Proposed Changes to Large Generator Interconnection Procedures
Cluster Processing

Since September 2008, the California ISO (ISO) processes the generator interconnection requests it receives through a cluster process implemented as the latest Large Generator Interconnection Procedures (LGIP). This cluster approach was adopted under the ISO’s Generator Interconnection Process Reform (GIPR) tariff amendment accepted by the FERC in its order dated September 26, 2008\(^1\). The LGIP cluster process is set forth in CAISO Tariff (Fourth Replacement Tariff, August 18, 2009) Appendix Y, “Interconnection Requests in a Queue Cluster Window.”\(^2\)

The ISO has assembled this proposal to consider changes to LGIP for Interconnection Requests in a Queue Cluster Window GIPR (Appendix Y). The proposal is formatted as proposed blackline tariff changes to Appendix Y.

Proposed changes include the following:

1. **Section 6.3**—
   - Clarifies the cost responsibility of interconnection customers for short-circuit related network upgrades;

2. **Section 6.7**—
   - Clarifies that the timing for modifications is at the Phase I Results Meeting step.
   - Clarifies that the permitted modifications must be made prior to the commencement of the Phase II Interconnection Studies
   - Adds two additional permitted exceptions:
     a. An increase in the MW value (not to exceed 30%, i.e. 130% of the original requested MW amount) of the generation facility capacity that is the subject of the interconnection request, and
     b. A change in the deliverability status from energy only to full capacity deliverability.

The interconnection customer will be subject to different financial security requirements if either modification is requested. (See changes to Sections 9.2 and 9.3).

3. **Section 9.1**—
   - Contains language clean-up to reflect the fact that financial securities (including any cash deposits) are issued in favor of the applicable Participating TO rather than the CAISO.

4. **Sections 9.2 and 9.3**—
   - Restructures interconnection financial security requirements and timing for posting of the financial securities.
     a. As indicated above, modified interconnection financial security requirements for interconnection customers who modify their request to increase MW value or to change from energy only to full capacity deliverability status.

5. **Section 9.4**—
   - Modifies the provisions pertaining to the effect of interconnection customer withdrawal or termination of the interconnection request on the interconnection financial securities.

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\(^1\) FERC’s order is posted on CAISO Website at [http://www.caiso.com/2051/20517cf513430.pdf](http://www.caiso.com/2051/20517cf513430.pdf)

\(^2\) Appendix Y is posted on the CAISO Website at [http://www.caiso.com/240d/240dbf8a3c1d0.pdf](http://www.caiso.com/240d/240dbf8a3c1d0.pdf)
Large Generator Interconnection Procedures (LGIP)
for Interconnection Requests in a Queue Cluster Window
GIPR (Appendix Y)
Fourth Replacement CAISO Tariff
August 18, 2009
6.3 Identification and Cost Allocation Methods for Network Upgrades in Phase I Interconnection Study.

6.3.1 Reliability Network Upgrades.

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

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

6.7.2 Modifications.

At the Phase I Results Meeting, the Interconnection Customer should be prepared to discuss any desired modifications to the Interconnection Request. Within five (5) Business Days following the Phase I 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. The Interconnection Customer shall remain eligible for the Phase II Interconnection Study if the modifications are in accordance with LGIP Sections 6.7.2.1 or 6.7.2.2.

Notwithstanding the above, 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.

6.7.2.1 Modifications permitted under this Section 6.7.2 shall include, if made prior to the commencement of the Phase II Interconnection Studies, specifically: (a) a decrease in the electrical output (MW) of the proposed project; (b) modifying the technical parameters associated with the Large Generating Facility technology or the Large Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration; (d) an increase in the MW value above the Generating Facility Capacity set forth in the Interconnection Request, not to exceed thirty percent (30%) of the original amount (i.e. not to exceed 130% of the generation facility capacity set forth in the original Interconnection Request); and (e) a change in the requested deliverability status set forth in the Interconnection Request from Energy Only to full capacity. Any modifications allowed under this Section 6.7.2.1 shall be subject to the Financial Security requirements of LGIP Section 9.2.2.

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9.1 Types of Interconnection Financial Security.

The Interconnection Financial Security posted by an Interconnection Customer may be any combination of the following types of Interconnection Financial Security provided in favor of the applicable Participating TO(s):

(a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody’s;

(b) an irrevocable and unconditional surety bond issued by an insurance company that has a credit rating of A or better by Standard and Poors or A2 or better by Moody’s;

(c) an unconditional and irrevocable guaranty issued by a company has a credit rating of A or better by Standard and Poors or A2 or better by Moody’s;

(d) a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account maintained at a bank or financial institution that is reasonably acceptable to the applicable Participating TO(s);

(e) a certificate of deposit in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody’s; or

(f) a payment bond certificate in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody’s.

Interconnection Financial Security instruments as listed above shall be in such form as the CAISO and applicable Participating TO(s) may reasonably require from time to time by notice to Interconnection Customers or in such other form as has been evaluated and approved as reasonably acceptable by the CAISO and applicable Participating TO(s).
The CAISO shall publish and maintain standardized forms related to the types of Interconnection Financial Security listed above on the CAISO Website. The CAISO shall require the use of standardized forms of Interconnection Financial Security to the greatest extent possible. If at any time the guarantor of the Interconnection Financial Security fails to maintain the credit rating required by this LGIP Section 9.1, the Interconnection Customer shall provide to the CAISO-applicable Participating TO(s) replacement Interconnection Financial Security meeting the requirements of this LGIP Section 9.1 within five (5) Business Days of the change in credit rating.

Interest on a cash deposit standing to the credit of the CAISO-applicable Participating TO(s) in an interest-bearing escrow account under subpart (d) of this LGIP Section 9.1 will accrue to the Interconnection Customer’s benefit and will be added to the Interconnection Customer’s account on a monthly basis.


The failure by an Interconnection Customer to timely post any Interconnection Financial Security required by this Section 9.2, shall result in the Interconnection Request being deemed withdrawn and subject to LGIP Section 3.8. The Interconnection Customer shall provide the CAISO and the Participating TO with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

9.2.1 Posting and Amounts, Generally.

On or before ninety (90) calendar days after publication of the final Phase I Interconnection Study report, Interconnection Customers must post, with notice to the CAISO, two separate Interconnection Financial Security instruments (i) in the amount of twenty percent (20%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, or $500,000, whichever is greater, and (ii) in the amount of twenty percent (20%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO’s Interconnection Facilities. The failure by an Interconnection Customer to timely post, and notify the CAISO of the posting of, the Interconnection Financial Security required by this LGIP Section 9.2 shall result in the Interconnection Request being deemed withdrawn and subject to LGIP Section 3.8.

9.2.2 Requirement for Certain Approved Modifications to Interconnection Request.

For Interconnection Customers who request and are granted modifications in accordance with LGIP Section 6.7.2.1, the following Interconnection Financial Security requirements set forth in this Section 9.2.2 shall apply in lieu of 9.2.1.

9.2.2.1 On or before ninety (90) calendar days after publication of the final Phase I Interconnection Study report, Interconnection Customers requesting an increase in the MW value above the Generating Facility Capacity set forth in the Interconnection Request shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments (i) in the amount of thirty percent (30%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, or $500,000, whichever is greater, and (ii) in the amount of twenty percent (20%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO’s Interconnection Facilities.
9.2.2.2 On or before ninety (90) calendar days after publication of the final Phase I Interconnection Study report, Interconnection Customers requesting to change the requested deliverability status set forth in the Interconnection Request from Energy Only to full capacity shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments (i) in the amount of twenty percent (20%) of the sum of the total of the cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades (which does not include any Delivery Network Upgrade costs) plus a proxy delivery network upgrade cost estimate as determined by the CAISO in consultation with the applicable Participating TO, pursuant to methodology to be posted on CAISO Website or, if applicable, set forth in a CAISO Business Practice Manual)- or $500,000, whichever is greater, and (ii) in the amount of twenty percent (20%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO’s Interconnection Facilities.

9.3 Second and Third Postings of Interconnection Financial Security.

The failure by an Interconnection Customer to timely post any Interconnection Financial Security required by this LGIP Section 9.3 shall constitute grounds for termination of the LGIA pursuant to LGIA Article 2.3. The Interconnection Customer shall provide the CAISO and the Participating TO with written notice of that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

The start date for Construction Activities of Network Upgrades or Participating TO’s Interconnection Facilities on behalf of the Interconnection Customer must be set forth in the Interconnection Customer’s LGIA if that start date is prior to one hundred eighty (180) calendar days after publication of the final Phase II Interconnection Study report.

9.3.1 Up to One Hundred Eighty Days After Final Phase II Interconnection Study Report.

On or before one hundred eighty (180) calendar days after publication of the final Phase II Interconnection Study report or at the start of Construction Activities of Network Upgrades or Participating TO’s Interconnection Facilities on behalf of the Interconnection Customer, whichever is earlier, the Interconnection Customer shall modify the separate Interconnection Financial Security instruments posted in accordance with LGIP Section 9.2 to be in the following total amounts:

9.3.1.1 Generally

In the total amount of thirty percent (30%) of the total cost responsibility assigned to the Interconnection Customer (i) in either the final Phase I Interconnection Study or Phase II Interconnection Study for Network Upgrades, whichever is lower (but in no event less than $500,000), and (ii) in the final Phase II Interconnection Study for Participating TO’s Interconnection Facilities.

9.3.1.2 Posting for Interconnection Requests that were Modified to Increase MW Value or to Change from Energy Only to Full Capacity Interconnection Status.

For Interconnection Customers who request and are granted modifications in accordance with LGIP Section 6.7.2.1, the total amount of thirty percent (30%) of the total cost responsibility assigned to the Interconnection Customer (i) in the Phase II Interconnection Study (if the Phase II cost is utilized and the cost responsibility is higher than that stated in Phase I or, if applicable, the Proxy Cost calculated in 9.2.2.2, the CAISO shall demonstrate that the increased costs are attributable to the Interconnection Customer’s Interconnection Request or, if such cost responsibility cannot be demonstrated, the CAISO shall adjust such costs) for Network Upgrades, (but in no event less than
$500,000), and (ii) in the final Phase II Interconnection Study for Participating TO's Interconnection Facilities.

total amount of one hundred percent (100%) of the total cost responsibility assigned to the Interconnection Customer (i) in the final Phase I Interconnection Study for Network Upgrades, if greater than $500,000, and (ii) in the final Phase II Interconnection Study for Participating TO's Interconnection Facilities. The start date for Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer must be set forth in the Interconnection Customer's LGIA if that start date is prior to one hundred eighty (180) calendar days after publication of the final Phase II Interconnection Study report. The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this LGIP Section 9.2 shall constitute grounds for termination of the LGIA pursuant to LGIA Article 2.3.

9.3.2 Start of Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities.

On or before the start of Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer, whichever is earlier, the Interconnection Customer shall modify the separate Interconnection Financial Security instruments posted pursuant to LGIP Section 9.3.1 to be in the following total amounts of:

9.3.2.1 Generally.

In the total amount of one hundred percent (100%) of the total cost responsibility assigned to the Interconnection Customer (i) in either the final Phase I Interconnection Study or Phase II Interconnection Study for Network Upgrades, whichever is lower (but in no event less than $500,000), and (ii) in the final Phase II Interconnection Study for Participating TO's Interconnection Facilities.

9.3.2.2 Posting for Interconnection Requests that were Modified to Increase MW Value or to Change from Energy Only to Full Capacity Interconnection Status.

For Interconnection Customers who request and are granted modifications in accordance with LGIP Section 6.7.2.1, in the total amount of one hundred percent (100%) of the total cost responsibility assigned to the Interconnection Customer (i) in the Phase II Interconnection Study (If the Phase II cost is utilized and the cost responsibility is higher than that stated in Phase I or, if applicable, the Proxy Cost calculated in 9.2.2.2, the CAISO shall demonstrate that the increased costs are attributable to the Interconnection Customer's Interconnection Request or, if such cost responsibility cannot be demonstrated, the CAISO shall adjust such costs) for Network Upgrades, (but in no event less than $500,000), and (ii) in the final Phase II Interconnection Study for Participating TO's Interconnection Facilities.

9.4 General Effect of Withdrawal of Interconnection Request or Termination of the LGIA on Interconnection Financial Security.

Except as set forth in LGIP Section 9.4.1, withdrawal of an Interconnection Request or termination of an LGIA shall allow the applicable Participating TO(s) to liquidate the Interconnection Financial Security, or balance thereof, posted by the Interconnection Customer for Network Upgrades at the time of withdrawal. To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by the Interconnection Customer to satisfy its obligation to finance Network Upgrades in accordance with LGIP Section 12.3 exceeds the total cost responsibility for Network Upgrades assigned to the Interconnection Customer by the final Phase I or final Phase II Interconnection Study, as applicable. In general, the lower of the two will be used.
However, for those Interconnection Requests for which the Generating Capacity has been increased or for which the interconnection status has been changed from Energy Only Interconnection Status to full capacity Interconnection Status, the Phase II cost will be used (if the Phase II cost is utilized and the cost responsibility is higher than that stated in Phase I or, if applicable, the Proxy Cost calculated in 9.2.2.2, the CAISO shall demonstrate that the increased costs are attributable to the Interconnection Customer’s Interconnection Request or, if such cost responsibility cannot be demonstrated, the CAISO shall adjust such costs). Phase I Interconnection Study, the applicable Participating TO(s) shall calculate the total cost responsibility as set forth herein and remit to the Interconnection Customer the excess amount.

Withdrawal of an Interconnection Request or termination of an LGIA shall result in the release to the Interconnection Customer of any Interconnection Financial Security posted by the Interconnection Customer for Participating TO’s Interconnection Facilities, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer for the Participating TO’s Interconnection Facilities and for which the applicable Participating TO(s) has not been reimbursed.

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9.4.2.1 Up to One Hundred Eighty Days After Final Phase II Interconnection Study Report.

If, at any time after the initial posting of the Interconnection Financial Security for Network Upgrades under LGIP Section 9.2 and on or before one hundred eighty (180) calendar days after the date of issuance of the final Phase II Interconnection Study report, the Interconnection Customer withdraws the Interconnection Request or terminates the LGIA, as applicable, in accordance with LGIP Section 9.4.1, the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for Network Upgrades under LGIP Section 9.2 and reimburse the Interconnection Customer in an amount of (i) any posted amounts less fifty percent (50%) of the value, up to a maximum of $10,000 per requested and approved megawatt of the Generating Facility Capacity at the time withdrawal is requested, of the posted Interconnection Financial Security for Network Upgrades, or (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If the Interconnection Customer has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, the applicable Participating TO(s) will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

9.4.2.2 Between One Hundred Eighty-One Days and Three Hundred Sixty-Five Days After Final Phase II Interconnection Study Report and the Commencement of Construction Activities.

If, at any time between one hundred eighty-one (181) calendar days and three hundred sixty-five (365) calendar days after the date of issuance of the final Phase II Interconnection Study report and the commencement of Construction Activities for Network Upgrades or the Participating TO’s Interconnection Facilities, the Interconnection Customer withdraws the Interconnection Request or terminates the LGIA, as applicable, in accordance with LGIP Section 9.4.1, the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for Network Upgrades under LGIP Section 9.3 and reimburse the Interconnection Customer in an amount of (i) any posted...
amounts less fifty percent (50%) of the posted value, up to a maximum of $20,000 per requested and approved megawatt of the Generating Facility Capacity at the time withdrawal is requested of the posted Interconnection Financial Security for Network Upgrades, or, (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If the Interconnection Customer has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, the applicable Participating TO(s) will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

9.4.2.3 [Not Used] Between Three Hundred Sixty-Six Days and Five Hundred Forty-Five Days After Final Phase II Interconnection Study Report.

If, at any time between three hundred sixty-six (366) calendar days and five hundred forty-five (545) calendar days after the date of issuance of the final Phase II Interconnection Study report, the Interconnection Customer withdraws the Interconnection Request or terminates the LGIA, as applicable, in accordance with LGIP Section 9.4.1, the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for Network Upgrades under LGIP Section 9.3 and reimburse the Interconnection Customer in an amount of (i) twenty percent (20%) of the posted value of the Interconnection Financial Security for Network Upgrades, or, (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer, the lesser of remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If the Interconnection Customer has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, the applicable Participating TO(s) will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

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9.4.2.6 Notification to CAISO and Accounting by Applicable Participating TO(s).

The applicable Participating TO(s) must notify the CAISO within one (1) Business Day of liquidating any Interconnection Financial Security. Within twenty (20) calendar days of any liquidating event, the applicable Participating TO(s) must provide the CAISO and Interconnection Customer with an accounting of the disposition of the proceeds of the liquidated Interconnection Financial Security and remit to the CAISO all proceeds not otherwise reimbursed to the Interconnection Customer or applied to costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer in accordance with this LGIP Section 9.4. All non-refundable portions of the Interconnection Financial Security remitted to the CAISO in accordance with this LGIP Section 9.4 shall be treated in accordance with CAISO Tariff Section 37.9.4.

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