

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
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September 12, 2008

**Via Electronic Delivery**

Kimberly D. Bose, Secretary  
Office of the Secretary  
Docket Room  
Federal Energy Regulatory Commission  
888 First Street, N.E., Room 1A, East  
Washington, D.C. 20002

**Re: California Independent System Operator Corporation  
Docket No. ER08-1317-000**

Dear Ms. Bose:

Enclosed for filing in the above-docketed case, please find an original electronic filing of the attached document entitled **“MOTION FOR LEAVE TO ANSWER AND ANSWER OF THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA.”**

Thank you for your cooperation in this matter.

Sincerely,

*/s/ Laurence G. Chaset*

Laurence G. Chaset  
Staff Attorney

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

California Independent System Operator  
Corporation

Docket No. ER08-1317-000

**MOTION FOR LEAVE TO ANSWER  
AND ANSWER OF THE PUBLIC UTILITIES COMMISSION OF  
THE STATE OF CALIFORNIA IN REPLY TO COMMENTS**

**I. MOTION FOR LEAVE TO ANSWER**

Pursuant to Rules 212 and 213 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“FERC” or “Commission”), the Public Utilities Commission of the State of California (“CPUC”) hereby moves for leave to reply and replies to various comments that have been submitted to date by several parties to the above-docketed proceeding.

The California Independent System Operator Corporation (“CAISO”) filed these tariff changes as the second step in a two-step process to reform the CAISO’s current Large Generator Interconnection Procedures (“LGIP”). This reform effort, which has been named the Generator Interconnection Process Reform (“GIPR”), will allow the CAISO both to manage its interconnection queue more efficiently and to be consistent with the pace for development of new transmission needed both to ensure reliability and to facilitate compliance with California's Renewables Portfolio Standard (“RPS”) requirements.

The CPUC timely intervened in this proceeding on August 15, 2008. In its Notice of Intervention, the CPUC indicated its general support for the CAISO's requested tariff revision, although the CPUC also stated that it had not yet had sufficient opportunity to carefully scrutinize the language thereof in sufficient detail so as to enable specific suggestions of appropriate clarifying revisions to the CAISO's proposed tariff language that the CPUC deems to be reasonable, appropriate and/or necessary. The CPUC accordingly reserved the right to file more specific and detailed comments on the CAISO's proposed tariff revision in response to the comments that may be filed by other parties. The following comments set forth the CPUC's specific suggestions of appropriate clarifying revisions to the CAISO's proposed tariff language as well as the CPUC's replies to the comments on the CAISO's proposed tariff language that have been filed by several other parties to this proceeding.

While FERC Rule 213(a)(2) normally prohibits answers to answers, FERC has waived this rule to allow responses when they will assist in the decision making process. For instance, in FERC's "Order Accepting Tariff Revisions, Subject to Conditions and Establishing Paper Hearing" (see, 122 FERC ¶ 61,187 at P 19) (2008), FERC allowed Southern California Edison Company ("SCE") to answer protests to its application: "We will accept SoCal Edison's answer because it provided information that assisted us in our decision making process." Here, the CPUC should be allowed to submit an Answer to the CAISO's filing and to reply several other comments that have been filed to date in this proceeding, because the CAISO's proposed tariff

language to implement the GIPR, although generally good, provides insufficient mechanisms to implement California's adopted laws that mandate the expeditious development of new renewable generation resources, and the associated needed new transmission. The CPUC believes strongly that the various minor revisions to the CAISO's proposed GIPR tariff that are proposed herein will improve the CAISO's proposal and make it more consistent with California state law. In order to have a complete record in this proceeding, the FERC should allow the CPUC's Answer.

## **II. ANSWER OF THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

The first step in the CAISO's LGIP reform process was effectuated by the CAISO's filing of a waiver petition this past May in Docket ER08-960-000. By Order dated July 14, 2008, (*see*, 124 FERC ¶ 61,031) the Commission approved the CAISO's waiver petition. The CAISO's instant filing seeks to revise the CAISO Tariff to incorporate the substance of the CAISO's Generator Interconnection Process Reform ("GIPR"). The GIPR itself has been in active development since early this year via an open and collaborative stakeholder process, in which the CPUC has been an active participant.

### **A. The Need for an Accelerated Study Process**

As it engages in a full-scale reform of its LGIP, the CAISO has determined that certain steps must be taken to streamline the processing of pending Interconnection Requests and to facilitate the transition to a new paradigm for addressing the interconnection queue. Accordingly, Section 7.6 of the CAISO's proposed LGIP tariff

amendments would establish an accelerated study process to ensure the timely interconnection of renewable resources to new transmission projects that have received applicable state and federal approvals. By thus providing for expediting the interconnection of renewable resources to planned and approved transmission projects, the CAISO's proposed tariff amendments generally support the goal of the California Renewable Portfolio Standard ("RPS"), which is to supply 20% of energy deliveries within the State from renewable resources by 2010.<sup>1</sup>

However, in order to assure that the RPS can in fact be met by the statutory deadline, proposed LGIP Section 7.6 requires modification in order to clarify the underlying intent of the CAISO's reform process, namely, to expedite the study of Interconnection Requests, as well as to facilitate the associated larger policy objective of the State of California, which is to accelerate the study of the transmission resources necessary achieve not only the 2010 RPS of 20%, which is built into state law, but also the higher RPS of 33% now under consideration by the CPUC, the Office of California Governor, Arnold Schwarzenegger, and the California Energy Commission.

### **1. The Concerns of Pacific Gas & Electric Company**

In the GIPR tariff filing, the CAISO proposed that projects needed to meet state requirements may be eligible for accelerated processing, but the proposed tariff language in LGIP Section 7.6 is vague and only provides that:

“CAISO may apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in this LGIP to meet the schedule

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<sup>1</sup> See, California Public Utilities Code § 399.11.

required by an order, ruling, or regulation of the Governor of the State of California, the CPUC, or the CEC.”

In its Motion to Intervene, Comments and Limited Protest of the CAISO’s filing in this case, the Pacific Gas & Electric Company (“PG&E”) has expressed the concern that the GIPR study timelines are too long.<sup>2</sup> For example, PG&E points out that a project that enters the Interconnection Queue in July, 2008 may have to wait until November, 2011 to have its studies completed.

In this regard, PG&E points out (at page 5 of its Comments and Limited Protest in this case) that it has recently executed and filed with the CPUC four Power Purchase Agreements (“PPAs”) for 906 MW of solar renewable power located in PG&E’s service territory. Each of these projects is expected to contribute significantly toward PG&E’s ability to reach its renewable energy goal. As it presently stands, 696 MW of these projects have been placed in the “Transition Group” under the GIPR, and all interconnection studies on Transition Group projects have been suspended until late 2008, and are not expected to be completed until August 2010. PG&E believes that these types of projects should be automatically eligible for the “Accelerated Phase II Interconnection Study Process” set forth in LGIP Section 7.6. The CPUC agrees with PG&E on this issue.<sup>3</sup>

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<sup>2</sup> See, PG&E’s Motion to Intervene, Comments and Limited Protest, filed August 18, 2008, at p. 4.

<sup>3</sup> The CPUC observes that on August 12, 2008, PG&E also filed a Request for Clarification or in the Alternative Rehearing of the Commission’s Order approving the CAISO’s waiver petition in Docket ER08-960-000. In that rehearing request, PG&E sought clarification that the May 1, 2008 date proposed by the CAISO in its waiver petition as a cut-off for projects with approved or pending PPAs to be studied in an expedited manner in the “serial study

In seeking to rebut PG&E's concerns that certain categories of projects should be able to have their Interconnection Requests expedited, the CAISO, in its Motion for Leave to Answer and Answer to Comments and Protests that was filed in this matter on September 2, 2008, the CAISO summarily dismisses PG&E's concern by stating (at pages 14-15) that it ". . . does not believe that there is a clear answer as to which categories of projects are deserving of special treatment and which are not. . ." The CAISO accordingly recommends retention of the limited opportunity for expedited treatment that is set forth in the proposed version of LGIP Section 7.6 that the CAISO submitted.

However, the CAISO's summary dismissal of PG&E's concerns is misplaced. There in fact is at least one category of projects that unquestionably deserves such

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group" should be extended to include any projects that "have approved or pending PPAs signed as of the date [FERC] acts on the Generator Interconnection Process Reform ("GIPR") proposal in Docket ER08-1317-000."

The CPUC specifically agrees with PG&E that the current May 1 cut-off date does not appear to be grounded in any particular rationale, and that PG&E's proposal to link the cutoff to the date FERC acts on the GIPR tariff proposal is reasonable. The proposed solar projects that are the subject of these PPAs, which PG&E has already filed with the CPUC, may help PG&E meet its state-mandated RPS obligation. These projects currently have anticipated online dates in the 2011 and 2012 timeframe and thus have the potential to make significant contributions to the achievement of the state's 20% renewable energy goals. Because these projects did not have a pending or approved PPA before the CPUC on or before May 1, 2008, they would, under the terms of the waiver petition that the CAISO filed in Docket ER08-960-000 and that FERC approved on July 28, 2008, be forced into the "Transition Group" and thus may face significant delay in terms of when their interconnection studies will be completed.

The CPUC believes that PG&E's immediate need with regard to the PPAs in question can be met by FERC's acceptance of PG&E's requested clarification in Docket ER08-960-000. However, the same issue is also raised, in a broader context, in this proceeding. Hence, the CPUC is offering its views, in the following subsection of this Answer, as to how PG&E's concerns with regard to the need to expedite the interconnection studies for these PPAs could also be addressed by an appropriate amendment to proposed LGIP Section 7.6.

special treatment, namely, projects with executed PPAs that have been approved by the CPUC. Without the availability of special expedited treatment for such projects, both PG&E individually, and the State of California more broadly, will run the risk of failing to meet the legal mandate that 20% of the state's energy be derived from renewable resources by the end of 2010. Meeting this goal is one of the highest priorities of the State of California.

For this reason, in the subsection below, the CPUC recommends revised language to proposed LGIP Section 7.6 that will provide the special treatment that is needed in order to assure the expedited interconnection study of certain projects that are urgently needed to help meet the state's RPS goal.

## **2. Suggested Revised Tariff Language**

In its Motion to Intervene, Comments and Limited Protest in this case (at page 5), PG&E proposed specific modifications to the CAISO's tariff language to make the Accelerated Phase II Study Process available to projects meeting specific criteria, such as projects with approved or pending PPAs with load serving entities. Specifically, PG&E has requested that FERC direct the CAISO to add the following language to LGIP Section 7.6:

“This accelerated process shall be available to all projects underlying an Interconnection Request that have an executed PPA or certificate application, approved or pending approval by the CPUC or other Local Regulatory Agency.”

The CPUC agrees with PG&E that there is insufficient provision in the CAISO's proposed tariff language for expediting the Phase II Study Process under

certain circumstances. However, the CPUC would go further than PG&E's proposed language. PG&E's proposed language would still appear to be subject to the requirement set forth in the CAISO's proposed tariff language that the CAISO, along with the Interconnection Customer, would have to apply to FERC for a waiver of the LGIP timelines. However, the processing of such waiver applications can take months.

By contrast, the CPUC believes that *CPUC approval* of a proposed generation project with a signed PPA is a key determinant of whether such project should get special priority in the LGIP Study Process. Thus, once the CPUC has actually *approved* a PPA, FERC should recognize that a specific state action has been taken to implement state law and state policy. Such state action should, by itself, be sufficient to warrant the shifting of study timelines into high gear by expressly exempting the acceleration of a project's Interconnection Study from the requirement to obtain a waiver from FERC.

The CPUC accordingly suggests revising LGIP Section 7.6 to make the availability of the Accelerated Study Process *automatic* upon CPUC approval of a PPA, rather than making the utility, or the CAISO, affirmatively seek a waiver from FERC.

In the CPUC's view, its suggested revisions to the CAISO's proposed language in LGIP Section 7.6 will expand the availability of the Accelerated Phase II Interconnection Study Process, as PG&E has requested, and, by eliminating the need for FERC review of a waiver request after the CPUC has *approved* a PPA, will save

even more time than what PG&E proposes in those special cases when (1) the CPUC has *approved* a PPA between a jurisdictional utility and a proposed new generating facility, and (2) time is of the essence to assure that the new generating facility is able to come on line by the date anticipated in the CPUC's approval of the PPA. Also, by limiting the availability of this special expedited treatment to projects with *CPUC-approved* PPAs, it will make sure that such special expedited treatment is available only to those projects that, by virtue of CPUC approval, can be reasonably assured of obtaining financing and getting built.

In keeping with the foregoing, the CPUC specifically recommends that the second paragraph of the CAISO's proposed LGIP Section 7.6 be amended to read as follows:

“In addition to the above criteria, the CAISO may ~~apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in this LGIP~~ accelerate the study timelines in this LGIP for a given Interconnection Customer or group of Interconnection Customers, or may conduct a separate, expedited Interconnection Study for said Interconnection Customer(s), without having to seek formal approval from FERC, to meet the schedule required by an order, ruling or regulation of the Governor of the State of California, the CPUC or the CEC, including, but not limited to, the approval by the CPUC of a power purchase agreement between a Load Serving Entity and an Interconnection Customer.”

**B. Expediting Generator Interconnection through Coordination with the Transmission Planning Process and Other Means**

An essential goal and feature of interconnection reform is better coordination and integration of the LGIP with other processes, particularly the broader

Transmission Planning Process (“TPP”) mandated by FERC Order 890<sup>4</sup> and related planning activities that support California’s energy policy priorities, such as the Renewable Energy Transmission Initiative (“RETI”).

The objective of improved coordination and integration is not only improved consistency and efficiency of study efforts, but also shorter timelines for developing transmission needed to access valuable generation resources. Therefore, the proposed language of LGIP Section 7.2 should go beyond “consistency” and “coordination” to specifically provide for using transmission plans developed under the TPP to substitute for and/or greatly reduce the time and effort otherwise allocated to Phase II Interconnection Studies within the LGIP. Toward this end, a new subsection (iii) should be added to proposed LGIP Section 7.2 (such that current subsection (iii) would become subsection (iv), *etc.*), to read as follows:

- (iii) maximum reasonable expediting of a Phase II Interconnection Study through adoption of all or part of any transmission plan(s) previously evaluated or developed, and not rejected, within the Transmission Planning Process that meets Network Upgrade requirements to interconnect Generating Facilities included in a Phase II Study, including plans initiated through a California State agency sanctioned initiative such as the Renewable Energy Transmission Initiative (RETI).

Furthermore, such previously developed plans may also usefully inform, and perhaps even expedite, Phase I Studies. Therefore, new language should be added at the end of the second paragraph of proposed LGIP Section 6.2, to read as follows:

“A Phase I Interconnection Study and its results shall make maximum reasonable use of any transmission plan(s) previously evaluated or developed,

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<sup>4</sup> *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 FR 12,266 (March 15, 2007), FERC Stats. and Regs. ¶ 31,241 (2007).

and not rejected, within the Transmission Planning Process that meet Network Upgrade requirements to interconnect Generating Facilities included in the Phase I Study, including plans initiated through a California State agency sanctioned initiative such as the Renewable Energy Transmission Initiative (RETI).”

With regard to the need for improved *planning* coordination that is addressed by the two foregoing recommended revisions to the CAISO’s proposed LGIP tariff, the CPUC would also emphasize the need for (and the CPUC’s commitment to work collaboratively with the CAISO toward the achievement of) improved coordination of the timing of Interconnection Studies and the CPUC’s own RPS procurement process. Such coordination is critically important, because delays in the implementation of the LGIP process will have the harmful side effect of delaying the CPUC’s RPS procurement process. To minimize such problems, once the GIPR is implemented (hopefully before the end of this year), the CPUC anticipates that it will only review proposed RPS contracts for which LGIP Phase I studies have been completed. In this way, the PPAs that are before the CPUC for approval will better reflect the timing and cost realities associated with the transmission needs of such projects. However, the necessary implication of this conscious coordination is that any delays in the Phase I studies will put the RPS procurement process on hold.

Thus, the CPUC would ask that, in approving the CAISO’s proposed LGIP tariff, FERC should direct the CAISO to place high value in the fact that a given PPA has received approval from the CPUC. Likewise, the CPUC is ready and willing to place high value on timely Phase I results from the reformed LGIP process that reveal the transmission implications of generation projects seeking PPAs.

Finally, a major goal and initial challenge for the reformed LGIP is processing and facilitating timely transmission development for the tens of thousands of megawatts of proposed generation facilities currently in the Interconnection Queue and that will be studied as part of the Transition Cluster. The issues and procedures specific to the Transition Cluster are addressed in the CAISO's proposed "Appendix 2 to Large Generator Interconnection Procedures (LGIP) Relating to the Transition Cluster." To specifically address this needed transmission development, a new Section 4 should be added at the end of Appendix 2, to read as follows:

**“4. Coordination of Transition Cluster Interconnection Studies with the Transmission Planning Process**

“Phase II Interconnection Studies for the Transition Cluster shall be coordinated with the Transmission Planning Process in the manner described in Section 7.2. Furthermore, it is recognized that generation projects in the large Transition Cluster may seek operating dates within a very few years and may be important for meeting California’s energy goals. Therefore, a high priority for Transmission Planning Process activity in 2009 shall be developing and/or evaluating plans of service capable of serving Transition Cluster generator locations having high priority based on interconnection and procurement activity, and also based on resource priorities endorsed by California state agencies, such as the priorities emerging from the Renewable Energy Transmission Initiative (RETI). To the maximum extent practicable, Phase II Interconnection Studies for the Transition Cluster shall use results of Transmission Planning Process activity in 2009 to expedite and/or partly substitute for Phase II Interconnection Studies for the Transition Cluster.”

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## **C. Generator Financial Commitments**

### **1. Transmission Owner Up-Front Funding**

Under existing FERC policy and the CAISO tariff, the cost of network upgrades, whether for reliability or deliverability, is ultimately rolled into the transmission owner's rate base and, thus, into the Transmission Access Charge paid by all grid users. However, interconnecting generators are required to up-front fund (*i.e.*, finance) network upgrades required for their interconnection, and to be reimbursed within 5 years of coming on line.

During the course of the discussions that led up to the CAISO's GIPR filings, one important issue that was repeatedly addressed was whether the Participating Transmission Owners ("PTOs"), *i.e.*, PG&E, SCE and San Diego Gas & Electric Company should be mandated to finance any Network Upgrades (including major new transmission projects) that would be necessary to support the interconnection of large numbers of new generating facilities, rather than to have the obligation to pay up front for these necessary Network Upgrades be imposed on the Interconnection Customer(s).

It can be challenging – and even inhibitory to development of new generation, especially innovative renewable generation projects – for the developers of proposed generation projects without access to deep balance sheets and/or significant existing generation to be required to make a large, up-front investment in the Network Upgrades needed for them to interconnect. This is especially a problem for many developers of renewable energy projects, because such projects are often locationally

constrained to the remote locations where the wind, solar and geothermal resources are situated, and substantial transmission investment is needed. Moreover, this problem needs to be seen in the broader context of the compelling policy objective of the State of California to accelerate the study of the transmission infrastructure necessary to achieve its RPS.

The CPUC accordingly believes that the reformed LGIP tariff to implement the GIPR should provide for *mandatory* up-front funding by PTOs of transmission upgrades needed to interconnect major new, location-constrained energy resource zones. In particular, the PTOs should be required to provide up-front funding for any major new transmission project serving location-constrained generators: (1) that is identified and approved through a state-mandated and/or managed process (such as the RETI process, which is currently being led collaboratively by the California Energy Commission, the CPUC, the CAISO and publicly-owned utilities); and (2) that the CAISO approves as part of a TPP.

FERC has already established a precedent for such up-front funding to access location-constrained energy resources in its approval in 2007 and earlier this year of the CAISO's Location-Constrained Resource Interconnection ("LCRI") proposal.<sup>5</sup> The CPUC has also addressed this up-front funding hurdle by approving backstop cost recovery through retail rates for transmission projects needed to access multiple

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<sup>5</sup> See, Order Granting Petition for Declaratory Relief in *California Independent System Operator Corp.*, Docket EL07-33, 119 FERC ¶ 61,061 (2007), and Order Conditionally Accepting Tariff Revisions in *California Independent System Operator Corp.*, Docket ER08-140, 121 FERC ¶ 61,286 (2008).

renewable resources when the costs for such projects cannot be recovered through the FERC-jurisdictional Transmission Access Charge.<sup>6</sup>

Thus, there should be no significant cost recovery risk accruing to the PTOs as a result of the imposition of the limited mandatory up-front funding requirement that the CPUC advocates herein. We would point out in this regard that the strategy for developing and funding over \$2 billion in new transmission to provide access to the resources of the important Tehachapi Wind Resource Area (approximately 100 miles north of Los Angeles), which is the first major transmission project in California primarily designed to access renewable resources, includes a commitment by the PTO (*i.e.*, SCE) to provide up-front funding for the project.

An additional reason why generation developers, especially the developers of location-constrained resources (*e.g.*, projects in renewable energy zones that will be designated as prime areas for development through California's RETI process), should be freed from responsibility for the up-front funding of the Network Transmission Upgrades needed to interconnect them is that the proposed LGIP tariff language to implement the GIPR already establishes substantially greater financial commitments for interconnecting generators to proceed through the interconnection study process. These include a \$250,000 study deposit and a \$250,000 site deposit in lieu of site control, with the former to be fully or partly forfeited if a generator withdraws at certain stages of the study process.

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<sup>6</sup> See, CPUC Decision D.06-06-034 (June 15, 2006); a link to this decision is: [http://docs.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/57298.PDF](http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/57298.PDF)

Furthermore, generators are required to post financial security in the full amount of their established cost responsibility for network upgrades (and to fully fund direct interconnection facilities). Depending on the status of a transmission project and the reason for a customer's withdrawal, an Interconnection Customer faces a very substantial and, in certain cases, a full loss of its potentially large security deposit, if it withdraws after signing an Interconnection Agreement.

These substantial deposit requirements mean that potential generators being studied are much more likely to be serious about developing their projects than is the case when study deposits are relatively nominal (as they currently are). This, in turn, minimizes the risk to the PTOs that transmission investment will be stranded. Furthermore, the risk of PTOs being saddled with stranded transmission investment is greatly mitigated, especially for the transmission upgrades needed to access significant new location-constrained energy resources, by the favorable cost recovery policies at the CPUC and CAISO noted above.

Finally, certain parties, in particular, SCE, have expressed concerns about the strain that the obligation to finance the construction of large amounts of transmission would place on its cash flow and access to capital. However, the fact is that ratepayers will ultimately pay for network transmission, regardless of who finances it initially. Moreover, the development and funding of major transmission projects arising in conjunction with the reformed LGIP is likely to be staged, both within a plan of service for a particular area, and also among different transmission projects to access different areas. Also, the major Network Upgrade projects identified through the

LGIP will also be vetted through the CAISO's TPP. Such staging and planning will spread the burden of financing a significant number of new transmission projects both geographically and over time and also will provide the opportunity to adjust, delay or even cancel later stages of identified transmission expansion, if conditions for their development become unfavorable.

For all the foregoing reasons, the CAISO's proposed LGIP tariff to implement the GIPR should be revised to include a provision providing for mandatory up-front funding by PTOs of transmission upgrades needed to interconnect major new location-constrained energy resource zones that are identified and approved through a state-mandated and/or managed process and that the CAISO approves as part of a TPP.

To accomplish this suggested policy revision, the language of several sections of the proposed LGIP tariff (specifically, but not limited to, proposed LGIP Sections 12.3.1 and 12.3.2) need to be slightly modified to limit the funding responsibility of Interconnection Customers for Network Upgrades in those cases where there is mandatory PTO up-front funding of such upgrade costs. For example, the first sentence of proposed LGIP Section 12.3.1 should be revised to read as follows:

“Unless the applicable Participating TO(s) elects to, or is mandated to, fund the full capital for identified Reliability and Deliverability Upgrades . . .”

Similarly the second sentence of Section 12.3.1 should be revised to read as follows:

“Where the applicable participating TO(s) is not mandated to, and does not elect to fund the full capital for specific Reliability and Deliverability Upgrades . . .”

Also, any other language in the proposed LGIP tariff where there is a reference to financing by Interconnection Customers should be modified to be consistent with, or should explicitly refer to, the modified language recommended just above.

On a related, but smaller issue, proposed LGIP Section 12.2.2 would require that the costs for timely completion of Network Upgrades that are already planned for interconnecting other generators but which Upgrades risk delay due to changed status of those other generators, would be up-front funded by the utility. SCE has sought clarification that such up-front funding is not required when delays are caused by anything that is outside of the control of the PTO, such as regulatory licensing or other obstacles. The CPUC opposes SCE's request for clarification, which is predicated on an erroneous assumption. Most delays will be outside the PTO's control, and regulatory or other delays should not excuse SCE (or any other PTO) from the obligation to upfront fund the costs for timely completion of Network Upgrades that are already planned.

Also, proposed LGIP Section 12.2.3 would require an *Interconnection Customer* to finance the cost of advancing already-planned Network Upgrades whose original construction schedule would not make them ready in time to meet the in-service date of the Interconnection Customer in question. However, where mandatory up-front funding by PTOs applies, as recommended above by the CPUC, the Interconnection Customer in question would not be responsible for financing such advancement costs.

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## 2. Credit for Study Deposits

Proposed tariff changes impose substantial financial requirements on generators, which will significantly streamline the interconnection process by discouraging generation projects from entering or remaining in the interconnection queue unless or until having substantial prospects for commercial operation. These financial requirements include a \$250,000 study deposit (\$100,000 for smaller generation projects meeting certain conditions) that becomes increasingly and ultimately fully non-refundable as a generator moves forward from Phase I studies into Phase II studies, a \$250,000 site control deposit as long as a generator does not meet site control requirements, and letters of credit in the full amount of the generator's assigned share of costs for network upgrades, which may be liquidated if the generator withdraws.

The CPUC believes that study deposits can retain their value in disciplining interconnection applications, while avoiding unnecessary risk and inflexibility for generators, if generators that withdraw from the Interconnection Queue are allowed to retain credit for unused (*i.e.*, not required to cover study costs that have already been incurred) study deposits, for future use under certain conditions. Those conditions would require the generator to file a re-application within one year, and even then, only if the re-application involves substantively the same project (*i.e.*, having the same fuel, the same (or smaller) size, and essentially the same location).

In this regard, the CPUC partially agrees with recommendations of the Wind

and Solar Parties.<sup>7</sup> Besides providing useful flexibility for developers while still disciplining queue entry, such carry-forward of unused study deposit balances can reduce the incentive for a not-yet-viable generation project to remain in the study process simply because its study deposit has become a sunk, nonrefundable cost.

Such a deposit-carry-forward provision should be implemented by adding a new subsection (e) between currently proposed subsections (e) and (f) in LGIP Section 3.5.1.2, to read as follows:

“(e) After subtracting funds needed to cover an Interconnection Customer’s share of actually incurred study costs, the Customer’s Interconnection Study Deposit or portion thereof that would otherwise be forfeited as a result of Customer’s withdrawal shall be retained as a credit against that Customer’s Interconnection Study Deposit requirements for a future Interconnection Application, but only for a Future Interconnection Application made within the following one year, and only if that future application is for a generation project having substantially the same or lower MW, at substantially the same location, and using the same energy source.”

#### **D. Data Transparency**

Proposed LGIP Section 6.4 provides that prior to commencing the first Queue Cluster Window for any calendar year, the CAISO and each PTO shall publish per unit costs for various components of transmission upgrades to interconnect generators, including underlying non-confidential information, followed by a stakeholder meeting to take comments, and then adoption and publication of final per unit costs. These

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<sup>7</sup> The CPUC differs from the Wind and Solar Parties in that the CPUC believes that a maximum one-year credit carry-forward strikes a better balance than the two year credit carry-forward that the Wind and Solar Parties recommend.

per-unit costs would be used in estimating transmission upgrade costs in Phase I Interconnection Studies, which in turn provide the basis for financial security responsibilities (for transmission construction) assigned to Interconnection Customers. However, SCE has argued that publication of per unit costs would be problematic because of the confidential information involved, and that a stakeholder meeting would not be useful.

The CPUC agrees with the CAISO's proposed approach and disagrees with SCE's argument. There is understandable concern that since the generators' maximum financial responsibilities, for their letters of credit, are established via the Phase I Interconnection Study, there may be a tendency to "high-ball" the cost estimates. It is reasonable that the draft per-unit costs be published and that stakeholders have opportunity to comment on them. Even where confidential information is not revealed, stakeholders would still have the opportunity to review per unit costs at a more generic level, and to provide and justify alternative costs. Stakeholders should also have the opportunity to sign nondisclosure agreements in order to review confidential information, where possible.

However, the CPUC does have a concern that proposed tariff language does not specify the timing for publication of draft versus final per unit costs, or timing of the stakeholder meeting. The CPUC suggests that this proposed LGIP Section 6.4 be revised to specify that draft per unit costs shall be published before the opening of the first Queue Cluster Window in a calendar year, that the final per unit costs be adopted and published before the close of that same Queue Cluster Window (for taking

applications), and that the stakeholder meeting be held no earlier than one month after the draft per unit costs are published, and no later than one month before the final per-unit costs are adopted.

## **E. Deliverability and Reliability Issues**

### **1. Thermal Overloads: Deliverability Versus Reliability Upgrades**

The distinction between Reliability Network Upgrades and Delivery Network Upgrades is important for transmission studies and cost allocation, not only in the LGIP, but also in broader transmission planning. Reliability Upgrades are not optional, but are physically necessary to maintain service to loads and/or maintain grid electrical conditions within established tolerances, unless it is demonstrated that “non-wires” options can accomplish this at a lower cost. On the other hand, Deliverability Network Upgrades (and “economic” upgrades more broadly) may be desirable for economic, policy or other reasons, but are not physically necessary.

As described in proposed LGIP Section 6.3.1, Reliability Network Upgrades are mandatory, and their costs are allocated within a group of studied generators based on each generator’s “maximum megawatt electrical output.” In contrast, as described in Section 6.3.2, Deliverability Network Upgrades are included in a plan of service to interconnect new generators to the extent that generators elect to be deliverable (as opposed to requesting “energy-only” interconnection). Moreover, within a given group of “electrically related” generators requesting full deliverability, the costs of Deliverability Network Upgrades are allocated based on the generators’ “flow

impacts,” which may give a different allocation of costs than would result based on maximum megawatts of electrical output.

Wind and Solar Parties acknowledge that the CAISO’s tariff filing defines Reliability Network Upgrades as those network upgrades that are “necessary safely and reliably to interconnect a generating facility, including those necessary to remedy short circuit and stability problems, or thermal overloads occurring under any system conditions that cannot be adequately mitigated through congestion management, operating procedures, or special protection schemes.”<sup>8</sup> In fact, within the filed tariff changes, this explanation of when thermal overload risks require reliability upgrades is contained not in proposed LGIP Section 6.3.1, but in the definition of the term “Reliability Network Upgrade”, on Original (Tariff) Sheet 523A. However, Wind and Solar Parties then argue that the CAISO has inadequately described exactly what role thermal overloads will play in determining Reliability Network Upgrades, such that Reliability Network Upgrades should be limited to those necessary to alleviate short circuit and stability violations, and that “thermal overload violations should be limited solely to deliverability network upgrades.”<sup>9</sup>

In contrast to Wind and Solar Parties’ concern that proposed tariff language poses unacceptable risk of Reliability Network Upgrades being unjustifiably required to mitigate potential thermal overloads, the Municipal Water District of Southern

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<sup>8</sup> See, Motion to Intervene and Comments of Wind and Solar Parties, filed on August 18, 2008, at pages 28-29.

<sup>9</sup> *Id.*, at page 29

California (“MWD”) finds unacceptable risk that *insufficient* mandatory Reliability Network Upgrades will be identified to address thermal overload risks created by interconnecting large amount of renewable generation that may request energy-only deliverability. MWD accordingly recommends adding language to Section 6.3.1 that explicitly requires potential thermal overloads to be addressed by Reliability Network Upgrades unless such overloads can be reliably addressed by “congestion management or operating procedures.”<sup>10</sup>

Notwithstanding the comments of Wind and Solar Parties and MWD, the CPUC believes that the actual language of the proposed LGIP tariff amendments has essentially gotten it right, that addressing thermal overloads is generally an optional *deliverability* measure (*i.e.*, an “economic” or “congestion reduction” issue), unless those overloads cannot be reliability addressed via the various available operating options, including but not limited to congestion management and special protection systems. Despite MWD’s concerns, such operational measures need not be limited to actions in “real time”, particularly given that a major feature of the CAISO’s Market Redesign and Technology Upgrade (“MRTU”) is more effective day-ahead congestion management.

However, CPUC does have two concerns. First, the “cannot be mitigated through Congestion Management...” condition for distinguishing Reliability versus Deliverability Network Upgrades for avoiding thermal overloads should not be placed

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<sup>10</sup> See, Motion to Intervene and Comments of MWD, filed on August 18, 2008, at page 8.

only in the Definitions part of the tariff. To do so leaves unnecessary opportunity for contention or confusion regarding exactly which upgrades are needed for reliability and which are needed for deliverability. Accordingly, for clarity, the underlined language below should be added at the end of the first paragraph in Section 6.3.1:

“ . . . . The CAISO, in coordination with the applicable Participating TO(s) . . . . identify Reliability Criteria violations, including applicable thermal overloads, that must be mitigated by Reliability Network Upgrades because it has been demonstrated that all applicable congestion management and/or other operational measures cannot reliably address such potential thermal violations.”

This language, along with the tariff’s explicit definition of Reliability Network Upgrades, addresses the reliability versus deliverability upgrade distinction while leaving flexibility for dealing with specific situations. It is clear that all applicable operational measures to avoid risk of thermal overloads must be demonstrated to be inadequate before mandatory Reliability Network Upgrades should be imposed.

## **2. On-Peak Deliverability**

LGIP tariff language should also more clearly specify that On-Peak Deliverability refers to deliverability as defined and calculated for resource adequacy (Net Qualifying Capacity or “NQC”) purposes, which (especially for intermittent generators) may be significantly less than the generator’s full capacity. Accordingly, the second paragraph of Section 6.3.2.1 (On-Peak Deliverability Assessment) should be revised to read as follows:

“The On-Peak Deliverability Assessment will identify the Network Upgrades that are required to enable the Large Generating Facility of each Interconnection Customer requesting full Capacity Deliverability Status to meet the requirements for deliverability. Deliverability requires

that the Generating Facility Capacity, as set forth in the Interconnection Request, can be delivered to the aggregate of Load . . . assuming the aggregate output of existing Generating Facilities with Net Qualifying Capacity values and other Large Generating Facilities in the Interconnection Cycle seeking Full Capacity Deliverability Status identified within the On-Peak Deliverability Assessment based on the effect of transmission Constraints. The Generating Facility's deliverability shall be used to determine that Generating Facility's Net Qualifying Capacity. If a generator has an intermittently available fuel supply and is to be studied at its maximum megawatts of output capability for purposes of a separate Off-Peak Deliverability Assessment, then for purposes of the On-Peak Deliverability Assessment, that generator may be assumed to operate at a level of output lower than its maximum electrical output, but no lower than the greater of its expected on-peak electrical output and its Net Qualifying Capacity.

The inclusion of this suggested additional language is essential to avoid determining Delivery Network Upgrades based on the assumption that all generators in a group being studied simultaneously operate on-peak at their maximum capacity even when (1) the timing of some of the generators' intermittent fuel supply (*e.g.*, wind) is such that these generators physically cannot operate simultaneously at full capacity on-peak, and (2) a separate Off-Peak Deliverability Assessment is addressing deliverability requirements under conditions where these generators *do* operate at full capacity. Without this clarification, there is a real risk that Delivery Network Upgrades based on on-peak conditions will be unnecessarily over-designed.

### **3. Deliverability “Without Selected Transmission Upgrade Components”**

Delivery Network Upgrades are designed to provide aggregate deliverability for a group of generators being studied (except in the case of individually studied generators), while the deliverability experienced by individual interconnecting

generators when they actually operate will depend on actual system operating conditions (which will include considerations such as when other generators are being scheduled and dispatched, and how those generators price their offers to be scheduled above or below their preferred schedule levels). Thus, it is not possible to say how much an individual generator will actually be “allowed” to deliver should part of the network upgrade plan for full deliverability (of those generators requesting deliverability) not be built.

For this reason, the second paragraph of Section 2.4.3 should be revised to read as follows:

“The Interconnection Studies will also identify Delivery Network Upgrades to allow the ~~full output of a Large Generating Facility selecting Full Capacity Deliverability Status,~~ aggregate requested deliverable capacity of group of Large Generating Facilities studied together, or of an individually studied Large Generating Facility, to be delivered to the aggregate of system load and, as applicable, to estimate the maximum allowed expected aggregate deliverable output of the interconnecting Large Generating Facilities studied as a group, or a Large Generating Facility Studied individually, without one or more Delivery Network Upgrades in accordance with the On-Peak and Off-Peak Deliverability Assessment set forth in LGIP Section 6.3.2.”

However, the CPUC does note and agree with the proposed LGIP tariff’s explicit provision in Section 6.3.2.2 for studying deliverability with removal of selected transmission upgrade components, under *off-peak* as well as on-peak conditions. However, *off-peak* deliverability studies in which selected Network Upgrade components have been removed (so as to provide an alternative and potentially better cost-versus deliverability tradeoff) should not be “[A]t the CAISO’s

discretion.” Rather, such studies should be mandatory for Off-Peak Deliverability Assessments, as they are for On-Peak Deliverability Assessments.

Accordingly, the beginning of the first sentence of the second paragraph of Section 6.3.2.2 e should be changed to read as follows:

~~“At the CAISO’s discretion, An additional Off-Peak Deliverability Assessment may~~ shall be performed to estimate . . . ”

#### **4. Off-Peak Deliverability Studies**

Proposed tariff language in Section 6.3.2.2 provides that on Off-Peak Deliverability Assessment shall be performed for interconnection of Location Constrained Resource Interconnection Generators, (“LCRIGs”) if the “fuel source or source of energy for the LCRIG substantially occurs during off-peak conditions.” The CPUC agrees with providing for off-peak deliverability studies when the temporal pattern of interconnecting generators’ fuel supply results in greatest output under off-peak conditions, such as typically occurs for wind energy projects. We expect that most if not all of such generators having such fuel-driven output patterns will in fact be located in state-designated Renewable Energy Zones, which, along with a fixed fuel supply location, is one of the two major criteria for being designated a LCRIG. However, it may be insufficiently informative to provide Off-Peak Deliverability Assessments for generators having such off-peak fuel patterns only if they are located in Energy Resource Areas.

To address this issue, the first sentence of the first paragraph of proposed LGIP Section 6.3.2.2 should be revised to read as follows:

“The CAISO, in coordination with the applicable Participating TO(s), shall perform an Off-Peak Deliverability Assessment for Interconnection Customers selecting Full Capacity Deliverability Status in their Interconnection Requests to determine Delivery Network Upgrades in addition to those identified in the On-Peak Deliverability Assessment, if any, for a Group Study or individual Phase I Interconnection Study that includes one or more Large Generating Facilities Location-Constrained Resource-Interconnection Generators whose (LCRIG), where the fuel source or source of energy has a fixed location and ~~for the LCRIG~~ substantially occurs during off-peak conditions.”

Furthermore, as long as both on-peak and off-peak deliverability studies are conducted when considering generation projects having their fuel-dependent output concentrated in off-peak hours, the CPUC strongly disagrees with the contention of Wind and Solar Parties that off-peak deliverability studies present unacceptable risk of unjustifiably shifting responsibility for transmission upgrades to wind or other generators having greatest output in off-peak conditions.<sup>11</sup> In fact, off-peak deliverability studies can be *necessary* to determine the appropriate transmission upgrades for such generators, including tradeoffs for providing a reduced, lower cost transmission build-out in exchange for somewhat lesser deliverability.

In addition, the second paragraph of proposed LGIP Section 6.3.2.2 also refers to the performance of Off-Peak Deliverability Assessments “if the highest cost, or any other, Delivery Network Upgrade component were removed from the preliminary Delivery Network Upgrade Plan.” This wording indicates that only a single upgrade component could be removed, whereas the option to remove multiple “components”

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<sup>11</sup> See, Motion to Intervene and Comments of Wind and Solar Parties, filed on August 18, 2008, at pages 27-28.

would provide greater flexibility to address the efficient tradeoff between cost and deliverability for resources (particularly, wind resources) that can have their greatest output in off-peak conditions. In this regard, we note that corresponding language in proposed LGIP Sections 2.4.3 and 6.3.2.1 (the latter of which addresses *On-Peak* Deliverability Assessments) do provide for removal of *multiple* upgrade components. Accordingly, the option to remove multiple upgrade components should also be provided for Off-Peak Deliverability Assessments.

### **5. Ability to Modify Requested Level of Deliverability**

Proposed LGIP Sections 6.3.2.1 and 6.3.2.2 state that the objective of deliverability studies in which components of the Network Delivery Upgrade Plan are removed is to “allow Interconnection Customers to address at the Results Meeting potential modifications under LGIP Section 6.7.2 or change the Interconnection Request’s Full Capacity Deliverability Status for purposes of financing under LGIP Section 12.3.1.” However, it is unclear what actual options an interconnection customer has for requesting reduced deliverability.

A customer’s ability to discuss and ultimately request modifications at the Results Meeting following Phase I studies, or shortly thereafter, should include the ability to request changes in deliverability, within circumscribed conditions. Specifically, generators initially requesting full deliverability should be able to discuss and request lesser deliverability. However, the options below full deliverability would be limited to whatever level of reduced deliverability (and presumably reduced transmission investment and/or earlier in-service dates) is offered by the CAISO

pursuant to Phase I deliverability studies, including studies in which one or more transmission upgrade component(s) required for full deliverability were removed. Without such an explicit option for the generator to choose a reduced level of deliverability, there would be no point in conducting such reduced deliverability studies in the first place.

Ultimately, the level of deliverability to be provided, and the associated cost and timing of the necessary transmission upgrades to provide a given level of deliverability, would be developed by mutual agreement among the “applicable Participating TO(s), the CAISO, and Interconnection Customer[s]” as already provided in LGIP Section 6.7.2. Such agreement would necessarily be informed, and limited, by the levels of deliverability studied as part of the Phase I Interconnection Study.

Explicitly giving generators this choice of reduced deliverability, subject to the various limitations described in the preceding paragraph, should be implemented by modifying proposed LGIP Section 6.7.2.1 to read as follows:

“Modifications permitted under this Section 6.7.2 shall include specifically: (a) a decrease in the electrical output (MW) of the proposed project; (b) if initially selecting full deliverability, a decrease in requested MW of deliverability, limited to the deliverability options offered to the Customer based on Phase I deliverability studies; (c) modifying the technical parameters associated with the Large Generating Facility technology or the large Generating Facility step-up transformer impedance characteristics; and ~~(e)~~ (d) modifying the interconnection configuration.”

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## 6. Phase II Deliverability Studies

The purpose and consequences of Phase II Deliverability Studies should be clarified in terms of their relationship to both Phase I Deliverability Studies and generators' final selection of their deliverability status. Accordingly, in proposed LGIP Section 7.1, it should be made clear that the Phase II Interconnection Study will re-do the deliverability assessment to ascertain that customers will achieve the deliverability level requested at the end of the Phase I Interconnection Study and reflected in customers' financial security deposit responsibilities for Delivery Network Upgrades, despite potential planning changes due to Phase II's greater level of detail and due to some generators dropping out between Phase I and Phase II.

To achieve this needed clarification, the CPUC recommends the following new item (v) be added to the first paragraph of proposed LGIP Section 7.1 (renumbering subsequent items in the paragraph accordingly), to read as follows:

“(v) conduct a Phase II deliverability assessment to ensure that Interconnection Customers selecting other than Energy Only Deliverability will, as a result of transmission upgrades identified in the Phase II Interconnection Study, receive no less than the deliverability they ultimately request and for which they are assigned financial security deposit responsibility, based on their originally requested deliverability plus any allowable modifications requested before beginning the Phase II Interconnection Study, unless the CAISO, participating TO(s), and affected Interconnection Customers mutually agree to some other deliverability.”

Also, the following language should be added at the end of the second paragraph of Section 7.1, to read as follows:

“Interconnection Customers will not be allowed to change their requested deliverability status after the beginning of the Phase II

Interconnection Study, except by mutual agreement among the CAISO, the participating TO(s), and the affected Interconnection Customers.”

**7. “Energy-Only” Interconnection if Planned Deliverability Upgrades are Delayed**

The CPUC agrees in principle with the recommendation by the Wind and Solar Parties that generation projects unable to achieve desired commercial operating dates only because Deliverability Network Upgrades would not be completed in time should have the option to interconnect as energy-only resources in the interim. Availability of such an “energy-only option” should be addressed by the addition of a new second paragraph in proposed LGIP Section 6.7.1, to read as follows:

“Where Delivery Network Upgrades determined to be needed by an Interconnection Customer will not be available in time to meet the Customer’s requested Commercial Operation Date that would be achievable but for these Deliverability Network Upgrades, then that Customer has the option of interconnecting on an interim energy-only basis until the required Deliverability Network Upgrades are completed, subject to the following conditions: (1) all Reliability Network Upgrades required for reliable and safe interconnection of that Customer must be completed prior to interconnection; (2) any resulting potential for congestion or reliability violations must be reliably managed using congestion management procedures or other applicable operating measures; (3) interim energy-only interconnection must not unreasonably impede completion of the overall network upgrade plan, including but not limited to any required transmission line tear-downs or construction/modification of substations; and (4) costs attributable only to providing interim energy-only interconnection, and not attributable to the overall reliability and network upgrade plans, will be borne by the Interconnection Customer(s) receiving interim energy-only interconnection.”

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### III. CONCLUSION

For the foregoing reasons, the CPUC respectfully requests that the Commission accept this Answer, and to assure that the CAISO's proposed LGIP tariff revisions to implement the GIPR will be fully consistent with the requirements of California law that encourage the expeditious development of renewable generation resources and the needed new transmission that is associated therewith, the CPUC respectfully requests that said tariff revisions be revised in the various specific ways that are noted above.

Dated: September 12, 2008

Respectfully submitted,

FRANK LINDH  
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By:           /s/ Laurence G. Chaset          

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**CERTIFICATE OF SERVICE**

I hereby certify that I have this day caused the foregoing document to be served upon all known parties in this proceeding by e-mail upon each party identified in the official service list compiled by the Secretary in this proceeding.

Dated at San Francisco, California, this 12th day of September, 2008.

*/s/ Laurence G. Chaset*

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Laurence G. Chaset

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