



**California ISO**  
Shaping a Renewed Future

# **Interconnection Process Enhancements**

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## **Revised Straw Proposal For Topics 4, 5, and 13**

February 5, 2014

## Table of Contents

1	Executive summary .....	3
2	Introduction .....	4
3	Stakeholder process next steps .....	10
4	Topics .....	10
4.1	Topic 4 – Improve Independent Study Process.....	10
4.1.1	ISP working group .....	11
4.1.2	Stakeholder comments on November 8 straw proposal.....	11
4.1.3	Modifications to November 8 straw proposal.....	15
4.1.4	Revised straw proposal.....	16
4.2	Topic 5 – Improve Fast Track .....	25
4.2.1	FT working group .....	25
4.2.2	November 8 straw proposal .....	26
4.2.3	Stakeholder comments.....	32
4.2.4	FERC Order 792 .....	33
4.2.5	Revised straw proposal.....	38
4.3	Topic 13 – Clarity regarding timing of transmission cost reimbursement.....	42
4.3.1	Background .....	42
4.3.2	November 8 straw proposal .....	44
4.3.3	Stakeholder comments.....	46
4.3.4	Revised straw proposal.....	47

# Interconnection Process Enhancements

## Revised Straw Proposal for Topics 4, 5 and 13

### 1 Executive summary

In this paper the ISO offers its revised straw 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).

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<sup>1</sup>). The ISO took the proposals for topics 6-11<sup>2</sup> 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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<sup>1</sup> 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.

<sup>2</sup> 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 change management process. That work is currently underway.

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 revised straw proposals are offered on all three topics. 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.<sup>3</sup> For projects that entered the ISO queue prior to 2012 (*i.e.*, up to and including cluster 4), interconnection to the ISO controlled grid is governed by the tariff provisions encompassed by the ISO’s generator interconnection process. 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 GIP 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.<sup>4</sup>

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<sup>3</sup> Some projects request interconnection to the distribution systems of the participating transmission owners through their wholesale distribution access tariffs (“WDATs”).

<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup>

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.

<sup>5</sup> <http://www.caiso.com/Documents/ScopingProposal-InterconnectionProcessEnhancements.pdf>.

<sup>6</sup> 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.

Table 1 – Scope of topics in the June 3 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<sup>7</sup>), the ISO offered straw proposals in the June 3, 2013 paper. For the remaining eight topics (*i.e.*, topics 1-5<sup>8</sup> and 13-15<sup>9</sup>), the ISO was not prepared to offer a proposal in the June 3,

<sup>7</sup> 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.

<sup>8</sup> 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.<sup>10</sup> 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 is currently underway through the business practice manual change process rather than through tariff changes.<sup>11</sup> 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 is currently underway.

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<sup>9</sup> These three topics are: (13) clarification of timing of transmission cost reimbursement; (14) distribution of forfeited funds; and (15) material modification review.

<sup>10</sup> 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.

<sup>11</sup> 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.

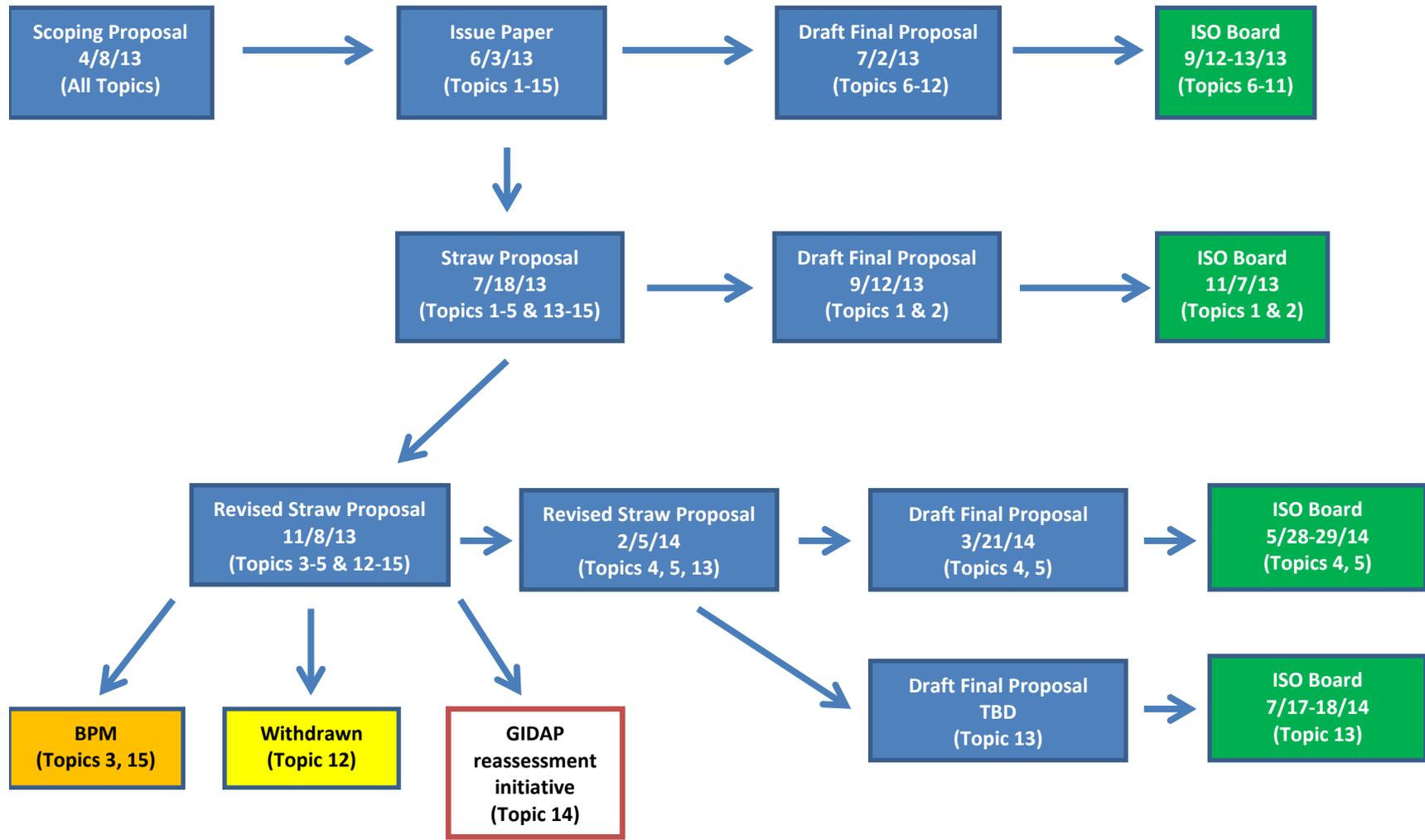
On November 8, 2013, the ISO published a paper addressing the remaining seven topics in the IPE initiative (*i.e.*, topics 3-5 and 12-15). Initial or revised straw proposals were offered on topics 3-5, 13, and 14. Although a straw proposal was already offered for topic 15 in the July 18, 2013 paper, 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. Revised straw proposals are offered on all three topics.

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 each topic.

Figure 1 – Progression of proposal development for the 15 topics in the IPE initiative



### 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 (Topics 4, 5)	March 21	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 revised straw proposals for Topics 4, 5, and 13 based on a consideration of stakeholder comments received in response to the November 8, 2013 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 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:

1. Criteria for ISP eligibility
2. Process and timeline enhancements
3. Tests for electrical independence
4. Clarification of behind-the-meter (BTM) expansion and its impact on the net qualifying capacity (NQC)

#### ***4.1.2 Stakeholder comments on November 8 straw proposal***

On November 8, 2013 the ISO presented a straw proposal on this topic. Stakeholder comments received December 6, 2013 following publication of the November 8 straw proposal are summarized below.

**Pacific Gas and Electric Company (PG&E)** – PG&E does not oppose the proposal.

**California Public Utilities Commission (CPUC) staff** – CPUC staff support the approach represented by the November 8 proposal, except that what constitutes identification of either “transient stability issues” or “reactive support needs” as a basis for failing the independence test should be more specifically (and predictably) defined.

**ISO Response:** If the most recent cluster study has identified mitigation required to address a transient stability or reactive support issue, then the ISP project will fail the tests of electrical independence.

**Southern California Edison Company (SCE)** – SCE agrees in general with the ISO on Topic 4. However, SCE recommends that the following revisions be incorporated into the proposal:

- Add clarifying language to Item #2 stating that the results of the most recently completed ISP will be used to assess electrical independence of the new ISP request.

**ISO Response:** The proposal states that “Phase I results of the current cluster (the last cluster which opened up before the ISP request was received) and SIS results of any previous ISP project in the same study area will be used to assess the electrical independence of the ISP project.” Therefore, the proposal addresses the comment.
- Include clarifying language stating that projects submitted under the ISP are not subject to a cost cap.

**ISO Response:** The facility study will establish a cost cap on an interconnection customer’s maximum cost responsibility for reliability network upgrades (“RNUs”), and deliverability studies will do the same for deliverability network upgrades (“DNU”), based on the lower of the phase I and phase II interconnection study cost estimates.
- Include clarifying language stating that a total of 90 calendar days are required to perform the System Impact Study and 60-90 calendar days are needed to perform the Facility Study unless a combined study agreement is executed in which case the required time may be shortened.

**ISO Response:** The proposal provides 120 calendar days to complete the SIS and facilities study after the execution of an Independent Study Process Study Agreement.
- Include clarifying language stating that the IC shall have no more than 90 calendar days to execute an Energy-Only Generation Interconnection Agreement and that deferral of such time requirement is not allowed for an ISP. Further, add language that the Energy-Only GIA will be amended to reflect Full Deliverability Study results whenever such studies are completed.

**ISO Response:** The ISO has included this requirement in the revised straw proposal (section 4.1.4.2).

**Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (Six Cities)** – The Six Cities have no position on the ISO’s straw proposal for this topic at this time.

**Large-scale Solar Association (LSA)** – Clarifications of current policies and separate breaker:

LSA: (1) strongly supports the proposed clarification that only Reliability Network Upgrades (RNU) are required to be completed before the BTM capacity can become operational; (2) does not oppose the 100 MW BTM limitation at this time; and (3) supports removal of the second-breaker requirement. However, LSA requests that the CAISO clarify the current BTM approval process.

In the GIP 2 stakeholder discussions that led to the current BTM framework, there was general agreement that BTM capacity additions could be proposed in the Material Modification Assessment (MMA) process, and approved in that manner if no material impacts were found. The new GIP 2 BTM provisions – allowing BTM requests to be evaluated through the ISP instead of the regular cluster-study process – would be available if any concerns regarding materiality were raised in the MMA process (or if, for whatever reason, a developer preferred to use the ISP instead of the MMA process).

However, since the BTM ISP eligibility provisions were added to the tariff, some confusion has arisen about a developer’s continuing ability to use the MMA process for BTM additions that are not expected to be material. LSA requests that the CAISO clarify this point as part of this initiative.

**BTM NQC impacts:** The Net Qualifying Capacity (NQC) proposals related to BTM additions would seriously impair the viability of the BTM concept (and the efficiencies that it offers the market, e.g., through fuller utilization of existing infrastructure), and they could eliminate such applications altogether. In particular, the CPUC’s recent approval of LSE storage-procurement mandates (with ambitious target dates) increases the importance of removing barriers to BTM storage additions, because such additions could potentially be added relatively quickly and economically to existing or planned generation projects already in the queue.

LSA’s specific concerns are explained below.

- Impairment of original project deliverability status: Many (if not most) PPAs today require a generation project to obtain Full Capacity Deliverability Status (FCDS). Related provisions can include guaranteed dates for FCDS attainment (and Buyer cancellation rights if those dates are not met) and/or significant financial penalties or for not having FCDS. Thus, if a generation project would lose FCDS by adding BTM capacity, it simply could not feasibly do so.
- Historical NQC determination: The CAISO’s proposal that a project be restricted to an NQC based on the last three years before BTM addition is flawed in several respects, i.e., it:
  1. Fails to explain how it would be applied to generation projects with less than three years of operating information.

2. Fails to address how that maximum QC level could change over time for other reasons, e.g., increase to reflect project improvements (e.g., installing/improving tracking ability).
3. Fails to consider why BTM capacity should impair the deliverability status of the original project if both are separately metered, so that separate QC calculations could continue to be made for the original project.
4. Is counter-intuitive. The addition of BTM capacity should enhance the deliverability status of a generation project, not impair it. An FCDS project that adds BTM capacity should have deliverability afterwards that is at least as high as it was before, and higher if the studies and system will support it (see below).
5. Is inconsistent with the CAISO interconnection-study methodology, the QC methodology for intermittent resources, and the MMA process. If the original resource was intermittent and the additional energy production came from the original generation equipment, then that energy production would fully count toward improving the QC of the generation project. The fact that the additional production came from other equipment on the same site would not have produced different results in the study process if the equipment change is immaterial.
6. Is inconsistent with the approach applied by the CAISO in similar situations. For example, when new projects have requested technology changes through the MMA process (e.g., wind to solar conversion of part of the project capacity), the project FCDS requirements do not change; instead, the CAISO imposes an NQC restriction based on the level at which the project was studied in the original interconnection studies.
7. Fails to clarify the process for increasing QC to reflect the new capacity, if the project so chooses.

In summary, LSA recommends the following, with tariff changes to clarify or implement these provisions as needed:

- A generation project that adds BTM capacity should maintain its pre-addition deliverability status (e.g., FCDS) but be restricted to the QC deliverability level under which it was studied. (If the CAISO does not agree with this statement generally, which LSA believes would be the correct treatment of this issue, it should at least allow retention of pre-addition deliverability status if the BTM capacity is separately metered.)
- A generation project that adds BTM capacity and wishes to increase its NQC to reflect the additional capacity should be entitled to request additional deliverability through either: (1)

the annual Deliverability Assessment Study process; or (2) inclusion in a future cluster-study process for that purpose only.

**ISO Response:** Please refer to the discussion of the revised straw proposal in section 4.1.4 of this paper. The concern regarding maintaining pre-expansion deliverability status has been addressed. Pursuant to the revised proposal, the existing generating facility will maintain the deliverability status (FCDS or energy-only (EO)) which existed before the BTM Interconnection request. Thus, BTM expansion will not cause any change in the deliverability status of the original project.

Here are some clarifications which address other concerns raised by LSA:

- The material modification assessment process is not intended to be used for adding capacity. Such expansions have to go through BTM expansion process.
- There is no “enhancement of deliverability status” under the BTM process. BTM expansion will only enhance the capacity. The deliverability status of the additional MW will be EO.
- The additional BTM expansion will be treated as EO and will not contribute towards improving the NQC of the original project. This is also consistent with the existing tariff and study methodology.

### ***4.1.3 Modifications to November 8 straw proposal***

Based on stakeholder comments, the working group proposes to retain, without modification, the enhancements proposed in the November 8, 2013 straw proposal for the following area:

1. Test for electrical independence

Two revisions proposed in November 8 straw proposal have already been included in the existing tariff:

- Prime mover technology
- Need for RNUs to be in-service

The ISO has removed these two items as part of the revised straw proposal.

The revised straw proposal brings clarity to the two new proposed criteria for ISP eligibility.

As part of the process and timeline enhancement section of the revised straw proposal an additional proposed requirement is to execute an EO GIA following the completion of the SIS and facilities studies within tariff timelines for GIA tendering, negotiation and execution. A deferral of such time requirement will not be allowed for an ISP project.

Based on stakeholder comments the working group does propose modifications to the enhancements proposed in the November 8 paper for the fourth area, clarification of BTM expansion and its impact on the NQC.

Specifically, the working group proposes the modifications to items 5 (“Impact of BTM expansion on NQC”) and 6 (“Deliverability status of BTM expansion”) from the November 8 straw proposal. This revised approach will ensure that the deliverability status of the original project is preserved. This approach will also maintain the distinction between the deliverability status of the original project and the deliverability status of the expanded capacity. In order to ensure that the sum of the output of the existing generating facility and the BTM expansion facility never exceeds the originally studied capacity, the interconnection customer will be required to install an automatic scheme to trip generation.

For clarity, a complete revised straw proposal is presented in the following section.

#### ***4.1.4 Revised straw 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.<sup>12</sup>

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 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

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<sup>12</sup> ISO tariff appendix DD, section 4.1.1.

located must be able to accommodate the interconnection of the ISP project without requiring any expansion of the existing facility. The most updated 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 that is known to the ISO or PTO 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 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.
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:

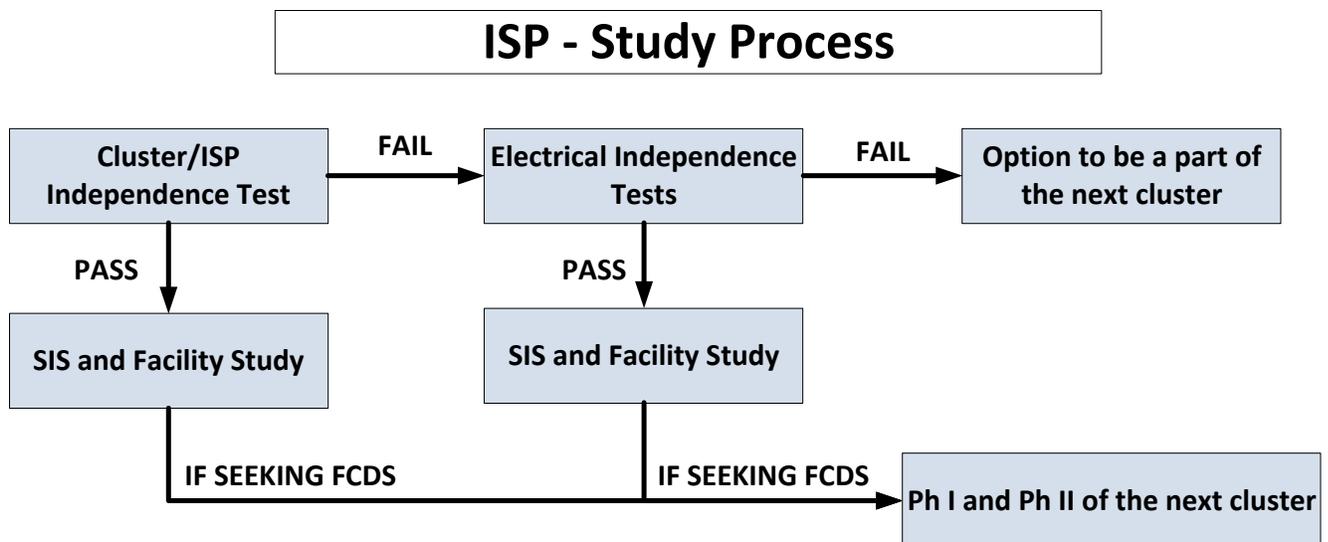


Figure 2 – Proposed Process Enhancement to ISP

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

For projects seeking FCDS or PCDS, the SIS and facilities study must be completed before the project's request for deliverability can be studied as part of the next cluster for deliverability assessment. If the SIS and facilities study cannot be completed in time, the project will be given an option to be part of the next cluster window.

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 the ISP 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.

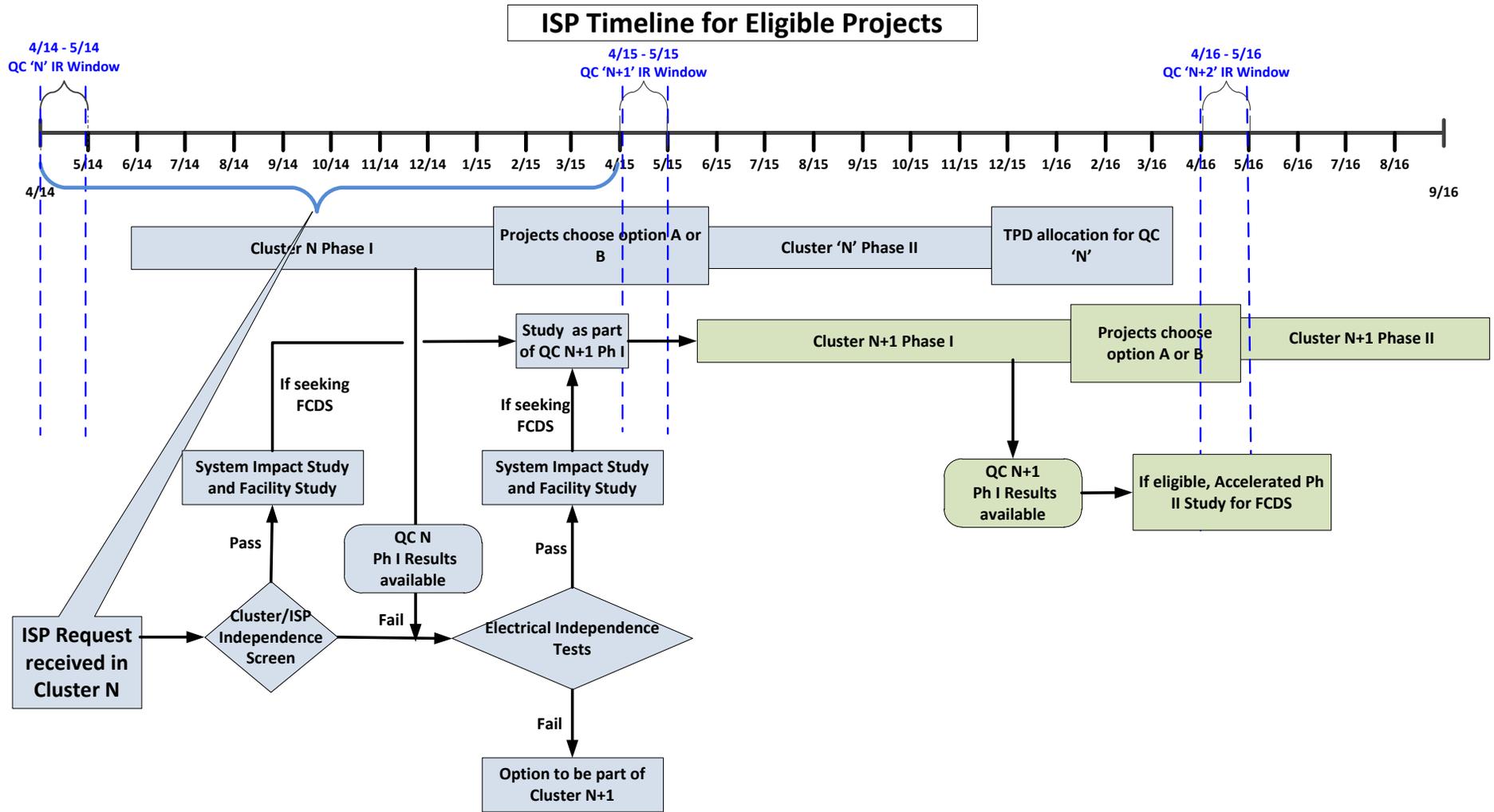


Figure 3 – Proposed ISP Timeline Enhancement

#### 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.<sup>13</sup> 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 (DNU), and the ISO's practice has been to test against both. Testing for electrical independence based on DNU 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:

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<sup>13</sup> 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.<sup>14</sup> 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:

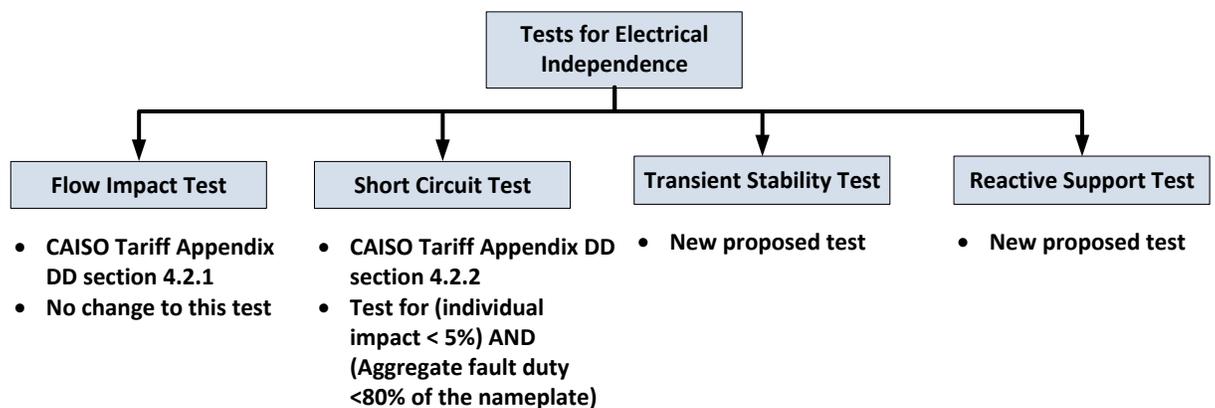
Short circuit contribution (in the aggregate with previous ISP projects in the study area) must be less than 5% of the available capacity and total fault duty on the identified breaker upgrade must be less than 80% of the nameplate capacity.

- 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.

<sup>14</sup> 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.<sup>15</sup> 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 including any prior expansions implemented pursuant to this section, one hundred (100) MW.<sup>16</sup>

##### 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.<sup>17</sup> The working group recommends that this requirement be removed, because BTM expansion has 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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<sup>15</sup> ISO tariff appendix DD, section 4.2.1.2.

<sup>16</sup> ISO tariff appendix DD, section 4.2.1.2(i)(1).

<sup>17</sup> 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.
- The interconnection customer will have to install an automatic generation 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 for 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 regular 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,<sup>18</sup> 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.<sup>19</sup> 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 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.

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<sup>18</sup> *Small Generator Interconnection Agreements and Procedures*, 145 FERC ¶ 61,159 (2013) (Order 792).

<sup>19</sup> See ISO tariff appendix DD, section 5.1.

**4.2.2 November 8 straw proposal**

As discussed in the November 8 straw proposal, the FT working group proposed the revisions to the existing FT screens and procedures described below in Table 3. The straw proposal included changes to some screens, the removal of two screens, and the addition of three new screens.

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
5.1, 3 <sup>rd</sup> Paragraph.		<p>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:</p> <p>(i) a completed Interconnection Request as set forth in Appendix 1 ;</p> <p>(ii) a non-refundable processing fee of \$500 and a study deposit of \$1,000; and</p>	<p>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:</p> <p>(i) a completed Interconnection Request as set forth in Appendix 1 ;</p> <p>(ii) a non-refundable processing fee of <b><u>\$1000</u></b> and a study deposit of <b><u>\$5,000</u></b>;</p> <p><u>Discussion of Changes</u></p> <p>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.</p>
5.2		<p>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.</p>	<p>Within <b><u>Thirty (30) Business Days</u></b> 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, <b><u>in a report that provides the details</u></b> of the analysis and data underlying the Participating TO's determinations using the screens.</p> <p><u>Discussion of Changes</u></p> <p>The group is proposing to increase the time required to perform the initial</p>

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			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.	<p>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 PTO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.</p> <p><b><u>This screen will not be required for a proposed interconnection of a Generating Facility to a radial line with no load.</u></b></p> <p><b><u>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.</u></b></p> <p><u>Discussion of Changes</u> 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.</p>
	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	<p><b><u>Eliminate this screen.</u></b></p> <p><u>Discussion of Changes</u> This screen deals with the interconnection of generation facility on the load side of the spot network protector. The ISO is <b>proposing to remove the screen</b> from the current FT</p>

**Table 3 – November 8 straw proposal to improve the FT process**

Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
		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.	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.	<p>The proposed Generating Facility, in aggregation with other <b>active FT</b> projects on the transmission circuit, shall not contribute more than <b>5 percent</b> 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.</p> <p><b><i>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.</i></b></p> <p><u>Discussion of Changes</u>                      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.</p>
	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 <b>80 percent</b> of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds <b>80 percent</b> of the short circuit interrupting capability.

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			<p><b><i>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</i></b></p> <p><u>Discussion of Changes</u> 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.</p>
	5.3.1.6	<p>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).</p>	<p>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</p> <ul style="list-style-type: none"> <li>• transient stability limitations;</li> <li>• <i>voltage &amp; thermal limitations; or</i></li> <li>• <i>any other known reliability limitations (e.g., existing or new Special Protection Systems)</i></li> </ul> <p>to generating units located in the general electrical vicinity (e.g., three or four transmission busses from the Point of Interconnection).</p> <p><u>Discussion of Changes</u> 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.</p>
<b>Proposed Additional Screens</b>			
	5.3.X1	None	<p>The proposed Generating Facility must interconnect to an existing substation. The proposed interconnection:</p> <ul style="list-style-type: none"> <li>• Shall be subject to availability of sufficient available infrastructure at the substation, including but not limited to necessary telecommunications equipment.</li> <li>• Taps to an existing transmission line shall not be acceptable and the project will fail the screen.</li> </ul>
	5.3.X2	None	The proposed Generating Facility, in the

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			<p>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.</p> <p>Power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen.</p>
	5.3.X3	None	<p>The proposed Generating Facility, in the aggregate with other Generating Facilities interconnected to the same transmission circuit, 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.</p> <p>Power flow cases from recently completed Queue Cluster studies (Phase I/ Phase II) will be utilized to perform this screen.</p>
5.3.2		<p>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.</p>	<p>Delete this provision. Existing Screen 5.3.4 will address this requirement.</p> <p><u>Discussion of Changes</u> The group is proposing to eliminate this requirement. The current proposal is to perform both System Impact and Facilities studies for projects failing the screen, and to perform only a Facilities Study for projects passing the screen. This proposal will ensure that the ISO and PTO accurately reflect upgrade costs in the SGIA.</p>
5.3.3.		<p>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</p>	<p>If the proposed interconnection fails the screens <b>then, in accordance with section 5.2, the ISO and applicable Participating TO will provide the Interconnection Customer with copies of all data and analyses underlying this conclusion. Also, in accordance with section 5.4, the ISO and Applicable Participating TO will offer to convene a Results meeting.</b></p> <p><u>Discussion of Changes</u> It was hard for the group to think of a</p>

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
		execution.	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 <b>Results meeting</b> .
5.5		If the Interconnection Customer agrees to a supplemental review, the Interconnection Customer shall agree in writing within fifteen (15) Business Days of the 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.	If the Interconnection Customer agrees to a supplemental review, the Interconnection Customer shall agree in writing within fifteen (15) Business Days of the offer, and <b>submit a deposit of \$25000</b> . 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 determine if the Small Generating Facility can be interconnected safely and reliably.	<p>Within 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. <b><i>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.</i></b></p> <p><u>Discussion of Changes</u>                      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</p>

Table 3 – November 8 straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			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 15 Business days to accommodate the type of studies envisioned.

**4.2.3 Stakeholder comments**

Stakeholder comments received on December 6, 2013 following publication of the November 8 straw proposal are summarized below.

**SCE** – SCE agrees in general with the ISO on Topic 5. However, SCE recommends that the following amendments be incorporated into the revised straw proposal:

- Add a requirement for the IC to provide study funds for performing the Facilities Study required to identify scope that will be put into an LGIA and specify time duration. As discussed in the working group, the cost was estimated at \$50,000 and study duration at 90 days.
- Add a requirement to limit the number of FT projects sharing gen-tie facilities to not exceed 10 MW of yet to be constructed resources. This requirement is needed to ensure single generators are not encouraged to divide a large project into numerous FT requests in an attempt to circumvent the appropriate study process.
- Add clarifying language stating that 90 calendar days are required to perform the Facility Study needed to define physical upgrades required to enable interconnection which needs to be described in a GIA.

**ISO Response:** The ISO has updated the estimated costs and duration for the proposed facility study. The ISO believes it is unnecessary to set a limit of 10 MW on the projects sharing gen-tie facilities, but instead proposes to add tariff language such as the following to the GIDAP:

- If the ISO receives multiple Fast Track Interconnection Requests for the same transmission circuit the requests will be studied on a first-come first-studied serial basis. If after a review of proposed FT Interconnection Requests the ISO determines that two or more projects contain sufficient commonality such that the projects are in reality one project with a total capacity of more the 5 MW, the ISO will disqualify the project(s) with a later Interconnection Request date. In its review of projects the ISO will consider factors such as,

but not limited to, ownership affiliation, proximity of facilities, use of shared facilities and/or point of interconnection.

#### 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;<sup>20</sup>
- Apply new fast track interconnection eligibility thresholds;<sup>21</sup>
- Revise the customer options meeting and supplemental review process following failure of a fast track screen;<sup>22</sup>
- Permit interconnection customers to provide written comments on any required upgrades in the facilities study;<sup>23</sup>
- Account for the interconnection of storage devices under small generator interconnection procedures;<sup>24</sup>
- 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).<sup>25</sup>

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.<sup>26</sup> Order 792 states that, in cases 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

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<sup>20</sup> Order 792 at PP 28-82.

<sup>21</sup> *Id.* at PP 83-111.

<sup>22</sup> *Id.* at PP 112-89.

<sup>23</sup> *Id.* at PP 190-210.

<sup>24</sup> *Id.* at PP 223-32.

<sup>25</sup> *Id.* at PP 233-37.

<sup>26</sup> *Id.* at P 269. Order 792 became effective on February 3, 2014. See 78 Fed. Reg. 73240 (Dec. 5, 2013).

previously approved provisions are consistent with or superior to the *pro forma* SGIP and SGIA as modified in Order 792.<sup>27</sup>

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 is 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. The ISO requests comments from stakeholders on these matters including, in cases where the ISO will adopt a proposed Order 792 reform, whether the ISO should incorporate into its tariff the exact *pro forma* tariff language adopted by FERC in Order 792 or propose other language to meet the directives of 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.<sup>28</sup>

The ISO proposes to incorporate the language adopted by Order 792 governing the pre-application report process into appendix DD of the ISO tariff.<sup>29</sup> 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. The ISO requests stakeholder comment on this proposal.

#### 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.<sup>30</sup> Order 792 maintains a 2 MW eligibility threshold for both synchronous and induction machines.<sup>31</sup>

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

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<sup>27</sup> Order 792 at P 270.

<sup>28</sup> *Id.* at PP 28-82.

<sup>29</sup> See Order 792 appendix C, section 1.2.

<sup>30</sup> Order 792 at PP 102-07.

<sup>31</sup> *Id.* at P 106.

is no larger than 5 MW and is requesting energy-only deliverability status.<sup>32</sup> 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.<sup>33</sup> 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.<sup>34</sup> 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. The ISO requests stakeholder comment on this position.

#### 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.<sup>35</sup> 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.<sup>36</sup> 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.<sup>37</sup> 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.<sup>38</sup> Order 792 provides that the interconnection customer can select the order in which the transmission provider conducts the screens.<sup>39</sup> Under Order 792, an interconnection customer is responsible for the actual costs of conducting the supplemental review. The transmission provider must provide the interconnection customer with a good faith estimate of the cost to perform the supplemental

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<sup>32</sup> ISO tariff appendix DD, section 5.1.

<sup>33</sup> Appendix 9 identifies various standards and codes. Appendix 10 relates to certification of equipment packages.

<sup>34</sup> ISO tariff appendix DD, section 5.1.

<sup>35</sup> Order 792 at P 117.

<sup>36</sup> *Id.* at PP 141-48.

<sup>37</sup> *Id.* at P 144.

<sup>38</sup> *Id.* at PP 156-61 and appendix C.

<sup>39</sup> *Id.* at PP 164, 170-72.

review, and the interconnection customer must pay this amount as a deposit in advance of the supplemental review.<sup>40</sup>

As described above, in the November 8 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. The ISO requests stakeholder comment on whether any of these initial review screens conflict with the supplemental review screens adopted by Order 792. The ISO also requests feedback on whether the proposed initial review screens are more restrictive than Order 792's supplemental review screens and, therefore, may make undertaking the supplemental review screens unnecessary.

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.<sup>41</sup> 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

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<sup>40</sup> *Id.* at PP 170-72.

<sup>41</sup> *Id.* at PP 181-88.

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 the third circumstance, the proposed interconnection does not pass the supplemental review screens and must continue to be evaluated under the study process.

In the November 8 straw proposal, the ISO proposed changes to the supplemental review process, including a proposal for participating transmission owners to perform a facilities study for interconnection customers that pass fast track screens. The ISO now proposes to incorporate the language adopted by Order 792 governing the customer option meeting and supplemental review process into tariff appendix DD. The ISO requests stakeholder comment on this change from the earlier approach presented in the November 8 straw proposal.

#### *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.<sup>42</sup> 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.<sup>43</sup> 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 requests stakeholder comment on this position.

#### *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.<sup>44</sup> 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 tariff appendix DD and tariff appendix EE, which contains the *pro forma* SGIA subject to appendix FF. The ISO requests stakeholder feedback on this compliance proposal.

#### *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

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<sup>42</sup> Order 792 at PP 203-09.

<sup>43</sup> ISO tariff appendix DD, sections 6.7, 8.7.

<sup>44</sup> Order 792 at PP 227-31.

under the transmission provider’s LGIP and to execute an LGIA.<sup>45</sup> As discussed above, the ISO has 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. The ISO requests stakeholder comment on this position.

**4.2.5 Revised straw proposal**

The ISO’s revised straw proposal is presented in the table below as updates to the screens as reported in the November 8 straw proposal (see section 4.2.2 of this paper). The purpose of these changes is to further clarify the intent of the screens and the customer option meeting for the FT study process. Modifications made to the November 8 straw proposal to create this revised straw proposal are presented in red font and denoted with either underline for new language or strikeout for deletions.

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, 3 <sup>rd</sup> Paragraph.		<p>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:</p> <p>(i) a completed Interconnection Request as set forth in Appendix 1 ;</p> <p>(ii) a non-refundable processing fee of \$500 and a study deposit of \$1,000; and</p>	<p>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:</p> <p>(i) a completed Interconnection Request as set forth in Appendix 1 ;</p> <p>(ii) a non-refundable processing fee of <u>\$1000</u> and a study deposit of <u>\$25,000</u>;</p> <p><u>Discussion of Changes</u>                      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</p>

<sup>45</sup> *Id.* at PP 285-86.

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			required for the proposed screening process.
5.2		<p>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.</p>	<p>Within <b>Thirty (30) Business Days</b> 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, <b><i>in a report that provides the details</i></b> of the <b>initial review analysis</b> and data underlying the Participating TO's determinations using the screens.</p> <p><u>Discussion of Changes</u> 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.</p>
5.3	5.3.1.2	<p>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.</p>	<p>For interconnection of a proposed Generating Facility to a radial transmission circuit <b>under CAISO control</b>, 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.</p> <p><b><i>This screen will not be required for a proposed interconnection of a Generating Facility to a radial line with</i></b></p>

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			<p><b><u>no load.</u></b></p> <p><b><u>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.</u></b></p> <p><u>Discussion of Changes</u> 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.</p>
<b>Proposed Additional Screens</b>			
	5.3.X1	None	<p>The proposed Generating Facility must interconnect to an existing substation. The proposed interconnection:</p> <ul style="list-style-type: none"> <li>• Shall be subject to availability of <b><u>vacant switch rack position.</u></b></li> <li>• Taps to an existing transmission line shall not be acceptable and the project will fail the screen.</li> </ul> <p><b><u>Discussion of Changes</u></b> <b><u>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.</u></b></p>
	5.3.X3	None	<p>The proposed Generating Facility, in the aggregate with other Generating Facilities interconnected to the same transmission circuit <b><u>on an existing substation</u></b>, 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.</p> <p><b><u>Discussion of Changes</u></b> <b><u>This screen was further modified to</u></b></p>

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			<b><u>ensure that the proposed FT interconnection is on an existing substation. The screen addresses the scope of application to all the CAISO controlled facilities.</u></b>
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 <b><i>then, in accordance with section 5.2, the ISO and applicable Participating TO will provide the Interconnection Customer with copies of all data and <u>initial review documentation analyses</u> underlying this conclusion. Also, in accordance with section 5.4, the ISO and Applicable Participating TO will offer to convene a Results meeting.</i></b>  <u>Discussion of Changes</u> 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 <b>Results meeting.</b>
	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 <b><u>Ninety (90) Fifteen (15)</u></b> 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. <b><i>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.</i></b>  <u>Discussion of Changes</u> 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

Table 4 – Revised straw proposal to improve the FT process			
Appendix DD-Section No.	Appendix DD-Subsection No.	Current Tariff Language	Proposed Tariff Language
			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 <del>90</del> <b>15</b> Business days to accommodate the type of studies envisioned.

### 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.<sup>46</sup>

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.

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<sup>46</sup> A phased generating facility is a generating facility that is structured to be completed and to achieve commercial operation in two or more successive sequences that are specified in the generator interconnection agreement, such that each sequence 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 one sequence.

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.”<sup>47</sup> 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.”<sup>48</sup> 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.<sup>49</sup> 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 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.”<sup>50</sup>

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

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<sup>47</sup> *California Independent System Operator Corp.*, 138 FERC ¶ 61,060, at P 53 (2012).

<sup>48</sup> *Id.*

<sup>49</sup> *California Independent System Operator Corp.* 140 FERC ¶ 61,168 at P 7 (2012).

<sup>50</sup> *Id.*

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.<sup>51</sup> 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.<sup>52</sup>

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.

In the July 18 straw proposal, the ISO requested that stakeholders provide comments on two potential options for addressing the timing of transmission cost reimbursement for phased and non-phased projects: (1) maintain the status quo and make no changes to the existing rules; or (2) develop a proposal to make eligibility for cost reimbursement commence upon the completion of two events – the (i) the commercial operation date of the generating facility or phase of a phased generating facility and (ii) the in-service date of required network upgrades for the generating facility or phase of the upgrades for a phased generating facility.

### **4.3.2 November 8 straw proposal**

A review of the August 22, 2013 stakeholder comments on the July 18 straw proposal did not indicate consensus on either of the potential options offered in the July 18 straw proposal. Some stakeholders preferred the status quo or some variant of the status quo, while others maintained

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<sup>51</sup> 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.

<sup>52</sup> *California Independent System Operator Corp.*, 143 FERC ¶ 61,228, at P 16 (2013).

that eligibility for cost reimbursement should commence upon the completion of both the commercial operation date of the generating facility or phase of a phased generating facility and the in-service date of required network upgrades for the generating facility or phase of the upgrades for a phased generating facility.

Despite this lack of consensus, the ISO nevertheless developed a straw proposal in an attempt to establish a common approach for phased and non-phased generating facilities with regard to commencement of reimbursement for network upgrade costs. The November 8 straw proposal was an attempt to strike a balance among all of the following 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. Some stakeholders have argued that there is no basis for the difference in treatment for phased versus non-phased generating facilities with respect to commencement of transmission credits.
3. Provision of further incentives for the timely completion of upgrades by PTOs.
4. Avoidance of retention of interconnection customer funds for an unreasonable number of years after the COD of the generating facility, or phase of the facility for phased projects.

Thus, in the November 8 paper the ISO proposed that reimbursement commence once the following two conditions are met:

1. The generating facility, or phase of the facility for phased projects, achieves commercial operation; and
2. The earlier of: (i) the in-service date of the required network upgrades for the facility or phase of the facility; and (ii) a specified period of time after the facility or phase of the generating facility has achieved commercial operation. The ISO was considering two years as the specified period of time but invited stakeholders to suggest other alternatives.

In addition, the ISO proposed that in instances where some of the required network upgrades are in service and others are not, reimbursement for the in-service upgrades can commence upon commercial operation of the generating facility or phase. For example, if RNUs are in service at the time a generator achieves commercial operation but DNUs are not, reimbursement for the RNUs would begin at that time, while reimbursement for the DNUs would commence pursuant to the two conditions articulated above.

Lastly, the ISO proposed to apply these new rules on a going-forward basis. The ISO stated its belief 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 proposed 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.

The ISO invited stakeholders to comment on this straw proposal. Written stakeholder comments were received December 6, 2013.

### ***4.3.3 Stakeholder comments***

Stakeholder comments received December 6, 2013 following publication of the November 8 straw proposal are summarized below.

**CPUC staff** – CPUC staff believes that reimbursement should begin upon COD and when any one of the following conditions are met: (1) the project's (or phase's) required NUs are in service, (2) the in-service date of the NUs specified in the GIA has been reached, or (3) one year has passed since the project achieved COD.

**Independent Energy Producers (IEP)** – IEP prefers maintaining the status quo. With regard to the ISO's straw proposal, IEP would prefer to see the ISO consider a period of time shorter than two years for which a customer would have to wait to get cost reimbursement. IEP would like to see that period of time reconsidered and shortened to one year or less.

**LSA** – LSA supports the status quo for current projects; LSA still believes that reimbursement should begin at COD even for phased projects but is willing to live with the current rules as long as they are not worsened for current non-phased projects. LSA supports the ISO's straw proposal as a compromise methodology, but only if the maximum time lag between COD and the commencement of transmission cost reimbursement is no more than a two year period. ISO should clarify reimbursement when NUs are still under construction. Reimbursement for payments made after reimbursement begins should be amortized over the remaining time period, so that reimbursement would still be over the five year period. Developers would cease making payments at that point, and the remaining costs would be placed into the PTO's rate base as they are incurred.

**PG&E** – PG&E conditionally supports the ISO straw proposal. PG&E states that the accounting mechanism does not yet exist to break up repayments of amounts advanced for NUs. Currently each queue position has a single account by queue number. PG&E does not track amounts advanced by line item network upgrade. With regard to commencing reimbursement for in-service NUs upon COD of the generating facility or phase, PG&E comments that this would require PG&E to track advances for each network upgrade on every project, which in some circumstances would result in dozens of different accounts for each queue position. PG&E recommends that it be modified such that in instances where at the time of COD some of the required NUs are in service

and other are not reimbursement can commence at COD for the amounts funded by the IC through COD, and with another settlement account set up to reimburse amounts funded by the IC subsequent to COD through the earlier completion of all NUs or two years following COD. This would significantly simplify the accounting from the PTO perspective, as a maximum of two settlement accounts would need to be created for each IC. PG&E also stipulates that IFS would need to be maintained for any remaining portion of upgrades not yet funded by ICs for up to five years after COD.

**Six Cities** – Six Cities does not believe that the two year period will incentivize timely completion of upgrades. Six Cities does not object to the ISO's straw proposal for applying these changes going forward. Six Cities does not object to providing reimbursement for NUs that are in service upon COD of the generating facility even though other upgrades may not be.

**SCE** – SCE opposes the scenario where reimbursement begins prior to the in-service of the associated NUs. The ISO should file revised tariff language to clarify that the timing of refunds associated with a non-phased project is tied-in with the in-service date of the associated NUs.

**Office of Ratepayer Advocates (ORA)** – ORA generally supports the ISO's straw proposal.

#### ***4.3.4 Revised straw proposal***

In crafting the previous straw proposal, the ISO was sensitive to the views previously expressed by a broad range of stakeholders including both generation developers and the PTOs among others, and attempted to strike the balance discussed above. A review of the December 6, 2013 stakeholder comments indicates that while some stakeholders prefer the status quo (at least for current projects), some of these same stakeholders express support for the ISO's November 8 straw proposal as a compromise approach. However, the ISO notes that it did not receive broad support from the PTOs. For example, SCE opposes any reimbursement for NUs not yet in service. Moreover, PG&E raises concerns about a PTO having to track amounts advanced by an interconnection customer by queue number and the potential for an unreasonable number of settlement accounts being required for each interconnection customer.

Given that the ISO is attempting to identify a proposal with sufficiently broad stakeholder support to justify moving it forward, the ISO has considered this feedback and has modified its proposal. In an attempt to identify an approach that may achieve broader support from stakeholders, the ISO now offers two alternative straw proposals (option A and option B) for stakeholder consideration, and requests stakeholders to 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 proposes 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 proposal remains unchanged from the November 8 straw proposal. 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 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.