May 22, 2019

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

Re: California Independent System Operator Corporation
Docket No. ER19- ___-000

Tariff Amendment to Comply with Order No. 845

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") submits this tariff amendment to comply with Order Nos. 845 and 845-A,[1] which the Commission issued to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process.[2] The CAISO respectfully requests that the Commission accept this filing in compliance with the requirements of Order No. 845.

I. Background

A. Order No. 845

Order No. 845 seeks to update the *pro forma* generator interconnection procedures and generator interconnection agreements first established in 2003 by Order No. 2003.[3] The electric industry has experienced myriad changes since these procedures were established, and the Commission found that certain reforms were warranted to ensure an efficient interconnection process. These reforms are designed to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process

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[1] *Reform of Generator Interconnection Procedures and Agreements*, 163 FERC ¶ 61,043 (2018), Order No. 845; *order on reh'g*, 166 FERC ¶ 61,137 (2019), Order No. 845-A.

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

[3] *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003) (subsequent history omitted).

generally, all while continuing to ensure a reliable and cost-effective grid.

To address these issues, Order No. 845 requires all transmission providers with open access transmission tariffs to revise their tariffs to comply with Order No. 845. Where transmission providers have existing tariff revisions that comply with Order No. 845, they may explain how their tariff provisions are consistent with or superior to the *pro forma* provisions in Order No. 845.[4]

B. The CAISO's Efforts to Enhance the Interconnection Process

Faced with the tsunami of new generation development precipitated by California's renewable portfolio standards, the CAISO continuously reviews and enhances its generator interconnection procedures.[5] In 2008 the CAISO transitioned from a serial study process to a group cluster study process.[6] This reduced the interdependency of individual interconnection studies, and reduced the need to perform restudies for every withdrawal, modification, and topology change. The CAISO also established the use of interconnection cost caps to provide developers with cost certainty throughout the interconnection study process. Additionally, the CAISO established interconnection financial security requirements to ensure that developers were able and committed to developing their projects.[7]

In 2010 the CAISO unified its small generator interconnection procedures with its large generator interconnection procedures to put all interconnection customers within the same cluster study process.[8] The CAISO also established independent study and fast track processes for independent and adroit projects.[9]

In 2012 the CAISO harmonized its generator interconnection study process with its transmission planning process.[10] This enabled interconnection studies to

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4 Order No. 845 at P 43.

5 The generator interconnection process and related provisions are set forth primarily in section 25 of the CAISO tariff. The interconnection procedures and *pro forma* generator interconnection agreements ("GIAs") are generally contained in appendices S through FF to the CAISO tariff.

6 *California Independent System Operator Corp.*, 124 FERC ¶ 61,292 (2008) (approving revisions to move from a serial to a cluster process, and to establish project viability and developer commitment as soon as interconnection customers have an estimate of the costs of their projects).

7 *Id*.

8 *California Independent System Operator Corp.*, 133 FERC ¶ 61,223 (2010) (approving revisions to harmonize the CAISO's Large Generator Interconnection Procedures ("LGIP") with its Small Generator Interconnection Procedures ("SGIP") by establishing integrated cluster study processes for small and large generators, and to expedite study processes for independent or otherwise adroit generators by implementing new independent study and fast track processes).

9 *Id*.

10 *California Independent System Operator Corp.*, 140 FERC ¶ 61,070 (2012) (approving revisions

account for new transmission capacity created by transmission projects.

In 2013, the CAISO launched its first Interconnection Process Enhancement ("IPE") initiative.[11] The IPE initiative has since resulted in dozens of interconnection process enhancements to the CAISO tariff, business practice manuals, and procedures, including in 2013,[12] 2014,[13] 2015,[14] 2016,[15] 2018,[16] and 2019.[17]

The CAISO's enhancements have shared Order No. 845's goals to improve certainty for interconnection customers, promote more informed interconnection decisions, and enhance the interconnection process. Order No. 845, its Notice of Proposed Rulemaking, American Wind Energy Association's ("AWEA") petition for the rulemaking, and parties' comments on these all commended the CAISO for its efforts and cited CAISO procedures as best practices to be adopted nationally.[18]

C. Stakeholder Process

Because Order No. 845 established several broad requirements that could be met in a variety of ways,[19] the CAISO posted its proposed tariff revisions for stakeholder review and comment twice, and held a public web/teleconference to review them.[20]

II. Compliance with Order No. 845

The CAISO describes its compliance with Order No. 845 below. For most topics, the CAISO proposes to adopt the Commission's prescribed *pro forma* tariff

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to integrate the transmission planning and generator interconnection processes).

11 Available at http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx.

12 *California Independent System Operator Corp.,* 145 FERC ¶ 61,172 (2013).

13 *See, e.g., California Independent System Operator Corp.*, 149 FERC ¶ 61,231 (2014); *California Independent System Operator Corp.,* 148 FERC ¶ 61,077 (2014).

14 *California Independent System Operator Corp*., 153 FERC ¶ 61,242 (2015).

15 *California Independent System Operator Corp*., 154 FERC ¶ 61,169 (2016).

16 *California Independent System Operator Corp.*, 162 FERC ¶ 61,207 (2018).

17 *California Independent System Operator Corp.*, 166 FERC ¶ 61,113 (2019); *California Independent System Operator Corp*., Letter Order Approving Tariff Revisions, Docket No ER19-1013-000. Additional enhancements are pending in Docket No. ER19-1153-000.

18 *See, e.g.*, Order No. 845 at PP 28, 57, 70, 359-61, 410, 434, 501, 543.

19 *E.g.*, Permissible Technological Advancements and the identification of Contingent Facilities.

20 Available at http://www.caiso.com/informed/Pages/MeetingsEvents/MiscellaneousStakeholderMeetings/Default.aspx.

provisions with minor deviations to accommodate the CAISO's existing terms and procedures. Where the CAISO's existing tariff already complies with Order No. 845 and no further tariff changes are needed, the CAISO explains how its procedures follow Order No. 845. In few instances, the CAISO provisions differ from the Commission's *pro forma* tariff language in a manner consistent with or superior to such *pro forma* language and consistent with the CAISO's specific Commission-approved framework and tariff definitions.

A. Stand Alone Network Upgrades

Order No. 845 requires transmission providers and transmission owners to allow interconnection customers to unilaterally select the option to build stand alone network upgrades and interconnection facilities regardless of whether the transmission provider can complete construction of such facilities by the interconnection customer's proposed in-service date.[21] The CAISO already allows interconnection customers to self-build any stand alone network upgrade. In 2016, the CAISO also expanded the definition of Stand Alone Network Upgrade to include "tasks" beyond Network Upgrades that an interconnection customer can construct, such as telecommunications, environmental, or property work.[22] The CAISO also recently clarified in its IPE initiative that if multiple interconnection customers share a stand alone network upgrade and desire to self-build it together, they may do so.[23]

Although the CAISO already complies with Order No. 845's requirements on stand alone network upgrades, the CAISO proposes to revise its tariff to adopt the Commission's *pro forma* language on this topic.[24] Doing so will promote transparency and clarity, and ensure that interconnection customers may continue to exercise these rights in the CAISO.

B. Dispute Resolution

Order No. 845 requires transmission providers establish interconnection dispute resolution procedures that allow a disputing party to unilaterally seek non-binding dispute resolution.[25] The CAISO proposes to revise its tariff to adopt the Commission's *pro forma* language on this topic.[26]

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[21] Order No. 845 at PP 73-74.

[22] *California Independent System Operator Corp.*, 154 FERC ¶ 61,169 (2016).

[23] CAISO, IPE Revised Straw Proposal, p. 45, *available at* http://www.caiso.com/Documents/RevisedStrawProposal-2018InterconnectionProcessEnhancements.pdf.

[24] Proposed "Stand Alone Network Upgrades," Appendix A; Definitions and Article 5 of Appendix EE to the CAISO tariff.

[25] Order No. 845 at P 132.

[26] Proposed Section 15.5.5 of Appendix DD to the CAISO tariff.

C. Contingent Facilities

Order No. 845 requires transmission providers to describe how they will identify "contingent facilities," which are the interconnection facilities and network upgrades that may affect the interconnection customer's costs or timing, including those facilities that could require the interconnection customer's restudy.

The CAISO's existing tariff complies with the Commission's requirements in identifying contingent facilities. As numerous parties commented in this proceeding, the CAISO is unique among the ISO/RTOs because it provides interconnection customers with firm cost caps.[27] Any interconnection costs for network upgrades above these caps must be financed by the interconnecting transmission owner. To avoid the transmission owners' needing to constantly backstop unforeseen costs, the CAISO's interconnection study process always has identified all contingent facilities in the interconnection customer's Phase I and Phase II interconnection studies.[28] For example, Section 6.2 of Appendix DD states that the Phase I Interconnection Study will:

i. evaluate the impact of all Interconnection Requests received during the Cluster Application Window for a particular year on the CAISO Controlled Grid,
ii. preliminarily identify all LDNU and RNU needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests,
iii. preliminarily identify for each Interconnection Request required Interconnection Facilities,
iv. assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs,
v. establish the maximum cost responsibility for LDNUs and RNUs assigned to each Interconnection Request, until the issuance of the Phase II Interconnection Study report.
vi. provide a good faith estimate of the cost of Interconnection Facilities for each Interconnection Request, and
vii. provide a cost estimate of ADNUs for each Generating Facility in a Queue Cluster Group Study.

Likewise, Section 8.1.1 of Appendix DD states that the Phase II Interconnection Study will:

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[27] *See* Section 10.1 of Appendix DD to the CAISO tariff.

[28] *See* Sections 6.2 and 8.1 of Appendix DD to the CAISO tariff.

i. update, as necessary, analyses performed in the Phase I Interconnection Studies to account for the withdrawal of Interconnection Requests from the current Queue Cluster;
ii. identify final RNUs needed in order to achieve Commercial Operation status for the Generating Facilities and provide final cost estimates;
iii. identify final LDNUs needed to interconnect those Generating Facilities selecting Full Capacity or Partial Capacity Deliverability Status and provide final cost estimates;
iv. identify final ADNUs for Interconnection Customers selecting Option (B), as provided below and provide revised cost estimates;
v. identify, for each Interconnection Request, the Participating TO's Interconnection Facilities for the final Point of Interconnection and provide a +/-20% cost estimate; and
vi. coordinate in-service timing requirements based on operational studies in order to facilitate achievement of the Commercial Operation Dates of the Generating Facilities.

The CAISO notes that its tariff does not limit the identification of network upgrades to those the interconnection customer triggers alone. The CAISO's interconnection studies also describe those network upgrades triggered by earlier clusters (*i.e.*, precursor network upgrades) or identified in the CAISO's transmission planning process. This provides complete transparency for the interconnection customer as to the transmission upgrades that are required by the project to interconnect and obtain deliverability. If a later interconnection request depends on these upgrades for reliability or deliverability, these upgrades will be described in its interconnection customer's study reports as well. Besides identifying all necessary facilities, these studies include cost estimates for each facility, the interconnection customer's current allocated share of those facilities, and its potential share. These figures comprise the interconnection customer's maximum cost responsibility, which is established based on the lower of its Phase I and Phase II interconnection study report.[29]

The CAISO tariff also requires the Phase I and Phase II Interconnection Studies to describe which engineering analyses were performed and why each identified facility is required. For example, Section 6.2 of Appendix DD states:

> 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

[29] Section 10.1 of Appendix DD to the CAISO tariff.

> 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.
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> The Phase I Interconnection Study will state for each Group Study or Interconnection Request studied individually (i) the assumptions upon which it is based, (ii) the results of the analyses, and (iii) 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.

Likewise, Section 6.3 of Appendix DD describes (i) the engineering analyses used to identify each type of assigned contingent facilities, and (ii) how costs are allocated for each type of facility where multiple interconnection customers share the same facility.

Because the CAISO studies interconnection requests in group clusters, and because the Phase I and Phase II interconnection studies set the interconnection customer's cost cap, interconnection customers are not subject to restudies late in the interconnection process. If an earlier-queued interconnection customer withdraws late in the interconnection process, and later-queued interconnection customers depend on its upgrades, the transmission owner assumes the financing responsibility for the network upgrades.[30]

The Commission should find that the CAISO's existing tariff complies with (or is superior to) Order No. 845 in identifying contingent facilities. The CAISO's Phase I and Phase II interconnection studies identify all interconnection facilities and network upgrades that may affect the interconnection customer's costs or timing. The CAISO's process and cost caps also have eliminated any need for latent restudies or cost shifts. AWEA's petition and other comments specifically identified the CAISO's study process as a best practice on this issue.[31] In its comments NextEra stated that adopting the CAISO's approach "can also be used to break endless start and stop restudy cycles."[32]

D. Study Assumptions Availability

Order No. 845 requires transmission providers to maintain network models

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30 Section 14.2.2 of Appendix DD to the CAISO tariff.

31 *See, e.g.*, AWEA Petition, p. 24, Docket No. RM15-21-000 (June 19, 2015).

32 NextEra Comments, p. 9, Docket No. RM15-21-000 (Sep. 8, 2015).

and underlying assumptions on either an Open Access Same-Time Information System ("OASIS") site or a password-protected website.[33] Section 2.3 of Appendix DD already requires the CAISO to maintain the "Interconnection Base Case Data" on a password-protected website. Appendix A to the CAISO tariff defines Interconnection Base Case Data as:

> Data including, but not limited to, base power flow, short circuit and stability databases, underlying Load, Generation, and transmission facility assumptions, Contingency lists and automated contingency files, including relevant Remedial Action Schemes, Operating Procedures, per unit costs, and transmission diagrams used to perform Phase I Interconnection Studies and Phase II Interconnection Studies. Interconnection Base Case Data may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Interconnection Base Case Data shall include transmission facilities approved by the CAISO under Section 24 and Network Upgrades associated with Generation Facilities in (iv) below and Generating Facilities that (i) are directly interconnected to the CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to an Affected System; or (iv) are not interconnected to the CAISO Controlled Grid, but are subject to a fully executed LGIA (or its equivalent predecessor agreement) or for which an unexecuted LGIA (or its equivalent predecessor agreement) has been requested to be filed with FERC. To the maximum extent practicable, the Interconnection Base Case Data shall utilize the Unified Planning Assumptions developed pursuant to Section 24.2.4.

The CAISO maintains Interconnection Base Case Data on a password-protected website because the data include Critical Energy/Electric Infrastructure Information and Western Electric Coordinating Council data. However, Section 2.3 of Appendix DD states that any current or former interconnection customer or market participant can gain access by executing a confidentiality agreement.

The CAISO's existing practices already comply with Order No. 845's requirement to maintain all interconnection study assumptions. Nevertheless, the CAISO proposes to revise its tariff to adopt the Commission's *pro forma* language on this topic to make this requirement even more transparent.[34] Consistent with the

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[33] Order No. 845-A at P 79.

[34] Proposed Section 2.3 of Appendix DD to the CAISO tariff.

clarification granted in Order No. 845-A, the CAISO has modified the term "current system conditions" to "system conditions in the near term planning horizon" to accurately describe the assumptions the CAISO uses for interconnection studies, consistent with North American Electric Reliability Corporation planning standards.[35]

E. Generating Facility Qua Storage

In Order No. 845, the Commission revised the definition of "Generating Facility" to include electric storage resources and to allow electric storage resources to interconnect pursuant to large generator interconnection processes.[36] Specifically, Order No. 845 requires transmission providers to add the phrase "and/or storage for later injection" to the description of Generating Facility production.[37]

This requirement was based on the CAISO tariff, which already defines a Generating Facility as "An Interconnection Customer's Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities."[38] As such, the CAISO's existing tariff complies with Order No. 845. Moreover, the CAISO's existing tariff allows both large and small generator interconnections to include storage.

F. Interconnection Study Deadlines

Order No. 845 requires transmission providers to report quarterly interconnection study performance data on their OASIS sites or public websites.[39] The Commission also adopted requirements for transmission providers to file informational reports with the Commission if a transmission provider exceeds its interconnection study deadlines for over 25 percent of any study type for two consecutive calendar quarters.

The CAISO proposes to revise its tariff to include the Commission's *pro forma* language to comply with this requirement.[40] The CAISO notes it only has modified the Commission's language to use terms consistent with the CAISO's terminology, namely Phase I and Phase II Interconnection Studies rather than

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35 Order No. 845-A at P 88.

36 Order No. 845-A at P 93.

37 *Id*.

38 "Generating Facility," Appendix A to the CAISO tariff.

39 Order No. 845-A at P 97.

40 Proposed Section 3.6.1 of Appendix DD to the CAISO tariff.

"interconnection feasibility study," and "system impact study." Similarly, because the CAISO has a 2-step study process, the CAISO's proposed language has one fewer subsection.[41] The CAISO proposes to publish all required data on the public CAISO Website.[42] This is where the CAISO maintains its generator interconnection queue and other public interconnection data, and where those seeking the new data would most naturally look.

G. Requesting Interconnection Service Capacity below Generating Facility Capacity

Order No. 845 requires transmission providers to allow interconnection customers to request interconnection service that is lower than the proposed generating facility capacity, while recognizing the need for proper control technologies and flexibility for transmission providers to propose penalties to ensure that the generating facility does not inject energy above the requested level of service.[43] Order No. 845 also clarified that interconnection customers may either request interconnection service below generating facility capacity in their interconnection requests, or reduce their levels of requested interconnection service through modifications later.[44]

The CAISO already allows interconnection customers to request interconnection service capacity lower than generating facility if they install proper control technologies to ensure that the generator output never exceeds the interconnection service capacity at the point of interconnection. Interconnection customers can make such requests through their interconnection or modification requests. In their respective comments, the Electric Storage Association, NextEra, and Pacific Gas &Electric Company all cited the CAISO as having the best practice on this issue.[45] Nevertheless, the CAISO proposes to revise its tariff to adopt the Commission's *pro forma* language on this topic.[46] Doing so will promote transparency and clarity, and ensure that interconnection customers may continue to exercise these rights in the CAISO.

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[41] In other words, Order No. 845 includes data for three different types of interconnection studies, but the CAISO only has two types of interconnection studies, and therefore only two subsections on study data.

[42] Without any password, registration, or agreement, available at: http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx.

[43] Order No. 845-A at P 108.

[44] *Id*.

[45] Order No. 845 at PP 359-61.

[46] Proposed "Interconnection Service Capacity," Appendix A; Sections 3.1, 6.2, 6.7.2.2, 7.5, and 8.1, and Appendix 1 to Appendix DD to the CAISO tariff.

Based on stakeholder feedback, the CAISO has revised the Commission's *pro forma* language in a manner consistent with, or superior to, the Commission's language. First, the CAISO proposes to include an additional definition, "Interconnection Service Capacity," which is "the approved maximum instantaneous Power output at the Point of Interconnection for the Interconnection Customer, as set forth in its Interconnection Studies."[47] In provisions that address actual values, the CAISO includes this term rather than "Interconnection Service," which refers to a service. The CAISO believes this revision will promote clarity. Second, CAISO stakeholders requested that the CAISO omit language from Order No. 845 regarding "additional studies" and upgrades resulting from such additional studies.[48] The CAISO studies interconnection service capacity and generating facility capacity simultaneously through its existing study processes, including when those values are different. No additional studies are required, and including language about additional studies is misleading. Third, Order No. 845 contemplated an iterative process for identifying upgrades and control equipment needed for interconnections with lower interconnection service capacity than generating facility capacity. Because the CAISO identifies all potential upgrades as early as its Phase I Interconnection Study, the CAISO has consolidated the Commission's proposed language into each study provision of the CAISO tariff.[49] This will allow the CAISO tariff to accurately reflect when and how it will identify any upgrades or control equipment needed, and include the costs for these facilities in the interconnection customers' cost caps. These changes do not result in any substantive difference from Order No. 845's policy or intent.

Clarifying these processes and introducing the term "Interconnection Service Capacity" also warrant clarifying the CAISO's downsizing process. Consistent with Order Nos. 2003 and 845, interconnection customers already can reduce their generating facility capacity or interconnection service capacity between their Phase I and Phase II interconnection studies.[50] The CAISO offers an *additional* opportunity for interconnection customers to reduce their capacity *after* their interconnection studies, known as the "downsizing process."[51] Interconnection customers use this process typically if they secure a power purchase agreement for less capacity than they initially requested, and want to right-size their project to the power purchase agreement. These requests require restudy through the CAISO's

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47 Proposed Appendix A to the CAISO tariff.

48 Proposed Section 3.1 of Appendix DD to the CAISO tariff.

49 Proposed Sections 6.2 and 8.1 of Appendix DD to the CAISO tariff.

50 Section 6.7.2.2(a) of Appendix DD to the CAISO tariff (the CAISO also has proposed clarifying language here consistent with Order No. 845).

51 *See* Section 7.5 of Appendix DD to the CAISO tariff.

annual reassessment[52] to avoid overbuilding the generator and its network upgrades. Currently, the CAISO tariff states that interconnection customers seeking "to reduce the megawatt generating capacities of their Generating Facilities" must submit downsizing requests.[53] The CAISO proposes to revise this language to clarify that only interconnection customers seeking to reduce their Interconnection Service Capacity after other modification options have been exhausted must submit a downsizing request. This revision accurately reflects which reductions could reduce network upgrades for the interconnection customer and others. It also reflects that an interconnection customer whose generating facility capacity is greater than its interconnection service capacity, but who wishes to reduce its generating facility capacity to a value still exceeding its interconnection service capacity, could simply submit a modification request at any time.[54] These requests have become fairly common as more interconnection customers propose to build hybrid resources including both conventional generation and storage.[55]

The CAISO also notes it had existing tariff language regarding how *small* generating facilities would be studied where their generating facility capacity and interconnection service capacity were different. Because the Commission's *pro forma* language is similar and applies to all generators, the CAISO proposes to remove the provision regarding small generating facilities.[56] CAISO stakeholders expressed this provision was now redundant and maintaining it could cause confusion.

H. Provisional Interconnection Service

Order No. 845 requires transmission providers to allow interconnection customers to interconnect early before completing all upgrades where sufficient "provisional interconnection service" is available.[57] Provisional interconnection service

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[52] In other words, the CAISO does not conduct separate restudies for downsizing throughout the year; it studies the reduced capacity as part of its annual reassessment process. Section 7.5.1 of Appendix DD to the CAISO tariff.

[53] *Id*.

[54] In this example, the reduction would not have a substantial impact on other interconnection customers' network upgrades or costs, so the CAISO could study it on an *ad-hoc* basis.

[55] For example, an interconnection customer could propose to construct a 100 MW solar PV facility with a 100 MW battery. Although theoretically such a facility could deliver 200 MW to the grid instantaneously, the interconnection customer does not contemplate doing so, and instead will use the battery principally when the solar PV is not running. To avoid constructing network upgrades for a 200 MW facility, the interconnection customer specifies that it will limit its peak output to 100 MW. Although these numbers are simplified for this example, these requests are now extremely common in the CAISO.

[56] Proposed Section 3.1 of Appendix DD to the CAISO tariff.

[57] Order No. 845 at P 438.

> refers to situations where, for example, available studies or additional studies as necessary indicate that there is a certain amount of interconnection service available without the need for additional network upgrades and the transmission provider can reliably accommodate the interconnection service. In such cases, an interconnection customer may use the identified interconnection service while it awaits the completion of the full interconnection process.[58]

The CAISO's existing tariff complies with the requirement to provide provisional interconnection service. The CAISO offers five mechanisms to interconnect reliably and operate before all identified network upgrades are completed. These five mechanisms are available today through the CAISO's existing interconnection processes, and four require no additional study. Although the CAISO believes that its Limited Operation Study tariff provisions comply with Order No. 845's requirement to provide provisional interconnection service, the CAISO explains below these several mechanisms to demonstrate its compliance with Order No. 845 and show that the CAISO and its transmission owners are extremely flexible in allowing interconnection customers to come online if they can do so reliably.

First, the CAISO allows interconnection customers to request a "Limited Operation" study and interconnection.[59] Limited Operation mirrors provisional interconnection service in compliance with Order No. 845. Section 14.2.4 of Appendix DD to the CAISO tariff states:

> The Participating TO and/or the CAISO, as applicable, will, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice. The Participating TO and the CAISO will permit the Interconnection Customer to operate the Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

Requesting a limited operation study only requires a $10,000 deposit, and takes 45

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[58] Order No. 845 at P 440.

[59] Section 14.2.4 of Appendix DD to the CAISO tariff.

days to conduct.[60] Many interconnection customers have used the limited operation study process successfully. Although the CAISO believes this provision alone complies with Order No. 845, the additional options below demonstrate that the CAISO's existing tariff is consistent with or superior to Order No. 845's *pro forma* provisions.

Second, even *without* a limited operation study, the CAISO allows all interconnection customers to interconnect once their Reliability Network Upgrades are constructed,[61] even if their Delivery Network Upgrades are not.[62] The Generating Facility thus can interconnect and participate in the CAISO markets as it awaits the completion of Delivery Network Upgrades that will allow the facility to sell Resource Adequacy capacity in California.[63] This process can also work with phased construction so the generating facility can receive Partial Capacity Deliverability status once some Delivery Network Upgrades are complete, before it receives Full Capacity Deliverability Status.

Third, the CAISO allows interconnection customers to structure their construction and GIA milestones to achieve commercial operation in two or more successive phases.[64] For example, an interconnection customer may submit an interconnection request to construct 50 MW of photovoltaic solar. Once studies are complete, it could structure its GIA to reflect that 25 MW would be constructed and achieve commercial operation in commercial operation year one, 15 MW in year two, and the final 10 MW in year three. This is known as a phased generating facility. Interconnection customers can structure phasing around power purchase agreement obligations, completing network upgrades, financing, or any other reason. Phased generating facilities are very common in the CAISO.

Fourth, the CAISO allows "Commercial Operation for Markets," which allows

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[60] Section 14.2.4.2 of Appendix DD to the CAISO tariff. Consistent with all interconnection study deposits, interconnection customers would be liable for any costs above this deposit.

[61] Because interconnection customers can interconnect *without* a limited operation study once their Reliability Network Upgrades are complete, the limited operation study is used to determine to what extent (or with what additional facilities or expedition) the interconnection customer can interconnect *before* the completion of all assigned Reliability Network Upgrades.

[62] This process does not require the interconnection customer to invoke any tariff provision. Its GIA milestones will simply have in-service data/commercial operation date after the completion of Reliability Network Upgrades and before the completion of all Delivery Network Upgrades.

[63] Deliverability statuses are explained in detail in the CAISO's September 27, 2018 tariff amendment resulting from its IPE initiative. *See California Independent System Operator Corp*., "Tariff Amendment," pp. 20 *et seq.*, Docket No. ER18-2498-000 (Sep. 27, 2018), *available at* http://www.caiso.com/Documents/Sep27-2018-TariffAmendment-IPE2018-ER18-2498.pdf.

[64] *See* Sections 6.7.4 and 14.3.2.1 of Appendix DD; Section 11.4.1.2 of Appendix EE to the CAISO tariff.

a portion or all of a contemplated generating facility to be tested and synchronized to the grid and bid into the CAISO markets before achieving its planned commercial operation date.[65] This allows generating facilities to participate in markets once all or a portion of their generating units have been synchronized and tested before their commercial operation date.

Fifth, the CAISO allows interconnection customers to request "Engineering and Procurement Agreements" before they have executed GIAs.[66] These agreements inform and authorize the transmission owner to begin engineering and procurement of long lead-time items to meet the interconnection customer's Commercial Operation Date. The transmission owner can thus work toward the interconnection even before the GIA has been executed.

The aforementioned five options effectively allow interconnection customers to interconnect reliably and operate before all identified network upgrades are completed. The Commission should find that the CAISO complies with Order No. 845, and no tariff revisions are required on this issue.

I. Surplus Interconnection Service

Order No. 845 requires transmission providers "to enable a new interconnection customer to utilize the unused portion of an existing interconnection customer's interconnection service."[67] "Surplus interconnection service is created because generating facilities may not operate at full capacity at all times."[68]

To comply with this requirement, the CAISO proposes to include the Commission's *pro forma* definition of "Surplus Interconnection Service."[69] The CAISO only has deviated from the Commission's language to refer to "Interconnection Service Capacity," instead of "Interconnection Service." This accurately refers to a value instead of a service, as discussed in Section II.G, above.

The CAISO also proposes to use two existing study processes to

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65 *See* Section 7 of the Business Practice Manual for Generator Management, *available at* https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Generator%20Management.

66 Section 12 of Appendix DD to the CAISO tariff.

67 Order No. 845-A at P 119.

68 Order No. 845 at P 468.

69 Proposed "Surplus Interconnection Service," Appendix A to the CAISO tariff, Definitions of Appendix EE to the CAISO tariff.

accommodate the transfer of surplus interconnection service.[70] Consistent with Order No. 845, both study processes are expedited processes. For new generating facilities that would not otherwise require a new interconnection request (because they do not increase Interconnection Service Capacity or substantially alter electrical characteristics thus affecting reliability),[71] the original Interconnection Customer can request to transfer surplus interconnection service through a material modification assessment request.[72] For all other new generating facilities, the surplus assignee will submit an interconnection request for a behind-the-meter capacity expansion under the independent study process.[73] The behind-the-meter capacity expansion study process is an existing expedited process for installing additional generating capacity to existing generating facilities. The study also determines whether any necessary tripping schemes or equipment are necessary to limit the total output to what was originally studied.[74] Consistent with Order No. 845, behind-the-meter capacity expansion studies consist of a short-circuit test,[75] transient stability test,[76] and reactive support test.[77]

The CAISO proposes to require the surplus interconnection service assignee to execute its own GIA, and that its generating units have separate meters and resource IDs from the original interconnection customer's generating units.[78]

Currently the CAISO tariff states that new generating units constructed through a behind-the-meter capacity expansion must be Energy Only,[79] meaning that the generating unit's capacity is ineligible to provide Resource Adequacy capacity in California because it may not be able to deliver its output to load during

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70 Proposed Section 3.4 of Appendix DD; proposed Section 3.3.4 of Appendix U; proposed Section 3.11 of Appendix Y to the CAISO tariff. The CAISO has included references in its older generator interconnection procedures so that interconnection customers still under those procedures but not online can avail themselves of surplus interconnection service transfers and permissible technological advancements. All other proposals here are either inapplicable or do not require new express provisions.

71 *See* Section 25.1 of the CAISO tariff.

72 Proposed Section 3.4 of Appendix DD to the CAISO tariff.

73 *Id*. (citing Sections 3.5 and 4.2 of Appendix DD to the CAISO tariff).

74 *See* Section 4.2.1.2(i)(3) of Appendix DD to the CAISO tariff.

75 Section 4.2.2 of Appendix DD to the CAISO tariff.

76 Section 4.2.3 of Appendix DD to the CAISO tariff.

77 Section 4.2.4 of Appendix DD to the CAISO tariff.

78 Proposed Section 3.4 of Appendix DD to the CAISO tariff; proposed Article 19.1 of Appendix EE to the CAISO tariff.

79 As opposed to Full or Partial Capacity Deliverability Status.

peak conditions.[80] The CAISO proposes to revise its tariff so new generating units constructed to transfer surplus interconnection service can receive deliverability from the original interconnection customer as well.[81] The transferred amount of deliverability may not exceed surplus interconnection service, nor can the transfer result in an increase in deliverability of the aggregate generating facility (including the expansion) that pre-existed the transfer.[82] Because the new unit can only take allocated deliverability from the existing generating unit, no further study or construction is required to ensure that the generating unit can deliver its output during peak conditions.[83]

Although Order No. 845 defines surplus interconnection service "only available up to the level that can be accommodated without requiring the construction of new network upgrades," the CAISO's existing behind-the-meter capacity expansion process goes further and allows for constructing new reliability network upgrades. The CAISO and its stakeholders believe that the CAISO should continue to allow this option for surplus interconnection service because merely providing surplus interconnection service without the ability to build some new reliability network upgrades would achieve little.[84] As numerous commenters in Order No. 845 noted, it is very difficult to add generating capacity without affecting the electrical characteristics such that no new facilities would be required. To ensure that constructing new reliability network upgrades effected through surplus transfers does not result in queue jumping, the CAISO proposes to limit all potential reimbursement for upgrades to the original interconnection customer's constructed generating facility capacity only.[85] The CAISO's existing tariff provides that transmission owners will only reimburse the costs for reliability network upgrades up to $60,000 per MW of generating capacity.[86] This limit ensures that

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80 *See* Section 4.2.1.4(ii)(1) of Appendix DD to the CAISO tariff.

81 If the interconnection customers agree. Energy Only capacity transfers also would be allowed. Proposed Section 3.4 of Appendix DD to the CAISO tariff.

82 *Id*.

83 The net qualifying capacity could decrease, however, based on the technology of the original units and the assignee's units. For example, variable energy resources may not be able to deliver the same percentage of output (*i.e.*, delivered output compared to nameplate capacity) at peak hours as combustion-fired resources, and this could be reflected in their net qualifying capacity. In any case, net qualifying capacity would be established through the CAISO's existing deliverability assessment process.

84 CAISO stakeholders also requested that the CAISO forego including the Commission's *pro forma* language that surplus interconnection service requests can be made by affiliates or other interconnection customers. Because the latter group includes the former, stakeholders believed that the language was superfluous and therefore could cause confusion.

85 Proposed Section 3.4 of Appendix DD to the CAISO tariff. The CAISO notes that constructed generating facility capacity is the correct value under Order No. 845 and Commission precedent. *See* Order No. 845 at P 493; *CalWind Resources Inc. v. CAISO*, 146 FERC ¶ 61,121 at PP 33 *et seq.* (2014).

86 Section 14.3.2 of Appendix DD to the CAISO tariff.

transmission owners and ratepayers only incur costs for prudent network upgrades. This limit incentivizes interconnection customers to avoid siting projects in locations where the costs of reliability network upgrades would be inappropriately high.

For surplus interconnection service transfers, applying this cap would mean that if the original interconnection customer built a 100 MW generating facility, the reimbursement cap for reliability network upgrades would be $6 million. If the original interconnection customer spent $5.5 million on the original reliability network upgrades, the surplus assignee would only be eligible to receive $500,000 for any additional reliability network upgrades, regardless of the assignee's generating capacity.[87] This effectively caps reimbursement to what the original interconnection request was. The CAISO notes that since the inception of the $60,000 per MW cap in 2012, no interconnection customer has proceeded to operation unless its reliability network upgrades were under the cap.

The CAISO also proposes to apply its existing rules on retaining capacity to surplus interconnection service. Interconnection customers lose their Deliverability (but not Interconnection Service Capacity) if they retire, or are incapable of operating at their deliverability level over a three-year period,[88] unless they can demonstrate they are actively engaged in constructing replacement generation.[89] Long-term outages are not uncommon in the CAISO because many older generating units temporarily cease operations while deciding whether to permanently retire or repower.

Although Order No. 845 contemplated that surplus interconnection service would cease within one year of the original interconnection customer's retirement, the CAISO proposes to apply its current rules for deliverability to the assignee: if the original interconnection customer notifies the CAISO that its generating facility is permanently retiring, the surplus interconnection service assignee will be converted to Energy Only immediately when the original generating facility retires.[90] Likewise, if the original interconnection customer's generating facility cannot operate for three years without actively reconstructing, the CAISO proposes to convert the surplus interconnection service assignee to Energy Only as well.[91] Importantly, at any point, the assignee may seek its own deliverability allocation under the CAISO's

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87 Any reliability network upgrade costs above the cap would be financed on a merchant basis.

88 *I.e.*, the level of their allocated Deliverability. This period is not cumulative over a lifetime; it must be three uninterrupted consecutive years.

89 *See* Section 40.4.6.1 of the CAISO tariff; Section 6.1.3.4 of the Business Practice Manual for Reliability Requirements, available at https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability Requirements.

90 Proposed Section 3.4 of Appendix DD to the CAISO tariff

91 *Id*.

existing procedures for online, Energy Only generating units to receive available deliverability.[92] If the assignee receives its own deliverability allocation, it will exist completely independent of the original interconnection customer and will not be converted to Energy Only due to the retirement or inoperability of the original interconnection customer.[93] This proposal is consistent with, or superior to, Order No. 845 in that it allows the assignee to exist after the retirement of original generating facility, thus saving ratepayers from new facilities, without resulting in "queue jumping," because the assignee would still have to acquire its own deliverability allocation in competition with queued customer. Moreover, the CAISO's existing deliverability allocation process prioritizes interconnection customers in the queue over online units, which will include surplus interconnection service assignees.[94]

The CAISO also proposes that the assignee of surplus interconnection service may continue to operate and retain its own interconnection service capacity even after the retirement of the original interconnection customer. Prohibiting the assignee to operate altogether merely because the original interconnection customer has retired would result in an unnecessary waste of useful generating facilities and network upgrades. The CAISO does not believe that taking over new or repowered facilities at existing sites results in queue jumping. Every developer has the opportunity to purchase surplus interconnection service. Similar transfers are permissible and occur frequently today: When a generating unit is no longer operating at its full capacity or intends to retire, it can assign all of its rights and obligations under its GIA to another developer. The developer then uses the behind-the-meter capacity expansion process, the repowering process, or a new interconnection request[95] to replace or expand the original generating unit. The result is a new generating facility that can save CAISO ratepayers considerably by using existing network upgrades and interconnection facilities, thus avoiding the construction of new ones. The only effective difference between the *status quo* and implementing surplus interconnection service is that interconnection customers can be more transparent about their plans for assignment, new facilities, and retirement.

The Commission should approve the CAISO's proposal as compliant with Order No. 845. The CAISO's proposed tariff revisions achieve the stated purpose of the reform "to enable the efficient use of any surplus interconnection service that may exist."[96] To the extent the CAISO's proposal differs from the Commission's *pro*

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92 *Id*. (incorporating Section 8.9.2 of Appendix DD to the CAISO tariff by reference).

93 *Id*.

94 Section 8.9.2 of Appendix DD to the CAISO tariff.

95 (Or some combination thereof).

96 Order No. 845 at P 503.

forma revisions, the CAISO's proposal offers interconnection customers even more flexibility to use available capacity efficiently and avoid unneeded ratepayer expense and thus is consistent with, or superior to, Order No. 845. The CAISO's proposal also meets all five of the elements in Order No. 845 for variations consistent with the Commission's requirements.[97]

J. Permissible Technological Advancement

Order No. 845 requires transmission providers to define "Permissible Technological Advancements" that interconnection customers can make without losing their queue position or requiring a material modification assessment.[98]

The CAISO proposes to define Permissible Technological Advancements as "Changes to Generating Facilities that do not require a Material Modification assessment, new Interconnection Request, re-study, or other substantial evaluation because they have little or no potential to substantially change Generating Unit electrical characteristics or affect other Interconnection Customers or Affected Systems."[99] The CAISO proposes to include a new provision stating that interconnection customers may request Permissible Technological Advancements, which may include removing equipment; aligning the Commercial Operation Date with an executed power purchase agreement; adding less than 5 MW of energy storage once without increasing the net output at the point of interconnection; and other changes that meet the definition of a Permissible Technological Advancement.[100] The CAISO intends for the list of Permissible Technological Advancements to grow as more interconnection customers find modifications that meet its definition. To ensure that interconnection customers know all modifications that constitute Permissible Technological Advancements, the CAISO proposes to include a tariff requirement that the CAISO will update its business practice manual to list any additional Permissible Technological Advancements approved but not specifically enumerated in the tariff.[101]

The interconnection customer's written request to evaluate technological advancements must include the technical data required to assess the request and a non-refundable fee of $2,500.[102] The CAISO selected this figure based on its

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97 Order No. 845 at P 477; Order No. 845-A at PP 140-1.

98 Order No. 845-A at PP 148 *et seq*.

99 Proposed "Permissible Technological Advancement," Appendix A to the CAISO tariff.

100 Proposed Section 6.7.2.4 of Appendix DD; proposed Section 4.4.11 of Appendix U; proposed Section 6.9.2.6 of Appendix Y to the CAISO tariff.

101 *Id*. The list would be in the CAISO's Business Practice Manual for Generator Management.

102 *Id*.

analysis of the study costs of the most straightforward modification requests. The CAISO proposes a flat fee instead of a deposit to avoid the need to track time and expenses, thereby increasing the speed and ease to process such requests for interconnection customers.

Within 30 days of the interconnection customer's completed request, the CAISO, in consultation with the transmission owner, will notify the interconnection customer whether the request constitutes an approved Permissible Technological Advancement, or why the interconnection customer must submit a material modification assessment request.[103] The CAISO also proposes to include Permissible Technological Advancements among modifications automatically allowed within ten business days of the Phase I interconnection study results meeting.[104]

The Commission should find that the CAISO's proposal complies with or is superior to Order No. 845. The CAISO has established a process much simpler, faster, and cheaper than material modification requests that will benefit interconnection customers. The CAISO has included the specific Permissible Technological Advancements it currently knows, and has required that the CAISO update its business practice manual so interconnection customers can see further Permissible Technological Advancements as they are proposed and approved.

K. Tariff Tracking

The CAISO has included the following table to reference where the Commission's prescribed tariff revisions will be in the CAISO tariff. All section numbers refer to Appendix DD of the CAISO tariff unless otherwise noted:

Order No. 845 Provision	Order No. 845 Section	Proposed CAISO Revision
Contingent Facilities	Definition	Already compliant
Generating Facility	Definition	Already compliant
Permissible Technology Advancement	Definition	App. A
Provisional Interconnection Service	Definition	Already compliant

103 *Id*.

104 Proposed Section 6.7.2.2 of Appendix DD to the CAISO tariff.

Order No. 845 Provision	Order No. 845 Section	Proposed CAISO Revision
Provisional Interconnection Service Agreement	Definition	Already compliant
Stand Alone Network Upgrades	Definition	App. A
Surplus Interconnection Service	Definition	App. A
Base Case Data	2.3	2.3
General	3.1	3.1
Utilization of Surplus Interconnection Service	3.3	3.4
Surplus Interconnection Service Requests	3.3.1	Using BTM Expansion (4.2.1) and MMA (6.7.2) process
OASIS Posting	3.5.2	3.6.1
Interconnection Feasibility Studies processing time	3.5.2.1	3.6.1.1
Interconnection System Impact Studies Processing Time	3.5.2.2	3.6.1.2
Interconnection Facilities Studies	3.5.2.3	N/A (No CAISO equivalent)
Interconnection Service Requests Withdrawn from Interconnection Queue	3.5.2.4	3.6.1.3
	3.5.3	3.6.2
	3.5.4	3.6.3
Identification of Contingent Facilities	3.8	Already compliant
Decreasing capacity	4.4.1	6.7.2.2
	4.4.2	N/A
Technological Change Procedure	4.4.6	6.7.2.4
Interconnection Feasibility Study Procedures	6.3	6.2

Order No. 845 Provision	Order No. 845 Section	Proposed CAISO Revision
Scope of Interconnection System Impact Study	7.3	8.1.1
Scope of Interconnection Facilities Study	8.2	N/A
Non-binding dispute resolution procedures	13.5.5	15.5.5
Appendix 1 to LGIP		App. 1 to App. DD
Generating Facility	LGIA definition	App. EE
Provisional Interconnection Service	LGIA definition	Already compliant
Provisional Large Generator Interconnection Agreement	LGIA definition	Already compliant
Stand Alone Network Upgrades	LGIA definition	App. A and App. EE
Surplus Interconnection Service	LGIA definition	App. A and App. EE
Options	LGIA 5.1	5.1 of App. EE
Option to Build	LGIA 5.1.3	5.1.3 of App. EE
Negotiated Option	LGIA 5.1.4	5.1.4 of App. EE
General Conditions Applicable to Option to Build	LGIA 5.2(12)	5.2(13) of App. EE
Provisional Interconnection Service	LGIA 5.9.2	Already compliant

III. Effective Date

Consistent with Order No. 845-A, the CAISO requests that the Commission grant an effective date when it approves the CAISO's proposed tariff revisions.[105]

IV. Communications

[105] Order No. 845-A at PP 156 *et seq*. As such, the CAISO has requested an effective date of 12/31/9998.

Pursuant to Rule 203(b)(3) of the Commission's Rules of Practice and Procedure,[106] the CAISO requests that all correspondence, pleadings, and other communications regarding this filing should be directed to following:

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General Counsel
Sidney L. Mannheim
Assistant General Counsel
William H. Weaver
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V. Service

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

VI. Contents of Filing

Besides this transmittal letter, this filing includes these attachments:

Attachment A	Clean CAISO tariff sheets incorporating this tariff amendment
Attachment B	Red-lined document showing the revisions in this tariff amendment

[106] 18 C.F.R. § 385.203(b)(3).

VII. Conclusion

For the reasons set forth above, the CAISO respectfully requests that the Commission find that the CAISO has complied with Order No. 845.

Respectfully submitted,

/s/ William H. Weaver

Roger E. Collanton
General Counsel
Sidney L. Mannheim
Assistant General Counsel
William H. Weaver
Senior Counsel

Counsel for the California Independent
System Operator Corporation

Attachment A – Clean Tariff

Order No. 845 Compliance

California Independent System Operator Corporation

Appendix A

Master Definitions Supplement

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- Interconnection Service Capacity

The approved maximum instantaneous Power output at the Point of Interconnection for the Interconnection Customer, as set forth in its Interconnection Studies.

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- Permissible Technological Advancements

Changes to Generating Facilities that do not require a Material Modification assessment, new Interconnection Request, re-study, or other substantial evaluation because they have little or no potential to substantially change Generating Unit electrical characteristics or affect other Interconnection Customers or Affected Systems.

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- Stand Alone Network Upgrades

Network Upgrades or tasks (e.g., telecommunications, environmental, or property work) that are not part of an Affected System and that an Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Large Generator Interconnection Agreement. If the CAISO, Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

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- Surplus Interconnection Service

Any unneeded portion of Interconnection Service Capacity established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service if utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

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Appendix U

Standard Large Generator

Interconnection Procedures (LGIP)

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3.3 Interconnection Service

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3.3.4 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service to Section 3.4 of Appendix DD.

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4.4 Modifications

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4.4.11 Permissible Technological Advancements

Interconnection Customers may request Permissible Technological Advancements pursuant to Section 6.7.2.4 of Appendix DD.

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Appendix Y

Generator Interconnection Procedures (GIP)

for Interconnection Requests

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3.11 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service pursuant to Section 3.4 of Appendix DD.

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6.9 Phase 1 Interconnection Study Results Meeting

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6.9.2 Modifications.

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6.9.2.6 Interconnection Customers may request Permissible Technological Advancements pursuant to Section 6.7.2.4 of Appendix DD.

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Appendix DD

Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

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15.5 Disputes

15.5.1 Submission
15.5.2 External Arbitration Procedures
15.5.3 Arbitration Decisions
15.5.4 Costs
15.5.5 Non-binding Alternative Dispute Resolution

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Section 2 Scope And Application

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2.3 Interconnection Base Case Data

For each Interconnection Study Cycle, the CAISO, in coordination with applicable Participating TO(s), shall maintain updated Interconnection Base Case Data, including, as applicable, separate Interconnection Base Case Data for each Group Study to reflect system conditions particular to the Group Study, to a secured section of the CAISO Website. Interconnection Base Case Data will represent the network model and underlying assumptions used during the most recent Interconnection Study and represent system conditions in the near term planning horizon.

The CAISO will update and publish the Interconnection Base Case Data:

(1) prior to the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(2) after the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests submitted in the Cluster Application Window for the Interconnection Study Cycle, and the identified preliminary transmission upgrades or additions, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(3) prior to the Phase II Interconnection Study, including all remaining Generation from the Phase I Interconnection Study for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; and

(4) after the Phase II Interconnection Study, including all remaining Generation from the applicable Phase I Interconnection Study and the identified transmission upgrades and additions for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions.

Interconnection Base Case Data shall include information subject to the confidentiality provisions in Section 15.1.

The CAISO shall require current and former Interconnection Customers, Market Participants, and electric utility regulatory agencies within California to sign a CAISO confidentiality agreement and, where the current or former Interconnection Customer or Market Participant is not a member of WECC, or its successor, an appropriate form of agreement with WECC, or its successor, as necessary. All other entities or persons seeking Interconnection Base Case Data must satisfy the foregoing requirements as well as all requirements under 18 C.F.R. Section 388.113 for obtaining the release of Critical Energy Infrastructure Information (as that term is defined by FERC).

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Section 3 Interconnection Requests

3.1 General

Pursuant to CAISO Tariff Section 25.1, a duly authorized officer or agent of the Interconnection Customer will submit to the CAISO (1) an Interconnection Request consistent with Appendix 1 to this GIDAP, including (2) an executed Generator Interconnection Study Process Agreement consistent with Appendix 3 to this GIDAP. All forms may be submitted electronically as provided on the CAISO website. Interconnection customers will submit Appendix B to the Generator Interconnection Study Process Agreement pursuant to Section 7 of this GIDAP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

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

Interconnection Customers may request Interconnection Service Capacity below the Generating Facility Capacity. The CAISO will study these requests for Interconnection Service at the level of Interconnection Service Capacity requested for purposes of Interconnection Studies, Network Upgrades, and associated costs. If the Generating Facility Capacity requires additional Network Upgrades beyond the Interconnection Service Capacity, the CAISO will provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade cost required for safety and reliability will be assigned to the Interconnection Customer and eligible for reimbursement consistent with the treatment of Interconnection Facilities and Network Upgrade provided in this GIDAP. Interconnection Customers may be subject to additional control technologies, as well as testing and validation of those technologies consistent with Article 6 of the GIA and Article 2 of the SGIA. The necessary control technologies and protection systems as well as any potential penalties for exceeding the level of Interconnection Service Capacity established in the executed, or requested to be filed unexecuted, GIA shall be established in Appendix C of that executed, or requested to be filed unexecuted, GIA.

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3.4 Surplus Interconnection Service

The CAISO will allow an Interconnection Customer to utilize or transfer Surplus Interconnection Service. The Interconnection Customer will notify the CAISO that it has transferred its Surplus Interconnection Service to another entity. The total Interconnection Service Capacity of the original Interconnection Customer and the assignee of the Surplus Interconnection Capacity may not exceed the original Interconnection Customer's constructed Generating Facility Capacity, regardless of the Interconnection Service Capacity it requested in its Interconnection Request or memorialized in its GIA. The Generating Facility of the assignee must interconnect at the same Point of Interconnection as the original Interconnection Customer.

If the assignee's Generating Facility would not require a new Interconnection Request pursuant to Section 25.1.1 of the CAISO Tariff, the original Interconnection Customer may transfer Surplus Interconnection Service, and the CAISO will study the transfer, as a modification under Section 6.7.2. Otherwise, the assignee of the Surplus Interconnection Service will submit an Interconnection Request under the Independent Study Process pursuant to Section 3.5 of this GIDAP. The CAISO and Participating TO will study and treat the use of the Surplus Interconnection Service and any capacity beyond the Interconnection Service Capacity as a behind-the-meter capacity expansion consistent with Section 4.2 of this GIDAP. The Independent Study Process for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary. Reimbursement for additional Reliability Network Upgrades will be capped pursuant to Section 14.3.2 of this GIDAP. The CAISO will use the constructed Generating Facility Capacity of the original Interconnection Customer for the MW value of the RNU reimbursement cap, and will subtract the costs of the original Interconnection Customer's Reliability Network Upgrades to determine any remaining eligible reimbursement under the cap for the assignee's Reliability Network Upgrades, if any.

Notwithstanding any other provision in this GIDAP, if the original Interconnection Customer has Full or Partial Capacity Deliverability Status, it will notify the CAISO whether its transfer of Surplus Interconnection Service includes any Deliverability currently associated with the constructed Generating Facility capacity. The transfer amount of Deliverability may not exceed the transfer amount of Surplus Interconnection Service. The transfer amount of Surplus Interconnection Service will not operate as a basis to increase the Net Qualifying Capacity of the Generating Facility (including the expansion) that pre-existed the transfer. In all cases, the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs. If the original Interconnection Customer's Generating Facility permanently retires, or ceases operation for three (3) years without having begun active construction of a repowered Generating Facility, both the original Interconnection Customer and the assignee of the Surplus Interconnection Service will be converted to Energy Only. At any point, the assignee may seek its own TP Deliverability allocation pursuant to Section 8.9 of this GIDAP. If the assignee receives its own TP Deliverability allocation, it will exist completely independent of the original Interconnection Customer and will not be converted to Energy Only due to the retirement or inoperability of the original Interconnection Customer, notwithstanding any other provision herein.

The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend the original Interconnection Customer's GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA.

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3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the most recent projected Commercial Operation Date; (v) the status of the Interconnection Request, including whether it is active or withdrawn; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (e.g., combined cycle, combustion turbine, wind turbine, and fuel type); (ix) requested Deliverability status, and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a GIA or requests that the applicable Participating TO(s) and the CAISO file an unexecuted GIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. The CAISO shall further post to the secure CAISO Website portions of the Phase I Interconnection Study that do not contain customer-specific information following the final Results Meeting and portions of the Phase II Interconnection Study that do not contain customer-specific information no later than publication of the final Transmission Plan under CAISO Tariff Section 24.2.5.2 (such posted information to be placed on the secure CAISO Website to protect any Critical Energy Infrastructure Information contained therein). The CAISO shall post to the secure CAISO Website any documents or other materials posted pursuant to this or a Business Practice Manual that contain Critical Energy Infrastructure Information.

3.6.1 Interconnection Studies Statistics

On a quarterly basis, the CAISO will publish to the CAISO Website summary quarterly statistics related to processing Interconnection Studies pursuant to Interconnection Requests. These statistics will include:

3.6.1.1 Phase I Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed beyond the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase I Interconnection Studies that have exceeded the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(D) The mean time (in days) of Phase I Interconnection Studies completed from the date when the CAISO began the annual Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP to the date the CAISO provided the completed Phase I Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase I Interconnection Studies exceeding the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

3.6.1.2 Phase II Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed beyond the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase II Interconnection Studies that have exceeded the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(D) The mean time (in days) of Phase II Interconnection Studies completed from the date when the CAISO began the annual Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP to the date the CAISO provided the completed Phase II Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase II Interconnection Studies exceeding the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

3.6.1.3 Interconnection Requests Withdrawn

(A) The number of Interconnection Requests withdrawn;

(B) The number of Interconnection Requests withdrawn before completion of any Interconnection Studies;

(C) The number of Interconnection Requests withdrawn before completion of their Phase II Interconnection Study;

(D) The number of Interconnection Requests withdrawn after executing a GIA or before the Interconnection Customer requests filing an unexecuted, new GIA;

(E) Mean time (in days), for all withdrawals, from the date when the request was determined to be valid to when the CAISO received the request to withdraw from the queue.

3.6.2 Retention

The CAISO will keep the quarterly interconnection studies statistics on the CAISO Website for three (3) calendar years, commencing in the first quarter of 2020.

3.6.3 FERC Reporting

In the event that any of the percentages calculated in any subparagraph E of Section 3.6.1.1 and 3.6.1.2 exceeds twenty five (25) percent for two (2) consecutive quarters, the CAISO will, for the next four quarters and until those percentages fall below twenty five (25) percent for two (2) consecutive quarters:

(i) submit a report to FERC describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline for completion (excluding any allowance for Reasonable Efforts). The CAISO will describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The CAISO will file the report with FERC

within forty five (45) days of the quarter.

(ii) aggregate and publish on the CAISO Website the total number of employee-hours and third party consultant hours expended towards its Interconnection Studies. The CAISO will publish these figures within thirty (30) days of the end of the quarter.

* * * * *

Section 6 Initial Activities and Phase I of the Interconnection Study Process for Queue Clusters

* * * * *

6.2. Scope and Purpose of Phase I Interconnection Study

The Phase I Interconnection Study shall:

(i) evaluate the impact of all Interconnection Requests received during the Cluster Application Window for a particular year on the CAISO Controlled Grid,

(ii) preliminarily identify all LDNU and RNU needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests,

(iii) preliminarily identify for each Interconnection Request required Interconnection Facilities,

(iv) assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs,

(v) establish the maximum cost responsibility for LDNUs and RNUs assigned to each Interconnection Request, until the issuance of the Phase II Interconnection Study report.

(vi) provide a good faith estimate of the cost of Interconnection Facilities for each Interconnection Request,

(vii) provide a cost estimate of ADNUs for each Generating Facility in a Queue Cluster Group Study, and

(viii) identify controls required for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity.

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 (i) the assumptions upon which it is based, (ii) the results of the analyses, and

(iii) 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). For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Phase I Interconnection Study will consider the level of Interconnection Service Capacity requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

* * * * *

6.7.2 Modifications.

6.7.2.1 At any time during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

6.7.2.2 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 Section shall include specifically:

(a) a decrease in the electrical output (MW) of the proposed project; through either (1) a decrease in Generating Facility Capacity or (2) a decrease in Interconnection Service Capacity (consistent with the process described in Section 3.1) accomplished by CAISO-approved limiting equipment;

(b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics;

(c) modifying the interconnection configuration;

(d) modifying the In-Service Date, Initial Synchronization Date, Trial Operation Date, and/or Commercial Operation Date that meets the criteria set forth in Section

3.5.1.4 and is acceptable to the applicable Participating TO(s) and the CAISO, such acceptance not to be unreasonably withheld;

(e) change in Point of Interconnection as set forth in Section 6.7.2.1;

(f) change in Deliverability Status to Energy Only Deliverability Status, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status;

(g) *De minimis* reductions in capacity pursuant to Section 7.5.13; and

(h) Permissible Technological Advancements consistent with Section 6.7.2.4.

For any modification other than these, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO(s) and, if applicable, any Affected System Operator, shall evaluate the proposed modifications prior to making them and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except for that specified by the CAISO in an Interconnection Study or otherwise allowed under this Section, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

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

If any requested modification after the Phase II Interconnection Study report would change the scope, schedule, or cost of the Interconnection Facilities or Network Upgrades, the CAISO will issue a report to the Interconnection Customer. Potential adjustments to the maximum cost responsibility for Network Upgrades for the Interconnection Customer will be determined in accordance with Section 7.4.3.

* * * * *

6.7.2.4 Interconnection Customers may request Permissible Technological Advancements. Permissible Technological Advancements may include, for example, removing equipment; aligning the Commercial Operation Date with an executed power purchase agreement; adding less than 5 MW of energy storage once without increasing the net output at the Point of Interconnection; and other changes that have little or no potential to affect other Interconnection Customers or Affected Systems, require a new Interconnection Request, or otherwise require a re-study or evaluation. The CAISO will update its Business Practice Manual to list any additional Permissible Technological Advancement approved but not specifically enumerated here when identified. The Interconnection Customer's written request to evaluate technological advancements must include the technical data required to assess the request and a non-refundable fee of $2,500. Within thirty (30) calendar days of the Interconnection Customer's completed request, the CAISO, in consultation with the Participating TO, will notify the Interconnection Customer whether the request constitutes an approved Permissible Technological Advancement, or why the Interconnection Customer must submit a modification request pursuant to Section 6.7.2.3.

6.7.2.5 Notwithstanding any other provisions in this GIDAP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded seven (7) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds seven (7) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed seven (7) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this GIDAP.

6.7.2.6 In addition to the options provided in this GIDAP, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status after the completion of its Phase II Interconnection Study. This conversion will become effective through the reassessment process described in Section 7.4. Except (i) as provided in Section 8.9.3.2 (ii) due to not receiving the requested TP Deliverability allocation, or (iii) due to declining a TP Deliverability allocation, Interconnection Customers that become Energy Only after their Phase II Interconnection Study may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

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Section 7 Activities in Preparation for Phase II

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7.5 Generator Downsizing Process

7.5.1 Objectives and Applicability

In accordance with the requirements set forth in this Section 7.5, the CAISO shall conduct, on an annual basis, a process for evaluating requests by Interconnection Customers to reduce Interconnection Service Capacity. In each annual cycle of this Generator Downsizing Process, the CAISO will process valid Generator Downsizing Requests submitted during the applicable Generator Downsizing Request Window as part of the annual reassessment process set forth in Section 7.4.

All reductions to Interconnection Service Capacity by Interconnection Customers shall utilize this annual Generator Downsizing Process unless explicitly exempted. Specifically, beginning on the

date of the opening of the first Generator Downsizing Request Window, all proposed reductions of Interconnection Service Capacity by Interconnection Customers shall, regardless of the dates of the Interconnection Customer's Interconnection Request(s), be subject to the requirements and procedures of the Generator Downsizing Process set forth in Section 7.5, except for MW capacity reductions made pursuant to the following: (1) the provisions of the CAISO's interconnection procedures that permit Interconnection Customers to reduce the size of their Generating Facilities between the Phase I and Phase II Interconnection Studies, as set forth in Section 6.7.2; (2) specific non-conforming provisions of an Interconnection Customer's Generator Interconnection Agreement that provide the Interconnection Customer with an explicit right to reduce the capacity of its Generating Facility through a partial termination of its Generator Interconnection Agreement; (3) the *de minimis* threshold set forth in Section 7.5.13.1; (4) the parking options set forth in Sections 8.9.4, 8.9.5, and 8.9.6; and (5) modifications made pursuant to Section 6.7.2 to reduce Generating Facility Capacity without decreasing Interconnection Service Capacity where the Generating Facility Capacity still exceeds the Interconnection Service Capacity.

Generator Downsizing Requests that meet the eligibility requirements set forth in this Section 7.5 will be studied as part of the next annual reassessment process set forth in Section 7.4.

* * * * *

Section 8 Phase II Interconnection Study and TP Deliverability Allocation Processes

The provisions of this Section 8 shall apply to all Interconnection Requests under this GIDAP except those processed under the Independent Study Process selecting Energy Only Deliverability Status, the Fast Track Process, or the 10 kW inverter process.

8.1 Scope of Phase II Interconnection Study

8.1.1 Purpose of the Phase II Interconnection Study

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:

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

(ii) identify final RNUs needed in order to achieve Commercial Operation status for the Generating Facilities and provide final cost estimates;

(iii) identify final LDNUs needed to interconnect those Generating Facilities selecting Full Capacity or Partial Capacity Deliverability Status and provide final cost estimates;

(iv) identify final ADNUs for Interconnection Customers selecting Option (B), as provided below and provide revised cost estimates;

(v) identify, for each Interconnection Request, the Participating TO's Interconnection Facilities for the final Point of Interconnection and provide a +/-20% cost estimate;

(vi) coordinate in-service timing requirements based on operational studies in order to facilitate achievement of the Commercial Operation Dates of the Generating Facilities;

and

(vii) identify any potential control equipment for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity.

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 Section 11.3 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 Section 10.1), the Phase II Interconnection Study report shall recite this fact.

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Section 15 Miscellaneous

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15.5 Disputes

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15.5.5 Non-binding Alternative Dispute Resolution

If a Party has submitted a Notice of Dispute pursuant to Section 15.5.1, and the Parties are unable to resolve the claim or dispute through unassisted or assisted negotiations within the thirty (30) calendar days provided in that section, and the Parties cannot reach mutual agreement to pursue the Section 15.5 arbitration process, a Party may request that the CAISO engage in non-binding Alternative Dispute Resolution pursuant to this section by providing written notice to the CAISO. Conversely, either Party may file a request for non-binding Alternative Dispute Resolution pursuant to this section without first seeking mutual agreement to pursue the Section 15.5 arbitration process. The process in this Section 15.5.5 shall serve as an alternative to, and not a replacement of, the Section 15.5 arbitration process. Pursuant to this process, the CAISO must within thirty (30) calendar days of receipt of the request for non-binding Alternative Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that shall not have any current or past substantial business or financial relationships with either Party. Unless otherwise agreed by the Parties, the decision-maker shall render a decision within sixty (60) calendar days of appointment and shall notify the Parties in writing of such decision and reasons therefore. This decision-maker shall be authorized only to interpret and apply the provisions of the GIDAP and GIA and shall have no power to modify or change any provision of the GIDAP and GIA in any manner. The result reached in this process is not binding, but, unless otherwise agreed, the Parties may cite the record and decision in the non-binding dispute resolution process in future dispute resolution processes, including in a Section 15.5 arbitration, or in a Federal Power Act section 206 complaint. Each Party shall be responsible for its own costs incurred during the process and the cost of the decision-maker shall be divided equally among each Party to the dispute.

* * * * *

Appendix 1 Interconnection Request

INTERCONNECTION REQUEST

* * * * *

4. The Interconnection Customer provides the following information:

a. Address or location, including the county, of the proposed new Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

Project Name: _____

Project Location:
Street Address:_____
City, State:_____
County:_____
Zip Code:_____
GPS Coordinates:_____

b. Maximum net megawatt electrical output (as defined by section 2.c of Attachment A to this appendix) of the proposed new Generating Facility or the amount of net megawatt increase in the generating capacity of an existing Generating Facility;

Maximum net megawatt electrical output (MW):_____ or

Net Megawatt increase (MW): _____

c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration (if more than one type is chosen include nameplate MW for each);

Technology	Nameplate
_____Cogeneration	_____(MW)
_____Reciprocating Engine	_____(MW)
_____Biomass	_____(MW)
_____Steam Turbine	_____(MW)
_____Gas Turbine	_____(MW)
_____Wind	_____(MW)
_____Hydro	_____(MW)
_____Photovoltaic	_____(MW)
_____Combined Cycle	_____(MW)

_____Other (please describe):

General description of the equipment configuration (e.g. number, size, type, etc):

d. Proposed In-Service Date (first date transmission is needed to the facility), Trial Operation date and Commercial Operation Date by month, day, and year and term of service (dates must be sequential); _____

Proposed Trial Operation Date: _____

Proposed Commercial Operation Date: _____

Proposed Term of Service (years): _____

e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person (primary person who will be contacted):

Name:_____
Title:_____
Company Name: _____
Street Address:_____
City, State:_____
Zip Code:_____
Phone Number:_____
Fax Number:_____
Email Address:_____

f. Approximate location of the proposed Point of Interconnection (i.e., specify transmission facility interconnection point name, voltage level, and the location of interconnection);

g. Interconnection Customer data (set forth in Attachment A)

The Interconnection Customer shall provide to the CAISO the technical data called for in Attachment A to this Interconnection Request. One (1) copy is required.

h. Requested Interconnection Service Capacity (in MW) (if lower than the Generating Facility Capacity; may not exceed Generating Facility Capacity);

_____

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Appendix EE
Large Generator Interconnection Agreement
for Interconnection Requests Under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD of the CAISO Tariff)

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Article 1. Definitions

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Stand Alone Network Upgrades shall mean Network Upgrades that are not part of an Affected System that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA. If the CAISO, the Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

* * * * *

Surplus Interconnection Service shall mean any unneeded portion of Interconnection Service Capacity established herein, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

* * * * *

ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

* * * * *

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

5.1 **Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option, Alternate Option, or, if eligible, Merchant Option, set forth below, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, the Interconnection Customer shall indicate whether it elects the Option to Build set forth in Article 5.1.3 below. If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, they shall so notify the Interconnection Customer within thirty (30)

calendar days. Upon receipt of the notification that the Interconnection Customer's designated dates are not acceptable to the CAISO and Participating TO, the Interconnection Customer shall notify the CAISO and Participating TO within thirty (30) calendar days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

* * * * *

5.1.3 Option to Build. The Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

5.1.4 Negotiated Option. If the designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, the Parties shall in good faith attempt to negotiate terms and conditions, including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), the Participating TO shall assume responsibility for the design, procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build.

* * * * *

5.2 General Conditions Applicable to Option to Build. If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, or assumes responsibility for any stand-alone task, such as telecommunications, environmental, or real-estate related work:

* * * * *

(13) If the Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, the Interconnection Customer shall pay the Participating TO the agreed upon amount of $_____for Participating TO to execute the responsibilities enumerated to it under Article 5.2. The Participating TO will invoice the Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

* * * * *

Article 19. Assignment

19.1 Assignment. This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

The Interconnection Customer may assign Surplus Interconnection Service pursuant to Section 3.4 of the GIDAP. The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend this GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA. The assignee must execute a separate GIA with the CAISO and Participating TO to memorialize its Interconnection Service.

Attachment B – Marked Tariff

Order No. 845 Compliance

California Independent System Operator Corporation

Appendix A

Master Definitions Supplement

* * * * *

- Interconnection Service Capacity

The approved maximum instantaneous Power output at the Point of Interconnection for the Interconnection Customer, as set forth in its Interconnection Studies.

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- Permissible Technological Advancements

Changes to Generating Facilities that do not require a Material Modification assessment, new Interconnection Request, re-study, or other substantial evaluation because they have little or no potential to substantially change Generating Unit electrical characteristics or affect other Interconnection Customers or Affected Systems.

* * * * *

- Stand Alone Network Upgrades

Network Upgrades or tasks (e.g., telecommunications, environmental, or property work) that are not part of an Affected System and that an Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Large Generator Interconnection Agreement. If the CAISO, Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

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- Surplus Interconnection Service

Any unneeded portion of Interconnection Service Capacity established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service if utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

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Appendix U

Standard Large Generator

Interconnection Procedures (LGIP)

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3.3 Interconnection Service

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3.3.4 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service to Section 3.4 of Appendix DD.

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4.4 Modifications

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4.4.11 Permissible Technological Advancements

Interconnection Customers may request Permissible Technological Advancements pursuant to Section 6.7.2.4 of Appendix DD.

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Appendix Y

Generator Interconnection Procedures (GIP)

for Interconnection Requests

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3.11 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service pursuant to Section 3.4 of Appendix DD.

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6.9 Phase 1 Interconnection Study Results Meeting

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6.9.2 Modifications.

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6.9.2.6 Interconnection Customers may request Permissible Technological Advancements pursuant to Section 6.7.2.4 of Appendix DD.

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Appendix DD

Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

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15.5 Disputes

15.5.1 Submission
15.5.2 External Arbitration Procedures
15.5.3 Arbitration Decisions
15.5.4 Costs
15.5.5 Non-binding Alternative Dispute Resolution

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Section 2 Scope And Application

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2.3 Interconnection Base Case Data

For each Interconnection Study Cycle, the CAISO, in coordination with applicable Participating TO(s), shall ~~publish~~ maintain updated Interconnection Base Case Data, including, as applicable, separate Interconnection Base Case Data for each Group Study to reflect system conditions particular to the Group Study, to a secured section of the CAISO Website. Interconnection Base Case Data will represent the network model and underlying assumptions used during the most recent Interconnection Study and represent system conditions in the near term planning horizon.

The CAISO will update and publish the Interconnection Base Case Data:

(1) prior to the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(2) after the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests submitted in the Cluster Application Window for the Interconnection Study Cycle, and the identified preliminary transmission upgrades or additions, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(3) prior to the Phase II Interconnection Study, including all remaining Generation from the Phase I Interconnection Study for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; and

(4) after the Phase II Interconnection Study, including all remaining Generation from the applicable Phase I Interconnection Study and the identified transmission upgrades and additions for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions.

Interconnection Base Case Data shall include information subject to the confidentiality provisions in Section 15.1.

The CAISO shall require current and former Interconnection Customers, Market Participants, and electric utility regulatory agencies within California to sign a CAISO confidentiality agreement and, where the current or former Interconnection Customer or Market Participant is not a member of WECC, or its successor, an appropriate form of agreement with WECC, or its successor, as necessary. All other entities or persons seeking Interconnection Base Case Data must satisfy the foregoing requirements as well as all requirements under 18 C.F.R. Section 388.113 for obtaining the release of Critical Energy Infrastructure Information (as that term is defined by FERC).

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Section 3 Interconnection Requests

3.1 General

Pursuant to CAISO Tariff Section 25.1, a duly authorized officer or agent of the Interconnection Customer will submit to the CAISO (1) an Interconnection Request consistent with Appendix 1 to this GIDAP, including (2) an executed Generator Interconnection Study Process Agreement consistent with Appendix 3 to this GIDAP. All forms may be submitted electronically as provided on the CAISO website. Interconnection customers will submit Appendix B to the Generator Interconnection Study Process Agreement pursuant to Section 7 of this GIDAP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

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

Interconnection Customers may request Interconnection Service Capacity below the Generating Facility Capacity. The CAISO will study these requests for Interconnection Service at the level of Interconnection Service Capacity requested for purposes of Interconnection Studies, Network Upgrades, and associated costs. If the Generating Facility Capacity requires additional Network Upgrades beyond the Interconnection Service Capacity, the CAISO will provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade cost required for safety and reliability will be assigned to the Interconnection Customer and eligible for reimbursement consistent with the treatment of Interconnection Facilities and Network Upgrade provided in this GIDAP. Interconnection Customers may be subject to additional control technologies, as well as testing and validation of those technologies consistent with Article 6 of the GIA and Article 2 of the SGIA. The necessary control technologies and protection systems as well as any potential penalties for exceeding the level of Interconnection Service Capacity established in the executed, or requested to be filed unexecuted, GIA shall be established in Appendix C of that executed, or requested to be filed unexecuted, GIA.~~An Interconnection Customer with a proposed Small Generating Facility shall be evaluated using the maximum rated capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system. However, if the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system is limited (e.g., through use of a control system, power relay(s), or other similar device settings or adjustments), then the Interconnection Customer must obtain the CAISO's agreement, with such agreement not to be unreasonably withheld, that the manner in which the Interconnection Customer proposes to implement such a limit will not adversely affect the safety and reliability of the CAISO's system. If the CAISO does not so agree, then the Interconnection Request must be withdrawn or revised to~~

~~specify the maximum capacity that the Small Generating Facility is capable of injecting into the CAISO's electric system without such limitations. Furthermore, nothing in this section shall prevent the CAISO from considering an output higher than the limited output, if appropriate, when evaluating system protection impacts.~~

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3.4 ~~[Not Used]~~Surplus Interconnection Service

The CAISO will allow an Interconnection Customer to utilize or transfer Surplus Interconnection Service. The Interconnection Customer will notify the CAISO that it has transferred its Surplus Interconnection Service to another entity. The total Interconnection Service Capacity of the original Interconnection Customer and the assignee of the Surplus Interconnection Capacity may not exceed the original Interconnection Customer's constructed Generating Facility Capacity, regardless of the Interconnection Service Capacity it requested in its Interconnection Request or memorialized in its GIA. The Generating Facility of the assignee must interconnect at the same Point of Interconnection as the original Interconnection Customer.

If the assignee's Generating Facility would not require a new Interconnection Request pursuant to Section 25.1.1 of the CAISO Tariff, the original Interconnection Customer may transfer Surplus Interconnection Service, and the CAISO will study the transfer, as a modification under Section 6.7.2. Otherwise, the assignee of the Surplus Interconnection Service will submit an Interconnection Request under the Independent Study Process pursuant to Section 3.5 of this GIDAP. The CAISO and Participating TO will study and treat the use of the Surplus Interconnection Service and any capacity beyond the Interconnection Service Capacity as a behind-the-meter capacity expansion consistent with Section 4.2 of this GIDAP. The Independent Study Process for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary. Reimbursement for additional Reliability Network Upgrades will be capped pursuant to Section 14.3.2 of this GIDAP. The CAISO will use the constructed Generating Facility Capacity of the original Interconnection Customer for the MW value of the RNU reimbursement cap, and will subtract the costs of the original Interconnection Customer's Reliability Network Upgrades to determine any remaining eligible reimbursement under the cap for the assignee's Reliability Network Upgrades, if any.

Notwithstanding any other provision in this GIDAP, if the original Interconnection Customer has Full or Partial Capacity Deliverability Status, it will notify the CAISO whether its transfer of Surplus Interconnection Service includes any Deliverability currently associated with the constructed Generating Facility capacity. The transfer amount of Deliverability may not exceed the transfer amount of Surplus Interconnection Service. The transfer amount of Surplus Interconnection Service will not operate as a basis to increase the Net Qualifying Capacity of the Generating Facility (including the expansion) that pre-existed the transfer. In all cases, the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs. If the original Interconnection Customer's Generating Facility permanently retires, or ceases operation for three (3) years without having begun active construction of a repowered Generating Facility, both the original Interconnection Customer and the assignee of the Surplus Interconnection Service will be converted to Energy Only. At any point, the assignee may seek its own TP Deliverability allocation pursuant to Section 8.9 of this GIDAP. If the assignee receives its own TP Deliverability allocation, it will exist completely independent of the original Interconnection Customer and will not be converted to Energy Only due to the retirement or inoperability of the original Interconnection Customer, notwithstanding any other provision herein.

The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend the original Interconnection Customer's GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA.

* * * * *

3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the most recent projected Commercial Operation Date; (v) the status of the Interconnection Request, including whether it is active or withdrawn; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (e.g., combined cycle, combustion turbine, wind turbine, and fuel type); (ix) requested Deliverability status, and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a GIA or requests that the applicable Participating TO(s) and the CAISO file an unexecuted GIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. The CAISO shall further post to the secure CAISO Website portions of the Phase I Interconnection Study that do not contain customer-specific information following the final Results Meeting and portions of the Phase II Interconnection Study that do not contain customer-specific information no later than publication of the final Transmission Plan under CAISO Tariff Section 24.2.5.2 (such posted information to be placed on the secure CAISO Website to protect any Critical Energy Infrastructure Information contained therein). The CAISO shall post to the secure CAISO Website any documents or other materials posted pursuant to this or a Business Practice Manual that contain Critical Energy Infrastructure Information.

3.6.1 Interconnection Studies Statistics

On a quarterly basis, the CAISO will publish to the CAISO Website summary quarterly statistics related to processing Interconnection Studies pursuant to Interconnection Requests. These statistics will include:

3.6.1.1 Phase I Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed beyond the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase I Interconnection Studies that have exceeded the one hundred seventy (170) days planned

for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(D) The mean time (in days) of Phase I Interconnection Studies completed from the date when the CAISO began the annual Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP to the date the CAISO provided the completed Phase I Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase I Interconnection Studies exceeding the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

3.6.1.2 Phase II Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed beyond the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase II Interconnection Studies that have exceeded the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(D) The mean time (in days) of Phase II Interconnection Studies completed from the date when the CAISO began the annual Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP to the date the CAISO provided the completed Phase II Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase II Interconnection Studies exceeding the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

3.6.1.3 Interconnection Requests Withdrawn

(A) The number of Interconnection Requests withdrawn;

(B) The number of Interconnection Requests withdrawn before completion of any Interconnection Studies;

(C) The number of Interconnection Requests withdrawn before completion of their Phase II Interconnection Study;

(D) The number of Interconnection Requests withdrawn after executing a GIA or before the Interconnection Customer requests filing an unexecuted, new GIA;

(E) Mean time (in days), for all withdrawals, from the date when the request was determined to be valid to when the CAISO received the request to withdraw from the queue.

3.6.2 Retention

The CAISO will keep the quarterly interconnection studies statistics on the CAISO Website for three (3) calendar years, commencing in the first quarter of 2020.

3.6.3 FERC Reporting

In the event that any of the percentages calculated in any subparagraph E of Section 3.6.1.1 and 3.6.1.2 exceeds twenty five (25) percent for two (2) consecutive quarters, the CAISO will, for the next four quarters and until those percentages fall below twenty five (25) percent for two (2) consecutive quarters:

(i) submit a report to FERC describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline for completion (excluding any allowance for Reasonable Efforts). The CAISO will describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The CAISO will file the report with FERC within forty five (45) days of the quarter.

(ii) aggregate and publish on the CAISO Website the total number of employee-hours and third party consultant hours expended towards its Interconnection Studies. The CAISO will publish these figures within thirty (30) days of the end of the quarter.

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Section 6 Initial Activities and Phase I of the Interconnection Study Process for Queue Clusters

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6.2. Scope and Purpose of Phase I Interconnection Study

The Phase I Interconnection Study shall:

(i) evaluate the impact of all Interconnection Requests received during the Cluster Application Window for a particular year on the CAISO Controlled Grid,

(ii) preliminarily identify all LDNU and RNU needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests,

(iii) preliminarily identify for each Interconnection Request required Interconnection Facilities,

(iv) assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs,

(v) establish the maximum cost responsibility for LDNUs and RNUs assigned to each Interconnection Request, until the issuance of the Phase II Interconnection Study report.

(vi) provide a good faith estimate of the cost of Interconnection Facilities for each Interconnection Request, ~~and~~

(vii) provide a cost estimate of ADNUs for each Generating Facility in a Queue Cluster Group Study, and

(viii) identify controls required for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity.

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 (i) the assumptions upon which it is based, (ii) the results of the analyses, and (iii) 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). For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Phase I Interconnection Study will consider the level of Interconnection Service Capacity requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

* * * * *

6.7.2 Modifications.

6.7.2.1 At any time during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

6.7.2.2 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 Section shall include specifically:

(a) a decrease in the electrical output (MW) of the proposed project; through either (1) a decrease in Generating Facility Capacity or (2) a decrease in Interconnection Service Capacity (consistent with the process described in Section 3.1) accomplished by CAISO-approved limiting equipment;

(b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics;

(c) modifying the interconnection configuration;

(d) modifying the In-Service Date, Initial Synchronization Date, Trial Operation Date, and/or Commercial Operation Date that meets the criteria set forth in Section 3.5.1.4 and is acceptable to the applicable Participating TO(s) and the CAISO, such acceptance not to be unreasonably withheld;

(e) change in Point of Interconnection as set forth in Section 6.7.2.1; ~~and~~

(f) change in Deliverability Status to Energy Only Deliverability Status, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status;

(g) *De minimis* reductions in capacity pursuant to Section 7.5.13; and

(h) Permissible Technological Advancements consistent with Section 6.7.2.4.

For any modification other than these, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO(s) and, if applicable, any Affected System Operator, shall evaluate the proposed modifications prior to making them and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except for that specified by the CAISO in an Interconnection Study or otherwise allowed under this Section, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

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

If any requested modification after the Phase II Interconnection Study report would change the scope, schedule, or cost of the Interconnection Facilities or Network Upgrades, the CAISO will issue a report to the Interconnection Customer. Potential adjustments to the maximum cost responsibility for Network Upgrades for the Interconnection Customer will be determined in accordance with Section 7.4.3.

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6.7.2.4 Interconnection Customers may request Permissible Technological Advancements. Permissible Technological Advancements may include, for example, removing equipment; aligning the Commercial Operation Date with an executed power purchase agreement; adding less than 5 MW of energy storage once without increasing the net output at the Point of Interconnection; and other changes that have little or no potential to affect other Interconnection Customers or Affected Systems, require a new Interconnection Request, or otherwise require a re-study or evaluation. The CAISO will update its Business Practice Manual to list any additional Permissible Technological Advancement approved but not specifically enumerated here when identified. The Interconnection Customer's written request to evaluate technological advancements must include the technical data required to assess the request and a non-refundable fee of $2,500. Within thirty (30) calendar days of the Interconnection Customer's completed request, the CAISO, in consultation with the Participating TO, will notify the Interconnection Customer whether the request constitutes an approved Permissible Technological Advancement, or why the Interconnection Customer must submit a modification request pursuant to Section 6.7.2.3.

6.7.2.5 Notwithstanding any other provisions in this GIDAP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded seven (7) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds seven (7) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed seven (7) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this GIDAP.

6.7.2.6~~5~~ In addition to the options provided in this GIDAP, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status after the completion of its Phase II Interconnection Study. This conversion will become effective through the reassessment process described in Section 7.4. Except (i) as provided in Section 8.9.3.2 (ii) due to not receiving the requested TP Deliverability allocation, or (iii) due to declining a TP Deliverability allocation, Interconnection Customers that become Energy Only after their Phase II Interconnection Study may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

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Section 7 Activities in Preparation for Phase II

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7.5 Generator Downsizing Process

7.5.1 Objectives and Applicability

In accordance with the requirements set forth in this Section 7.5, the CAISO shall conduct, on an annual basis, a process for evaluating requests by Interconnection Customers to reduce ~~the megawatt generating capacities of their Generating Facilities~~ Interconnection Service Capacity. In each annual cycle of this Generator Downsizing Process, the CAISO will process valid Generator Downsizing Requests submitted during the applicable Generator Downsizing Request Window as part of the annual reassessment process set forth in Section 7.4.

All reductions to ~~the megawatt generating capacity of Generating Facilities~~ Interconnection Service Capacity by Interconnection Customers shall utilize this annual Generator Downsizing Process unless explicitly exempted. Specifically, beginning on the date of the opening of the first Generator Downsizing Request Window, all proposed reductions of ~~megawatt generating capacity~~ Interconnection Service Capacity by Interconnection Customers shall, regardless of the dates of the Interconnection Customer's Interconnection Request(s), be subject to the requirements and procedures of the Generator Downsizing Process set forth in Section 7.5, except for MW capacity reductions made pursuant to the following: (1) the provisions of the CAISO's interconnection procedures that permit Interconnection Customers to reduce the size of their Generating Facilities between the Phase I and Phase II Interconnection Studies, as set forth in Section 6.7.2; (2) specific non-conforming provisions of an Interconnection Customer's Generator Interconnection Agreement that provide the Interconnection Customer with an explicit right to reduce the capacity of its Generating Facility through a partial termination of its Generator Interconnection Agreement; (3) the *de minimis* threshold set forth in Section 7.5.13.1; ~~and~~ (4) the parking options set forth in Sections 8.9.4, 8.9.5, and 8.9.6; and (5) modifications made pursuant to Section 6.7.2 to reduce Generating Facility Capacity without decreasing Interconnection Service Capacity where the Generating Facility Capacity still exceeds the Interconnection Service Capacity.

Generator Downsizing Requests that meet the eligibility requirements set forth in this Section 7.5 will be studied as part of the next annual reassessment process set forth in Section 7.4.

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Section 8 Phase II Interconnection Study and TP Deliverability Allocation Processes

The provisions of this Section 8 shall apply to all Interconnection Requests under this GIDAP except those processed under the Independent Study Process selecting Energy Only Deliverability Status, the Fast Track Process, or the 10 kW inverter process.

8.1 Scope of Phase II Interconnection Study

8.1.1 Purpose of the Phase II Interconnection Study

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:

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

(ii) identify final RNUs needed in order to achieve Commercial Operation status for the Generating Facilities and provide final cost estimates;

(iii) identify final LDNUs needed to interconnect those Generating Facilities selecting Full Capacity or Partial Capacity Deliverability Status and provide final cost estimates;

(iv) identify final ADNUs for Interconnection Customers selecting Option (B), as provided below and provide revised cost estimates;

(v) identify, for each Interconnection Request, the Participating TO's Interconnection Facilities for the final Point of Interconnection and provide a +/-20% cost estimate; ~~and~~

(vi) coordinate in-service timing requirements based on operational studies in order to facilitate achievement of the Commercial Operation Dates of the Generating Facilities; and

(vii) identify any potential control equipment for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity.

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 Section 11.3 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 Section 10.1), the Phase II Interconnection Study report shall recite this fact.

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Section 15 Miscellaneous

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15.5 Disputes

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15.5.5 Non-binding Alternative Dispute Resolution

If a Party has submitted a Notice of Dispute pursuant to Section 15.5.1, and the Parties are unable to resolve the claim or dispute through unassisted or assisted negotiations within the thirty (30) calendar days provided in that section, and the Parties cannot reach mutual agreement to pursue the Section 15.5 arbitration process, a Party may request that the CAISO engage in non-binding Alternative Dispute Resolution pursuant to this section by providing written notice to the CAISO. Conversely, either Party may file a request for non-binding Alternative Dispute

Resolution pursuant to this section without first seeking mutual agreement to pursue the Section 15.5 arbitration process. The process in this Section 15.5.5 shall serve as an alternative to, and not a replacement of, the Section 15.5 arbitration process. Pursuant to this process, the CAISO must within thirty (30) calendar days of receipt of the request for non-binding Alternative Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that shall not have any current or past substantial business or financial relationships with either Party. Unless otherwise agreed by the Parties, the decision-maker shall render a decision within sixty (60) calendar days of appointment and shall notify the Parties in writing of such decision and reasons therefore. This decision-maker shall be authorized only to interpret and apply the provisions of the GIDAP and GIA and shall have no power to modify or change any provision of the GIDAP and GIA in any manner. The result reached in this process is not binding, but, unless otherwise agreed, the Parties may cite the record and decision in the non-binding dispute resolution process in future dispute resolution processes, including in a Section 15.5 arbitration, or in a Federal Power Act section 206 complaint. Each Party shall be responsible for its own costs incurred during the process and the cost of the decision-maker shall be divided equally among each Party to the dispute.

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Appendix 1 Interconnection Request

INTERCONNECTION REQUEST

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4. The Interconnection Customer provides the following information:

a. Address or location, including the county, of the proposed new Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

Project Name: _____

Project Location:
Street Address:_____
City, State:_____
County:_____
Zip Code:_____
GPS Coordinates:_____

b. Maximum net megawatt electrical output (as defined by section 2.c of Attachment A to this appendix) of the proposed new Generating Facility or the amount of net megawatt increase in the generating capacity of an existing Generating Facility;

Maximum net megawatt electrical output (MW):_____ or

Net Megawatt increase (MW): _____

c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration (if more than one type is chosen include nameplate MW for each);

Technology	Nameplate
_____Cogeneration	_____(MW)
_____Reciprocating Engine	_____(MW)
_____Biomass	_____(MW)
_____Steam Turbine	_____(MW)
_____Gas Turbine	_____(MW)
_____Wind	_____(MW)
_____Hydro	_____(MW)
_____Photovoltaic	_____(MW)
_____Combined Cycle	_____(MW)
_____Other (please describe):	

General description of the equipment configuration (e.g. number, size, type, etc):

d. Proposed In-Service Date (first date transmission is needed to the facility), Trial Operation date and Commercial Operation Date by month, day, and year and term of service (dates must be sequential); _____

Proposed Trial Operation Date: _____

Proposed Commercial Operation Date: _____

Proposed Term of Service (years): _____

e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person (primary person who will be contacted):

Name:_____
Title:_____
Company Name: _____
Street Address:_____
City, State:_____
Zip Code:_____
Phone Number:_____
Fax Number:_____
Email Address:_____

f. Approximate location of the proposed Point of Interconnection (i.e., specify transmission facility interconnection point name, voltage level, and the location of interconnection);

g. Interconnection Customer data (set forth in Attachment A)

The Interconnection Customer shall provide to the CAISO the technical data called for in Attachment A to this Interconnection Request. One (1) copy is required.

h. Requested Interconnection Service Capacity (in MW) (if lower than the Generating

Facility Capacity; may not exceed Generating Facility Capacity);

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Appendix EE
Large Generator Interconnection Agreement
for Interconnection Requests Under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD of the CAISO Tariff)

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Article 1. Definitions

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Stand Alone Network Upgrades shall mean Network Upgrades~~,~~ that are not part of an Affected System that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA. If the CAISO, the Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination. ~~(~~

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Surplus Interconnection Service shall mean any unneeded portion of Interconnection Service Capacity established herein, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

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ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

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Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

5.1 Options. Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option, Alternate Option, or, if eligible, Merchant Option, set forth below ~~for completion of the Participating TO's Interconnection Facilities and Network Upgrades as set forth in Appendix A~~, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, the Interconnection Customer shall indicate whether it elects the Option to Build set forth in Article 5.1.3 below. If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, they shall so notify the Interconnection Customer within thirty (30) calendar days. Upon receipt of the notification that the Interconnection Customer's designated dates are not acceptable to the CAISO and Participating TO, the Interconnection Customer shall notify the CAISO and Participating TO within thirty (30) calendar days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

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5.1.3 Option to Build. ~~If the dates designated by the Interconnection Customer are not acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, t~~The Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. ~~If the Interconnection Customer elects to exercise its option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, it shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO.~~ The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

5.1.4 Negotiated Option. If the designated by the Interconnection Customer ~~elects not to exercise its option under Article 5.1.3, Option to Build, the Interconnection Customer shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates~~ are not acceptable to the CAISO and Participating TO, ~~and~~ the Parties shall in good faith attempt to negotiate terms and conditions, ~~(~~including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of ~~a portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades by the Interconnection Customer)~~ all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. ~~pursuant to which the Participating TO is responsible for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades.~~ If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), the Participating TO shall assume responsibility for the design, procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades ~~pursuant to Article 5.1.1, Standard Option~~if the Interconnection Customer elects to exercise the Option to Build.

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5.2 General Conditions Applicable to Option to Build. If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, or assumes responsibility for any stand-alone task, such as telecommunications, environmental, or real-estate related work:

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(13) If the Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, the Interconnection Customer shall pay the Participating TO the agreed upon amount of $ for Participating TO to execute the responsibilities enumerated to it under Article 5.2. The Participating TO will invoice the Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

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Article 19. Assignment

19.1 Assignment. This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

The Interconnection Customer may assign Surplus Interconnection Service pursuant to Section 3.4 of the GIDAP. The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend this GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA. The assignee must execute a separate GIA with the CAISO and Participating TO to memorialize its Interconnection Service.