1: Consider an ISP request that is received in May 2014. If it passes the cluster/ISP independence test, then an SIS and facilities study will be performed using the latest available cluster base case and the ISP project will be eligible to interconnect as an EO project after signing its EO GIA, as early as Q4 of 2014. If the ISP project is seeking FCDS or PCDS, then it will be studied as an option A project as part of the next cluster (cluster 8) to receive its phase II interconnection study results as early as Q4 of 2016 and transmission plan deliverability (TPD) allocation as early as Q2 of 2017.

By comparison, under the existing process, an ISP request received in May 2014 will be tested for independence after the phase II interconnection study results for the current cluster (cluster 7) become available in Q4 of 2015. If the ISP project passes the tests, then an SIS and facilities study will be performed, after which the ISP project can potentially interconnect as an EO project. If the ISP project is seeking FCDS or PCDS, it will be studied as part of the phase II interconnection study for the next cluster (cluster 8) in Q4 of 2016 and will receive its TPD allocation in Q2 of 2017.

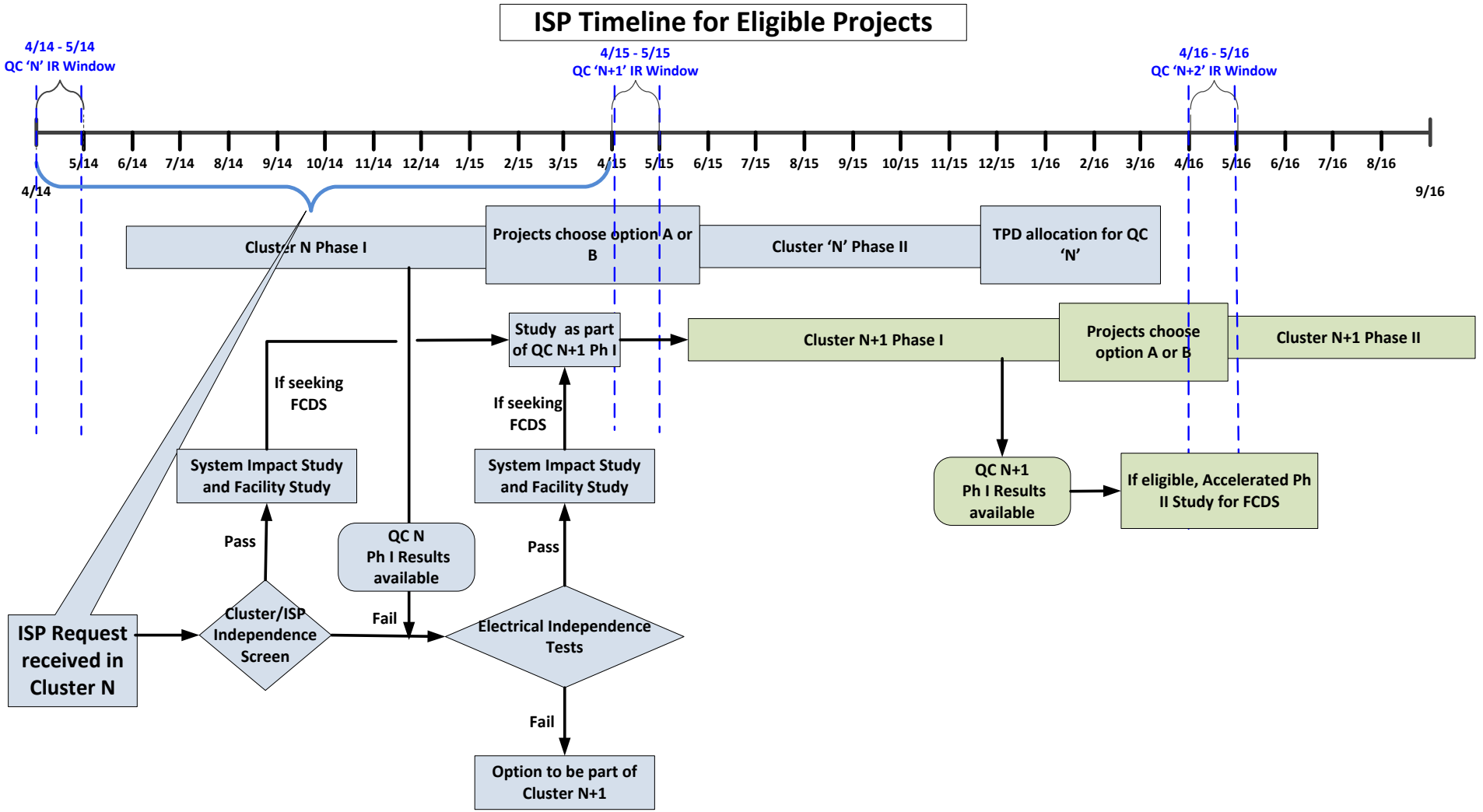
Example 2: Consider an ISP request that is received in May 2014. If it fails the cluster/ISP independence test, then the tests for electrical independence will be performed using the phase I interconnection study results for the current cluster (cluster 7) in Q1 of 2015. If the ISP project passes the tests for electrical independence, then an SIS and facilities study will be performed using the latest available cluster base case and the ISP project will be eligible to interconnect as an EO project after signing its EO GIA, as early as Q1 of 2015. If the ISP project is seeking FCDS or PCDS, then it will be studied as an option A project as part of the next cluster (cluster 8) to receive its

phase II interconnection study results as early as Q4 of 2016 and TPD allocation as early as Q2 of 2017.

By comparison, under the existing process, an ISP request received in May 2014 will be tested for independence after the phase II interconnection study results for the current cluster become available in Q4 of 2015. If the ISP project passes the tests, then an SIS and facilities study will be performed, after which the ISP project can potentially interconnect as an EO project. If ISP the project is seeking FCDS or PCDS, it will be studied as part of the phase II interconnection study for the next cluster in Q4 of 2016 and will receive its TPD allocation in Q2 of 2017.

Figure 3 illustrates the ISP timeline as enhanced by these proposals.

Figure 3 – Proposed ISP Timeline Enhancement



4.1.4.3 Tests for electrical independence

The ISP timeline is dependent on the timing of the tests for electrical independence. The existing tariff specifies that the electrical independence of a project submitted under the ISP needs to be tested based on the base case that is being used for the most recent queue cluster. Also, under the existing flow impact test, if the current queue cluster studies or earlier-queued ISP studies have not yet determined which transmission facilities are electrically impacted by the generating facility being tested require network upgrades, and the ISO cannot reasonably anticipate whether such transmission facilities will require network upgrades from other data, then the ISO will wait to conduct the independence analysis until sufficient information exists in order to make this determination.[14] This existing process can introduce delays and uncertainties in the commencement of tests for electrical independence. The ISO is therefore proposing to use the phase I interconnection study results of the current cluster to test for electrical independence.

The existing flow impact test against network upgrades does not delineate between reliability network upgrades (RNUs) and deliverability network upgrades (DNUs), and the ISO's practice has been to test against both. Testing for electrical independence based on DNUs is not required since a project requesting FCDS will go through a separate deliverability assessment.

Consistent with the existing tariff, the tests for electrical independence will be performed using the network upgrades identified or reasonably expected to be needed by generating facilities currently being studied in a queue cluster, or as a result of network upgrades identified or reasonably expected to be needed by earlier-queued generating facilities currently being studied through the ISP.

The following discussion and Figure 4 summarize the proposed changes to the tests for electrical independence:

a. Flow impact test:

   i. The flow impact will only be tested on RNUs where the need for the RNUs was related to flow concerns. Testing area delivery network upgrades (ADNUs) and local delivery network upgrades (LDNUs) for independence creates unnecessary hurdles to the interconnection of ISP projects as EO resources. Due to the nature of RNUs, it is expected that the flow impact test will seldom be required since RNUs are rarely related to flow concerns. If an RNU is related to flow concerns, the flow impact will be tested on the limiting elements that drive the need for RNUs. Flow impact on system protection scheme (SPS) RNUs will not be tested.

b. Short circuit test:

[14] ISO tariff appendix DD, sections 4.2, 4.2.1.1(i).

i. Under the existing tariff, an ISP project will pass the short circuit test if its short circuit contribution is less than 100 amperes.[15] This 100-ampere threshold can be too restrictive in certain areas and does not serve the intent of testing electrical dependence across a diverse topology. The working group recommends using a proportional threshold instead of an absolute threshold, as follows:

Short circuit contribution (in the aggregate with previous ISP projects in the study area) must be less than 5% of the available capacity and total fault duty on the identified breaker upgrade must be less than 80% of the nameplate capacity.

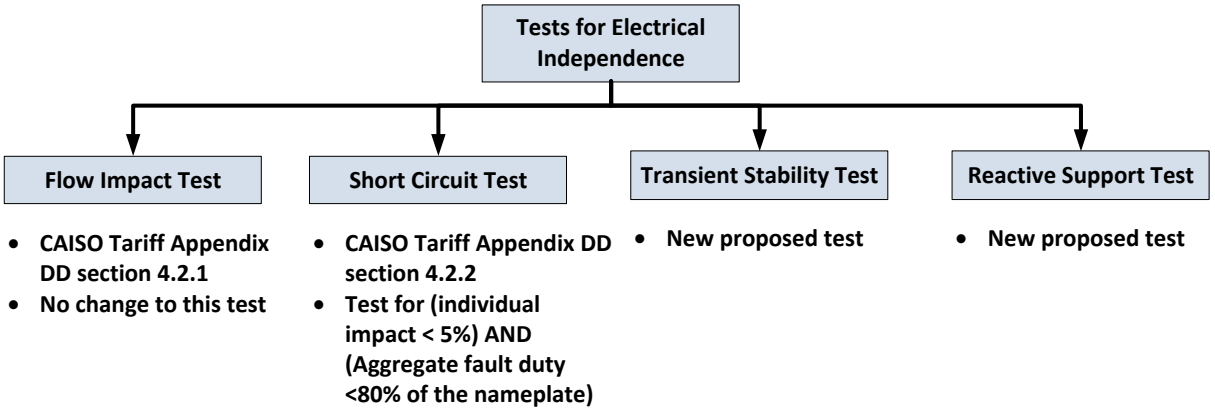
c. Transient stability test:

The working group proposes a new component of the tests for electrical independence test: if an ISP project is connecting in an area where transient stability issues are identified in the current cluster, then the project will fail the transient stability test.

d. Reactive support test:

The working group proposes a new component of the tests for electrical independence: if an ISP project is connecting in an area where reactive support needs are identified as RNUs in the current cluster, then the project will fail the reactive support test.

Figure 4 – Proposed Tests for Electrical Independence



Failure to pass the tests for electrical independence: If an ISP project fails any of the tests for electrical independence, the interconnection customer will be notified and given the option to participate in the next cluster as a non-ISP project.

[15] ISO tariff appendix DD, section 4.2.2.

4.1.4.4 Clarification on BTM expansion and its impact on the NQC

The working group proposes the following modifications/clarifications to the existing tariff section regarding the technical and business criteria that must be satisfied for study in the ISP of BTM expansion.[16] Note that although the ISO is presenting this information in the form of draft changes to its existing tariff language, the ISO is doing so only for ease of stakeholder review. The ISO will conduct a tariff stakeholder process for this and other IPE proposals in which the specific tariff language may be revised as necessary in order to best reflect the final proposal. Therefore, stakeholders are encouraged to provide general comments at this time in lieu of specific suggested edits to the tariff language.

1. Size of the expansion

The working group proposes clarifying the technical criteria regarding the size limits on the BTM expansion to read as follows:

> The total nameplate capacity of the existing Generating Facility plus the incremental increase in capacity does not exceed in the aggregate one hundred twenty-five (125) percent of the capacity studied for the project's initial interconnection request, before any BTM expansion, and the incremental increase in capacity ~~and~~ does not exceed, in the aggregate <u>including any prior expansions implemented pursuant to this section</u>, one hundred (100) MW.[17]

2. Requirement for a separate expansion breaker

The existing technical criteria require that the expanded capacity for the generating facility be placed behind a separate breaker (the expansion breaker) such that the expansion can be metered separately at all times.[18] The working group recommends that this requirement be removed, because the BTM expansion is required to be behind the main gen-tie breaker for the existing generating facility.

3. Deliverability status of BTM expansion and its impact on NQC

In order to eliminate confusion regarding the deliverability status of BTM expansion and the impact of BTM expansion on existing project's NQC, the working group proposes to modify and simplify BTM expansion process as follows:

- The existing generating facility will maintain the deliverability status (FCDS or EO) which existed before the BTM interconnection request.

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[16] ISO tariff appendix DD, section 4.2.1.2.

[17] ISO tariff appendix DD, section 4.2.1.2(i)(1).

[18] ISO tariff appendix DD, section 4.2.1.2(i)(3).

- The new BTM capacity will have EO status. The expanded capacity will have to be metered separately at all times and will have a new resource ID. If the BTM expansion project uses the same technology as the original project, then the interconnection customer may choose to add the BTM capacity without being metered separately, but the deliverability status of the entire project will then change from FCDS to PCDS. The requirement for the automatic tripping scheme mentioned below will still apply to this project. The BTM capacity will not act as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the BTM expansion Request.
- The interconnection customer will have to install an automatic generator tripping scheme to trip sufficient generation to ensure that the total output of the existing generating facility and the expansion facility does not exceed, at any time, the capacity studied in the project's initial interconnection request, before any BTM expansion.
- If the project considering BTM expansion desires to have FCDS with respect to its requested capacity expansion, then it should not proceed through the BTM expansion process. Instead, it should go through the ISP or cluster study process.

4.2 Topic 5 – Improve Fast Track

The purpose of this topic is to develop Fast Track (FT) screening criteria based on appropriate criteria for projects seeking FT treatment to interconnect to the ISO's higher voltage networked transmission system. The screening criteria will be developed consistent with direction provided by FERC in its Order 792,[19] which was issued on November 22, 2013, *i.e.*, after the issuance of the November 8 straw proposal. While clarification of the general tariff process is within the scope of this topic, the current 5 MW FT project size limitation will not be considered for revision.[20] The tariff revisions to improve the FT process will be made solely to the GIDAP, because all new requests by customers to take part in the FT process will be pursuant to the GIDAP.

4.2.1 FT working group

In the June 3, 2013 issue paper, the ISO proposed a FT working group to take on the tasks outlined above. The PTOs perform the studies for reliability network upgrades under the direction of the ISO, and they perform the screening process for projects seeking to qualify for FT treatment. Consequently, the working group includes both engineers and participants with policy expertise from the PTOs and the ISO. This technical input is of vital importance to achieving a workable and technically sound resolution to the issues associated with the FT process. Additionally, participants

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[19] *Small Generator Interconnection Agreements and Procedures*, 145 FERC ¶ 61,159 (2013) (Order 792).

[20] *See* ISO tariff appendix DD, section 5.1.

from the generation development community with both technical and policy expertise participated in the working group.

The working group held its first meeting on August 12, 2013 and has been generally meeting bi-weekly in an effort to develop a final proposal that can be vetted with the broader IPE stakeholder group.

4.2.2 February 5 revised straw proposal

The ISO's revised straw proposal from the February 5 paper is presented in the table below. The purpose of the proposed enhancements was to further clarify the intent of the screens and the customer option meeting for the FT study process.

Table 3 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
5.1, 3rd Paragraph.		Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with: (i) a completed Interconnection Request as set forth in Appendix 1 ; (ii) a non-refundable processing fee of $500 and a study deposit of $1,000; and	Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with: (i) a completed Interconnection Request as set forth in Appendix 1 ; (ii) a non-refundable processing fee of ***$1000*** and a study deposit of ***$25,000***; Discussion of Changes The work group has proposed some significant changes to the screening process. These changes will help further clarify the intent and the application of the screens. However, this does impact the amount of work and data required for the screening process. The proposed fees should address the additional workload required for the proposed screening process.
5.2		Within fifteen (15) Business Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the	Within ***Thirty (30) Business Days*** after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the

Table 3 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
		Interconnection Customer of the results, and shall include with the notification copies of the analysis and data underlying the Participating TO's determinations under the screens.	Interconnection Customer of the results, ***in a report that provides the details*** of the **initial review** ~~**analysis**~~ and data underlying the Participating TO's determinations using the screens. Discussion of Changes The group is proposing to increase the time required to perform the initial screening from 15 to 30 Business days. This will ensure that the ISO and PTO have enough time to screen the fast track project for any potential issues. The group is also proposing to issue a report that will provide the details around the application of the screens.
5.3	**5.3.1.2**	For interconnection of a proposed Generating Facility to a radial transmission circuit, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.	For interconnection of a proposed Generating Facility to a radial transmission circuit **under CAISO control**, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a PTO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line. ***This screen will not be required for a proposed interconnection of a Generating Facility to a radial line with no load.*** ***In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen.*** Discussion of Changes The proposal to use the latest Generation interconnection Phase I/ Phase II study base case eliminates the confusion about the type of base case needed for the

Table 3 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
			analysis.
Proposed Additional Screens			
	5.3.X1	None	The proposed Generating Facility must interconnect to an existing substation. The proposed interconnection: • Shall be subject to availability of **vacant switch rack position.**~~,~~ • Taps to an existing transmission line shall not be acceptable and the project will fail the screen. **Discussion of Changes** **The telecommunication requirement, as specified in the November 8 straw proposal, could not be determined until the completion of the facility study. The screen was updated to address the issue.**
	5.3.X3	None	The proposed Generating Facility, in the aggregate with other Generating Facilities interconnected to the same transmission circuit **on an existing substation**, shall not cause the Power flow on any CAISO-controlled facility to increase by 5 percent, and shall not exceed 80 percent of the same facility's normal rating. Power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen. **Discussion of Changes** **This screen was further modified to ensure that the proposed FT interconnection is on an existing substation. The screen addresses the scope of application to all the CAISO controlled facilities.**
5.3.3.		If the proposed interconnection fails the screens and no Upgrades are reasonably anticipated, but the CAISO and Participating TO determine that the Generating Facility may nevertheless be	If the proposed interconnection fails the screens ***then, in accordance with section 5.2, the ISO and applicable Participating TO will provide the Interconnection Customer with copies of all data and***

Table 3 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
		interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within Fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.	***initial review documentation~~analyses~~ underlying this conclusion. Also, in accordance with section 5.4, the ISO and Applicable Participating TO will offer to convene a Results meeting***. Discussion of Changes It was hard for the group to think of a potential scenario that fits the situation described in this provision. The proposed language better addresses the consequences of failing the screens.
5.4		Customer Options Meeting	Change the name to **Results meeting**.
	5.5.1	Within ten (10) Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will determine if the Small Generating Facility can be interconnected safely and reliably.	Within **Ninety (90)** ~~**Fifteen (15)**~~Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will determine if the Small Generating Facility can be interconnected safely and reliably. ***If a Generating Facility has passed the screens set forth in Section 5.3, the ISO and Applicable Participating TO shall perform a facilities study for that Generating Unit.*** Discussion of Changes The WG determined that to interconnect a FT project that passes the screens a facilities study will be needed to define the scope of the interconnection that will be reflected in the SGIA. The Supplemental Review section of the tariff does not specify the types of studies that would be offered to be performed when a FT project fails the screens. The WG considered defining the studies as being similar to system impact and facility study, and/or a hybrid of the two studies. While the tariff will not be changed to define the type of studies to be performed the timeline is proposed to be extended to **90** ~~**15**~~Business days to accommodate the type of studies envisioned.

4.2.3 Stakeholder comments

In the February 28 comments received, stakeholders did not provide specific comments on the revised straw proposal as presented above in Table 3. However, stakeholders did express general support for the ISO's proposed approach to comply with Order 792 and expressed interest in commenting on the associated proposed tariff language to comply with Order 792 as it is developed.

4.2.4 FERC Order 792

On November 22, 2013, FERC issued Order 792 directing revisions to FERC's *pro forma* small generator interconnection agreement (SGIA) and small generator interconnection procedures (SGIP). Order 792 requires transmission providers to implement, among others, the following SGIP/SGIA reforms:

- Provide prospective interconnection customers with the opportunity to request a pre-application report;[21]
- Apply new fast track interconnection eligibility thresholds;[22]
- Revise the customer options meeting and supplemental review process following failure of a fast track screen;[23]
- Permit interconnection customers to provide written comments on any required upgrades in the facilities study;[24]
- Account for the interconnection of storage devices under small generator interconnection procedures;[25]
- Revise the *pro forma* SGIP to require interconnection customers wishing to interconnect using Network Resource Interconnection Service to do so under the large generator interconnection procedures (LGIP) and execute a large generator interconnection agreement (LGIA).[26]

Order 792 requires each public utility transmission provider to submit a compliance filing within six months of the effective date of Order 792, *i.e.*, by August 3, 2014.[27] Order 792 states that, in cases

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21 Order 792 at PP 28-82.

22 *Id.* at PP 83-111.

23 *Id*. at PP 112-89.

24 *Id*. at PP 190-210.

25 *Id*. at PP 223-32.

26 *Id*. at PP 233-37.

27 *Id*. at P 269. Order 792 became effective on February 3, 2014. *See* 78 Fed. Reg. 73240 (Dec. 5, 2013).

where provisions in public utility transmission providers' existing SGIPs and SGIAs have previously been found by FERC to be consistent with or superior to the *pro forma* SGIP and SGIA, the public utility transmission providers must either comply with Order 792 or demonstrate that the previously approved provisions are consistent with or superior to the *pro forma* SGIP and SGIA as modified in Order 792.[28]

As the ISO will explain in its filing to comply with Order 792, the ISO believes that at least some provisions in its existing tariff already comply with or are superior to the Order 792 reforms. Of importance to any compliance filing is the fact that the ISO no longer has separate interconnection procedures for new interconnection requests by small generators. Instead, the ISO's interconnection procedures set forth in appendix DD of the ISO tariff apply to all new interconnection requests by both large and small generators. In the paragraphs below, the ISO sets forth a proposal to comply with the directives of Order 792. In comments, stakeholders have generally supported this approach or withheld comment pending release of draft tariff language to comply with Order 792.

4.2.4.1 Pre-application report process

Order 792 directed each public utility transmission provider to include tariff language regarding a pre-application report process that allows prospective interconnection customers to request a pre-application report.[29] The ISO proposes to incorporate certain language adopted by Order 792 governing the pre-application report process into appendix DD of the ISO tariff.[30] This language will seek to incorporate information categories identified in Order 792 that apply to a networked transmission system as opposed to a radial distribution circuit. The ISO proposes to specify in the tariff language that the pre-application report will only apply to developers considering the interconnection of resources no larger than 20 MW.

4.2.4.2 Fast track eligibility

In Order 792, FERC adopted fast track interconnection eligibility thresholds that (1) modify fast track eligibility for inverter-based machines based on individual system and generator characteristics; (2) limit eligibility for lines below 5 kV; and (3) make all projects interconnecting to lines greater than 69-kV ineligible for the fast track process.[31] Order 792 maintains a 2 MW eligibility threshold for both synchronous and induction machines.[32]

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[28] Order 792 at P 270.

[29] *Id.* at PP 28-82.

[30] *See* Order 792 appendix C, section 1.2.

[31] Order 792 at PP 102-07.

[32] *Id*. at P 106.

Appendix DD of the ISO's existing tariff (the GIDAP) provides that an interconnection customer may request interconnection of a proposed generating facility under the fast track process if the facility is no larger than 5 MW and is requesting energy-only deliverability status.[33] The tariff also requires that the interconnection customer's resource meet the codes, standards, and certification requirements of appendices 9 and 10 of appendix DD , or that the applicable participating transmission owner notify the ISO that it has reviewed the design for or tested the proposed resource and has determined that the proposed facility may interconnect consistent with reliability criteria and good utility practice.[34] Tariff appendix DD also permits an existing resource to take advantage of the fast track process if it is reconfiguring or repowering in a manner that increases the gross generating capacity by not more than 5 MW.[35] The ISO is not proposing any changes to its current fast track eligibility thresholds because these tariff provisions are more inclusive than the fast track eligibility thresholds adopted in Order 792. The ISO believes, therefore, that these thresholds are consistent with or superior to those adopted in Order 792.

4.2.4.3 Customer options meeting and supplemental review process

In Order 792, FERC adopted reforms to the customer options meeting and supplemental review process following an interconnection customer's failure of a fast track screen. These reforms require transmission providers to apply three supplemental screens to assess if a fast track interconnection process is still possible: (1) a minimum load screen; (2) a power quality and voltage screen; and (3) a safety and reliability screen.[36] The minimum load screen assesses if the aggregate generating capacity on a line section, including the proposed small generating facility, is less than 100 percent of minimum load.[37] A transmission provider need not perform the minimum load screen if data are unavailable or if it is unable to calculate, estimate, or determine minimum load.[38] Sections 2.4.4.2 and 2.4.4.3 in the *pro forma* SGIP language adopted by FERC in Order 792 describe the power quality and voltage as well as the safety and reliability screens.[39] Order 792 provides that the interconnection customer can select the order in which the transmission provider conducts the screens.[40] Under Order 792, an interconnection customer is responsible for the actual costs of conducting the supplemental review. The transmission provider must provide the

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[33] ISO tariff appendix DD, section 5.1.

[34] Appendix 9 identifies various standards and codes. Appendix 10 relates to certification of equipment packages.

[35] ISO tariff appendix DD, section 5.1.

[36] Order 792 at P 117.

[37] *Id.* at PP 141-48.

[38] *Id*. at P 144.

[39] *Id.* at PP 156-61 and appendix C.

[40] *Id.* at PP 164, 170-72.

interconnection customer with a good faith estimate of the cost to perform the supplemental review, and the interconnection customer must pay this amount as a deposit in advance of the supplemental review.[41]

As described above, in the February 5 revised straw proposal the ISO proposed refinements to both its fast track screens that comprise the initial review as well as the supplemental review, if an interconnection customer fails the fast track screens. As described in section 4.2.5 of this paper, the ISO is proposing to modify the fee and timeframes associated with the initial review under the fast track interconnection process. For fast track screens relying on the peak load on a radial transmission circuit, the ISO is proposing to modify the source of this data if no telemetry on the circuit exists and to eliminate this screen when no load on the circuit exists. The ISO is also proposing to eliminate an existing screen involving the interconnection of a proposed generating facility to the load side of spot network protectors. In connection with the ISO's screen involving the maximum fault current on the transmission circuit, the ISO is proposing to reduce the maximum threshold to ensure existing relay settings and coordination are not adversely affected due to the proposed resource interconnection. As part of another screen, the ISO is also proposing to reduce the threshold of the short circuit interrupting capability associated with the proposed resource interconnection and the ISO is proposing to modify an existing fast track screen to account for reliability limitations of existing transmission circuits. Finally, the ISO is proposing new screens relating to the need for the interconnection to occur at existing facilities and the need to not violate ISO voltage standards or increase power flows on a facility's circuit by more than 5 percent and exceed 80 percent of the facility's normal rating.

Order 792 also articulated specific processes to follow the supplemental review if (1) the proposed interconnection passes the supplemental review screens and does not require construction of facilities by the transmission provider on its own system; (2) the review identifies interconnection facilities or minor modifications to the transmission provider's system for the proposed interconnection to pass the supplemental review screens; and (3) the proposed interconnection requires more than interconnection facilities or minor modifications to the transmission provider's system to pass the supplemental review screens.[42] In the first circumstance, the proposed interconnection passes the supplemental review screens and the interconnection customer receives an interconnection agreement within ten business days. In the second circumstance, the proposed interconnection passes the supplemental review screens, and, if the interconnection customer agrees to pay for the modifications, the interconnection customer receives an interconnection agreement within 15 business days of receiving written notification of the supplemental review results. In both instances, the ISO believes further assessment will be

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[41] *Id*. at PP 170-72.

[42] *Id*. at PP 181-88.

necessary by the Participating TO to identify interconnection facilities. The ISO will propose language to accommodate that assessment, including the additional time to ensure the assessment is complete before providing the interconnection customer with an interconnection agreement. This assessment will ensure the interconnection customer only pays for the facilities needed to complete the interconnection in a safe and reliable manner. In the third circumstance, the proposed interconnection does not pass the supplemental review screens and must continue to be evaluated under the study process.

4.2.4.4 Opportunity to submit comments on any required upgrades in the facilities study

In Order 792 directed transmission providers to permit interconnection customers to provide written comments on any required upgrades in the facilities study.[43] The ISO tariff currently provides an opportunity for the interconnection customers to submit written comments on both the phase I and phase II interconnection study reports.[44] The ISO is not proposing any changes to this tariff language. The ISO believes its existing tariff is consistent with or superior to the directive adopted in Order 792. The ISO also plans to extend this right for an interconnection customer to submit written comments in response to a feasibility study performed as part of the independent study process.

4.2.4.5 Account for the interconnection of storage devices under small generator interconnection procedures

Order 792 directed transmission providers to specifically define electric storage devices as generating facilities that can take advantage of generator interconnection procedures.[45] Order 792 also directed that transmission providers should measure the capacity of a small generating facility based on the capacity specified in the interconnection request, which may be less than the maximum capacity that a device is capable of injecting into the transmission provider's system. The ISO plans to incorporate language into its tariff as directed in Order 792, into Appendix A of the ISO tariff. The ISO will also amend the definition of generating facility in appendices EE and FF, which contains the *pro forma* SGIA and LGIA subject to appendix DD.

4.2.4.6 Require interconnection customers wishing to interconnect using network resource interconnection service to do so under the LGIP and execute the LGIA

Order 792 directed each transmission provider to require an interconnection customer wishing to interconnect a small generating facility using network resource interconnection service to do so under the transmission provider's LGIP and to execute an LGIA.[46] As discussed above, the ISO has

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[43] Order 792 at PP 203-09.

[44] ISO tariff appendix DD, sections 6.7, 8.7.

[45] Order 792 at PP 227-31.

[46] *Id*. at PP 285-86.

consolidated its small and large generator interconnection procedures in tariff appendix DD. Also, section 2.4.2 of appendix DD allows an interconnection customer to connect its generating facility to the ISO grid and be eligible to deliver the resource's output using the available capacity of the ISO grid. The ISO is not proposing any changes to this language, and the ISO believes its existing tariff is consistent with or superior to the directive adopted in Order 792.

4.2.5 Draft final proposal

The ISO's final revised straw proposal is presented in the table below. This is a comprehensive proposal and captures all the changes that we have proposed in the process. Any updates to the screens, as reported in the February 5 revised straw proposal (see section 4.2.2 of this paper) are presented in red font and denoted with either underline for new language or strikeout for deletions. Two new sections (5.3.4 & 5.4.1) have been added to the proposal as well. The purpose of these changes is to further clarify the intent of the screens and the customer option meeting for the FT study process.

Table 4 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
5.1, 3rd Paragraph.		Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with: (i) a completed Interconnection Request as set forth in Appendix 1 ; (ii) a non-refundable processing fee of $500 and a study deposit of $1,000; and	Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with: (i) a completed Interconnection Request as set forth in Appendix 1 ; (ii) ~~a non-refundable processing fee of ***$1000*** and~~ a study deposit of ***$25,000***; Discussion of Changes The work group has proposed some significant changes to the screening process. These changes will help further clarify the intent and the application of the screens. However, this does impact the amount of work and data required for the screening process. The nonrefundable processing fees has been eliminated, but the study fee is same as the February 5th proposal. ~~**The proposed fees should address the additional**~~

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
			~~**workload required for the proposed screening process**~~. The study deposit is intended to take care of the modified screening process and the proposed Facility study. The Facility studies will only be performed if the project passes the initial screening process, as clarified in section 5.3.2 of the paper, or as part of a supplemental review study.
5.2		Within fifteen (15) Business Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the Interconnection Customer of the results, and shall include with the notification copies of the analysis and data underlying the Participating TO's determinations under the screens.	Within ***Thirty (30)*** ~~***Business***~~ ***Calendar Days*** after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.3 below, shall notify the Interconnection Customer of the results, ***in a report that provides the details*** of the initial review and data underlying the Participating TO's determinations using the screens. Discussion of Changes The group is proposing to increase the time required to perform the initial screening from 15 Business Day to 30 ~~Business~~ Calendar days. The time proposed in our February 5th proposal was 30 Business days which has been changed to 30 Calendar days now .This will ensure that the ISO and PTO have enough time to screen the fast track project for any potential issues. The group is also proposing to issue a report that will provide the details around the application of the screens.
5.3	**5.3.1.2**	For interconnection of a proposed Generating Facility to a radial transmission circuit, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a Participating TO's electric	For interconnection of a proposed Generating Facility to a radial transmission circuit **under CAISO control**, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.3.1.2, a line section shall be considered as that portion of a PTO's electric system

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
		system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.	connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line. ***This screen will not be required for a proposed interconnection of a Generating Facility to a radial line with no load.*** ***In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen.*** Discussion of Changes The proposal to use the latest Generation interconnection Phase I/ Phase II study base case eliminates the confusion about the type of base case needed for the analysis.
	5.3.1.3	For interconnection of a proposed Generating Facility to the load side of spot network protectors, the proposed Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 percent of a spot network's maximum load or 50 kW. For purposes of this Section 5.3.1.3, a spot network shall be considered as a type of distribution system found in modern commercial buildings for the purpose of providing high reliability of service to a single retail customer.	***Eliminate this screen.*** Discussion of Changes This screen deals with the interconnection of generation facility on the load side of the spot network protector. We are **proposing to remove the screen** from the current FT screening process. The current screen is not appropriate for the interconnection of generators to an ISO controlled facility. It is more suitable for interconnection at distribution level voltages.
	5.3.1.4	The proposed Generating Facility, in aggregation with other generation on the transmission circuit, shall not contribute more than 10 percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.	The proposed Generating Facility, in aggregation with other ***active FT*** projects on the transmission circuit, shall not contribute more than ***5 percent*** to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership. ***The short circuit study data from recently completed Queue Cluster***

Table 4 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			studies (Phase I/ Phase II) will be utilized to perform the scree in this Section. Discussion of Changes The proposed 5% threshold provides adequate margin to ensure existing relay settings and coordination are not adversely affected due to the proposed generation in this high level screening process. The Typical margin is 120% which factors in the CT, relay and other modeling errors. The existing 10% limit infringes on the typical margins, and could lead to relay misoperations. The lower threshold also ensures safety and reliability in absence of a detailed short circuit study.
	5.3.1.5	The proposed Generating Facility, in aggregate with other generation on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5 percent of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds 87.5 percent of the short circuit interrupting capability.	The proposed Generating Facility, in aggregate with other generation on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed ***80 percent*** of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds ***80 percent*** of the short circuit interrupting capability. ***The short circuit study data from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform the scree in this Section*** Discussion of Changes The proposed 80 percent threshold provides additional margin to account for the X/R multiplier. This threshold also ensures safety and reliability in absence of a detailed short circuit study.
	5.3.1.6	The Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Generating Facility proposes to interconnect shall not exceed 10 MW in	The Generating Facility, shall not be permitted to interconnect pursuant to the process set forth in this Section 5 in an area where there are known • transient stability limitations; • *voltage & thermal limitations; or*

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
		an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the Point of Interconnection).	• *any other known reliability limitations (e.g., existing or new Special Protection Systems)* to generating units located in the general electrical vicinity (*e.g.*, three or four transmission busses from the Point of Interconnection). Discussion of Changes The existing 10 MW threshold was removed and the additional reliability criteria for screening purposes are proposed. This is to ensure safety and reliability of the system in the absence of technical studies.
Proposed Additional Screens			
	5.3.X1	None	The proposed Generating Facility must interconnect to an existing substation. The proposed interconnection: • Shall be subject to availability of **vacant switch rack position.**~~,~~ • Taps to an existing transmission line shall not be acceptable and the project will fail the screen. **Discussion of Changes** **The telecommunication requirement, as specified in the November 8 straw proposal, could not be determined until the completion of the facility study. The screen was updated to address the issue.**
	5.3.X2	None	The proposed Generating Facility, in the aggregate with other Generating Facilities interconnected to the same transmission circuit, shall not cause the violation of ISO voltage standards, per ISO planning guidelines, on any CAISO controlled facility. Power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen.
	5.3.X3	None	The proposed Generating Facility, in the aggregate with other Generating Facilities interconnected to the same transmission

Table 4 – Revised straw proposal to improve the FT process

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			circuit **on an existing substation**, shall not cause the Power flow on any CAISO-controlled facility to increase by 5 percent, and shall not exceed 80 percent of the same facility's normal rating. Power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen. **Discussion of Changes** **This screen was further modified to ensure that the proposed FT interconnection is on an existing substation. The screen addresses the scope of application to all the CAISO controlled facilities.**
5.3.2		If the proposed interconnection passes the screens and no Upgrades are reasonably anticipated, the Interconnection Request shall be approved. Within fifteen (15) Business Days thereafter, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.	Discussion of Changes The WG determined that to interconnect a FT project that passes the initial screens, the CIASO and PTO will need to conduct an assessment to define the scope of the interconnection that will be reflected in the SGIA. The initial screens do not specify the types of studies that the CAISO and PTO would perform when a FT project passes the initial screens. The WG considered defining the studies as being similar to a facility study. The timelines to perform this assessment may require more time before providing the interconnection customer with an interconnection agreement.
5.3.3.		If the proposed interconnection fails the screens and no Upgrades are reasonably anticipated, but the CAISO and Participating TO determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within Fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.	If the proposed interconnection fails the screens ***then, in accordance with section 5.2, the ISO and applicable Participating TO will provide the Interconnection Customer with copies of all data and initial review documentation underlying this conclusion. Also, in accordance with section 5.4, the ISO and Applicable Participating TO will offer to convene a ~~Results meeting~~*** **Customer Options meeting**. Discussion of Changes

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
			It was hard for the group to think of a potential scenario that fits the situation described in this provision. The proposed language better addresses the consequences of failing the screens. Also the proposal to change the name of customers option meeting to results meeting has been dropped.
5.3.4		If the proposed interconnection passes the screens and Upgrades are reasonably anticipated, the CAISO and Participating TO shall provide the Interconnection Customer with the opportunity to attend a customer options meeting as described in Section 5.4.	**We are proposing to eliminate this section.** Discussion of Changes The modifications to the screens were developed to ensure that no NUs would be reasonably anticipated if a project passes all screens. Modified section 5.3.2 should be sufficient to address projects that pass all screens.
5.4		Customer Options Meeting	~~Change the name to **Results meeting**.~~ Discussion of Changes The proposal to change the name of customers option meeting to results meeting has been dropped. This is to be consistent with the order 792 process nomenclature.
5.4.1		Offer to perform facility modifications or modifications to the Participating TO's electric system (*e.g.*, changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system;	**We are proposing to eliminate this section.** Discussion of Changes The proposal to include facility study before and during the supplemental study process will address the requirements of this screen.
	5.5.1.	Within ten (10) Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will determine if the Small Generating Facility can be interconnected safely and reliably.	***The ISO and PTO will perform an assessment to identify the upgrades required for a safe and reliable interconnection of the project.*** **The Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution after the completion of this assessment.** Discussion of Changes ~~**The WG determined that to interconnect a FT project that passes the screens a facilities study will be needed to define the scope of the interconnection that**~~

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	**Appendix DD-Subsection No.**	**Current Tariff Language**	**Proposed Tariff Language**
			~~will be reflected in the SGIA.~~ The Supplemental Review section of the tariff does not specify the types of studies that would be offered to be performed when a FT project fails the screens. The WG considered defining the studies as being similar to system impact and facility study, and/or a hybrid of the two studies. ~~While the tariff will not be changed to define the type of studies to be performed the timeline is proposed to be extended to 90 15Business days to accommodate the type of studies.~~

4.3 Topic 13 – Clarity regarding timing of transmission cost reimbursement

4.3.1 Background

On November 30, 2011, the ISO filed proposed tariff revisions to its generator interconnection process in FERC Docket No. ER12-502 following the completion of the GIP 2 stakeholder process. Item #6 in the GIP 2 effort addressed repayment of interconnection customer funding for network upgrades associated with a phased generating facility. The ISO tariff provisions to implement item #6, contained in section 12.3.2.2 of appendix Y, stated that upon commercial operation of a phase of a generating facility, the generator is entitled to repayment of the costs of the network upgrades associated with that phase, provided that the network upgrades are in-service. However, the ISO did not explicitly include a similar "in-service" requirement for repayment in the tariff appendix Y provisions regarding the repayment of network upgrades for non-phased facilities (section 12.3.2.1), which refer only to the requirement that a generator have achieved commercial operation in order to qualify for repayment of network upgrade costs funded by that generator.[47]

[47] A phased generating facility is a generating facility that is structured to be completed and to achieve commercial operation in two or more successive partial implementations or phases that are specified in the generator interconnection agreement, such that each phase comprises a portion of the total megawatt generation capacity of the entire generating facility. In contrast, a non-phased generating facility is a generating facility that is structured to be completed and to achieve commercial operation in its entirety at one time.

In the GIP 2 proceeding, LSA and the California Wind Energy Association ("CalWEA") both urged FERC to reject the ISO's proposed in-service requirement for repayment of network upgrade costs for phased facilities. These entities argued that this requirement violated FERC precedent, reasoning that the FERC has never required any other conditions to repayment other than commercial operation of the generator.

In its January 30, 2012 order on the GIP 2 tariff amendment, FERC rejected this argument, in particular the notion that "the achievement of commercial operation is the sole condition required before an interconnection customer becomes eligible for repayment."[48] Instead, FERC explained that in order to ensure that an interconnection customer "bears an appropriate level of risk that network upgrades associated with its generating facility may become unnecessary should the interconnection customer's facility becomes commercially infeasible, the Order No. 2003 series of orders required as a general policy that repayment begin once transmission service to deliver the output of the interconnection customer's generating facility is provided."[49] Because it found that repayment of network upgrades is appropriately tied to the utilization of the transmission provider's network, FERC concluded that the ISO's proposal to require that network upgrades associated with a particular phase be in service prior to the generator being eligible to receive repayment for the costs of those upgrades was just and reasonable and consistent FERC's interconnection policies.

Despite the fact that FERC decided this matter in the context of phased facilities, FERC did not state or suggest that its reasoning was limited to phased facilities, nor does the ISO believe there is any logical reason that FERC's reasoning should be so limited. As with a phased facility, if certain upgrades associated with a non-phased facility have not been placed in service, those upgrades are not being utilized by the generator. Therefore, consistent with FERC's reasoning that the repayment of network upgrades is appropriately tied to the utilization of those upgrades, the ISO does not believe there is a sound basis for retaining the current rule that non-phased generators need only achieve commercial operation in order to be eligible for repayment for all network upgrade costs up-front funded by the generator.

Although the ISO explained in pleadings submitted in the GIP 2 proceeding that it interpreted the tariff provision regarding non-phased facilities as inherently including an in-service requirement, FERC, in a subsequent order on rehearing and clarification of the original GIP 2 order, rejected this interpretation.[50] FERC stated that the "plain language" of the ISO tariff provides that eligibility for repayment for non-phased generators is based solely on the commercial operation date of the

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[48] *California Independent System Operator Corp.*, 138 FERC ¶ 61,060, at P 53 (2012).

[49] *Id*.

[50] *California Independent System Operator Corp.* 140 FERC ¶ 61,168 at P 7 (2012).

generator. FERC stated that if the ISO interprets this provision differently, the ISO should "file revised tariff language to clarify the timing of refunds associated with a non-phased project."[51]

Based on FERC's clarification in the GIP 2 proceeding, the ISO proposed, in its April 12, 2013 tariff amendment in FERC Docket No. ER13-1274, to revise article 11.4.1 of the *pro forma* LGIAs contained in tariff appendices CC and EE to remove existing language requiring an interconnection customer with a non-phased generating facility to wait until the in-service date of corresponding network upgrades prior to being entitled to repayment for the cost of those network upgrades.[52] The ISO explained in that proceeding that its proposed changes to article 11.4.1 of appendices CC and EE would only serve to implement FERC's GIP 2 clarification order and remove any ambiguity from the ISO tariff regarding what conditions apply to repayment of network upgrades cost for non-phased projects.

On June 11, 2013, FERC issued an order accepting the proposed changes, stating that the changes would ensure that the provisions currently found in the *pro forma* LGIAs correspond to the language found in tariff appendices Y and DD, consistent with FERC's clarification in the GIP 2 proceeding, and would serve to remove ambiguity from the existing tariff language regarding what conditions apply to repayment of network upgrade costs for non-phased projects. FERC directed that if the ISO supports modified tariff language to include the in-service requirement, it should file revised tariff language.[53]

Thus, under the ISO's existing rules, the timing of transmission cost reimbursement for phased and non-phased projects is as follows:

- For phased projects, transmission cost reimbursement does not begin until the commercial operation date of each completed phase and all network upgrades to support the desired level of deliverability for each completed phase are in service.
- For non-phased projects, transmission cost reimbursement begins upon the commercial operation date of the generating facility.

This topic was originally placed within the scope of this initiative because these rules left some stakeholders desiring additional clarity or even a different approach. For example, some generation developers wanted clarity on whether refunds could commence for a completed phased generating facility once the last phase is completed (i.e., whether it would be treated the same as completed non-phased generating facilities). Further, these same generation developers

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[51] *Id.*

[52] Appendix CC of the ISO tariff contains the *pro forma* LGIA for interconnection requests in a queue cluster window that are tendered an LGIA on or after July 3, 2010 pursuant to tariff appendix Y. Appendix EE of the ISO tariff contains the *pro forma* LGIA for interconnection requests processed under the GIDAP.

[53] *California Independent System Operator Corp.*, 143 FERC ¶ 61,228, at P 16 (2013).

also wanted clarity on refund timing when a non-phased generating facility reaches COD before all of its network upgrades are complete. Some of the PTOs expressed the view that reimbursement for network upgrades should not occur until such upgrades are complete and that there is no logical basis for a difference in treatment for phased versus non-phased generating facilities.

As a result, the ISO has been working with stakeholders throughout this initiative to both develop the desired clarity and identify a common approach with broad stakeholder support that can be applied to both phased and non-phased generating facilities. Through a series of papers, the ISO has been attempting to develop a proposal that balances a number of considerations:

1. Alignment with the policies and requirements of the Order No. 2003 series of orders that repayment for transmission assets begin once those assets are utilized to deliver the output of the interconnection customer's generating facility.
2. Elimination of the differential treatment of phased and non-phased projects with respect to timing of reimbursement.
3. Broad stakeholder support.
4. Apply any new rules on a going forward basis.

4.3.2 February 5 revised straw proposal

In its February 5 revised straw proposal, the ISO offered two alternative straw proposals (option A and option B) for stakeholder consideration, and requested that stakeholders comment on the pros and cons and their preferences as to these alternatives.

Option A. Reimbursement based on network upgrades in service at COD and network upgrades in service subsequent to COD. Under this approach, reimbursement is tied to whether network upgrades are in-service and thus is better aligned with the policies and requirements of the Order No. 2003 series of orders (that repayment for transmission assets begin once those assets are utilized to deliver the output of the interconnection customer's generating facility).

1. Reimbursement for in-service network upgrades would commence upon the generating facility or phase achieving commercial operation, as specified in the generator interconnection agreement.
2. Reimbursement for network upgrades placed in service subsequent to the generating facility or phase achieving commercial operation (including those under construction at the time of COD) would commence once the last required network upgrade is placed in service. A variation on this approach could be that reimbursement commence for the aggregate of network upgrades placed in service during some defined time period such as a calendar year.

Option B. Reimbursement based on amounts funded by the interconnection customer through COD and amounts funded by the interconnection customer subsequent to COD. Under this

approach, reimbursement is tied to payments made by the interconnection customer, rather than being based on whether network upgrades are in-service. This option is an attempt to address issues raised by PG&E and possibly simplify accounting from a PTO perspective. However, unlike option A, this option could in some circumstances result in reimbursement for network upgrades not yet in-service at the time of COD.

1. Reimbursement for the amounts funded by the interconnection customer up to the time the generating facility or phase achieves commercial operation would commence upon the COD. This could include amounts for required network upgrades not yet in service at the time of COD.
2. Reimbursement for the amounts funded by the interconnection customer subsequent to the time the generating facility or phase achieves commercial operation would commence once the last required network upgrade is placed in service. A variation on this approach could be that reimbursement commence for the aggregate of network upgrades placed in service during some defined time period such as a calendar year.

For each option, the ISO proposed to revise the tariff to apply these new rules on a going-forward basis to both phased and non-phased projects. This feature of the February 5 proposal remained unchanged from the November 8 straw proposal.

4.3.3 Second revised straw proposal

In this section the ISO offers its current proposal for Topic 13.

On February 28 the ISO received written stakeholder comments on its February 5 revised straw proposal. The ISO considered this stakeholder input in the development of the second revised straw proposal described in this section. A summary of the comments received, as well as ISO responses to the issues raised, are provided in the subsequent section.

The following is the ISO's second revised straw proposal for this topic, which is based on Option A:

1. Reimbursement for required network upgrades already in service will commence upon the generating facility or the phase that requires those upgrades achieving commercial operation, as specified in the generator interconnection agreement.
2. Reimbursement for required network upgrades placed in service subsequent to the generating facility or phase achieving commercial operation (including those under construction at the time of the commercial operation date of the project or project Phase) will commence at the beginning of each calendar year for those required network upgrades placed in the service during the prior year calendar year.
3. The ISO proposes to revise the tariff to apply these new rules on a going-forward basis to both phased and non-phased projects. The ISO believes that the appropriate balance between harmonizing the repayment rules and existing customer expectations is to apply

this new policy beginning with customers who have not yet received a generator interconnection agreement. However, in order to avoid a situation in which customers in the same cluster, or even in the same study group, could be subject to different repayment rules, the ISO proposes to apply these new rules beginning with the customers in the first cluster in which all projects have not yet been tendered a generator interconnection agreement at the time of FERC approval of the ISO proposal on this topic.

The ISO recognizes the concerns raised by PG&E about the potential for retroactive reconciliation of payments being complicated and time consuming, and the potential for multiple reimbursement periods and reimbursement accounts. However, further stakeholder consultation is needed to more thoroughly examine of these issues. In order for the ISO and stakeholders to better understand the feasibility of this approach, including the possible ramifications of this approach for the PTOs and the potential for addressing them, the ISO requests that stakeholders provide comments on this paper limited to the feasibility of implementing Option A rather than Option B. Following receipt of stakeholder comments on this second revised straw proposal on April 16, the ISO will address any issues in a draft final proposal to be posted in May. The ISO plans to take its proposal on this topic to the ISO Board in July.

4.3.4 Stakeholder comments and ISO responses

Stakeholder comments received February 28 following publication of the February 5 revised straw proposal are summarized below. ISO responses to the issues raised are also included in this section.

CPUC staff – Supports reimbursement commencing upon COD for the amounts funded by the interconnection customer up to the time the generating facility or phase achieves commercial operation. For amounts funded by the interconnection customer subsequent to the generating facility or phase achieving commercial operation, supports reimbursement when each network upgrade is placed in service. For delayed network upgrades, reimbursement should commence no later than one year after the completion date specified in the interconnection agreement. Recommends that these new rules be applied to current interconnection customers rather than waiting to apply these new rules beginning with all customers in the first cluster in which all projects have not yet been tendered a generator interconnection agreement at the time of FERC approval of the ISO proposal on this topic.

ISO response: The ISO is not inclined to support reimbursement tied to payments made by interconnection customers by the time COD is achieved (rather than based on the upgrade being placed in service) as this may result in reimbursement for network upgrades not yet in service, which would be inconsistent with the policies and requirements of the Order No. 2003 series of orders that repayment for transmission assets begin once those assets are utilized to deliver the output of the interconnection customer's generating facility. Even in the case of delayed network

upgrades, to be consistent with this approach reimbursement should thus not begin until the network upgrade is placed in service.

LSA – Supports both options with some conditions. Supports Option A if reimbursement for network upgrades placed in service subsequent to the generating facility or phase achieving commercial operation commences at the start of each year for network upgrades placed into service the prior year. Supports Option B if reimbursement for network upgrades placed in service subsequent to the generating facility or phase achieving commercial operation commences at the start of each year for network upgrades placed into service the prior year. Also supports a modified Option B in which reimbursement for network upgrade payments made subsequent to the generating facility or phase achieving commercial operation would commence once those payments are made, with an annual refund commencement. LSA also asks how these options would work under the concept of "commercial operation for markets" as described in the ISO's *New Resource Implementation Guide*.[54]

ISO response: The ISO is inclined to support Option A (over Option B) because it is better aligned with the policies and requirements of the Order No. 2003 series of orders that repayment for transmission assets begin once those assets are utilized to deliver the output of the interconnection customer's generating facility. Once the generating facility or phase achieves commercial operation, the ISO is inclined to support allowing reimbursement at the start of each year thereafter for required network upgrades placed in service the prior year, rather than waiting until the last required network upgrade is placed in service. This would help address the situation in which an interconnection customer would otherwise have to wait for reimbursement for a network upgrade that is placed in service long after all other required network upgrades have been placed in service. Lastly, the concept of Commercial Operation for Markets (COM) is not to be confused with Commercial Operation Date (COD). A COD is a date set forth in the generator interconnection agreement (GIA) that designates the official start of commercial operation of either a particular phase of a phased project or the entire project in the case of a non-phased project. For purposes of the reimbursement proposal discussed in this paper, only GIA-specified CODs are relevant. In contrast, any dates associated with a project's utilization of the COM provision are not relevant to reimbursement for network upgrade costs. The COM functionality is designed to enable early participation in the ISO markets – i.e., participation ahead of a GIA-specified COD – by a portion of the generating capacity of a phase of a phased project or a portion of the generating capacity of a non-phased project, while continuing to develop the remaining generating capacity of the project or project phase, including trial operations with test energy for remaining megawatt capacity. Upon approval by the ISO of the project's request to utilize the COM provision, including the proposed COM date or dates, the interconnection customer submits a COM

[54] http://www.caiso.com/Documents/NewResourceImplementationGuide.doc

letter to the ISO. Each time the project increases the amount of commercial energy as part of its COM implementation, the interconnection customer must submit a new COM letter. However, the COD is achieved only when the associated project or project phase as specified in the GIA is completed in full and is in service. Thus, COM and COD are not equivalent, and a project's use of the COM provisions and any associated COM dates are irrelevant for purposes of reimbursement of network upgrade costs.

PG&E – Supports Option B because it would minimize the number of separate reimbursement accounts that need to be created. PG&E's preferred approach is to limit the number of reimbursement phases to two: pre-COD and post-COD. While PG&E believes that Option A is better than the status quo, it is not their preferred option because retroactive reconciliation of payments made by generators could be complicated and time consuming. PG&E also asks how these options would work under the concept of "commercial operation for markets" as described in the ISO's *New Resource Implementation Guide*.

ISO response: See ISO's previous responses above with regard to Option A versus Option B. With respect to PG&E's concerns about retroactive reconciliation of payments being complicated and time consuming, the ISO believes that it is important to further explore this issue in order for the ISO and stakeholders to understand the ramifications of Option A. The ISO intends to do this through a subsequent paper. See ISO's clarification above about COM versus COD.

Six Cities – Supports Option A because it is the most consistent the approach that reimbursement for network upgrades should commence after the project or phase has achieved commercial operation and all of the associated network upgrades are in service. Does not support Option B because it could result in reimbursement for network upgrades that are not in service at the time the project or phase achieves commercial operation. Six Cities supports the principle that, as a prerequisite for reimbursement, network upgrades should be available for use in delivering the output of an interconnection customer's generating facility.

ISO response: The ISO is also inclined to support Option A for the same reasons.

SCE – Supports Option A. Reimbursement for network upgrades energized subsequent to the time the generating facility or phase achieves commercial operation should commence as soon as the last associated network upgrade is in-service. SCE believes that tying the reimbursement to payments made by the interconnection customer (*i.e.* Option B) rather than being based on whether network upgrades are in-service (*i.e.*, Option A) would be incompatible with FERC's Order 2003 series of orders. SCE agrees that in order to not have interconnection customers in the same study cluster, or even the same study group, negotiate an interconnection agreement and operate under disparate reimbursement rules, that this new policy be applied on a going-forward basis for both phased and non-phased projects.

ISO response: The ISO is also inclined to support Option A for the same reasons. However, once the generating facility or phase achieves commercial operation, the ISO is inclined to support allowing reimbursement at the start of each year thereafter for required network upgrades placed in service the prior year, rather than waiting until the last required network upgrade is placed in service.

Attachment E – Board Memorandum

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: May 21, 2014

Re: **Decision on interconnection process enhancements for independent study and fast track processes and FERC Order No. 792 compliance**

This memorandum requires Board action.

EXECUTIVE SUMMARY

As part of the interconnection process enhancement initiative, the ISO proposed changes to improve both the independent study and fast track processes. On November 22, 2013, FERC issued Order No. 792 to amend the Small Generator Interconnection Procedures (SGIP) and the ISO incorporated compliance with this order in the independent study and fast track processes improvement stakeholder initiative.

As a result of an extended stakeholder process to address both technical and policy issues related to the independent study and fast track processes, and compliance with Order No. 792, Management proposes revisions to:

- Clarify the independent study process, while expanding the criteria for qualifying for the independent study process;
- Clarify the behind-the-meter expansion process within the independent study process;
- Improve the screens for the fast track process to align them with the ISO's networked transmission interconnection requirements; and
- Comply with Order No. 792 requirements.

Management recommends the following motion:

Moved, that the ISO Board of Governors approves the proposal to modify the independent study and fast track interconnection processes, as described in the memorandum dated May 21, 2014;

Moved, that the ISO Board of Governors approves the proposal to modify the generator interconnection and deliverability allocation procedures in compliance with FERC Order No. 792, as described in the memorandum dated May 21, 2014; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

DISCUSSION AND ANALYSIS

Independent study process improvements

The independent study process is a process where a project can enter the interconnection study process outside of the annual generator interconnection request window and be studied independently of the projects studied in the cluster study process and on a faster timeline. A project must qualify for the independent study process by demonstrating that it is at an advanced stage of development such that the standard cluster study process cannot accommodate its commercial operation date and any potential network upgrades needed would not be shared by any projects in ongoing cluster studies.

The independent study process was added to the interconnection procedures in 2010. After gaining experience with the relatively small number of projects that have applied for the independent study process to date, the ISO and stakeholders agreed that clarifications and improvements were needed. The primary changes proposed are to:

1. Further define the criteria for independent study process eligibility;
2. Relax the tests for electrical independence;
3. Enhance the process and timeline; and
4. Clarify the behind-the-meter expansion and its impact on net qualifying capacity

The most significant change proposed is the test for electrical independence where the test for independence related to deliverability network upgrades has been removed, leaving only the requirement for independence related to reliability network upgrades in place. This is a significant relaxation of the requirements as independence for reliability network upgrades is a significantly easier requirement to demonstrate than independence from deliverability network upgrades. This change is appropriate since any independent study process project that requests full capacity deliverability status is

already required to be studied for deliverability network upgrades in the next cluster study. Other significant proposed changes relate to providing more definition to the study process, the inputs to the studies, and to the process timeline.

The proposed improvements for the behind-the-meter expansion process include:

1. Removing the requirement for a separate expansion breaker;
2. Adding a requirement for an automatic tripping scheme; and
3. Adding a requirement for separate metering and a separate resource ID to retain the full capacity deliverability status of the original facility.

Fast track Improvements

The fast track process allows for a project of 5 MW or less to seek to interconnect as "energy only" status by passing a set of screening criteria FERC developed as part of its pro forma interconnection procedures. Projects can proceed through the fast track process if all screening criteria are met and it is determined that no upgrades would be reasonably anticipated. To date it has been very difficult for a project to pass all screens. Furthermore, some screens are not relevant for a project seeking to interconnect to a networked transmission system. Such screens, which were included in the FERC pro forma tariff, were designed for distribution level interconnections that are primarily to radial circuits. Accordingly, the fast track improvement process scope was primarily focused on developing more appropriate screening criteria based on both technical and policy considerations. The proposed improved fast track screening process will enable fast track interconnection projects requesting interconnection to the networked transmission system to be processed more quickly and with a greater likelihood of proceeding to commercial operation. The proposed fast track screens are summarized below.

1. The proposed generating facility's point of interconnection must be on the ISO controlled grid, subject to availability of vacant switch rack position at an existing substation. Taps to an existing transmission line shall not be allowed. (new);
2. For interconnections to a radial transmission circuit the aggregated generation on the circuit, including the proposed generating facility, shall not exceed 15 percent of the line section annual peak load. This screen will not be required for a proposed interconnection of a generating facility to a radial line with no load. (modified);
3. The proposed generating facility, in aggregation with other active fast track projects on the transmission circuit, shall not contribute more than 5 percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership. (modified);
4. The proposed generating facility, in aggregate with other generation on the transmission circuit, shall not cause any transmission protective devices and

equipment, or interconnection customer equipment on the system, to exceed 80 percent of the short circuit interrupting capability; nor shall the interconnection be allowed on a circuit that already exceeds 80 percent of the short circuit interrupting capability. (modified);

5. The generating facility will not be permitted to interconnect in an area where there are known transient stability limitations; voltage & thermal limitations; or any other known reliability limitations. (modified);
6. The proposed generating facility, in the aggregate with other generating facilities interconnected to the same transmission circuit, shall not cause the violation of ISO voltage standards on any ISO controlled facility. (new); and
7. The proposed generating facility, in the aggregate with other generating facilities interconnected to the same transmission circuit on an existing substation, shall not cause the power flow on any ISO-controlled facility to increase by 5 percent, and shall not exceed 80 percent of the same facility's normal rating. (new)

FERC Order No. 792 compliance

FERC issued Order No. 792 on November 22, 2013, to adopt reforms to the small generator interconnection procedures and small generator interconnection agreement originally set forth in FERC Order No. 2006. In Order No. 792, FERC directed that public utility transmission providers submit revised tariffs to comply with these reforms by August 1, 2014. Given the timing of this directive, the ISO incorporated its compliance effort into the fast track improvement stakeholder discussions.

Order No. 792 amends the pro forma small generator interconnection procedures (SGIP) to:

1. Incorporate provisions that provide an interconnection customer with the option of requesting a pre-application report providing existing information about system conditions at a possible point of interconnection;
2. Revise the 2 megawatt (MW) threshold for participation in the fast track process;
3. Revise the customer options meeting and the supplemental review process following a project's failure of the fast track screens;
4. Allow the interconnection customer the opportunity to provide written comments on the upgrades required for interconnection;
5. Revise the pro forma SGIP and the pro forma SGIA to specifically include energy storage devices; and
6. Clarify certain sections of the pro forma SGIP and the pro forma SGIA.

The ISO and stakeholders developed the plan to comply with Order No. 792's compliance requirements as part of the fast track improvement discussions. Some existing tariff provisions already comply with or are superior to Order No. 792 reforms.

Some issues addressed by the order overlap with the proposed fast track improvements. The ISO will request that FERC approve any deviations from Order No. 792 under the independent entity variation standard[1]. To comply with Order No. 792, the ISO proposes to incorporate the following:

1. Incorporate a pre-application report process that applies to projects no larger than 20 MW;
2. Maintain its current fast track eligibility thresholds at 5 MW for all interconnection types;
3. Modify the customer options meeting and supplemental review process;
4. Define electric storage devices 20 MW or less as generating facilities;
5. Incorporate Order No. 792's direction for how to measure capacity of energy storage resources for interconnection purposes.

POSITIONS OF THE PARTIES

All stakeholders fully support the proposal with the exception of the clarifications to the behind-the-meter expansion and its impact on net qualifying capacity. While the behind-the-meter process was initially a very minor component of the improvements proposed here, a minority of stakeholders raised the following concerns with Management's proposed treatment of behind-the-meter expansions:

1. *Proposal should be modified to allow behind-the-meter expansions to be eligible for the annual full capacity process.*

   Management Response:

   The annual full capacity process allows projects that are energy only to seek some level of deliverability based on unallocated transmission capacity that their project could utilize. The ISO has determined that a behind-the-meter project is not eligible for the annual full capacity process. Behind-the-meter expansions do not go through a comprehensive reliability assessment and hence are not allowed to dispatch capacity above the capability of the original generating facilities capacity to the grid. If a project desires to seek full capacity deliverability status then it must choose either the full independent study process or the cluster study process.

[1] The "independent entity variation" standard permits an RTO/ISO to adopt interconnection procedures that are responsive to specific regional needs. Under this standard, the Commission affords an RTO/ISO greater flexibility than it does for a non-independent transmission provider because an RTO/ISO does not own generation, and thus lacks the incentive to discriminate in favor of certain generation or to obstruct access to the grid by independent generators.

2. *Proposal should be modified to allow behind-the-meter capacity to count towards an increase in the net qualifying capacity of the expanded facility above that of the original generating facility.*

Management Response:

As originally conceived and clarified throughout the working group discussions on the independent study process improvements, the behind-the-meter process is designed to add generation behind-the-meter that can supplement the production of the original generating facility's capacity, but cannot raise the total production levels of the expanded facility to levels greater than the original facility's capability. The behind-the-meter process was designed for quick additions of limited amounts of supplemental generation behind the meter of an existing facility without studying the expansion for issues related to reliability and deliverability. To count behind-the-meter's added capacity for a net qualifying capacity increase a comprehensive reliability and deliverability study is needed, the same as standard independent study process or cluster study does for any new project. The behind-the-meter was not intended to be a means to bypass the established study requirements for reliability and deliverability.

3. *Proposal should be modified to allow behind-the-meter capacity expansion through the material modification assessment.*

Management Response

This issue has been raised late in the behind-the-meter improvement process. The ISO has been holding stakeholder discussions related to the interconnection of energy storage facilities and has committed to accept requests for project modifications for "bolt-on" energy storage projects and make a determination for materiality on a case-by-case basis. This will allow the ISO to gain experience in performing material modification assessments on projects seeking to incorporate energy storage and guide future enhancements to the material modification assessment process. Stakeholders that desire to discuss the material modification assessment process further can do so within the ISO's ongoing energy storage interconnection stakeholder initiative.

4. *Proposal should be modified to allow separate owners for behind-the-meter expansion projects.*

Management Response:

The ISO originally proposed not allowing for separate ownership of the original project and the expansion component of the facility because the metering configuration for a behind-the-meter expansion is typically more complex than the original project's meter configuration and would significantly complicate the market settlement. However, after further consideration, the ISO modified the proposal to perform the settlement function in these cases in an aggregated fashion as if the project has a single owner. The owners of the different components of the generating equipment that exist behind-the-meter could disaggregate the ISO settlement amounts as they see fit.

CONCLUSION

Management recommends that the Board approve the proposal described in this memorandum so that improvements to the generation interconnection independent study and fast track processes may be implemented. Furthermore, Management recommends that the proposal related to FERC Order No. 792 compliance be approved so that the ISO may move forward with its compliance filing requirements under the order. This proposal is broadly supported by stakeholders and was refined where possible to address stakeholder comments and concerns. Management believes that its proposal will provide interconnection customers with improved options for interconnection projects, improve the effectiveness of the ISO's study processes and generally improve the efficiency of administering the interconnection queue.

Board of Governors **May 28-29, 2014** **Decision on interconnection process enhancements**

Motion

Moved, that the ISO Board of Governors approves the proposal to modify the independent study and fast track interconnection processes, as described in the memorandum dated May 21, 2014;

Moved, that the ISO Board of Governors approves the proposal to modify the generator interconnection and deliverability allocation procedures in compliance with FERC Order No. 792, as described in the memorandum dated May 21, 2014; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

Moved: Maullin **Second: Foster**

Board Action: **Passed**	Vote Count: **5-0-0**
Bhagwat	Y
Foster	Y
Galiteva	Y
Maullin	Y
Olsen	Y

Motion Number: 2014-05-G4

Attachment F – List of Key Dates in Stakeholder Process

Tariff Amendment to Implement Third Set of Interconnection Process Enhancements

and to Satisfy Requirements of Order No. 792

California Independent System Operator Corporation

List of Key Dates in the Stakeholder Process for this Tariff Amendment

Date	Event/Due Date
April 8, 2013	CAISO issues paper entitled “Interconnection Process Enhancements Scoping Proposal”
April 22, 2013	CAISO hosts web conference that includes discussion of paper issued on April 8 and presentation entitled “Interconnection Process Enhancements Initiative Scoping Proposal”
April 30, 2013	Due date for written stakeholder comments on paper issued on April 8
June 3, 0213	CAISO issues paper entitled “Interconnection Process Enhancements Issue Paper”
June 11, 2013	CAISO hosts web conference that includes discussion of paper issued on June 3 and presentation entitled “Interconnection Process Enhancements Initiative Issue Paper”
June 25, 2013	Due date for written stakeholder comments on paper issued on June 3
July 18, 2013	CAISO issues paper entitled “Interconnection Process Enhancements Straw Proposal”
August 8, 2013	CAISO hosts web conference that includes discussion of paper issued on July 18 and presentation entitled “Interconnection Process Enhancements Initiative Straw Proposal – Topics 1-5 and 13-15”
August 22, 2013	Due date for written stakeholder comments on paper issued on July 18
November 8, 2013	CAISO issues paper entitled “Interconnection Process Enhancements Revised Straw Proposal for Topics 3-5 and 12-15”
November 18, 2013	CAISO hosts web conference that includes discussion of paper issued on November 8 and presentation entitled “Interconnection Process Enhancements Initiative Revised Straw Proposal for Topics 3-5 and 12-15”
December 6, 2013	Due date for written stakeholder comments on paper issued on November 8
February 5, 2014	CAISO issues paper entitled “Interconnection Process Enhancements Revised Straw Proposal for Topics 4, 5, and 13”
February 13, 2014	CAISO hosts web conference that includes discussion of paper issued on February 5 and presentation entitled “Interconnection Process Enhancements Initiative Revised Straw Proposal for Topics 4, 5, and 13”
February 28, 2014	Due date for written stakeholder comments on paper issued on February 28

Date	Event/Due Date
March 25, 2014	CAISO issues paper entitled “Interconnection Process Enhancements Draft Final Proposal for Topics 4, 5, and 13”
April 2, 2014	CAISO hosts web conference that includes discussion of paper issued on March 25 and presentation entitled “Interconnection Process Enhancements Initiative Draft Final Proposal for Topics 4, 5, and 13”
April 16, 2014	Due date for written stakeholder comments on paper issued on March 25
July 3, 2014	CAISO issues draft tariff language to implement tariff amendment
July 10, 2014	Due date for written stakeholder comments on draft tariff language issued on July 3
July 17, 2014	CAISO hosts web conference that includes discussion of draft tariff language issued on July 3
July 25, 2014	CAISO issues revised draft tariff language to implement tariff amendment