Business Practice Manual

For

Generator Interconnection and Deliverability Allocation Procedures

(GIDAP BPM)

Version DRAFT

Sections 1, 2 and 6 ending at 6.2.9.11 Only

Last Revised: March 11, 2013

**Approval History**

Approval Date: MM DD YYYY

Effective Date: MM DD YYYY

BPM Owner: Stephen Rutty

BPM Owner’s Title: Director, Grid Assets

**Revision History**

| Version | Date | Description |
| --- | --- | --- |
| 1 |  | 1st Version Released |
|  |  |  |

Although this GIDAP BPM is based on Tariff Appendix DD (GIDAP), it is written to provide the reader with a more detailed chronological sequence of events the Interconnection Customer needs to perform in order to interconnect to the Grid.  The following Table of Contents summarizes that sequence.**Table of Contents**

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**GIDAP BPM**

# Introduction

In this Introduction you will find the following information:

* The purpose of California Independent System Operator Corporation (CAISO) Business Practice Manuals (BPMs);
* What you can expect from this CAISO BPM; and
* Other CAISO BPMs or documents that provide related or additional information.

## Purpose of CAISO Business Practice Manuals

Business practice manuals (BPMs) provide detailed rules, procedures and examples for the administration, operation, planning and accounting requirements of the CAISO and the market that are consistent with the CAISO tariff. Adherence to the manuals is important for orderly operation of the CAISO market. And the CAISO’s systematic and publicly transparent change management process ensures the consideration of all relevant information when modifying the manuals.”

To view the listing of CAISO BPMs go to the “Rules” tab within the CAISO Website.

## Purpose of this Business Practice Manual

The GIDAP BPM covers procedures for cluster, independent, fast track, and 10kW or less inverter Interconnection Study processes for Large Generating Facilities (LGF) and Small Generating Facilities (SGF).

In this BPM you will find:

* A description of the application & study process for CAISO Tariff Appendix DD, which is referenced in this GIDAP BPM as the GIDAP; and
* General information on CAISO Tariff Appendix DD Generator Interconnection and Deliverability Allocation Procedures (GIDAP) processes.

The provisions of this BPM are intended to be consistent with the GIDAP. If the provisions of this BPM nevertheless conflict with the GIDAP, the CAISO is required to operate in accordance with the GIDAP. Any provision of the GIDAP that is summarized or repeated in this BPM is only to aid understanding. Even though every effort is made by the CAISO to update the information contained in this BPM and notify Market Participants and other parties of the changes, it is the responsibility of each Market Participant and other party to ensure that it is using the most recent version of this BPM and complies with all applicable provisions of the GIDAP.

## References

The CAISO BPM for Definitions & Acronyms provides the definition of acronyms and words beginning with capitalized letters.

In addition, the following references relate to this GIDAP BPM:

* Other CAISO BPMs; and
* The CAISO FERC Electric Tariff.

The CAISO Website posts current versions of these documents.

Whenever this BPM refers to the GIDAP, a given agreement (such as a GIA or any other BPM or instrument), the intent is to refer to the GIDAP, that agreement, other BPM or instrument as it may have been modified, amended, supplemented or restated from the release date of this GIDAP BPM.

The captions and headings in this BPM intend solely to facilitate reference and not to have any bearing on the meaning of any of the terms and conditions of this BPM.

## Definitions

### Master Definitions Supplement

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, shall have the same meaning where used in this GIDAP BPM. Special Definitions not covered in Appendix A to the CAISO Tariff, yet apply to this GIDAP BPM are provided in Section 1.4.2 of this BPM.

### Highlighted Definitions Applicable to this GIDAP BPM

The definitions of the following terms, which also appear in either CAISO Appendix A or the GIDAP (Appendix DD), are important to keep in mind in reviewing this GIDAP BPM:

“Area Delivery Network Upgrade” shall mean a transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

“Cluster Study Process” shall mean a process whereby a group of Interconnection Requests are studied together, instead of serially, for the purpose of conducting Phase I and II Studies.

"Confidential Information" shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to GIDAP Section 15.1 and GIDAP BPM Section 13.

"Dispute Resolution" shall mean the procedure set forth in GIDAP Section 15.5 and in GIDAP BPM Section 15 for resolution of a dispute between the Parties.

“Local Delivery Network Upgrade” shall mean a transmission upgrade or addition identified by the CAISO in the GIDAP interconnection study process to relieve a Local Reliability Constraint.

“Option (A) Generating Facility” shall mean a Generating Facility for which the Interconnection Customer has selected Option (A) as the Deliverability option under GIDAP Section 7.2.

“Option (B) Generating Facility” shall mean a Generating Facility for which the Interconnection Customer has selected Option (B) as the Deliverability option under GIDAP Section 7.2.

"Party" or "Parties" shall mean the CAISO, Participating TO(s), Interconnection Customer or the applicable combination of the above.

“10 kW Inverter Process” shall mean the study process set forth in GIDAP Appendix 7, which applies only for an inverter-based Small Generating Facility no larger than 10 kW that meets the codes, standards, and certification requirements of Appendices 9 and 10 of the GIDAP, or that the Participating TO has reviewed the design of or tested and has satisfied itself that the proposed Small Generating Facility is safe to operate.

“TP Deliverability” shall mean the capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions modeled or identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

# GIDAP Applicability and Comparability

This GIDAP BPM applies to Interconnection Requests that are processed under the GIDAP. The GIDAP was accepted by FERC on July 24, 2012, with an effective date of July 25, 2012. The CAISO processes both small generator Interconnection Requests (generation up to 20 MW) and large generator Interconnection Requests (greater than 20 MW) under the GIDAP.

The ISO’s Queue Cluster 5 and Interconnection Requests received on or after July 25, 2012, are being processed under the GIDAP.

**The Three Processing Tracks of the GIDAP** - Under the GIDAP, Interconnection Requests are processed under one of three study tracks: (i) the Queue Cluster Study Process track; (ii) the Independent Study Process track; and (iii) the Fast Track Process track, which includes the 10 kW Inverter Process track.

**Interconnection Service -** Interconnection Service allows the Interconnection Customer to connect the Generating Facility to the CAISO Controlled Grid and be eligible to deliver Generating Facility output using the available capacity of the CAISO Controlled Grid. Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or point of delivery or rights to any specific MW of available capacity on the CAISO Controlled Grid.

An Interconnection Request under the GIDAP is not a request for transmission service nor does it confer upon an Interconnection Customer any right to receive transmission service. In addition, it is important to understand that:

1. no Interconnection Customer obtains any “rights” to capacity by virtue of connecting to the CAISO Controlled Grid, even though it may “up-front finance” the cost to construct the needed network upgrades to interconnect the generating facility; and
2. “firm transmission service,” a type of transmission service available in some parts of the eastern United States, does not exist with respect to the CAISO Controlled Grid.

There is sometimes confusion on the part of Interconnection Customers that, through the generator interconnection process, they have “purchased Network Upgrades” and have specific rights in them, or have specific rights to the transfer capacity that result from construction and installation of the upgrades because they may have up-front funded them. This is not the case.

First, the interconnection process is designed to permit the generating facility to interconnect by:

1. in terms of reliability - identifying and constructing Network Upgrades needed to preserve the safe and reliable operation of the CAISO Controlled Grid (Reliability Network Upgrades); and
2. in terms of deliverability - enhance the transfer capacity of the CAISO Controlled Grid (through Delivery Network Upgrades) to deem the interconnecting generating facility “deliverable” in the sense that it has full capacity delivery status, a status which means that from an engineering standpoint, the output of the generating facility to the extent of its net qualifying capacity can be considered deliverable to the aggregate of load on the CAISO Controlled Grid, even under peak conditions.

Second, under the GIDAP the Interconnection Customer payments for certain Network Upgrades are repaid to the customer by the Participating TOs, from revenues that come from the CAISO Transmission Access Charge (TAC). Accordingly, while an Interconnection Customer generally up-front funds the construction of certain needed Network Upgrades, the customer does not ultimately absorb these costs - ratepayers who pay the TAC do.

In addition, discussion of generator interconnection sometimes crosses over into interrelated transactional concepts relating to power purchase transactions. For example, Resource Adequacy (RA) deliverability and Net Qualifying Facility are not items which are the subject of an Interconnection Request or a Generator Interconnection Agreement (GIA). Parties sometimes mistakenly seek to put language regarding RA qualification into draft GIAs.

In addition, there is sometimes confusion regarding what the Interconnection Service to the CAISO Controlled Grid does and does not provide to the Interconnection Customer.

* No “protection” against curtailment in real-time – Full Capacity Deliverability Status does not insulate a Generating Facility from curtailments that are necessary in real-time system operations. In the event that a power transfer onto a stressed line must be curtailed, the CAISO curtails all affected generation on a pro-rata basis.

* No determination of Resource Adequacy deliverability – interconnection under Full Capacity Deliverability Status is a necessary but not a sufficient condition for the facility to qualify as a Resource Adequacy resource and obtain a Net Qualifying Capacity (NQC) rating. The interconnection process only addresses physical and electrical interconnection; resource adequacy counting and qualification are external to the GIDAP.

**Timeframes for interconnection study** - The GIDAP contains time frames for the CAISO to intake and validate Interconnection Requests, conduct interconnection studies and negotiate GIAs. The CAISO will use reasonable efforts to meet the time frames, and when the CAISO anticipates that it cannot meet tariff time frames, it will inform the affected Interconnection Customers.

Proposed interconnection of a new Generating Facility to a Participating TO’s Distribution System are processed, as applicable, pursuant to the applicable Participating TO’s Wholesale Distribution Access Tariff (WDAT), CPUC Rule 21, or other Local Regulatory Authority requirements of the Participating TO.

# On-Line Resources

# Summary of Available Study Tracks and Application Deadlines

# Interconnection Requests

# Study Tracks and Details

## General (Applies across all Study Tracks)

### Detailed description of Network Upgrades

#### Reliability Network Upgrades (RNU)[[1]](#footnote-1)

Reliability Network Upgrades mean the transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facilities safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facilities, including Network Upgrades necessary to remedy short circuit or stability problems, or thermal overloads.

Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which system operating limits cannot be adequately mitigated through Congestion Management, Operating Procedures, or Special Protection Systems based on the characteristics of the Generating Facilities included in the Interconnection Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies.

Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility’s interconnection may have on a WECC path’s approved rating.

#### Local Delivery Network Upgrades (LDNU)[[2]](#footnote-2)

Local Delivery Network Upgrades mean transmission upgrades or additions identified by the CAISO in the GIDAP interconnection study process to relieve a Local Deliverability Constraint.

A Local Deliverability Constraint is a transmission system operating limit modeled in the GIDAP study process that would be exceeded if the CAISO were to assign full capacity or partial capacity deliverability status to one or more additional generating facilities interconnecting to the CAISO controlled grid in a specific local area and that is not an area deliverability constraint

#### Area Delivery Network Upgrades (ADNU)[[3]](#footnote-3)

Area Delivery Network Upgrades mean transmission upgrades or additions identified by the CAISO to relieve an Area Deliverability Constraint.

An Area Deliverability Constraint means a transmission system operating limit that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO controlled grid in a total amount that is greater than the TP Deliverability for those areas. The definition also states that an area deliverability constraint may be a transmission system operating limit that constrains a quantity of generation in a local area of the grid that is larger than the generation amount identified in the applicable Transmission Planning Process portfolio for the entire portfolio area, or a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified area deliverability constraint.

### Detailed Description of Interconnection Facilities

The Participating TO’s Interconnection Facilities and the Interconnection Customer's Interconnection Facilities (collectively referred to as Interconnection Facilities) includes all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the CAISO Controlled Grid. Interconnection Facilities are sole-use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Regardless of whether a Generating Facility is an Option (A) Generating Facility, an Option (B) Generating Facility, or has Energy-Only Deliverability Status, the customer will be responsible for the costs of the Participating TO’s Interconnection Facilities and all other facilities costs besides the costs of ADNUs, LDNUs, and RNUs discussed above.

### Use of Per-Unit Costs to Estimate Network Upgrade Costs[[4]](#footnote-4)

Under the direction of the CAISO, each Participating TO develops and provides to the CAISO per-unit Costs for facilities generally required to interconnect Generation to their respective systems, which are updated on an annual basis.

These per-unit costs will reflect the anticipated cost of procuring and installing such facilities during the current Interconnection Study Cycle, and may vary among Participating TOs and within a Participating TO Service Territory based on geographic and other cost input differences, and should include an annual adjustment for the following ten (10) years to account for the anticipated timing of procurement to accommodate a potential range of Commercial Operation Dates of Interconnection Requests in the Interconnection Study Cycle. The per-unit costs are used to develop the cost of RNUs, LDNUs, ADNUs and Participating TO’s Interconnection Facilities. Deviations from a Participating TO‟s benchmark per-unit costs will be permitted if a reasonable explanation for the deviation is provided and there is no undue discrimination.

Prior to adoption and publication of final per- unit costs for use in an Interconnection Study Cycle, the CAISO will post to the CAISO Website draft per-unit costs, including non-confidential information regarding the bases therefore, hold a stakeholder meeting to address the draft per-unit costs, and permit stakeholders to provide comments on the draft per-unit costs. A schedule for the release and review of per-unit costs is set forth in GIDAP Appendix 5.

For access to the draft per- unit costs published by the CAISO, please go to the CAISO Website and select the following sequence of tabs:

* Planning
* Generator Interconnection
* Generator interconnection application process

### Coordination with Affected Systems[[5]](#footnote-5)

The CAISO will notify the Affected System Operators that are potentially affected by the Interconnection Customer’s Interconnection Request or Group Study within which the Interconnection Customer’s Interconnection Request will be studied. The CAISO coordinates the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators, to the extent possible, and, if possible, the CAISO will include those results (if available) in its applicable Interconnection Study within the time frame specified in the GIDAP. The CAISO provides Affected System Operators with the opportunity to be included in scoping and results meetings held with the Interconnection Customer. The Interconnection Customer is required under the GIDAP to cooperate with the CAISO in all matters related to the Affected System Operator’s conduct of studies and the determination of modifications to its Affected Systems, including signing separate study agreements with Affected System owners and paying for necessary studies. Under general principles related to open access obligations, an entity which may be an Affected System cooperates with the CAISO in matters related to the conduct of studies and the determination of modifications to Affected Systems.

**Special Provisions for Affected Systems, Other Affected Participating TOs[[6]](#footnote-6)**

The Interconnection Customer must enter into an agreement with the owner of the Affected System and/or other affected Participating TO(s), as applicable. The agreement must specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected Participating TO(s) as well as the repayment by the owner of the Affected System and/or other affected Participating TO(s). If the affected entity is another Participating TO, the initial form of agreement will be the GIA, as appropriately modified.

Any repayment by the owner of the Affected System shall be in accordance with FERC Order No. 2003-B (109 FERC ¶ 61,287).

## Queue Cluster Study Process[[7]](#footnote-7)

The Queue Cluster Study Process track is the default process for processing Interconnection Requests (see GIDAP BPM Attachments 1 and 2). Unless it is demonstrated that an Interconnection Request qualifies for the Independent Study Process track (GIDAP Section 4), the Fast Track Process track (GIDAP Section 5), or the 10 kW Inverter Process (GIDAP Appendix 7), the Interconnection Request will be studied under the Queue Cluster Study Process track (GIDAP Sections 6 and 7).

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

### Generator Interconnection Study Process Agreement[[8]](#footnote-8)

Before the Interconnection Study process begins, Interconnection Customers are required to sign an interconnection study agreement wherein the Interconnection Customer agrees to pay for the reasonably incurred study costs.

The timing and details of the interconnection study agreement are as follows: Within thirty (30) calendar days of the close of a Cluster Application Window, the CAISO will provide each Interconnection Customer (which has a valid Interconnection Request received during the Cluster Application Window) a pro forma Generator Interconnection Study Process Agreement in the form set forth in GIDAP Appendix 3. Within three (3) Business Days following the Scoping Meeting, the Interconnection Customer must specify for inclusion in the attachment to the Generator Interconnection Study Process Agreement the Point of Interconnection for the Phase I Interconnection Study. Within ten (10) Business Days following the CAISO’s receipt of such designation, the CAISO, in coordination with the applicable Participating TOs, provides the Interconnection Customer a signed Generator Interconnection Study Process Agreement. The Interconnection Customer must execute and deliver to the CAISO the Generator Interconnection Study Process Agreement no later than thirty (30) calendar days after the Scoping Meeting.

### Scoping Meeting[[9]](#footnote-9)

Within five (5) Business Days after the CAISO notifies the Interconnection Customer of an Interconnection Request that is complete, valid, and ready for study, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. All Scoping Meetings shall occur no later than sixty (60) calendar days after the close of a Cluster Application Window, unless otherwise mutually agreed upon by the Parties.

The CAISO shall endeavor to bring any Affected System into the communications regarding the Interconnection Studies. The CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s) service territory or of any other Affected System(s) so as to potentially affect such third parties, and, in such case, the CAISO shall invite the affected Participating TO(s), and/or Affected System Operator(s) in accordance with GIDAP Section 3.7 and GIDAP BPM Section 6.1.4, to the Scoping Meeting by informing such third parties of the time and place of the scheduled Scoping Meeting as soon as practicable.

The Scoping Meeting is a primary feedback mechanism available to the Interconnection Customer to provide general preliminary information regarding the Interconnection Request.

The purpose of the Scoping Meeting is to discuss items such as reasonable Commercial Operation Dates and alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection and eliminate alternatives given resources and available information. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose, the following: (a) such already available technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues, and (b) general information regarding the number, location, and capacity of other Interconnection Requests in the Interconnection Study Cycle that may potentially form a Group Study with the Interconnection Customers Interconnection Request.

The Interconnection Customer is required to bring to the Scoping Meeting, in addition to the technical data in Attachment A to the GIDAP Appendix 1, any system studies previously performed. Likewise, the applicable Participating TO(s), the CAISO and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, the Interconnection Customer shall designate its Point of Interconnection. The duration of the meeting shall be sufficient to accomplish its purpose.

The CAISO prepares draft minutes of the meeting, and provides the Interconnection Customer and the other attendees with an opportunity to confirm their accuracy before they are finalized. The minutes include, at a minimum, discussions among the applicable Participating TO(s) and the CAISO of the expected results and a good-faith estimate of the costs for the Phase I Interconnection Study. If, at the Scoping Meeting, the Interconnection Customer disagreed with the CAISO and/or Participating TO on some subject matter covered in the meeting, the CAISO will attempt to capture the disagreement in the minutes, and the Interconnection Customer will have the opportunity, when it reviews the draft minutes, to add to the discussion in the draft version minutes as a part of its opportunity to confirm the accuracy of the meeting minutes.

### Grouping Interconnection Requests[[10]](#footnote-10)

At the CAISO’s option, and in coordination with the applicable Participating TO(s), Interconnection Requests received during the Cluster Application Windows may be either studied individually or in a Group Study for the purpose of conducting one or more of the analyses forming the Interconnection Studies. For each Interconnection Study within an Interconnection Study Cycle, the CAISO may develop one or more Group Studies. A Group Study will include, at the CAISO’s sole judgment after coordination with the applicable Participating TO(s), Interconnection Requests that electrically affect one another with respect to the analysis being performed without regard to the nature of the underlying Interconnection Service.

Short circuit upgrades and looped substations generally comprise the majority of Reliability Network Upgrade costs. Short circuit duty contribution is used to create groups for short circuit duty mitigation. Generating Facilities connecting to new substations are included in the group for allocation of the cost of the new substation. Generating Facilities are grouped together for Special Protection System analysis and mitigation based on its expected flow contribution to the identified constraint. Generating Facilities are grouped together for reactive support analysis based on geographic and electrical proximity. The CAISO may also, in its sole judgment after coordination with the applicable Participating TO(s), conduct an Interconnection Study for an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility from other Generating Facilities with Interconnection Requests in the Cluster Application Window for a particular year.

The fact that the CAISO included an Interconnection Request in a Group Study will not relieve the CAISO or Participating TO(s) from meeting the timelines for conducting the Phase I Interconnection Study provided in the GIDAP. Group Studies shall be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the transmission system's capabilities at the time of each study.

In general, the business practice of the CAISO has been to identify study areas for purposes of creating Queue Cluster groups based upon the topography and electrical configuration of the CAISO Controlled Grid, such that Generating Facilities in the Queue Cluster that materially affect each other electrically are placed within a particular study area. The exact grouping is determined during the study.

### Phase I Interconnection Studies

#### Scope and Purpose of Phase I Interconnection Studies[[11]](#footnote-11)

The scope and purpose of the Phase I Interconnection Study is to:

1. evaluate the impact of all Interconnection Requests received during the Cluster Application Window for a particular year on the CAISO Controlled Grid;
2. preliminarily identify all LDNU and RNU needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests;

1. preliminarily identify for each Interconnection Request required Interconnection Facilities;
2. assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs;
3. establish the maximum cost responsibility for LDNUs and RNUs assigned to each Interconnection Request, until the issuance of the Phase II Interconnection Study report;
4. provide a good faith estimate of the cost of Interconnection Facilities for each Interconnection Request; and
5. provide a cost estimate of ADNUs for each Generating Facility in a Queue Cluster Group Study.

The Phase I Interconnection Study will consist of a short circuit analysis, a stability analysis to the extent the CAISO and applicable Participating TO(s) reasonably expect transient or voltage stability concerns, a power flow analysis, including off-peak analysis, and an On-Peak Deliverability Assessment (and Off-Peak Deliverability Assessment which will be for informational purposes only) for the purpose of identifying LDNUs and estimating the cost of ADNUs, as applicable.

The Phase I Interconnection Study will state for each Group Study or Interconnection Request studied individually:

1. the assumptions upon which it is based;
2. the results of the analyses; and
3. the requirements or potential impediments to providing the requested Interconnection Service to all Interconnection Requests in a Group Study or to the Interconnection Request studied individually.

The Phase I Interconnection Study will provide, without regard to the requested Commercial Operation Dates of the Interconnection Requests, a list of RNUs and LDNUs to the CAISO Controlled Grid that are preliminarily identified as required as a result of the Interconnection Requests in a Group Study or as a result of any Interconnection Request studied individually and Participating TO’s Interconnection Facilities associated with each Interconnection Request, the estimated costs of ADNUs, if applicable and an estimate of any other financial impacts (*i.e.*, on Local Furnishing Bonds).

#### Roles and Responsibilities of Participating TO and CAISO

The GIDAP sets forth a pro forma contract between the CAISO and the applicable Participating TOs that clarifies the roles and responsibilities of the CAISO and Participating TOs with regard to Generator Interconnection Procedures and Interconnection Study Agreements.[[12]](#footnote-12) This agreement is commonly referred to as the “Roles and Responsibilities agreement.” The CAISO will assign responsibility for performance of portions of the Interconnection Studies to the relevant Participating TOs, under the direction and oversight of, and approval by, the CAISO, as set forth in the agreement. The agreement serves as a general overview of the roles and responsibilities as between the CAISO and Participating TOs, but does not include the process steps, involvement or obligations of the Interconnection Customer, or all procedures that are necessary to comply with all provisions of a GIA, the GIDAP, and Generator Interconnection Study Process Agreement for Queue Clusters.

#### Deliverability Assessment[[13]](#footnote-13)

For both the Phase I Interconnection Study and the Phase II Interconnection Study, the CAISO, in coordination with the applicable Participating TOs will conduct On-Peak Deliverability Assessments and Off-Peak Deliverability Assessments for Interconnection Customers selecting Full Capacity Deliverability Status or Partial Capacity Deliverability Status.

**The On-Peak Deliverability Assessment**

The On-Peak Deliverability Assessment shall determine the Interconnection Customer’s Generating Facility’s ability to deliver its energy to the CAISO Controlled Grid under peak load conditions, and identify preliminary Delivery Network Upgrades required to provide the Generating Facility with Full Capacity or Partial Capacity Deliverability Status. The methodology for the On-Peak Deliverability Assessment is published on the CAISO Website at <http://www.caiso.com/Documents/On-PeakDeliverabilityAssessmentMethodology.pdf>. The On-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point.

The On-Peak Deliverability Assessment will consist of two rounds, the first of which will identify any transmission constraints that limit the Deliverability of the Generating Facilities in the group study and will identify LDNUs to relieve the local constraints, and second of which will determine ADNUs to relieve the area constraints.

The first round of the Deliverability Assessment models all the generation projects requesting Full Capacity or Partial Capacity Deliverability Status in accordance with the On-Peak Deliverability Assessment Methodology. The transmission system operating limits identified during the assessment are divided into two categories: Local Deliverability Constraints and Area Deliverability Constraints.

Local Deliverability Constraints tend to have the following attributes:

* Generators whose deliverability is constrained by Local Deliverability Constraints (*i.e.*, generators inside the 5% DFAX circle) are all located on a few buses electrically close to each other. Relieving these constraints does not trigger high-cost upgrades.

Area Deliverability Constraints tend to have the following attributes:

* Generators whose deliverability is constrained by Area Deliverability Constraints (*i.e.*, generators inside the 5% DFAX circle) are spread over at least one and possibly more grid study areas or resource areas identified in a resource portfolio used in the Transmission Planning Process.
* In the first round of the Phase I Deliverability Assessment, relieving Area Deliverability Constraints may trigger high cost upgrades, driven by excessively large MW amounts of new generation electrically located behind the Area Deliverability Constraint.
* In some potential situations, the CAISO may classify a constraint as an Area Deliverability Constraint if it constrains the deliverability of generators electrically close to each other and is triggered by an exceptionally large volume of generation. This could occur, for example, when there is an exceptionally large volume of interconnection requests in a relatively smaller local sub-area within one of the resource development areas identified in the Transmission Planning Process portfolios and relieving the constraint requires expensive upgrades. This potential situation was raised as a concern by some stakeholders, and the CAISO determined that in such cases, if they occur, the appropriate remedy would be to reclassify the constraint as an area deliverability constraint based on the recognition that it would serve a substantial volume of generation projects within the study area.

The categorization of ADNU versus LDNU is based on the deliverability constraint that triggers the need of the DNU. With the exception of Special Protection System- mitigating deliverability constraints, ADNUs are transmission upgrades or additions to relieve Area Deliverability Constraints and LDNUs are to relieve Local Deliverability Constraints.

In the second round of the Deliverability Assessment, facilities necessary to provide the incremental deliverability between the level of TP Deliverability and an additional amount are identified. In a Phase I study, the additional amount represents a subset of the generator interconnection projects whose requested deliverability is supported by additional ADNU. In a Phase II study, the additional amount represents the generator interconnection projects selecting Option (B).

**Off-Peak Deliverability Assessment**

The CAISO, in coordination with the applicable Participating TO(s), shall perform an Off-Peak Deliverability Assessment to identify transmission upgrades in addition to those Delivery Network Upgrades identified in the On-Peak Deliverability Assessment, if any, for a Group Study or individual Interconnection Study that includes one or more Location Constrained Resource Interconnection Generators (LCRIG), where the fuel source or source of energy for the LCRIG substantially occurs during off-peak conditions. The Off-Peak Deliverability Assessment is performed for informational purposes only. The methodology for the Off-Peak Deliverability Assessment is published on the CAISO Website at <http://www.caiso.com/Documents/Off-PeakDeliverabilityAssessmentMethodology.pdf>.

#### Phase I Interconnection Study Procedures[[14]](#footnote-14)

The CAISO coordinates the Phase I Interconnection Study with applicable Participating TO(s) pursuant to GIDAP Section 3.2 and with any Affected System Operator whose system is affected by the Interconnection Request pursuant to GIDAP Section 3.7 or GIDAP BPM Section 6.1.4.

Existing studies shall be used to the extent practicable when conducting the Phase I Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to complete and issue to Interconnection Customers the Phase I Interconnection Study report within two hundred (200) days after the commencement of the Phase I Interconnection Study for Queue Cluster 5 and within one hundred seventy (170) days after the annual commencement of the Phase I Interconnection Study beginning with Queue Cluster 6; however, each individual study or Group Studies may be completed prior to this maximum time where practicable based on factors, including, but not limited to, the number of Interconnection Requests in the Cluster Application Window, study complexity, and reasonable availability of subcontractors as provided under GIDAP Section 15.2.

Note also that not all reports will come out on the same day and that some studies may be completed sooner than others. The CAISO will share applicable study results with the applicable Participating TO(s) for review and comment and will incorporate comments into the study report. The CAISO will issue a final Phase I Interconnection Study report to the Interconnection Customer. At the time of completion of the Phase I Interconnection Study, the CAISO may, at the Interconnection Customer’s request, determine whether the Interconnection Request qualifies for an accelerated Phase II study effort under GIDAP Section 8.6 and GIDAP BPM Section 6.2.7.5.

At any time the CAISO determines that it will not meet the required time frame for completing the Phase I Interconnection Study due to the large number of Interconnection Requests, study complexity, or unavailability of subcontractors on a reasonable basis to perform the study in the required time frame, the CAISO shall notify the Interconnection Customers as to the schedule status of the Phase I Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, work papers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase I Interconnection Study, subject to confidentiality arrangements consistent with GIDAP Section 15.1 and GIDAP BPM Section 13.

##### **Identification of and Cost Allocation for Reliability Network Upgrades (RNUs)[[15]](#footnote-15)**

The CAISO, in coordination with the applicable Participating TO(s), will perform short circuit and stability analyses for each Interconnection Request either individually or as part of a Group Study to preliminarily identify the RNUs needed to interconnect the Generating Facilities to the CAISO Controlled Grid. The CAISO, in coordination with the applicable Participating TO(s), shall also perform power flow analyses, under a variety of system conditions, for each Interconnection Request either individually or as part of a Group Study to identify Reliability Criteria violations, including applicable thermal overloads, that must be mitigated by RNUs.

The cost of all RNUs identified in the Phase I Interconnection Study shall be estimated in accordance with GIDAP Section 6.4 and GIDAP BPM Section 6.1.3. The estimated costs of short circuit related RNUs identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the short circuit duty contribution of each Generating Facility. The estimated costs of all other RNUs identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request. The estimated costs of RNUs identified as a result of an Interconnection Request studied separately shall be assigned solely to that Interconnection Request.

##### **Identification of and Cost Allocation for Deliverability Network Upgrades**

**Local Delivery Network Upgrades (LDNUs)**[[16]](#footnote-16)

The On-Peak Deliverability Assessment will be used to establish the maximum cost responsibility for LDNUs for each Interconnection Customer selecting Full Capacity or Partial Capacity Deliverability Status. Deliverability of a new Generating Facility will be assessed on the same basis as all existing resources interconnected to the CAISO Controlled Grid.

The cost of LDNUs identified in the On-Peak Deliverability Assessment as part of a Phase I Interconnection Study shall be estimated in accordance with GIDAP Section 6.4 and GIDAP BPM Section 6.1.3. The estimated costs of Delivery Network Upgrades identified in the On-Peak Deliverability Assessment shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on the Delivery Network Upgrades as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**Area Delivery Network Upgrades (ADNUs)**[[17]](#footnote-17)

The On-Peak Deliverability Assessment will be used in the Phase I Interconnection Studies to identify those facilities necessary to provide the incremental Deliverability between the level of TP Deliverability and such additional amount of Deliverability as is necessary for the MW capacity amount of generation targeted in the Phase I Interconnection Studies. Based on such facility cost estimates, the CAISO will calculate a rate for ADNU costs equal to the facility cost estimate divided by the additional amount of Deliverability targeted in the study. The Phase I Interconnection Studies shall provide a cost estimate for each Interconnection Customer which equals the rate multiplied by the requested deliverable MW capacity of the Generating Facility in the Interconnection Request.

**Off Peak Deliverability Assessment for Information Only**

The transmission upgrades identified in the Off-Peak Deliverability Assessment shall comprise those needed for the full maximum megawatt electrical output of each proposed new LCRIG or the amount of megawatt increase in the generating capacity of each existing LCRIG as listed by the Interconnection Customer in its Interconnection Request, whether studied individually or as a Group Study, to be deliverable to the aggregate of Load on the CAISO Controlled Grid under the Generation dispatch conditions studied.

The CAISO performs the Off-Peak Deliverability Assessment for Interconnection Customer informational purposes only, and any such upgrades identified in the Off-Peak Deliverability Assessment as part of the Phase I Interconnection Study shall be estimated in accordance with GIDAP Section 6.4. The estimated costs of such upgrades identified in the assessment will be referred to as “off peak Deliverability transmission upgrades,' the description of such upgrades in any report will be conceptual in nature, and such transmission upgrades will not be included in a plan of service within the applicable Interconnection Study report.

The cost of transmission upgrades identified in the Off-Peak Deliverability Assessment performed during the course of the Phase I Interconnection Study are estimated in accordance with Section 6.4 and GIDAP BPM Section 6.1.3. However, because these transmission upgrades shall be conceptual in nature only these upgrades shall be treated as follows:

1. these transmission upgrades will not be required for the proposed Generating Facility (or proposed increase in capacity) that is the subject to the Interconnection Request to achieve Full Capacity Deliverability Status;
2. the estimated costs for these transmission upgrades shall not be assigned to any Interconnection Customer in an Interconnection Study report, such costs shall not be considered in determining the cost responsibility or maximum cost responsibility of the Interconnection Customer for Network Upgrades under this or in determining the Interconnection Financial Security than an Interconnection Customer must post under GIDAP Section 11 and GIDAP BPM Section 8; and
3. the applicable Participating TO(s) shall not be responsible under this for financing or constructing such transmission upgrades.

##### **Identification of and Cost Allocation for Participating TO Interconnection Facilities**

As part of the Phase I studies, the Participating TO will identify the required Participating TO’s Interconnection Facilities associated with each Interconnection Request. The cost for these identified Interconnection Facilities will be estimated in accordance with GIDAP Section 6.4 and GIDAP BPM Section 6.1.3 and included in the Phase I Interconnection Study report.

#### Phase I Cost Responsibility[[18]](#footnote-18)

Under the GIDAP Cluster Study Process track, the maximum cost responsibility assigned to the Interconnection Customer for Network Upgrades is the lower of the cost estimates determined through the Phase I Interconnection Studies or the cost estimates determined through the Phase II Interconnection Studies.

Until such time as the Phase II Interconnection Study report is issued to the Interconnection Customer, the costs assigned to Interconnection Customers for RNUs and LDNUs in the Phase I Interconnection Study report shall establish the maximum value for:

* 1. each Interconnection Customer's cost responsibility; and
  2. the initial posting of Interconnection Financial Security required from each Interconnection Customer under GIDAP Section 11.2 and GIDAP BPM Section 8.3 for such Network Upgrades.

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

The ADNU cost estimates provided in the Interconnection Study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs.. However, subsequent to the Interconnection Customer’s receipt of its Phase II Interconnection Study report, an Interconnection Customer having selected Option (B) may have its ADNUs adjusted in the reassessment process undertaken under GIDAP Section 7.4. Accordingly, for such Interconnection Customers, the most recent annual reassessment undertaken under GIDAP Section 7.4 shall provide the most recent cost estimates for the Interconnection Customer’s ADNUs.

In contrast to the cost estimation for RNUs and LDNUs, which results in a “cost cap” for the Interconnection Customer’s maximum cost responsibility, GIDAP cost estimation for Interconnection Facilities yields estimates with no cost responsibility cap. Accordingly, the costs for the Participating TO’s Interconnection Facilities estimated in the Phase I and Phase II Interconnection Studies are estimates only that establish the basis for Interconnection Financial Security posting amounts. Interconnection Customers’ cost responsibility for Interconnection Facilities extends to the actual costs for such facilities.

The Phase I Interconnection Study report shall set forth the applicable cost estimates for RNUs, LDNUs, ADNUs and Participating TO’s Interconnection Facilities that shall be the basis for the initial Interconnection Financial Security posting under GIDAP Section 11.2 and GIDAP BPM Section 8.3.

#### Contents of Phase I Interconnection Study Report

Below is a general list of report information that may be included as part of the Phase I Interconnection Study reports. The list may not be a comprehensive list of all the possible types of data as each project can have unique circumstances. The content of information in Phase I Interconnection Study reports will vary from project to project.

* Generator interconnection data
* Study scopes and assumptions
* Deliverability assessment
* Power flow analysis
* Reactive power deficiency analysis
* Transient stability evaluation
* Short circuit duty analysis
* Preliminary protection requirement
* Interconnection plan of service requirements
* Network upgrade requirements
* Substation and transmission work scope and estimate
* Upgrades, cost estimates and construction schedule estimates

### Phase I Interconnection Study Results Meetings[[19]](#footnote-19)

Within thirty (30) calendar days of issuing the Phase I Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall hold a Results Meeting to discuss the results of the Phase I Interconnection Study, including assigned cost responsibility, modifications, change in Commercial Operation Date (COD), and other possible changes addressed in GIP BPM Section 7.

#### Interconnection Customer Comments on Phase I Interconnection Study Report[[20]](#footnote-20)

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

The Interconnection Customer may submit, in writing, additional comments on the final Phase I Interconnection Study report up to (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with GIDAP Section 6.8 and GIDAP BPM Section 8.6, whether it is necessary to follow the final Phase I Interconnection Study report with a revised study report or an addendum. The CAISO will issue any such revised report or addendum to the Interconnection Customer no later than fifteen (15) Business Days following the Results Meeting.

#### Meeting Minutes[[21]](#footnote-21)

The CAISO will prepare the minutes from the meetings and will provide the Interconnection Customer and the other attendees an opportunity to confirm the accuracy of the minutes. If the Interconnection Customer disagrees with the CAISO and/or Participating TO on some subject matter covered in the meeting, the CAISO will attempt to capture the disagreement in the draft minutes, and the Interconnection Customer will have the opportunity to add to the discussion in the minutes as a part of its opportunity to confirm the accuracy of the draft minutes before finalization.

#### Commercial Operation Date Validation[[22]](#footnote-22)

At the Phase I Results Meeting, the Interconnection Customer shall provide a schedule outlining key milestones including environmental survey start date, expected environmental permitting submittal date, expected procurement date of project equipment, back-feed date for project construction, and expected project construction date. This will assist the parties in determining if Commercial Operation Dates are reasonable. If major Interconnection Customer’s Interconnection Facilities for the Generating Facility have been identified in the Phase I Interconnection Study, such as telecommunications equipment to support a possible Special Protection System (SPS), distribution feeders to support back feed, new substation, and/or expanded substation work, permitting and material procurement lead times may result in the need to alter the proposed Commercial Operation Date. The Parties may agree to a new Commercial Operation Date.

In addition, where an Interconnection Customer intends to establish Commercial Operation separately for different Electric Generating Units or project phases at its Generating Facility, it may only do so in accordance with an implementation plan agreed to in advance by the CAISO and Participating TO, which agreement shall not be unreasonably withheld. Where the parties cannot agree, the Commercial Operation Date determined reasonable by the CAISO, in coordination with the applicable Participating TO(s), will be used for the Phase II Interconnection Study where the changed Commercial Operation Date is needed to accommodate the anticipated completion, assuming Reasonable Efforts by the applicable Participating TO(s), of necessary Reliability Network Upgrades and/or Participating TO’s Interconnection Facilities, pending the outcome of any relief sought by the Interconnection Customer through the dispute procedures under GIDAP Section 15.5 and GIDAP BPM Section 15. The Interconnection Customer must notify the CAISO within five (5) Business Days following the Results Meeting that it is initiating dispute procedures.

#### Modifications Prior to Phase II Studies[[23]](#footnote-23)

At the Phase I Interconnection Study Results Meeting, the Interconnection Customer should be prepared to discuss any desired modifications to the Interconnection Request. After the issuance of the final Phase I Interconnection Study, but no later than ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO, in writing, modifications to any information provided in the Interconnection Request. The CAISO will forward the Interconnection Customer’s modification to the applicable Participating TO(s) within one (1) Business Day of receipt.

Modifications permitted under this GIDAP BPM Section 6.2.5.4 shall include specifically: (a) a decrease in the electrical output (MW) of the proposed project; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration.

For any modifications other than these, see GIDAP BPM Section 7 (Modifications).

The Interconnection Customer shall remain eligible for the Phase II Interconnection Study if the modifications are in accordance with this GIDAP BPM Section 6.2.5.4.

### Activities in Preparation for Phase II Studies

#### Phase II Data Form[[24]](#footnote-24)

Within ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO the completed form of Appendix B to the “*Generator Interconnection Study Process Agreement for Queue Clusters*”– set forth in GIDAP Appendix 3 (GIDAP Appendix B). The title of GIDAP Appendix B is ”*Data Form to Be Provided by the Interconnection Customer Prior to Commencement of the Phase II Interconnection Study*,” In this form, the Interconnection Customer provides critical information regarding the customer’s proposed Generating Facility for the purpose of scoping the Phase II Interconnection Study Work.

##### **Confirm Deliverability Status and Provide Other Data[[25]](#footnote-25)**

GIDAP Appendix B requires the Interconnection Customer to make certain important choices and/or affirmations about the nature of its proposed Generating Facility, so that the facility can be appropriately incorporated into the Phase II Interconnection Study effort. One of the most important things that the Interconnection Customer must do is make its election to either:

1. confirm the desired Deliverability Status that the Interconnection Customer had previously designated in the completed form of Appendix A to the Generator Interconnection Study Process Agreement (Assumptions Used in Conducting the Phase I Interconnection Study); or
2. change the desired Deliverability Status in one of the following ways:
   1. from Full Capacity Deliverability Status to Energy-Only Deliverability Status;
   2. from Full Capacity Deliverability Status to Partial Capacity Deliverability Status with a specified fraction of Full Capacity Deliverability Status;
   3. from Partial Capacity Deliverability Status to Energy-Only Deliverability Status; or
   4. reduce Partial Capacity Deliverability Status to a lower fraction of Full Capacity Deliverability Status.

Importantly, there is no opportunity for the Interconnection Customer to “upgrade” its delivery status from Energy-Only Deliverability Status to Full or Partial Capacity Deliverability Status.

Another significant point that the Interconnection Customer must bear in mind in deciding either to confirm a Full or Partial Capacity Deliverability Status or to “downgrade” (for example, from Full to Partial Capacity or to Energy-Only Deliverability Status) is that, once the choice is made, there is no later, further opportunity for the Interconnection Customer to “upgrade” the deliverability status of the Generating Facility, say from Partial Capacity or Energy-Only Deliverability Status to Full Capacity Delivery Status. The purpose of an Interconnection Request and Interconnection Study is to interconnect the facility to the CAISO Controlled Grid. A new facility (or increase increment of an increased facility) is only interconnected to the grid once, and so the Interconnection Request mechanism is not available thereafter to change delivery status.[[26]](#footnote-26)

Once the Interconnection Customer has chosen Partial Capacity or Energy-Only Deliverability Status at the onset of the Phase II Interconnection Study, the only opportunity left for any “upgrade” of deliverability status is the Annual Full Capacity Deliverability Option under GIDAP Section 9.2 and GIDAP BPM Section 6.6.1. Under this process, Generating Facilities with Partial Capacity or Energy-Only Deliverability Status may choose an annual option to be included an annual CAISO study effort that evaluates existing transmission capacity to see if the facility, or any 50 MW increment thereof, can be considered to have Full Capacity Deliverability Status. Interconnection Customers choosing this option must submit a modified form of Interconnection Request along with a non-refundable $10,000 study fee in the following Interconnection Study Cycle or a later study cycle. If a Generating Facility receives Full Capacity Deliverability Status for all or a portion of its capacity under the Annual Full Capacity Deliverability Option, it retains the Full Capacity Deliverability Status for the term of its GIA, subject to Resource Adequacy rules regarding Net Qualifying Capacity.

##### **Confirm MW Capacity**

GIDAP Appendix B requires the Interconnection Customer to confirm the requested MW capacity of the generator.

##### **Confirm Need for Ratepayer-Funded/Self Fund Deliverability (Option A or B)[[27]](#footnote-27)**

This GIDAP BPM Section 6.2.6.1(iii) applies to Interconnection Requests for which the Generating Facility Deliverability Status is either Full Capacity or Partial Capacity.

Within GIDAP Appendix B, the Interconnection Customer must select one of two options with respect to its Generating Facility:

**Option (A)**, which means that the Generating Facility requires TP Deliverability to be able to continue to Commercial Operation. If the Interconnection Customer selects Option (A), then the Interconnection Customer shall be required to make an initial posting of Interconnection Financial Security under GIDAP Section 11.2 and GIDAP BPM Section 8.3 for the cost responsibility assigned to it in the Phase I Interconnection Study for RNUs and LDNUs; or,

**Option (B)**, which means that the Interconnection Customer will assume cost responsibility for Delivery Network Upgrades (both ADNUs and LDNUs, to the extent applicable) without cash repayment under GIDAP Section 14.3.2 and GIDAP BPM Section 12 to the extent that sufficient TP Deliverability is not allocated to the Generating Facility to provide its requested Deliverability Status. If the Interconnection Customer selects Option (B), then the Interconnection Customer shall be required to make an initial posting of Interconnection Financial Security under GIDAP Section 11.2 and GIDAP BPM Section 8.3 for the cost responsibility assigned to it in the Phase I Interconnection Study for RNUs, LDNUs and ADNUs.

#### Reassessment of Phase I Base Case for the Phase II Studies[[28]](#footnote-28)

The CAISO will perform a reassessment of the Phase I Interconnection Study base case prior to the beginning of the GIDAP Phase II Interconnection Studies. The reassessment will evaluate the impacts on those Network Upgrades identified in previous interconnection studies and assumed in the Phase I Interconnection Study of:

1. Interconnection Request withdrawals occurring after the completion of the Phase II Interconnection Studies for the immediately preceding Queue Cluster;
2. the performance of earlier queued Interconnection Customers with executed GIAs with respect to required milestones and other obligations,

1. compliance of earlier queued Interconnection Customers that were allocated TP Deliverability under the GIDAP with the retention criteria;
2. the results of the TP Deliverability allocation from the prior Interconnection Study cycle; and,
3. transmission additions and upgrades approved in the most recent Transmission Planning Process cycle.

The reassessment will be used to develop the base case for the Phase II Interconnection Study.

Where, as a consequence of the reassessment, the CAISO determines that changes to the previously identified Delivery Network Upgrades in Queue Clusters earlier than the current Interconnection Study Cycle will cause changes to plans of service set out in executed GIAs, such changes will serve as a basis for amendments to GIAs.

The reassessment is performed in conjunction with TP Deliverability allocation as described in GIDAP BPM Section 6.2.9.3.

### Phase II Studies

#### Scope & Purpose of Phase II Studies[[29]](#footnote-29)

The CAISO, in coordination with the applicable Participating TO(s), will conduct a Phase II Interconnection Study that will incorporate eligible Interconnection Requests from the previous Phase I Interconnection Study. The Phase II Interconnection Study shall:

1. update, as necessary, analyses performed in the Phase I Interconnection Studies to account for the withdrawal of Interconnection Requests from the current Queue Cluster;

1. identify final RNUs needed to physically and reliably interconnect the Generating Facilities and provide final cost estimates;
2. identify final LDNUs needed to interconnect those Generating Facilities selecting Full Capacity or Partial Capacity Deliverability Status and provide final cost estimates,
3. identify final ADNUs for Interconnection Customers selecting Option (B), as provided below and provide revised cost estimates;
4. identify, for each Interconnection Request, the Participating TO’s Interconnection Facilities for the final Point of Interconnection and provide a +/-20% cost estimate; and
5. coordinate in-service timing requirements based on operational studies in order to facilitate achievement of the Commercial Operation Dates of the Generating Facilities.

The Phase II Interconnection Study report shall set forth the applicable cost estimates for RNUs, LDNUs, ADNUs and Participating TOs Interconnection Facilities that shall be the basis for Interconnection Financial Security Postings under GIDAP Section 11.3 and GIDAP BPM Section 8.4. In circumstances where the cost estimations applicable to the total of RNUs and LDNUs are based upon the Phase I Interconnection Study (because the cost estimation for the subtotal of RNUs and LDNUs were lower and so establish maximum cost responsibility under GIDAP Section 10.1 and GIDAP BPM Section 6.2.4.4), the Phase II Interconnection Study report shall recite this fact.

#### Roles and Responsibilities of Participating TO and CAISO

As described in GIDAP BPM Section 6.2.4.2, Attachment A to GIDAP Appendix 4 is a pro forma contract between the CAISO and the applicable Participating TOs that clarifies the roles and responsibilities of the CAISO and Participating TOs with regard to Generator Interconnection Procedures and Interconnection Study Agreements. This contract agreement also applies to the Phase II studies.

#### Phase II Interconnection Study Procedures[[30]](#footnote-30)

The CAISO shall coordinate the Phase II Interconnection Study with applicable Participating TO(s) and any Affected System that is affected by the Interconnection Request pursuant to GIDAP Section 3.7 and GIDAP BPM Section 6.1.4. Existing studies shall be used to the extent practicable when conducting the Phase II Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to commence the Phase II Interconnection Study by May 1 of each year, and to complete and issue to Interconnection Customers the Phase II Interconnection Study report within two hundred and five (205) calendar days after the annual commencement of the Phase II Interconnection Study. The CAISO will share applicable study results with the applicable Participating TO(s), for review and comment, and will incorporate comments into the study report. The CAISO will issue a final Phase II Interconnection Study report to the Interconnection Customer.

At the request of the Interconnection Customer or at any time the CAISO determines that it will not meet the required time frame for completing the Phase II Interconnection Study, the CAISO shall notify the Interconnection Customer as to the schedule status of the Phase II Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, work papers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase II Interconnection Study, subject to confidentiality arrangements consistent with GIDAP Section 15.1 and GIDAP BPM Section 13.

##### **Reliability Network Upgrades and Local Delivery Network Upgrades[[31]](#footnote-31)**

RNUs and LDNUs will be identified on the basis of all Interconnection Customers in the current Queue Cluster regardless of whether they have selected Option (A) or (B).

##### **Area Delivery Network Upgrades[[32]](#footnote-32)**

The Phase II Interconnection Study will identify ADNUs for Interconnection Customers who have selected Option (B). The Deliverability Assessment Base Case for the Phase II Interconnection Study will include Option (A) Generating Facilities in the current Interconnection Study Cycle and earlier queued Generating Facilities that will utilize TP Deliverability in a total amount that fully utilizes but does not exceed the available TP Deliverability.

If the MW capacity of the Option (A) Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area is less than or equal to the total TP Deliverability in any electrical area, the Deliverability Assessment Base Case will include all Option (A) and earlier queued Generating Facilities in the electrical area.

If the MW capacity of the Option (A) Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area exceeds the TP Deliverability in any electrical area, the Deliverability Assessment Base Case will include a representative subset of Generating Facilities that fully utilizes but does not exceed the TP Deliverability.

After the CAISO has modeled the Option (A) Generating Facilities, as described above, the CAISO will add Option (B) Generating Facilities to the Deliverability Assessment Base Case. ADNUs that are identified as needed for each electrical area shall be assigned to Option (B) Generating Facilities based upon their flow impacts.

##### **Operational Deliverability Assessment[[33]](#footnote-33)**

The CAISO will perform an operational partial and interim Deliverability Assessment (operational Deliverability Assessment) as part of the Phase II Interconnection Study. The operational Deliverability Assessment will be performed for each applicable Queue Cluster Group Study group for each applicable study year through the prior year before all of the required Delivery Network Upgrades are in-service. The CAISO will consider operational Deliverability Assessment results stated for the first year in the pertinent annual Net Qualifying Capacity process that the CAISO performs for the next Resource Adequacy Compliance Year. The study results for any other years studied in operational Deliverability Assessment will be advisory and provided to the Interconnection Customer for its use only and for informational purposes only.

The operational Deliverability Assessment follows the On-Peak Deliverability Assessment methodology set forth on the CAISO Website at <http://www.caiso.com/Documents/On-PeakDeliverabilityAssessmentMethodology.pdf>. The key components of the operational Deliverability Assessments are discussed below.

*Generation Interconnection Project Commercial Operation Date*

The assessment models the generation projects according to their Commercial Operation Date (COD). The latest COD information will be collected as specified below:

* The COD in the Generator Interconnection Agreement (GIA) for executed GIAs or those GIAs that were filed unexecuted at FERC;
* The estimated COD in an approved modification request;
* The estimated COD in the latest study report for projects that have completed the interconnection studies but have not executed the GIA; or
* The requested COD for projects in the current cluster.

The COD will be further scrutinized for feasibility and adjusted if deemed infeasible. Factors used to adjust the COD include:

* Status and progress of the interconnection study or GIA negotiation.
* The estimated time for the Participating TO to complete the Interconnection Facilities and Network Facilities required for the generator interconnection.
* Other information provided by the Interconnection Customer, such as notice to proceed with development of Interconnection Facilities or Network Facilities, and the Generating Facility’s permitting, financing and construction status.

The adjusted COD will be used in the operational Deliverability Assessment. In particular, projects that have not signed GIAs or are not under construction are not considered as reasonable to have COD in the next year. The COD for such projects will be adjusted to a later future year based on the factors listed above.

*Study Years*

The operational Deliverability Assessment will be performed for each applicable future year until the year before all the required Delivery Network Upgrades are scheduled to be in service for the study group. For example, if the 2013 Interconnection Study Cycle identifies Delivery Network Upgrades to be in service in 2019, the operational Deliverability Assessment will be performed for each year between 2014 and 2018.

*Modeling Requirements*

For each study year, the operational Deliverability Assessment will model the generation projects with adjusted COD in or before the study year and Network Upgrade components that are projected to be in service in or before the study year. In case a generation project will be implemented in phases as defined in the executed GIA, the phasing of the project will be modeled.

The resources, including generation, load, and import, will be modeled in accordance with the On-Peak Deliverability Assessment methodology.

*Method for Allocating Deliverable Partial Capacity*

Assuming the system conditions cannot accommodate the full deliverability of all generators in the study area that will be in Commercial Operation for the study year, the partial deliverability of each generator is allocated as a function of the Queue Position, generator size, and generator flow impact on the transmission constraint that is binding in the deliverability power flow.

For each deliverability constraint facility, the available capacity without the generation projects being tested is allocated to projects in the order from earlier queued projects to later queued projects until it is depleted. The projects in the same cluster are considered to have the same queue position. If there is available partial capacity for projects in the same cluster, the capacity is allocated using a weighted least square optimization.

The optimization allocation is formulated as:



where

N: number of generators

Di: Deliverable MW of generator i

: Upper limit of NQC[[34]](#footnote-34) of generator i

L: number of deliverability constraints

Cl: available capacity on the deliverability constraint l

SFil: shift factor of generator i output on deliverability constraint l

##### **Interim Energy-Only Interconnection Until DNUs Completed[[35]](#footnote-35)**

If it is determined that the Delivery Network Upgrades cannot be completed by the Interconnection Customer’s identified Commercial Operation Date, the Interconnection Study will include interim mitigation measures necessary to allow the Generating Facility to interconnect as an energy-only resource until the Delivery Network Upgrades for the Generating Facility are completed and placed into service, unless interim partial capacity deliverability measures are developed pursuant to GIDAP Section 8.1.4 and GIDAP BPM Section 6.2.7.3(iii).

#### Phase II Cost Estimates and Responsibilities

**Cost Estimate Details[[36]](#footnote-36)**

With respect to the items detailed in GIDAP Section 8.1.1 and GIDAP BPM Section 6.2.7.1, the Phase II Interconnection Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work, including the financial impacts (*i.e.*, on Local Furnishing Bonds), if any, and schedule for effecting remedial measures that address such financial impacts, needed on the CAISO Controlled Grid to implement the conclusions of the updated Phase II Interconnection Study technical analyses in accordance with Good Utility Practice to physically and electrically connect the Interconnection Customer’s Interconnection Facilities to the CAISO Controlled Grid. The Phase II Interconnection Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Participating TO's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities.

**Cost Responsibility for Reliability Network Upgrades[[37]](#footnote-37)**

Cost responsibility for final Reliability Network Upgrades identified in the Phase II Interconnection Study of an Interconnection Request shall be assigned to Interconnection Customers regardless of whether the Interconnection Customer has selected Option (A) or (B) or Energy-Only Deliverability Status, as follows:

* 1. The cost responsibility for final short circuit related Reliability Network Upgrades shall be assigned to all Interconnection Requests in the Group Study pro rata on the basis of short circuit duty contribution of each Generating Facility. The short circuit duty contribution of each Generating Facility includes: (a) the direct contribution from the Generating Facility; and (b) the share of contribution from other Reliability Network Upgrades and Local Delivery Network Upgrades of which the costs are allocated to the Generating Facility.
  2. The cost responsibility for all other final Reliability Network Upgrades shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request.

**Cost Responsibility for Local Delivery Network Upgrades[[38]](#footnote-38)**

The cost responsibility for Local Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of the Phase II Interconnection Study shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Capacity Deliverability Status, regardless of whether the Interconnection Customer has selected Option (A) or (B), based on the flow impact of each such Generating Facility on each Local Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**Cost Responsibility for Area Delivery Network Upgrades[[39]](#footnote-39)**

The cost responsibility for Area Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of Phase II Interconnection Study shall be assigned to Interconnection Customers who have selected Option (B) Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on each Area Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

The cost estimate provided in the Phase II Interconnection Study shall establish the basis for the second Interconnection Financial Security Posting for Interconnection Customers selecting Option (B).

**Cost Responsibility for Participating TO’s Interconnection Facilities**

As stated in GIDAP BPM Section 6.2.4.5, the costs for the Participating TO’s Interconnection Facilities estimated in the Phase II Interconnection Studies are estimates only that establish the basis for Interconnection Financial Security posting amounts. Interconnection Customers cost responsibility extends to the actual costs for such facilities.

#### Accelerated Phase II Studies[[40]](#footnote-40)

Under certain circumstances, the CAISO may perform an accelerated Phase II Interconnection Study for an Interconnection Request. The accelerated Phase II Interconnection Study shall be completed within one hundred fifty (150) calendar days following the later of (1) the posting of the initial Interconnection Financial Security or (2) the completion of the reassessment in preparation for the Phase II Interconnection Study under GIDAP Section 7.4 and GIDAP BPM Section 6.2.6.3.

An accelerated Phase II Study may be performed where the Interconnection Request meets the following criteria;

1. the Interconnection Request was not grouped with any other Interconnection Requests during the Phase I Interconnection Study or was identified as interconnecting to a point of available transmission during the Phase I Interconnection Study; and
2. the Interconnection Customer is able to demonstrate that the general Phase II Interconnection Study timeline under GIDAP is not sufficient to accommodate the Commercial Operation Date of the Generating Facility.

Accelerated Phase II studies can start as soon as the project meets the above criteria and is determined independent.

In addition to the above criteria, the CAISO may apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in the GIDAP to meet the schedule required by an order, ruling, or regulation of the Governor of the State of California, the CPUC, or the California Energy Commission.

#### Contents of Phase II Interconnection Study Report

Below is a general list of report information that may be included as part of the Phase II Interconnection Study reports. The content of Phase II Interconnection Study report information may vary based on the unique circumstances of a project.

* Generator interconnection data
* Study scopes and assumptions
* Deliverability assessment
* Power flow analysis
* Reactive power deficiency analysis
* Transient stability evaluation
* Short circuit duty analysis
* Operational studies
* Preliminary protection requirement
* Interconnection plan of service requirements
* Network upgrade requirements
* Substation and transmission work scope and estimate
* Upgrades, cost estimates and construction schedule estimates

### Phase II Interconnection Study Results Meetings[[41]](#footnote-41)

Within thirty (30) calendar days of providing the final Phase II Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Phase II Interconnection Study, including selection of the final Commercial Operation Date.

#### Interconnection Customer Comments on Phase II Interconnection Study Report

Should the Interconnection Customer provide written comments on the final Phase II Interconnection Study report within ten (10) Business Days of receipt of the report, but in no case less than three (3) Business Days before the Results Meeting, whichever is sooner, then the CAISO will address the written comments in the Phase II Interconnection Study Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible.

The Interconnection Customer may submit, in writing, additional comments on the final Phase II Interconnection Study report up to three (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.8, whether it is necessary to follow the final Phase II Interconnection Study Report with a revised study report or an addendum to the report. The CAISO will issue any such revised report or addendum no later than fifteen (15) Business Days following the Results Meeting.

#### Meeting Minutes

As is done for the Scoping Meeting and the Phase I Interconnection Study Results Meeting, the CAISO will prepare meeting minutes and provide the Interconnection Customer, and other attendees, with an opportunity to confirm their accuracy.

#### Establish Final Commercial Operation Date

At the Phase II Interconnection Study Results Meeting, the parties should be prepared to discuss and select the final Commercial Operation Date. The CAISO’s practice is to incorporate the time frame for completion of the transmission build-out when determining the Commercial Operation Date.

### Allocation Process for TP Deliverability[[42]](#footnote-42)

After the Phase II Interconnection Study reports are issued, the CAISO will perform the allocation of the TP Deliverability to Option (A) and Option (B) Generating Facilities that meet the eligibility criteria set forth in GIDAP Section 8.9.2 and GIDAP BPM Section 6.2.9.4. The TP Deliverability available for allocation will be determined from the most recent Transmission Plan. Once a Generating Facility is allocated TP Deliverability, the facility will be required to comply with retention criteria specific in GIDAP Section 8.9.3 and BPM Section 6.2.9.5 in order to retain the allocation. A Generating Facility’s compliance with the retention criteria shall be verified annually until the facility achieves Commercial Operation, at which time the allocation of TP Deliverability will be reflected in the facility’s Deliverability Status as an attribute of the facility that is no longer subject to the retention criteria.

Allocation of TP Deliverability shall not provide any Interconnection Customer or Generating Facility with any right to a specific MW of capacity on the CAISO Controlled Grid or any other rights (such as title, ownership, rights to lease, transfer or encumber). Rather, an allocation of TP Deliverability will be reflected in the Generating Facility’s Deliverability Status for purposes of determining its Net Qualifying Capacity on an annual basis in accordance with CAISO Tariff Section 40.4.6.1 and Section 5.1 of the BPM for Reliability Requirements.

#### Market Notice of Timeline, Submission of Affidavits and Commencement of Allocation Activities[[43]](#footnote-43)

The CAISO will issue a Market Notice to inform interested parties as to the timeline for commencement of allocation activities, for Interconnection Customer submittal of affidavits attesting to each proposed Generating Facility’s eligibility status and retention information, and for anticipated release of allocation results to Interconnection Customers. There are two major components of the allocation process, which are described in detail in GIDAP BPM Sections 6.2.9.2 and 6.2.9.4, respectively.

The remainder of this GIDAP BPM Section 6.2.9.1 describes the affidavits that Interconnection Customers must submit in support of the process for allocating TP Deliverability. Three different affidavits are needed prior to the allocation process, and are listed below.

1. Affidavit for Queue Cluster 4 and earlier queued projects.
2. Affidavit for Queue Cluster 5 and later clusters previously allocated TP Deliverability.
3. Affidavit for Queue Cluster 5 and later Queue Clusters seeking allocation of TP Deliverability, including projects that have exercised the parking option.

All affidavits shall be notarized. Each affidavit will be reviewed by the CAISO to ensure completeness and accuracy based on information available to the CAISO. If the CAISO determines that an affidavit is not acceptable it will be returned to the submitter for correction and resubmitted for further review. The CAISO and the Interconnection Customer shall work together to resolve any issue on a best efforts basis.

##### **Affidavit for Cluster 4 and Earlier Queued Projects**

The first component of the GIDAP allocation procedures, as described in GIDAP BPM Section 6.2.9.2(a), requires that the CAISO identify MW quantities of TP Deliverability to be reserved for proposed Generating Facilities in Queue Cluster 4 and earlier that are expected to achieve Commercial Operation.

Specifically, GIDAP Section 8.9.1(a) requires the CAISO to identify commitments that will utilize MW quantities of TP Deliverability for proposed Generating Facilities in Queue Cluster 4 or earlier that have executed power purchase agreements (PPAs) with Load-Serving Entities and have GIAs that are in good standing.

For this purpose, each year following the completion of the current Queue Cluster’s Phase II Interconnection Study, the CAISO will require all Interconnection Customers that meet the criteria just stated to provide an affidavit that attests to information associated with their PPAs and GIAs, as well as other information to assist in the evaluation of these Generating Facilities’ progress toward Commercial Operation.

The affidavit must include:

* The name and queue number of the Generating Facility being attested to;
* An attestation to the existence of an active PPA, and specify the MW of generating capacity covered under the PPA and the date the PPA was fully executed; and
* The name of the purchasing entity associated with the PPA.

##### **Affidavit for Queue Cluster 5 and Later Queue Clusters previously allocated TP Deliverability**

All Interconnection Customers for Generating Facilities that have been allocated TP Deliverability under GIDAP Section 8.9.1 are required to annually provide an affidavit that demonstrates that the Generating Facility meets the criteria to retain its TP Deliverability.

The affidavit must contain current information that demonstrates the following:

* 1. The Generating Facility remains in good standing with respect to the criteria on which the allocation of TP Deliverability was based.
  2. If the Generating Facility was allocated TP Deliverability based on achievement of only criterion (d) set forth in GIDAP Section 8.9.2(2), then the Interconnection Customer must, by the start of the next allocation cycle, demonstrate achievement of criteria (a), (b) or (c) set forth in GIDAP Section 8.9.2(2).
  3. The Interconnection Customer must have executed a GIA and must remain in good standing with regard to its GIA, such that neither the Participating TO nor the CAISO has provided the Interconnection Customer with a Notice of Breach of the GIA that has not been cured and the Interconnection Customer has not commenced curative actions.
  4. The Interconnection Customer must maintain the original Commercial Operation Date set forth in the GIA without request for extension unless such extension is required for reasons beyond the control of the Interconnection Customer and such extension results in no Material Modification or delay in the construction schedule for Network Upgrades common to multiple Generating Facilities; or unless the extension is occasioned by a material delay in the Participating TO’s construction of any Network Upgrades or Participating TO’s Interconnection Facilities.

##### **Affidavit for Queue Cluster 5 and later Queue Clusters seeking allocation of TP Deliverability, including projects that have exercised the parking option**

This affidavit is applicable to Generating Facilities that fall into one of two categories. The first category includes Generating Facilities that have just completed the GIDAP Phase II Interconnection Study process and are seeking an allocation of TP Deliverability for the first time. The second category includes Generating Facilities that have completed the GIDAP Phase II Interconnection Study process in a previous Interconnection Study Cycle, have exercised the parking option and are seeking an allocation of TP Deliverability in the current Queue Cluster’s allocation process.

The CAISO shall allocate available TP Deliverability to Generating Facilities according to the Interconnection Customer’s demonstration of having met the criteria listed below for all or a portion of the full MW generating capacity of the Generating Facility as specified in the Interconnection Request. Where a criterion is met by a portion of the full MW generating capacity of the Generating Facility, the eligibility score associated with that criterion shall apply to the portion that meets the criterion. Therefore, the affidavit must relate to the same proposed Generating Facility as described in Appendix A to the Interconnection Request specified and, for each criterion attested to, must specify the MW quantity of generating capacity that meets that criterion. At a minimum, the Generating Facility must meet criteria (1)(d) and (2)(a) or (2)(d) below to be eligible for TP Deliverability allocation.

The affidavit must include the following current information:

1. Permitting status. An Interconnection Customer’s Generating Facility must meet at least one of the following:
   1. The Interconnection Customer has received its final governmental permit or authorization allowing the Generating Facility to commence construction.
   2. The Interconnection Customer has received a draft environmental report document (or equivalent environmental permitting document) indicating likely approval of the requested permit and/or which indicates that the permitting authority has not found an environmental impact which would likely prevent the permit approval.
   3. The Interconnection Customer has applied for the necessary governmental permits or authorizations and the authority has deemed such documentation as data adequate for the authority to initiate its review process.
   4. The Interconnection Customer has applied for the necessary governmental permit or authorization for the construction.
2. Project financing status. An Interconnection Customer’s Generating Facility must meet at least one of the following criteria:
   1. The Generating Facility will be balance-sheet financed or has otherwise received a commitment of project financing, and the Interconnection Customer represents to the CAISO that either it has a regulator-approved power purchase agreement or that the Interconnection Customer is proceeding to Commercial Operation without a power purchase agreement.
   2. The Interconnection Customer has an executed and regulator-approved power purchase agreement.
   3. The Interconnection Customer has an executed power purchase agreement but such agreement has not yet received regulatory approval.
   4. The Interconnection Customer does not have an executed power purchase agreement but the Interconnection Customer is included on an active short list or other commercially recognized method of preferential ranking of power providers by a prospective purchaser Load Serving Entity.
3. Land acquisition
   1. The Interconnection Customer demonstrates a present legal right to begin construction of the Generating Facility on one hundred percent (100%) of the real property footprint necessary for the entire Generating facility.
   2. The Interconnection Customer demonstrates Site Exclusivity.

#### First Component of the Allocation Process: Representing TP Deliverability Used by Prior Commitments[[44]](#footnote-44)

Before allocating any TP Deliverability to specific Generating Facilities, the CAISO will identify the following commitments that will utilize MW quantities of TP Deliverability and will appropriately represent them during allocation of TP Deliverability in accordance with GIDAP BPM Section 6.2.9.4:

1. The proposed Generating Facilities corresponding to earlier queued Interconnection Requests meeting the criteria set forth below:
   1. proposed Generating Facilities in Queue Cluster 4 or earlier that have executed PPAs with Load-Serving Entities and have GIAs that are in good standing; or
   2. proposed Generating Facilities in Queue Cluster 5 and subsequent Queue Clusters that were previously allocated TP Deliverability and have met the retention criteria set forth in GIDAP Section 8.9.3.

As to both criterion (i) and criterion (ii), the CAISO would set aside TP Deliverability in MW amounts that reflect the Deliverability Status requested by the identified Generating Facilities and their expected Qualifying Capacity amounts, which will not necessarily be the same as their installed MW of capacity. For example, a wind or solar photovoltaic resource of 100 MW installed capacity that requested Full Capacity Deliverability Status would typically have a Qualifying Capacity somewhat less than 100 MW, and this lesser amount would be reflected in the MW amount of TP Deliverability the CAISO sets aside before issuing new allocations. If the same Generating Facility requested Partial Capacity Deliverability Status, it would have an even smaller impact on the set-aside of TP Deliverability. For another example, a Generating Facility that met criterion (i) but requested Energy-Only Deliverability Status would not require any set aside of TP Deliverability.

1. any Maximum Import Capability included as a planning objective in the Transmission Plan; and
2. any other commitments having a basis in the Transmission Plan. For example, the CAISO’s annual process for assigning deliverability status to distributed generating resources, which was approved by FERC in November 2012, could result in a commitment of TP Deliverability that would need to be reflected in this component of the process.

This first allocation component is performed for the purpose of determining the amount of TP Deliverability available for allocation to the current Queue Cluster and any eligible parked Generating Facilities from the previous Queue Cluster in accordance with GIDAP Section 8.9.2 and GIDAP BPM Section 6.2.9.4.

The results of this first allocation component shall not affect the rights and obligations of proposed Generating Facilities in Queue Cluster 4 or earlier with respect to the construction and funding of Network Upgrades identified for such Generating Facilities, or their requested Deliverability Status. Such rights and obligations will continue to be determined pursuant to the GIP and the Generating Facility’s GIA.

#### Reassessment Study and TP Deliverability Allocation Study

The CAISO will perform a multi-step study, in coordination with the Participating TOs, to allocate TP Deliverability to eligible generators and update Network Upgrade requirements for all generator projects that have completed their Phase II Interconnection Study or Facilities Study. The overall study consists of the first part of the reassessment, TP Deliverability allocation, and the second part of the reassessment.

In the first part of the reassessment, the CAISO will update the generator and transmission study models to reflect changes since the model setup was completed for the current Phase II Interconnection Study for the Queue Cluster. The study scope will include a Deliverability Assessment, a power flow analysis, and a stability analysis if applicable. The study will identify all deliverability constraints and updates RNU and LDNU requirements.

Then the CAISO will perform a TP Deliverability allocation study for the Area Deliverability Constraints identified in the first part of the reassessment. The CAISO will adjust generator project models in the Deliverability Assessment to represent deliverability preserved for prior commitments and the scores of the generator projects seeking TP Deliverability allocation. The CAISO will allocate available TP Deliverability, if any, to the eligible generator projects in the descending order of scores pursuant to GIDAP BPM Section 6.2.9.4.

After the CAISO receives the Interconnection Customers’ decisions on accepting TP Deliverability allocation results, the CAISO, in coordination with the Participating TOs, will perform the second part of the reassessment. The generator projects that have withdrawn will be removed from the study model. The CAISO will update the deliverability study model to reflect changes of requested deliverability status. The CAISO will perform a Deliverability Assessment, a power flow analysis, a short circuit duty analysis, and a stability analysis if applicable to update RNU, LDNU and ADNU requirements.

#### Second Component of the Allocation Process: Allocating TP Deliverability to the Current Queue Cluster and Parked Projects[[45]](#footnote-45)

If the CAISO determines, under GIDAP Section 8.9.1 and after completing the steps described in GIDAP BPM Section 6.2.9.2, that no TP Deliverability exists for allocation to Generating Facilities not previously allocated their requested amounts of TP Deliverability (which would include both the current Queue Cluster as well as parked projects from the prior Queue Cluster), then no allocation of TP Deliverability shall be made to these Generating Facilities. If TP Deliverability is available for allocation, then the CAISO will allocate such capacity to eligible Generating Facilities in the current Interconnection Study Cycle and eligible parked Generating Facilities from the previous Interconnection Study Cycle.

The CAISO will allocate available TP Deliverability to Generating Facilities according to the Interconnection Customers’ demonstration, via the submitted affidavits described in GIDAP BPM Section 6.2.9.1, of having met the criteria listed below for all or a portion of the full MW generating capacity of the Generating Facility as specified in the Interconnection Request. Where a criterion is met by a portion of the full MW generating capacity of the Generating Facility, the eligibility score associated with that criterion shall apply to the portion that meets the criterion. The demonstration must relate to the same proposed Generating Facility as described in Appendix A to the Interconnection Request.

The CAISO will determine how to allocate TP Deliverability in two steps.  First, the CAISO will assess each project against minimum threshold criteria.  Specifically, the Interconnection Customer must attest in its submitted affidavit that its proposed Generating Facility has, at a minimum, applied for a Conditional Use Permit, Application for Certification, or equivalent, and that it either is on an active short-list for a Load-Serving Entity’s request for offers or will be balance-sheet financed. That is, the proposed Generating Facility must meet at least criteria (1)(d) plus (2)(a) or (2)(d) from the list of criteria below.

If the amount of projects meeting the threshold eligibility criteria can be deliverable within the available TP deliverability, the CAISO will allocate TP Deliverability to all of them. In this case the Option (A) or (B) projects that receive TP Deliverability may execute GIAs that reflect their allocations. If, however, not all projects that meet the threshold criteria can be fully accommodated, the CAISO will apply rationing based on numerical scores reflecting each project’s status with respect to the criteria below, which are set forth in GIDAP Section 8.9.2.

1. Permitting status. The intent is for the permitting-related criteria to be comparable irrespective of whether the project requires permitting through the California Energy Commission (CEC) or through another authority.[[46]](#footnote-46) A project must meet at least one of the following:
   1. (9 points) The project has received its final governmental permit or authorization allowing it to commence construction of the Generating Facility. This could be, for example, an approved Application for Certification from the CEC, a Conditional Use Permit from a local agency, a final non-appealable permit for siting on public lands, or equivalent.
   2. (5 points) The project has a draft environmental report document (or equivalent environmental permitting document) indicating that the permitting authority has not found any environmental impact that cannot be mitigated to insignificance. This could be, for example, a Preliminary Staff Assessment from the CEC.
   3. (3 points) The project developer has applied for the necessary governmental permit or authorization for the construction of a Generating Facility, and has been deemed data adequate or the designated agency has initiated its review.
   4. (1 point) The project developer has applied for the necessary governmental permit or authorization for the construction of a Generating Facility.
2. Project financing status. A project must meet at least one of the following criteria:
   1. (10 points) The project will be balance-sheet financed or the project has received a commitment of project financing, covering the full MW amount of the Generating Facility as specified in the Interconnection Request submitted to the CAISO, and the Interconnection Customer represents to the CAISO that it has a regulator-approved PPA.

(9 points) The project will be balance-sheet financed or the project has received a commitment of project financing, covering the full MW amount of the Generating Facility as specified in the Interconnection Request submitted to the CAISO, and the Interconnection Customer represents to the CAISO that it is proceeding to Commercial Operation without a PPA.

* 1. (7 points) The project has an executed and regulator-approved PPA, for the full MW amount of the facility as specified in the Interconnection Request.
  2. (4 points) The project has an executed PPA that has not yet received regulatory approval.
  3. (3 points) The project does not have an executed PPA but is on an active Load-Serving Entity short-list.

1. Land acquisition
   1. (3 points) The project demonstrates a present legal right to begin construction on 100 percent of the property footprint necessary for the Generating Facility.
   2. (2 points) The project demonstrates Site Exclusivity, as defined by the CAISO Tariff and described in this GIDAP BPM, for at least 50 percent of the property necessary to construct the facility and the duration of Site Exclusivity extends at least to the project’s Commercial Operation Date specified in its Interconnection Request.

The table below summarizes the scoring methodology described above.

|  |  |  |  |
| --- | --- | --- | --- |
| **Points** | **Permit** | **Financing / PPA** | **Land** |
| 10 |  | Has financing w/PPA |  |
| 9 | Has final permits | Has financing w/o PPA |  |
| 7 |  | Approved PPA |  |
| 5 | Draft EIR w/no significant impact that cannot be mitigated |  |  |
| 4 |  | Executed PPA |  |
| 3 | Data adequate | Short list | Legal right to construct 100% of project |
| 2 |  |  | Site Exclusivity |
| 1 | Applied |  |  |

In allocating TP Deliverability under this GIDAP BPM Section 6.2.9.4, in a situation where the available amount of TP Deliverability can accommodate only one out of two or more Generating Facilities requesting TP Deliverability and such Generating Facilities score equally under the criteria above, then the CAISO will allocate the TP Deliverability to such equally scoring Generating Facilities according to lowest LDNU cost estimates.

#### Criteria for Retaining TP Deliverability Allocation[[47]](#footnote-47)

Once a Generating Facility is allocated TP Deliverability under GIDAP Section 8.9.1 and GIDAP BPM Section 6.2.9.4, the Interconnection Customer must annually demonstrate, on the date set forth in the Market Notice and according to the process described in the Business Practice Manual, that the Generating Facility meets the following criteria to retain its TP Deliverability:

1. The Generating Facility shall remain in good standing with respect to the criteria on which the allocation of TP Deliverability was based.
2. If the Generating Facility was allocated TP Deliverability based on achievement of only criterion (2)d in GIDAP Section 8.9.2(2) and GIDAP BPM Section 6.2.9.4(2), then the Interconnection Customer must, by the start of the next allocation cycle, demonstrate achievement of criteria (a), (b) or (c) in GIDAP Section 8.9.2(2) and GIDAP BPM Section 6.2.9.4(2).
3. The Interconnection Customer must have executed a GIA be in compliance with its terms, such that neither the Participating TO nor the CAISO has provided the Interconnection Customer with a Notice of Default or Notice of Breach of the GIA that has not been cured. If the Interconnection Customer has received such a notice and the condition of breach or default is not susceptible to cure within the notice period, then the Interconnection Customer must have commenced reasonable curative actions.
4. The Interconnection Customer must maintain the original Commercial Operation Date set forth in the GIA without request for extension unless such extension is required for reasons beyond the control of the Interconnection Customer and such extension results in no Material Modification or delay in the construction schedule for Network Upgrades common to multiple Generating Facilities; or unless the extension is occasioned by a material delay in the Participating TO’s construction of any required Network Upgrades or Participating TO’s Interconnection Facilities

The Interconnection Customer will provide the required information in the form of an affidavit as described in GIDAP BPM Section 6.2.9.1.

##### **Consequences of Failure to Retain TP Deliverability[[48]](#footnote-48)**

An Interconnection Customer’s failure to retain its allocation of TP Deliverability shall not be considered a Breach of the GIA. Upon failure of the Interconnection Customer to retain TP Deliverability, the Deliverability status of the Generating Facility corresponding to the Interconnection Request shall convert to Energy-Only Deliverability Status as to that portion of the Generating Facility which has not retained the TP Deliverability.

#### Parking for Option (A) Generating Facilities[[49]](#footnote-49)

For an Option (A) Generating Facility in the current Interconnection Study Cycle which either was allocated less TP Deliverability than requested or does not desire to accept the amount allocated the Interconnection Customer shall select one of the following options:

* + 1. Withdraw its Interconnection Request; or
    2. Decline any allocated TP Deliverability amount and enter into a GIA for Energy-Only Deliverability Status for the entire Generating Facility. In such circumstances, upon execution of the GIA, any Interconnection Financial Security shall be adjusted to remove the obligation for Interconnection Financial Security pertaining to LDNUs; or
    3. Park the Interconnection Request; in which case the Interconnection Request may remain in the Interconnection queue until the next allocation of TP Deliverability in which it may participate in accordance with the requirements of GIDAP Section 8.9.2[[50]](#footnote-50) and GIDAP BPM Section 6.2.9.4. Under this option, the Interconnection Customer may decline any allocated TP Deliverability amount and park the entire amount of the Interconnection Request, or may accept all or a portion of the allocated amount and park to seek the balance of the TP Deliverability needed to fulfill its Interconnection Request in accordance with GIDAP BPM Section 6.2.9.7(iii). Parking an Interconnection Request does not confer a preference relative to any other Interconnection Request with respect to allocation of TP Deliverability; or
    4. Elect one of the other options available under GIDAP BPM Section 6.2.9.7.

#### Partial Allocations of Transmission Based Deliverability to Option (A) and Option (B) Generating Facilities[[51]](#footnote-51)

If a Generating Facility is allocated TP Deliverability in the current Interconnection Study Cycle in an amount less than the amount of Deliverability requested, then the Interconnection Customer must choose one of the following options:

1. Accept the allocated amount of TP Deliverability and reduce the MW generating capacity of the proposed Generating Facility such that the allocated amount of TP Deliverability will provide Full Capacity Deliverability Status to the reduced generating capacity; or

1. Accept the allocated amount of TP Deliverability and adjust the Deliverability status of the proposed Generating Facility to achieve Partial Capacity Deliverability corresponding to the allocated TP Deliverability;
2. For an Option (A) Generating Facility, accept the allocated amount of TP Deliverability and seek additional TP Deliverability for the remainder of the requested Deliverability of the Interconnection Request in the next allocation cycle. In such instance, the Interconnection Customer shall execute a GIA for the entire Generating Facility having Partial Capacity Deliverability corresponding to the allocated amount of TP Deliverability. Following the next cycle of TP Deliverability allocation, the GIA shall be amended as needed to adjust its Deliverability status to reflect any additional allocation of TP Deliverability. At the same time the Interconnection Customer may also adopt options (i) or (ii) above based on the final amount of TP Deliverability allocated to the Generating Facility. There will be no further opportunity for this Generating Facility to participate in any subsequent cycle of TP Deliverability allocation; or
3. Decline the allocated amount of TP Deliverability and either withdraw the Interconnection Request or convert to Energy-Only Deliverability Status. In accordance with GIDAP BPM Section 6.9.2.6(3), an Interconnection Customer having an Option (A) Generating Facility that has not previously parked may decline the allocation of TP Deliverability and park until the next cycle of TP Deliverability allocation in the next Interconnection Study Cycle.

#### Declining TP Deliverability Allocation[[52]](#footnote-52)

An Interconnection Customer having an Option (A) Generating Facility that has not previously parked and is allocated the entire amount of requested TP Deliverability may decline all or a portion of the TP Deliverability allocation and park the Generating Facility Request as described in GIDAP Section 8.9.4(3) and GIDAP BPM Section 6.2.9.6(3).

#### Required Customer Response to TP Deliverability Allocation[[53]](#footnote-53)

Upon completion of the allocation of TP Deliverability in accordance with GIDAP Section 8.9.2 and GIDAP BPM Section 6.2.9.4, the CAISO will provide the allocation results to the Interconnection Customers for eligible Generating Facilities in the current Queue Cluster and eligible parked Generating Facilities in the prior Queue Cluster. Each of these Interconnection Customers will then have seven (7) calendar days to inform the CAISO of its decisions in accordance with GIDAP Sections 8.9.4, 8.9.5, and 8.9.6 and GIDAP BPM Sections 6.2.9.6, 6.2.9.7, and 6.2.9.8.

#### Update to Interconnection Study Reports[[54]](#footnote-54)

Following completion of the reassessment and TP Deliverability allocation study, the CAISO will provide updates where needed to the governing interconnection study reports for all Generating Facilities whose Network Upgrades have been affected.

#### Second and Third Financial Security Postings

See GIDAP Section 11.2 and GIDAP BPM Section 8.4 for second and third Financial Security posting requirements.

# Modifications

# Interconnection Financial Security

# Engineering and Procurement Agreement[[55]](#footnote-55)

# Generator Interconnection Agreement (GIA)[[56]](#footnote-56)

# Construction and Funding of Participating TO’s Interconnection Facilities and Network Upgrades

# Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security

# Confidentiality[[57]](#footnote-57)

# Delegation of Responsibility[[58]](#footnote-58)

# Disputes[[59]](#footnote-59)

# Local Furnishing Bonds

# Change In CAISO Operational Control[[60]](#footnote-60)

# TABLE 1 - Listing of GIDAP BPM and GIDAP Appendices

Provides the reader a self explanatory description of each appendix and how each one is used by pointing to where it is referenced

# ATTACHMENT 1 - Narrative of Cluster Timeline

# ATTACHMENT 2 - Flow Diagram of Cluster Timeline

1. CAISO Tariff Appendix A, definition of Reliability Network Upgrades. [↑](#footnote-ref-1)
2. CAISO Tariff Appendix A, definition of Local Delivery Network Upgrade. [↑](#footnote-ref-2)
3. CAISO Tariff Appendix A, definitions of Area Delivery Network Upgrade and Area Deliverability Constraint. [↑](#footnote-ref-3)
4. GIDAP Section 6.4. [↑](#footnote-ref-4)
5. GIDAP Sections 3.7. [↑](#footnote-ref-5)
6. GIDAP Section 14.4. [↑](#footnote-ref-6)
7. GIDAP Sections 2.4.3 and 6. [↑](#footnote-ref-7)
8. GIDAP Section 6.1.1. [↑](#footnote-ref-8)
9. GIDAP Section 6.1.2. [↑](#footnote-ref-9)
10. GIDAP Section 6.1.3. [↑](#footnote-ref-10)
11. GIDAP Section 6.2. [↑](#footnote-ref-11)
12. GIDAP Appendix 4, at Attachment A. [↑](#footnote-ref-12)
13. GIDAP Sections 6.3.2.1 and 6.3.2.2. [↑](#footnote-ref-13)
14. GIDAP Section 6.6. [↑](#footnote-ref-14)
15. GIDAP Section 6.3.1. [↑](#footnote-ref-15)
16. GIDAP Section 6.3.2.1.1. [↑](#footnote-ref-16)
17. GIDAP Section 6.3.2.1.2. [↑](#footnote-ref-17)
18. GIDAP Sections 7.3 and 10.1. [↑](#footnote-ref-18)
19. GIDAP Section 6.7. [↑](#footnote-ref-19)
20. GIDAP Section 6.7. [↑](#footnote-ref-20)
21. GIDAP Section 6.7. [↑](#footnote-ref-21)
22. GIDAP Section 6.7.1. [↑](#footnote-ref-22)
23. GIDAP Section 6.7.2.2. [↑](#footnote-ref-23)
24. GIDAP Section 7. [↑](#footnote-ref-24)
25. GIDAP Section 7.1. [↑](#footnote-ref-25)
26. As part of the 2010 GIP Phase 1 stakeholder initiative, the CAISO included a one-time option for existing generating facilities and facilities in Queue Clusters 1 to 3 to submit an Interconnection Request to upgrade Energy-Only Deliverability Status to Full Capacity Deliverability Status. Interconnection Customers were given the ability to do so by placing an Interconnection Request of limited scope (*i.e.*, deliverability status change only) into Queue Cluster 4. That window has now closed and the one-time option via Interconnection Request is not available in future Interconnection Requests. [↑](#footnote-ref-26)
27. GIDAP Section 7.2. [↑](#footnote-ref-27)
28. GIDAP Section 7.4. [↑](#footnote-ref-28)
29. GIDAP Section 8.1.1. [↑](#footnote-ref-29)
30. GIDAP Section 8.5. [↑](#footnote-ref-30)
31. GIDAP Section 8.2.1. [↑](#footnote-ref-31)
32. GIDAP Section 8.2.2. [↑](#footnote-ref-32)
33. GIDAP Section 8.1.4. [↑](#footnote-ref-33)
34. For intermittent generation, a range of output levels between the 20% and 50% production exceedance during summer peak load hours are studied. [↑](#footnote-ref-34)
35. GIDAP Section 8.1.2. [↑](#footnote-ref-35)
36. GIDAP Section 8.1.3. [↑](#footnote-ref-36)
37. GIDAP Section 8.3. [↑](#footnote-ref-37)
38. GIDAP Section 8.4. [↑](#footnote-ref-38)
39. GIDAP Section 8.4.1. [↑](#footnote-ref-39)
40. GIDAP Section 8.6. [↑](#footnote-ref-40)
41. GIDAP Section 8.7. [↑](#footnote-ref-41)
42. GIDAP Section 8.9. [↑](#footnote-ref-42)
43. GIDAP Section 8.9. [↑](#footnote-ref-43)
44. GIDAP Section 8.9.1. [↑](#footnote-ref-44)
45. GIDAP Section 8.9.2. [↑](#footnote-ref-45)
46. The CAISO recognizes that there is some variation in the permits, certificates, or similar approvals required by any federal, state, local or regional agency to allow for the construction and operation of a generating facility, depending on such factors as governmental jurisdiction and whether the project will utilize public lands. In turn there is some variation in the terminology used. For example, the CEC’s process is called the “Application for Certification” or “AFC” process, where AFC also refers to the application a developer submits to the CEC for approval.  Final approval of the Presiding Members Proposed Decision from the full Commission of the CEC is often referred to as a “Commission decision” or “CEC certification of a project” or “granting a permit.”  Kern County, which has a well-developed process for siting wind projects, calls its approval a “Conditional Use Permit” or “CUP.” The CAISO will assign consistent point values to proposed Generating Facilities that have achieved comparable permitting milestones in situations where the terminology used by the relevant authorities may vary. [↑](#footnote-ref-46)
47. GIDAP Section 8.9.3. [↑](#footnote-ref-47)
48. GIDAP Section 8.9.7. [↑](#footnote-ref-48)
49. GIDAP Section 8.9.4. [↑](#footnote-ref-49)
50. As of the date of this GIDAP BPM version, GIDAP Section incorrectly references Section 8.9.1 and not Section 8.9.2 The CAISO will correct this mis-reference through a tariff amendment filing to correct such inadvertent errors and conform the GIDAP. [↑](#footnote-ref-50)
51. GIDAP Section 8.9.5. [↑](#footnote-ref-51)
52. GIDAP Section 8.9.6. [↑](#footnote-ref-52)
53. GIDAP Section 8.9.8. [↑](#footnote-ref-53)
54. GIDAP Section 8.9.8. [↑](#footnote-ref-54)
55. GIDAP Section 12. [↑](#footnote-ref-55)
56. GIDAP Section 13. [↑](#footnote-ref-56)
57. GIDAP Section 151. [↑](#footnote-ref-57)
58. GIDAP Section 15.2. [↑](#footnote-ref-58)
59. GIDAP Section 15.5. [↑](#footnote-ref-59)
60. GIDAP Section 15.7. [↑](#footnote-ref-60)