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Shaping a Renewed Future

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## **Resource Transitions**

*Resource Adequacy Deliverability Assessment  
for Resources Transitioning from Outside to Inside  
the ISO Balancing Authority Area*

**DRAFT FINAL PROPOSAL**

**April 21, 2011**

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## Resource Adequacy Deliverability Assessment for Resources Transitioning from Outside to Inside the ISO Balancing Authority Area

### 1. Executive Summary

The California Independent System Operator Corporation (“ISO”) publishes this Draft Final Proposal regarding the determination of the Resource Adequacy (“RA”) deliverability of a resource when the resource transitions from outside to inside the ISO balancing authority area (“BAA”) due to a change to the ISO BAA boundary. This proposal, like the straw proposal issued on March 24, narrows the scope of applicability from that originally described in the February 11 issue paper. The original issue paper scope included consideration of a change to the resource’s physical interconnection point, whereas the straw proposal and this draft final proposal limit the scope to relatively limited BAA boundary changes. As in the straw proposal, we continue to propose here that large BAA boundary changes involving additions to the ISO controlled grid, multiple resources or the incorporation into the ISO grid of retail load be addressed on a case-by-case basis.

Under this draft final proposal, the transitioning resource would be granted deliverability status for the amount of its capacity associated with historically demonstrated imports during the RA import deliverability assessment hours, and the RA import capability of the associated intertie would be reduced by the same amount.<sup>1</sup> After this deliverability is granted at the time the BAA boundary change and the resource transition occur, the actual net qualifying capacity (NQC) of the resource will be determined annually for each RA compliance year through the ISO’s regular process for determining NQC, and in this process the transitioning resource will be treated the same as other internal resources.

In order for the BAA boundary change and the resource transition to be taken into account in the ISO’s annual NQC process, either the transition must have already occurred by June 15 of the transition year, or the BAAs involved in the boundary change must have executed the relevant revisions to their Inter-Control Area Operating Agreement (ICAOA) by June 15 and that agreement must specify an effective date prior to January 1 of the upcoming RA compliance year. If none of these requirements are met, the ISO will perform the NQC assessment and RA Import Allocation without taking account of the boundary change and resource transition. This means that the transitioning resource would have zero NQC for the upcoming RA year, and the RA import capacity on the associated intertie would not be reduced to reflect the resource transition. In such a case, if the transitioning resource wishes to obtain a positive NQC value either for the remainder of the year in which the transition occurs or for the upcoming RA compliance year, it may do so only through a bilateral import capability transfer as detailed in ISO tariff section 40.4.6.2.2.

The existing ISO tariff and business practice manuals (“BPM”) describe the process for establishing the RA deliverability of internal resources as reflected in their annual NQC values

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<sup>1</sup> This is generally consistent with the approach referred to as Option 3 in the straw proposal. In this draft final proposal, however, we no longer refer to the initially assigned deliverability status as “permanent” in recognition of the fact that the resource’s actual net qualifying capacity (NQC) for each RA compliance year will be determined through the ISO’s annual NQC assessment at the same time and in the same manner as NQC is determined for other internal resources.

and for allocating RA deliverability on the interties to load-serving entities for purposes of meeting their RA requirements. The ISO intends to amend the BPM for Reliability Requirements in accordance with the stakeholder process schedule described below to reflect this draft final proposal. As the schedule indicates, the ISO plans to submit the proposed BPM revisions to the BPM change management process promptly after receiving and, where appropriate, modifying the BPM language in response to stakeholder comments on this draft final proposal. It is important to keep to this schedule so that the BPM revisions can take effect in time for the ISO to incorporate the resource transition provisions in the next annual NQC process for 2012, which the ISO expects to complete by mid July, so that certain ISO BAA changes and resource transitions that will take effect later this year can be reflected in the 2012 NQC results. To facilitate the proposed schedule the ISO has included proposed BPM language in section 5.3 of this paper. The ISO intends to include discussion of the proposed BPM language in the agenda for the April 27 conference call with stakeholders, and requests that stakeholders address the BPM language when they submit their written comments by May 4.

Six sets of comments were submitted on the straw proposal: Pacific Gas & Electric Company (“PG&E”), Southern California Edison (“SCE”), San Diego Gas & Electric Company (“SDG&E”), Sempra Generation (“Sempra”), Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (“Six Cities”), and LS Power Development, LLC (“LS Power”). The majority of stakeholder comments strongly supported the straw proposal, while some raised issues that are now clarified in this draft final proposal.

In the following sections, this paper provides a description of the stakeholder process, a brief summary of the options considered and the preferred option presented in the straw proposal, an overview of comments received on the straw proposal, a draft final proposal and proposed BPM revisions for stakeholder review and comment, and an outline of next steps including opportunities for stakeholders to discuss and to submit written comments on this proposal. Additional relevant background information is contained in the February 11 issue paper.

## 2. Stakeholder Process

This draft final proposal will be discussed during a stakeholder conference call as shown in Table 1 below. An ISO objective in this effort is to develop an option that can be adopted under existing tariff authority, and therefore the proposed timetable below does not provide for Board of Governors approval or a FERC filing. The ISO will conduct the usual stakeholder process with a series of three papers prior to initiating the BPM change management process.

<b>Table 1: Schedule</b>	
<b>STAKEHOLDER PROCESS</b>	
<i>Feb 11</i>	<i>Post Issue Paper</i>
<i>Feb 18</i>	<i>Stakeholder Conference Call</i>
<i>Mar 2</i>	<i>Comments on Issue Paper</i>
<i>Mar 24</i>	<i>Post Straw Proposal</i>

<b>Table 1: Schedule</b>	
<i>Apr 1</i>	<i>Stakeholder Conference Call, 1:00 PM to 3:00 PM</i>
<i>Apr 8</i>	<i>Comments on Straw Proposal</i>
<i>Apr 21</i>	Post Draft Final Proposal (DFP)
<i>Apr 27</i>	Stakeholder Conference Call, 10:00 AM to 12:00 PM
<i>May 4</i>	Comments on DFP
<i>May 5</i>	Submit BPM Revisions into the BPM Change Management Process
<i>Jun 1</i>	Proposed Effective Date for BPM Revisions

A web page has been established for this initiative that provides access to meeting materials, proposals, and stakeholder written comments. This information can be found at <http://www.caiso.com/2b22/2b229ae739c60.html>

### 3. Background

The Resource Transitions issue paper identified three potential options that would establish the RA deliverability of a resource when the resource transitions from outside to inside the ISO BAA due to a change to either the resource's interconnection point or the ISO BAA boundary. These options are described in more detail in the issue paper.

**Option 1, New Resource:** Treat the resource as a new interconnection customer and address its deliverability status through the generation interconnection procedures ("GIP"), with no ex ante allowance for its previous contribution to the RA import deliverability on the associated intertie;

**Option 2, Interim Basis:** Grant the resource, on an interim basis, a MW value of deliverability status that reflects its contribution to the RA deliverability on the associated intertie, and require the resource to utilize the GIP as a new interconnection customer to establish its deliverability status on a permanent basis;

**Option 3, Permanent Basis:** Grant the resource, on a permanent basis, a MW value of deliverability status that reflects its contribution to the RA deliverability on the associated intertie; if that MW value is less than the resource's full qualifying capacity (QC) value under the prevailing counting rules, however, and the resource wants to obtain full capacity deliverability status up to its QC value, it would have to utilize the GIP to obtain the additional MW.

In the March 24 straw proposal, the ISO proposed a narrower scope for resource transitions relative to the issue paper, one that was limited to an existing resource that transitions from

outside to inside the ISO BAA as a result of a BAA boundary change. The ISO proposed to grant permanent delivery status for capacity associated with historically demonstrated imports during the RA import delivery assessment hours. This option has been identified as Option 3. Under this approach, resource transitions would be limited to existing substation reconfigurations involving no retail load (other than generator auxiliary load) and small reconfigurations to existing transmission facilities (as may be required in order to physically change the exiting BAA boundary with the accord of all parties involved).

The straw proposal resource transitions approach would not apply to large boundary changes or “large swaths” that would move load or significant amounts of transmission or generation infrastructure into the ISO BAA, because such changes present complex challenges, potentially including new scheduling points, a merger of an interconnection queue, and numerous resources. These larger changes will be evaluated on a case-by-case basis. New generator interconnections are also outside the scope of this proposal and must proceed through the generator interconnection procedures (GIP).

Under the resource transition process for resources within the scope of this proposal, the ISO would perform a one-time, permanent allocation of deliverability status to the transitioning resource. In order to qualify for consideration as a resource transition, the resource must conform to requirements in the following areas: (1) limits on substation reconfigurations, (2) demonstration of clear historical deliveries as an import, (3) absence of affected load, (4) exclusion of new interconnections or new substations, (5) deliverability beyond historical import data, and (6) adjustment to historical RA import data on associated inerties.

#### **4. Comments on the Straw Proposal**

Comments on the issue paper were due on April 8. The comment template posted by the ISO asked stakeholders to comment on any concerns they had with the straw proposal, the proposed criteria to qualify for a resource transition, and the proposed approach to determine historical deliveries based on tags and metered output data, or if tags are not available or clear, the power purchase agreement contract and metered output data. Six sets of comments were respectively submitted by PG&E, SCE, SDG&E, Sempra, Six Cities, and LS Power. The majority of stakeholders strongly supported the straw proposal in April 8 comments and some raised issues that are now clarified in this draft final proposal.

PG&E states that it has no concerns with the straw proposal and supports the ISO’s proposal to grant qualifying resources permanent RA value that reflect their contribution to the RA deliverability on the associated inertia.

SDG&E stated that it is “fully supportive” of the straw proposal and that it “roundly supports the ISO’s direction in this initiative.”

Sempra states that believes that the straw proposal is “on the right track,” in that it proposes to adopt the Option 3 approach to grant permanent delivery status for capacity associated with historically demonstrated imports during RA import delivery assessment hours. In the comments, Sempra seeks certain clarifications regarding the straw proposal, as described below.

#### 4.1. Comments on Criteria to Qualify for a Resource Transition

PG&E supports the ISO's criteria that would qualify for a resource for a resource transition and further stated that the criteria described in the straw proposal are reasonable.

SDG&E agrees with the resource transition triggers and criteria as outlined.

Sempra disagrees with the ISO's proposed exclusion of new interconnections or new substations from the resource transition process. Sempra agrees with the ISO that "small" reconfigurations to existing transmission lines in order to effectuate a BAA boundary change should be permissible, with the caveat that such changes have an "insignificant effect on the system impedance and effectively do not change the flow patterns from the existing ISO boundary towards the main CAISO system." Sempra would modify the scope of this effort such that an insignificant effect on system impedance and lack of change in flow patterns should actually define what is considered to be an acceptable "small" reconfiguration. Sempra contends that, where resources make a BAA change by means of "new interconnections or new substations" and thereby cause a significant effect on system impedance and change in flow patterns, it would be inappropriate for such resources to be eligible for the resource transition benefits.

Sempra states that the straw proposal did not articulate any basis, rational or otherwise, for distinguishing between (1) the permissible "small" reconfigurations, which may include "the addition of buses or bays," required to accomplish a BAA change, and (2) the impermissible "new interconnections or new substations" that would lead to the same result. Sempra argues that the benefits of resource transition should be afforded in both cases, so long as the ISO's stated criteria are met, i.e., any physical changes must have an "insignificant effect on system impedance and effectively do not change the flow patterns from the existing ISO boundary towards the main ISO system." Otherwise, by denying the resource transition benefits in such a case, the ISO would run the risk of a party asserting that the ISO is arbitrarily discriminating among similarly-situated customers. Sempra notes that taking a case-by-case approach for such resources would be inappropriate as well. There would be no reason to subject a resource to such discrimination and the open-ended delays that would likely be associated with a case-by-case approach if the physical changes necessitated by the resource's move into the BAA otherwise met the ISO's above-stated criteria.

LS Power is concerned that the proposed criteria would result in resource transitions that would effectively restrict or reduce the amount of RA import capacity available (or that could become available in the future) to LSEs to import other resources under contract, and/or which could be utilized by other market participants. LS Power did not cite any specific criteria or provide any rationale in support of this concern.

#### ISO Response:

- Sempra argued for inclusion of new interconnections or new substations in the resource transition process, in the event that the reconfiguration would have an insignificant effect on system impedance and does not effectively change the flow patterns from the existing ISO boundary towards the main ISO system." The ISO disagrees for the reason that it would be extremely difficult to establish a bright line and associated methodology for such a standard.

- Regarding the concern raised by LS Power, the ISO observes that the resource that established the historical flows formed the basis for the import allocation and that LSEs are indifferent on this point. PG&E was indifferent to this transfer of deliverability in its comments on the issue paper. LSEs will be able to procure a similar amount of RA capacity, irrespective of whether it is allocated to LSEs on an intertie or whether it assigned to a specific resource. Additionally, the reduction in the MIC will only occur in the first year of the resource transition. The ISO will re-evaluate the MIC in subsequent years through the normal annual deliverability process. SDG&E similarly observed, In its comments on the issue paper, that permanently shifting a transition resource's deliverability status from an import to an internal ISO resource, should effectively amount to a wash, and currently proposed resources in the ISO queue should be largely indifferent to the transition.

## 4.2. Comments on Historical Delivery Demonstration Approach

PG&E stated that it has no concerns with the historical deliveries aspect of the straw proposal.

SDG&E stated that it does not disagree with the proposal to determine historical deliveries based on a combination of metered data and tags or power purchase agreement information.

Sempra requests that the ISO clarify the timing of the two-year historical "lookback" that would establish the capacity of a resource that qualifies for deliverability status. According to Sempra, the Straw Proposal is unclear on when this historical review would occur. That is, it could occur at the point in time when the boundary has actually changed, i.e., when the physical change to the existing balancing authority area (BAA) has been completed, or it could occur at the point in time when the boundary change has been initiated, i.e., with the submittal of the request initiating the boundary change process.

Sempra recommends that the ISO confirm that the two-year historical review period will occur as of the date when the boundary change process is initiated. The fundamental concept of deliverability is based on the premise that a given resource's early deliveries, i.e., deliveries that occurred before those from other resources that began deliveries at a later point in time, establish that given resource's deliverability. To wait until the point in time when the boundary change has actually been implemented – such as when any physical changes have been put into place to change the resource's BAA – would likely lead to a less accurate assessment of the resource's deliverability. More importantly, any physical changes that may need to occur would in large part be outside of the resource's control, and – even if relatively minor – could take some time to complete. As such, it would be appropriate for the "lookback" to be triggered as of the date when the boundary change process is initiated, such as with the submittal of the request that results in the boundary change.

LS Power states that, under the proposed approach, if power purchase agreements (PPAs) are used to establish the amount of deliverability of a transitioning resource, there is currently no proposed criteria for a minimum term remaining on the PPA before deliverability is assigned. For instance, if PPA for a generator that transitions into ISO were to expire shortly after it transitions into ISO and it receives deliverability assigned based on this PPA, the generator will receive indefinite RA benefits. Under the existing process, intertie capacity is allocated to LSEs on a load ratio share annually with certain existing PPAs grandfathered to guarantee intertie capacity for import counting. Moving a resource into ISO based on this counting would likely reduce the intertie capacity on a permanent basis. At the expiration of those grandfathered



PPA's, all generators and LSE's should have equal access to existing intertie capacity. ISO should develop rules around this approach to ensure that other market participants importing into ISO at the same intertie are not put at a disadvantage as a result of the proposal.

Additionally, LS Power recommends that the ISO add more detail regarding the process to be used for determining historic deliveries. How much historical data will be used? What will the resolution be if tags are not clear? Will generators need to request that ISO perform this analysis so they can find out how much deliverability can be assigned to them if they were to transition within ISO or does the ISO intend to provide this information to all generators that are currently out of ISO BAA but schedule energy into ISO, or have done so in the past?

#### **ISO Response:**

- The ISO agrees with Sempra regarding its recommendation on the lookback issue and will modify the proposal to confirm that the two-year historical review period will occur as of the date when the boundary change process is initiated.
- The ISO acknowledges the PPA related concerns raised by LS Power. However, the ISO does not agree that a resource transition would likely reduce intertie capacity on a permanent basis in every case.
- The ISO has added more detail regarding the process to be used for determining historic deliveries.

### **4.3. Comments on Permanent Deliverability**

SCE expressed concern with the “permanent” deliverability aspect of the straw proposal, and states that the use of this concept is appropriate as a starting point for determining deliverability for the initial year when the resource transitions from outside the balancing area to an internal asset. However, SCE states that it is not aware of any generator that receives “permanent” deliverability status under the CAISO Tariff. SCE contends that resources should remain subject to the applicable provisions of the CAISO tariff regarding deliverability, including Section 40.4.6.1, which states in part:

“In order to determine Net Qualifying Capacity from Resource Adequacy Resources subject to this Section 40.4, the CAISO will determine that a Resource Adequacy Resource is available to serve the aggregate of Load by means of a deliverability study. Documentation explaining the CAISO’s deliverability analysis will be posted on the CAISO Website. The deliverability study will be performed annually and shall focus on peak Demand conditions. The results of the deliverability study shall be incorporated into the Net Qualifying Capacity annual report under Section 40.4.2 and will be effective for the next Resource Adequacy Compliance Year.”

SCE states that to “permanently” assign a deliverability value to these resources simply by virtue of the fact that they “transitioned” from outside the CAISO Balancing Authority Area (BAA) to inside based on a change of boundaries is to provide these resources an unfair advantage over resources already located within the CAISO BAA that must comply with the requirements of CAISO Tariff Section 40.4.6.1 and other applicable provisions necessary to be granted deliverability status and count towards meeting RA requirements on an annual basis.

**ISO Response:** The ISO agrees with SCE on this point and will modify the proposal such that resources will remain subject to the applicable provisions of the ISO tariff regarding deliverability, including Section 40.4.6.1.

#### 4.4. Comments on Affected Interties

SCE observes that the impact to RA import capability from transitioning resources should be determined with consideration to the ISO's other stakeholder process - Deliverability of RA Capacity on Interties.<sup>2</sup> The resource transition proposal's assumption that RA import capacity automatically decreases when the resource transitions seems to create the same issue that is driving the CAISO to reconsider its intertie methodology in the other stakeholder process.

Six Cities states that any long-term grandfathered LSE import allocation associated with a resource transition should be reduced by the same amount. If a transitioning resource provides the output in support a long-term grandfathered import contract allocation, and if the resource is granted full deliverability for the amount of capacity documented in historic imports, then the any long-term grandfathered import allocation of the LSE should be reduced by the same amount.

LS Power states that, in order to effectively participate in this initiative, and analyze the impact of potential resource transitions, the ISO must provide (1) the list of interties and boundary substations potentially impacted by potential resource transition requests, (2) the approximate MW quantity of the impacts, and (3) the extent to which the changes in the ISO boundary are expected to reduce available RA import capacity across the interties. LS Power alleges that it is impossible for market participants to evaluate the potential impact on existing and proposed resources without this information, and that failing to provide it creates an unlevel playing field between stakeholders with and without this information. LS Power contends that this information can be meaningfully provided in an appropriate format while still maintaining confidentiality.

#### ISO Response:

- Regarding the SCE comment on the two initiatives, the ISO believes the new MIC methodology being developed in the Deliverability of RA Capacity on Interties initiative and the resource transitions process being developed here can coexist. As already set forth in the resource transitions straw proposal, for the first year after the resource transitions into the ISO BAA, the maximum RA import capacity on the associated intertie will be decreased by the same amount of deliverability given to the transitioned resource. However, in subsequent years the new (reconfigured) tie will get its own maximum RA import capacity based on the established MIC methodology.
- Six Cities requested that any long-term grandfathered LSE import allocation associated with a resource transition should be reduced by the same amount. This would effectively occur under the existing proposal. The ISO separately tracks grandfathered contracts (Pre-RA Import Commitments). Accordingly, a resource transition that previously supported a Pre-RA Import Commitment would be removed during the annual RA Import Allocation process.

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<sup>2</sup> Deliverability of RA Capacity on Interties Initiative, <http://www.caiso.com/2b42/2b42b9378530.html>

- Regarding the LS Power request for more information, the ISO has determined that it cannot reasonably provide the information in aggregated form under Section 20 of the ISO tariff.

## 5. Draft Final Proposal

The ISO offers the following draft final proposal for stakeholder review and comment. Consistent with the straw proposal issued on March 24, this proposal limits the scope of applicability compared to what was originally described in the February 11 issue paper. The original issue paper scope included consideration of cases where a resource becomes connected to the ISO grid via a change to its physical interconnection point. In contrast, both the straw proposal and this draft final proposal limit the scope of the proposal to BAA boundary changes.

The ISO limited the scope of this initiative to BAA boundary changes and excluded the case of a resource establishing a new interconnection point for several reasons. When a resource changes its point of interconnection, its proximity to load, generation, and various transmission elements on the grid also change. This change in proximity can result in significant changes to the operational characteristics of the grid. Because interconnection configurations vary, it is not possible to clearly establish a bright line between interconnection point changes that would require further study in the GIP process and others that would not likely result in a change to the electrical characteristics of the grid. In addition, the scope was narrowed to ensure that the deliverability of resources already in the generation interconnection queue would not be negatively affected. For these reasons, the scope of the resource transitions initiative was limited to resource transitions from outside to inside the ISO BAA due to a boundary change. Situations where a resource moves into the ISO controlled grid by changing its interconnection point must go through the ISO's generator interconnection procedures (GIP).

Under this draft final proposal, the ISO will grant deliverability status to the transitioning resources for the MW quantity of generation capacity associated with historically demonstrated imports during the RA import delivery assessment hours, and will reduce the RA import capability of the associated intertie by the same amount. This proposal relies solely on conformance to the limits of applicability described below and the demonstration of historical imports, and does not require the transitioning resource to have provided RA capacity during the assessment hours or at any other time.

The ISO will use two years of historical data in the assessment of the resource's deliverability value, utilizing the same hours the ISO uses to establish RA import capability on the intertie, and utilizing the most recent two historical years for which the RA deliverability hours are available. In the event that the e-tag data is unclear for these hours, the PPA contract and metered output data will be utilized. The ISO will formally assign the deliverability value to the transitioning resource at the time of the BAA boundary change and the transition of the resource. The ISO may also provide an advisory assessment of the deliverability amount to the resource in advance of the actual transition. After this deliverability is granted at the time the BAA boundary change and the resource transition occurs, the actual net qualifying capacity (NQC) of the resource will be determined annually for each RA compliance year through the ISO's regular process for determining NQC, and in this process the transitioning resource will be treated the same as other internal resources. In that NQC process, the ISO will also reduce the RA import capability of the associated intertie by the same MW amount to reflect the transition.

In order for the BAA boundary change and the resource transition to be taken into account in the ISO's annual NQC process, either the transition must have already occurred by June 15 of the transition year, or the BAAs involved in the boundary change must have executed the relevant revisions to their Inter-Control Area Operating Agreement (ICAOA) by June 15 and that agreement must specify an effective date prior to January 1 of the upcoming RA compliance year. If none of these requirements are met, the ISO will perform the NQC assessment and RA Import Allocation without taking account of the boundary change and resource transition. This means that the transitioning resource would have zero NQC for the upcoming RA year, and the RA import capacity on the associated intertie would not be reduced to reflect the resource transition. In such a case, if the transitioning resource wishes to obtain a positive NQC value either for the remainder of the year in which the transition occurs or for the upcoming RA compliance year, it may do so only through a bilateral import capability transfer as detailed in ISO tariff section 40.4.6.2.2.

Under this draft final proposal, resource transitions would be limited to existing substation reconfigurations involving no retail load (other than generator auxiliary load) and small reconfigurations to existing transmission facilities as may be required in order to physically change the exiting BAA boundary with the accord of all parties involved.

This resource transitions approach would not apply to large boundary changes that would move load or significant amounts of transmission or generation infrastructure into the ISO BAA, because such changes present complex challenges, potentially including new scheduling points, a merger of an interconnection queue, and numerous resources. These larger changes will be evaluated on a case-by-case basis. New generator interconnections are also outside the scope of this proposal and must proceed through the GIP.

## 5.1. Resource Transition Requirements

Under the resource transition process for resources within the scope of this proposal, the ISO would perform an initial allocation of deliverability to the transitioning resource, which will then be subject to the Net Qualifying Capacity (NQC) tariff provisions in Section 40.4.6.1 on an annual basis for determination of the resource's NQC for the coming RA compliance year. In addition, in order to qualify for consideration as a resource transition, the resource must conform to the following requirements:

1. **Triggered by existing substation reconfiguration at the BAA boundary.** Substation reconfigurations with a BAA boundary change can result from: (a) a change of ownership of buses or bays, (b) a change of BAA designations of buses or bays, or (c) the addition of buses or bays. Small reconfigurations to existing transmission lines are allowed since they may be required in order to physically change the existing BAA boundary, as long as they have an insignificant effect on the system impedance and they effectively do not change the flow patterns from the existing ISO boundary towards the main ISO system. Such changes can be accomplished by agreement between the adjacent BAAs involved and would be incorporated into the ICAOA between those parties.
2. **Demonstrate clear historical deliveries as an import.** To determine the amount of the resource's capacity to which deliverability will be assigned, the ISO will conduct an assessment of historical deliveries based on (1) tags and metered output data, or (2) if

tags are not available or clear, the power purchase agreement (PPA) contract and metered output data. The amount of energy delivered by the resource into the ISO grid during the deliverability hours used to establish RA deliverability will determine the amount of the resource's capacity that qualifies for deliverability status under this proposal.

3. **Load.** BAA boundary changes to the transmission configuration that add load (currently outside ISO control area) or removes load (currently inside ISO control area) are not eligible for a resource transition.
4. **New interconnections or new substations.** Projects involving building new infrastructure like new transmission lines or transformers in order to form new interconnections or building of new substations are not eligible for a resource transition.
5. **Deliverability beyond historical data.** If the existing resource transitioning into the ISO control area desires deliverability beyond the historical level established as described above, it needs to apply for such additional deliverability by entering the GIP queue as a new interconnection.
6. **Adjustment to historical RA import data.** For the first year after the resource transitions into the ISO BAA, the maximum RA import capacity on the associated intertie will be decreased by the same amount of deliverability given to the transitioned resource. In subsequent years the new (reconfigured) tie will get its own maximum RA import capacity based on the established MIC methodology.

As noted above, there is no requirement that the transitioning resource provided RA capacity during the assessment hours or at any other time. In addition, although some external resources have appeared on the ISO NQC list,<sup>3</sup> there is no requirement that the transitioning resource appeared on that list at any time in order to qualify for the deliverability status addressed in this proposal. The only requirements are, as listed above, those related to the technical nature of the agreed-upon boundary change and the ability of the resource to demonstrate its contribution to historical import flows during the RA import assessment hours.

## 5.2. Example: Assignment of Deliverability Status to a Transitioning Resource

Under this proposal, a transitioning resource would be granted deliverability status for capacity associated with historically demonstrated imports during the RA import deliverability assessment hours. If this MW value is less than the resource's PMax, the resource could either

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<sup>3</sup> Some stakeholders have noted that external resources have appeared on the ISO NQC List, and have asked whether this appearance means that the resource is deemed to have deliverability for RA purposes. It is important to clarify that external resources do not have deliverability under the existing ISO tariff. Rather, the resource is able to count for RA only if an internal LSE uses its allocation of RA import capacity to obtain RA capacity for the resource. In order to avoid confusion in the future, starting with the next round of NQC postings the ISO will list external resources on a new tab of the spreadsheet, to indicate that these external resources do not have deliverability for RA purposes, and only become deliverable when an LSE within the ISO utilizes its RA Import Allocation to count the resource toward meeting its system RA requirement. The NQC list is available at <http://www.caiso.com/1796/179688b22c970.html#1b8eaa2643ed0>. External resources on the NQC List are currently shown in the "LCR Area" column as "CAISO Import" in the spreadsheet.

accept this MW value or enter the GIP interconnection queue to obtain full capacity deliverability status up to its PMax. Thus, the resource would not be required to enter the ISO GIP for the demonstrated historical contribution to the ISO Maximum RA Import Capability, but it would be required to enter the ISO GIP for any incremental deliverability status request above its contribution to the Maximum RA Import Capability.

Consider the following illustration:

- i. A transitioning resource with a PMax of 1,000 MW transitions into the ISO BAA through an ISO-BAA boundary change.
- ii. The resource can prove 750 MW of historical average import schedules during the hours used to establish the maximum RA import capability for the pre-transition intertie.
- iii. The ISO assigns 750 MW to the resource as its deliverability status when the BAA boundary change and the resource transition occur. Provided the change takes effect prior to June 15 of the year in which the transition occurs, or the BAAs involved execute the relevant ICAOA amendments prior to June 15 that specify an effective date prior to January 1 of the upcoming RA compliance year, the resource will be included in the ISO's annual NQC process and be eligible to receive an NQC designation up to 750 MW for the upcoming RA compliance year. If these requirements are not met, the resource will receive zero NQC in that year's NQC process, but will be able to obtain some positive NQC through a bilateral import capability transfer.
- iv. If the assigned 750 MW deliverability value for the transitioning resource is included in the annual NQC process per the previous step, the process will also assume that this 750 MW former import is no longer available for next year's RA import allocation on the post-transition intertie. Thus, the RA import capability on the intertie will be reduced from its pre-transition value of 2000 MW to 1,250 MW for the first RA compliance year following the transition. In subsequent years, once there are two years of historical data for peak conditions in which the transition was in effect, the ISO will revert to the regular process for establishing the RA import capability for the intertie.

### **5.3. Proposed Revisions to BPM for Reliability Requirements**

The ISO proposes to add provisions to implement the Resource Transitions process to the BPM for Reliability Requirements. The ISO will initiate the BPM Change Management Process on May 5, as described in the Table 1 Schedule.

Because all resources transitioning to the ISO will be subject to the ISO Tariff as an internal resource including the NQC requirements, it is appropriate to place the resource transitions requirements in the BPM for Reliability Requirements. As explained earlier, under the resource transition process for resources within the scope of this proposal, the ISO would perform an initial allocation of deliverability to the transitioning resource, which will then be subject to the Net Qualifying Capacity (NQC) tariff provisions in Section 40.4.6.1. Thus, transitioning resources will be subject to the ISO's annual deliverability study analysis and process for establishing the Net Qualifying Capacity for internal generation resources.

Accordingly, the ISO proposes to add the following new language to the BPM for Reliability Requirements:

## **BPM for Reliability Requirements**

### **Section 5.1.3.7 Deliverability of Resources Subject to Resource Transitions**

The purpose of this section is to establish the Resource Adequacy (“RA”) deliverability status of a resource when the resource transitions from outside to inside the ISO balancing authority area (“BAA”) due to a change to the ISO BAA boundary. This section describes the conditions under which a resource may be eligible for this resource transitions process. Resource transitions will be subject to CAISO Tariff Section 40.4.3, General Qualifications For Supplying Net Qualifying Capacity, and other provisions applicable to internal resources.

Deliverability status will be established for resource transitions for capacity associated with historically demonstrated imports during the RA import delivery assessment hours. Resource transitions are limited to existing substation reconfigurations involving no retail load (other than generator auxiliary load) and small reconfigurations to existing transmission facilities (as may be required in order to physically change the exiting BAA boundary with the accord of all parties involved).

Resource Transitions do not apply to large boundary changes that would move load or significant amounts of transmission or generation infrastructure into the ISO BAA. These larger changes will be evaluated on a case-by-case basis. New generator interconnections are also outside the scope of this proposal and must proceed through the generator interconnection procedures (GIP).

#### **Section 5.1.3.7.1 Resource Transition Requirements**

In order to qualify for consideration as a resource transition, the resource must conform to the following requirements:

- 1) Eligibility for the resource transition process may be triggered solely by an existing substation reconfiguration at the BAA boundary.** Substation reconfigurations with a BAA boundary change can result from: (a) a change of ownership of buses or bays, (b) a change of BAA designations of buses or bays, or (c) the addition of buses or bays. Small reconfigurations to existing transmission lines are allowed since they may be required in order to physically change the existing BAA boundary, as long as they have an insignificant effect on the system impedance and they effectively do not change the flow patterns from the existing ISO boundary towards the main ISO system. Such changes can be accomplished with concurrence from all involved parties.
- 2) Resources affected by BAA boundary changes that involve load transferring in or out of the ISO BAA are not eligible for the resource transition process.** BAA boundary changes to the transmission configuration that add load (currently outside ISO control area) or removes load (currently inside ISO control area) are not eligible for a resource transition.
- 3) The resource transition process is not available for BAA boundary changes involving new resource interconnections or new substations.** Projects involving building new infrastructure like new transmission lines or transformers in order to form new interconnections or building of new substations are not eligible for a

resource transition.

- 4) **The resource transitioning into the ISO BAA will not be entitled to deliverability beyond historical data.** If the existing resource transitioning into the ISO control area desires deliverability beyond the historical level established as described above, it needs to apply for such additional deliverability by entering the GIP queue as a new interconnection.

#### **Section 5.1.3.7.2 Initiating the Resource Transition Process**

Resources transitioning into the ISO BAA will not be evaluated for an initial allocation of RA deliverability under Section 5.1.3.7 until all parties affected by an eligible BAA boundary change (substation reconfiguration) have agreed to such change by executing an amendment to the Interconnected Control Area Operating Agreement (ICAOA). Affected parties must also provide supporting information regarding the physical configuration of the boundary change, the timing of the change and other necessary documentation.

In order for the BAA boundary change and the resource transition to be taken into account in the ISO's annual net qualifying capacity (NQC) process, either the transition must have already occurred by June 15 of the transition year, or the BAAs involved in the boundary change must have executed the relevant revisions to their ICAOA by June 15 and that agreement must specify an effective date prior to January 1 of the upcoming RA compliance year. If none of these requirements are met, the ISO will perform the NQC assessment and RA Import Allocation without taking account of the boundary change and resource transition. Accordingly, a transitioning resource would have zero NQC for the upcoming RA year, and the RA import capacity on the associated intertie would not be reduced to reflect the resource transition. In such a case, if the transitioning resource wishes to obtain a positive NQC value either for the remainder of the year in which the transition occurs or for the upcoming RA compliance year, it may do so only through a bilateral import capability transfer as detailed in ISO tariff section 40.4.6.2.2.

#### **Section 5.1.3.7.3 Contract Requirements**

In addition to the ICAOA amendment, transitioning resources must enter into an Interconnection Agreement, a Participating Generator Agreement (PGA), and a Metering Services Agreement (MSA) with the ISO. These contracts are a prerequisite to counting the transitioning resource in the month ahead RA process as described below.

#### **Section 5.1.3.7.4 Establishing Deliverability for Resource Transitions**

Under the resource transition process, the ISO will perform an initial allocation of deliverability to the transitioning resource, which will then be subject to the Net Qualifying Capacity (NQC) tariff provisions in Section 40.4.6.1. Thus, transitioning resources will be subject to the ISO's annual deliverability study analysis and process for establishing the Net Qualifying Capacity for internal generation resources.

Eligible resources must demonstrate clear historical deliveries as an import. To determine the amount of the resource's capacity to which deliverability will be assigned, the ISO will conduct an assessment of historical deliveries based on (1) tags and metered output data, or (2) if tags are not available or clear, the power purchase agreement (PPA) contract and metered output data. The amount of energy delivered by the resource into the ISO grid during the deliverability



hours used to establish RA deliverability will determine the amount of the resource's capacity that qualifies for deliverability status under this proposal. The historical delivery assessment will occur relative to the date a boundary change request or notification has been submitted to the ISO.

Two full years of historical data will be used in the assessment. In the event that tags are unclear, the PPA contract and metered output data will be utilized. Once a resource initiates a resource transition with the ISO in accordance with Section 5.1.3.7.2 above, the historical assessment will be scheduled by the ISO. The ISO will not perform this analysis without the requisite evidence of a valid BAA boundary change request.

The initial deliverability assessment is done in the year ahead timeframe at the same time as the RA Import Allocations are given out for the next compliance year. Once RA Import Allocation is given out to the LSE for the next compliance year (early July), the ISO cannot retract the allocation and the transitioning resource may have to wait another compliance year to receive its initial deliverability. The transitioning resource will be subject to all posting requirements under the ISO Tariff Section 40.4.6.2.2.

#### **Section 5.1.3.7.5 Adjustment to historical RA import data**

For the first year after the resource transitions into the ISO BAA, the maximum RA import capacity on the associated intertie will be decreased by the same amount of deliverability given to the transitioned resource. In subsequent years a new maximum RA import capacity will be developed for the tie based on the established MIC methodology. This concludes the ISO's proposed BPM language for resource transitions.

## **6. Next Steps**

The ISO will host a stakeholder conference call on April 27, 2011 from 10:00 a.m. - 12:00 p.m. to review and discuss this Draft Final Proposal. Stakeholders are encouraged to submit written comments on the Draft Final Proposal to [ResTrans@caiso.com](mailto:ResTrans@caiso.com) by close of business May 4, 2011. The ISO will develop a template that it asks stakeholders to use to submit their written comments. The ISO will post the written comments that it receives to that web address by May 6, 2011.