

SCE Comments on the CAISO's 10/1/03 Large Generator Interconnection Rule
White Paper on Pricing and Service Issues

SCE appreciates the opportunity to submit comments on the CAISO's "FERC Large Generator Interconnection Rule – Pricing and Service Issues" white paper (White Paper) dated October 1, 2003.¹ SCE also appreciates the CAISO's effort to develop an interconnection policy that works best for California and looks forward to working with the CAISO on these important issues. Additional details on each section of the White Paper are provided following this summary.

Summary

In its compliance filing on FERC's Large Generator Interconnection Final Rule (Final Rule), the CAISO has an opportunity to improve upon its current generator interconnection policy to ensure that cost-effective transmission upgrades are constructed to facilitate the delivery of generation to load. SCE believes that the CAISO's should revise its current interconnection policy (based on Amendment 39) so that the CAISO can ensure that cost-effective transmission delivery upgrades for generator interconnections are constructed.

Pricing Policy – Under the current CAISO Tariff, there are three types of upgrades associated with new generation interconnection: Direct Assignment, Reliability, and Delivery Upgrades (note that Reliability and Delivery upgrades are Network Upgrades per the Final Rule's "at or beyond" the point of interconnection definition). SCE concurs with the CAISO that these three definitions should be retained. Direct Assignment Facilities (CAISO Tariff) or Interconnection Facilities (FERC Final Rule) are sole-use facilities that should be the cost responsibility of the generator. Since these facilities are not part of the transmission network, generators should not receive credits for their payment for these facilities. Reliability Upgrades should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. Delivery Upgrades should be identified in the interconnection studies and then be subject to a cost-effectiveness analysis by the CAISO. Delivery Upgrades that are found to be cost-effective by the CAISO should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. For Delivery Upgrades that are not found to be cost-effective by the CAISO, the PTO would not include the costs of those facilities in its TAC, but the generator should be allowed to fund the upgrade if it chooses to do so and would then receive Firm Transmission Rights (FTRs) or Congestion Revenue Rights (CRRs) for its investment. Regardless of who funds a Reliability or Delivery Upgrade, the applicable PTO should own all Network Facilities.

¹ SCE's comments are intended to facilitate development of an effective generator interconnection and pricing service policy for the CAISO. By providing these comments, however, SCE is not waiving any rights associated with FERC's Final Rule proceeding.

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Service Issues – The Final Rule is suitable for either the pro forma OATT model or PJM's model which includes a resource adequacy requirement. Under PJM's approach, there is a capacity requirement for Load Serving Entities (LSEs), a requirement for generators to obtain Network Interconnection Service to qualify as a capacity resource, and a requirement for generators to pay for Network Upgrades necessary to meet a deliverability standard. Without a fully developed resource adequacy requirement, it is premature for the CAISO to offer Network Interconnection Service. SCE believes that these resource adequacy issues, including the criteria for qualifying as a "capacity" resource and a deliverability standard, should continue to be addressed as part of the CPUC's long-term procurement proceeding with CAISO participation.

I. Assumptions

SCE supports assumptions 1, 2, and 3 in the White Paper. Regarding assumption 4, while SCE agrees that interconnection service is distinct from transmission service, that distinction does not in and of itself imply that all generating resources will be treated the same for purposes of the ISO's Day-Ahead Scheduling and Congestion Management practices. For example, under the current ISO Tariff, Reliability Must-Run (RMR) generators are treated differently than non-RMR generators and hydro units are not subject to the same "must-offer" obligation as thermal units. FERC's intention was simply to clarify that interconnection service does not imply transmission service (i.e. a generator must request transmission service per the CAISO Tariff). SCE recommends the following changes to assumption #4:

1. The ISO and PTOs will start with the *pro forma* interconnection procedures and agreement adopted by FERC in the final rule when developing their compliance filings;
2. The ISO as an independent transmission provider has the flexibility granted by FERC to develop interconnection policies in a manner that work best for California;
3. The distinction between "Reliability Upgrades" and "Delivery Upgrades" as originally defined in Amendment No. 39 to the ISO tariff, will be retained for purposes of developing the new interconnection procedures.
4. Consistent with FERC's finding that Interconnection Service is distinct from Transmission Service (Final Rule ¶ 756, 757), all Scheduling Coordinators for generating resources will be required to ensure that the transmission service necessary to deliver energy that they produce is procured pursuant to the ISO Tariff and other applicable tariffs for purposes of the ISO's Day-Ahead Scheduling and Congestion Management practices, ~~all generating resources will be treated the same, subject to any operating constraint agreed to by the resource owner and the ISO as part of the interconnection process.~~

II. Definitions

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No comments as these definitions were taken without modification from the FERC Order 2003 and the CAISO Tariff.

III. Summary of Pricing Provisions

SCE supports both the current CAISO Tariff and FERC's Final Rule regarding cost responsibility for Interconnection Facilities (FERC Final Rule) and Direct Assignment Facilities (current CAISO Tariff). In both cases, generators are responsible for the costs of these sole-use facilities and are not eligible for a credit back because these facilities are not part of the transmission network.

The next draft of the White Paper should clarify that although the CAISO Tariff does not provide for transmission credits to generators for providing upfront funding for Reliability Upgrades, because of PG&E's *Los Medanos* and SCE's *Wildflower* cases, generators that pay for Reliability Upgrades are entitled to receive credits (with interest) for their up front payment.

SCE provides comments on future policies for Network Upgrades in Section V and VI.

IV. Definitions of Interconnection Service

The Final Rule is suitable for either the pro forma OATT model or PJM's model which includes a resource adequacy requirement. Under PJM's approach, there is a capacity requirement for Load Serving Entities (LSEs), a requirement for generators to obtain Network Interconnection Service to qualify as a capacity resource, and a requirement for generators to pay for Network Upgrades necessary to meet a deliverability standard. Without a fully developed resource adequacy requirement, it is premature for the CAISO to offer Network Interconnection Service. SCE believes that these resource adequacy issues, including the criteria for qualifying as a "capacity" resource and a deliverability standard, should continue to be addressed as part of the CPUC's long-term procurement proceeding with CAISO participation.

V. Pricing & Service Issues and Options

Option 1 – Conform the ISO's existing pricing and service provisions to those of the Final Rule

Regarding pricing issues, while SCE supports a cost-effectiveness test for Delivery Upgrades, there are certainly some appealing features of the pricing provisions in the Final Rule. Under the Final Rule, all Network Upgrades would be eligible for cost recovery under the TAC based simply on their location – "at or beyond" the point of interconnection. This approach is much simpler than developing a cost-effectiveness test for Delivery Upgrades and provides clear responsibility for upgrade costs to enable projects to move forward in a timely manner. There has been a concern raised that the pricing provisions in the Final Rule may result in too much transmission being constructed. However, based on the CAISO experience since 1998, it appears that

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reliability and economic consequences associated with what some may argue is "too much" transmission would be far less than with "too little" transmission.

Regarding service issues, the Final Rule is suitable for either the pro forma OATT model or PJM's model which includes resource adequacy. Under PJM's approach, there is a capacity requirement for Load Serving Entities, a requirement for generators to obtain Network Interconnection Service to qualify as a capacity resource, and a requirement for generators to pay for Network Upgrades necessary to meet a deliverability standard. The inappropriateness of Network Interconnection Service is also demonstrated by its definition, which requires the integration "in the same manner as all other Network Resources" - the CAISO does not have any Network Resources. Without a fully developed resource adequacy requirement in the CAISO, it is premature for the CAISO to offer Network Interconnection Service. SCE believes that these resource adequacy issues, including the criteria for qualifying as a "capacity" resource and a deliverability standard, should continue to be addressed as part of the CPUC's long-term procurement process. SCE urges the CAISO to actively participate in the CPUC's long-term procurement proceeding to ensure that resource adequacy and deliverability concerns are adequately addressed.

Option 2 – Continue with the existing, effective Amendment 39 pricing and service provisions (including FERC's separate requirement that PTOs provide credits for Network Upgrades), as described above.

Regarding pricing issues, the current CAISO generator interconnection policy does not ensure that cost-effective transmission is constructed to facilitate delivery of generation to load. Under the current CAISO Tariff, the CAISO is not permitted to require Delivery Upgrades as part of the interconnection process and the CAISO should take this opportunity to change this policy. Delivery Upgrades should be identified in the interconnection studies subject to a cost-effectiveness analysis by the CAISO. Delivery Upgrades that are found to be cost-effective by the CAISO should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. For Delivery Upgrades that are not found to be cost-effective by the CAISO, the PTO will not include the costs of those facilities in its TAC, but the generator should be allowed to fund the upgrade if it chooses to do so and would then receive FTRs or CRRs for its investment.

Regarding service issues, the CAISO's current interconnection service is adequate, given the CAISO's market structure. As stated above, SCE urges the CAISO to actively participate in the CPUC's long-term procurement proceeding to ensure that resource adequacy and deliverability concerns are adequately addressed.

Option 3 – Recognize current practice and existing markets in California, and modify Final Rule service definitions accordingly.

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While SCE believes the issues associated with deliverability should be addressed along with resource adequacy in the CPUC long-term procurement process, SCE does support a CAISO determination of whether or not a Delivery Upgrade is cost-effective. Rather than offering a lesser-quality interconnection service, SCE believes that the CAISO should use a cost-effectiveness test to determine the appropriate level of Delivery Upgrades that should be constructed by the PTO. Delivery Upgrades that are found to be cost-effective by the CAISO should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. For Delivery Upgrades that are not found to be cost-effective by the CAISO, the PTO will not include the costs of those facilities in its TAC, but the generator should be allowed to fund the upgrade if it chooses to do so and would then receive FTRs or CRRs for its investment.

VI. Major Pricing and Service Issues

Issue	SCE Comments
<p>1. Crediting Policy – Given that the Final Rule permits ISOs/RTOs to propose alternative pricing measures the 5-year credit back for Network Upgrades, should generators continue to receive credits for Network Upgrades that they fund? Continue crediting post MD02?</p>	<ul style="list-style-type: none"> • Crediting policy should be the same pre/post MD02 • Reliability Upgrades should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. • Delivery Upgrades should be identified in the interconnection studies subject to a cost-effectiveness analysis by the CAISO. Delivery Upgrades that are found to be cost-effective by the CAISO should be constructed by the applicable PTO and the costs should be recovered through the TAC. The applicable PTO should be able to either fund the upgrade itself or require upfront funding by the generator and then provide credits (plus interest) to the generator. • Delivery Upgrades that are not found to be cost-effective by the CAISO, the PTO will not include the costs of those facilities in its TAC, but the generator should be allowed to fund the upgrade if it chooses to do so and would then receive FTRs or CRRs for its investment. • No credits are appropriate for generator funding of gen-tie or direct assignment facilities (i.e. Interconnection Facilities)
<p>2. Regional State Committees (RSC) – Should ISO coordinate its pricing and service policies with</p>	<ul style="list-style-type: none"> • SCE agrees that ISO should coordinate with the CPUC in developing its policy on pricing and service issues.

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Issue	SCE Comments
the RSC (i.e. with the CPUC procurement process)?	
<p>3. Network Service – FERC's Final Rule includes Network Interconnection Service which includes a deliverability requirement. Should the ISO offer Network Interconnection Service, and if so, when?</p>	<ul style="list-style-type: none"> • Without a fully developed resource adequacy requirement in the CAISO, it is premature for the CAISO to offer Network Interconnection Service. • SCE believes that these resource adequacy issues, including the criteria for qualifying as a "capacity" resource and a deliverability standard, should continue to be addressed as part of the CPUC's long-term procurement proceeding, with CAISO participation.
<p>4. Transmission Credits and CRRs – Should the ISO continue to offer transmission credits to those that pay for Network Upgrades? Should the ISO continue to offer CRRs to customers that pay for upgrades? Should the ISO offer both and whose decision is it as to which option is elected?</p>	<ul style="list-style-type: none"> • <i>See comments on #1 – Crediting Policy</i> • CRRs should be allocated to LSEs based on LSE load and resource delivery requirements (as proposed in MD02).
<p>5. Deliverability –Should the ISO have a delivery requirement associated with some form of interconnection service? Should the ISO establish such a requirement even though the issue is before the CPUC in the procurement proceeding?</p>	<ul style="list-style-type: none"> • <i>See comments on #3 - Network Service</i>
<p>6. Economic Methodology – Does the ISO need to finalize and implement a cost-benefit methodology in order to move forward with defining an interconnection policy? Should the ISO apply such a methodology when evaluation Network Upgrades necessitated by interconnection requests?</p>	<ul style="list-style-type: none"> • The CAISO should develop a method to determine the cost-effectiveness of Delivery Upgrades • As stated in SCE's comments on the CAISO/London Economics Methodology (AB970 proceeding), overall, SCE supports what SCE views as the basic elements of the proposed CAISO/LE methodology as presented by the CAISO in its February 28, 2003 Update on a Methodology to Assess the Economic Benefits of Transmission Upgrades, and at the March 14th PG&E Workshop. • Based on discussions at the workshop, it was unclear to SCE how much flexibility was intended in applying the methodology in the context of particular transmission projects. SCE's experience with past transmission projects has taught that each project has unique aspects that cannot be

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	<p>adequately captured with a highly prescriptive evaluation methodology, making flexibility essential in the economic analysis.</p> <ul style="list-style-type: none"> • SCE believes it would be better for the CAISO to specify the issues that should be addressed in a cost-effectiveness assessment rather than prescribe a specific methodology.
<p>7. Cost-Responsibility Allocation - To the extent that multiple TOs would need to participate in installing system Network Upgrades, would a cost/benefit analysis include a cost reallocation mechanism among the participants such that all entities receive a net benefit?</p>	<ul style="list-style-type: none"> • All Network Upgrades should be recovered per the CAISO's TAC methodology. There is no need to have a cost/benefit analysis to reallocate transmission costs among PTOs.
<p>8. Phase-in Approach – Should the ISO adopt a phase-in approach wherein one policy is in place in the interim period until MD02 is further implemented and the state establishes a resource adequacy policy?</p>	<ul style="list-style-type: none"> • The CAISO should move forward with revising its pricing policy to ensure that cost-effective Delivery Upgrades are constructed • The CAISO should actively participate in the CPUC's long-term procurement proceeding to ensure resource adequacy and deliverability issues are addressed • Pricing policy should be the same pre/post MD02
<p>9. Allocation of CRRs – What is the relationship between the CRR allocation process contemplated under MD02 and the proposal to allocate CRRs to interconnection customers that fund Network Upgrades? What types of facilities qualify for CRR allocation (e.g. Reliability Upgrades, Delivery Upgrades, both, FACTS, capacitors, etc.)?</p>	<ul style="list-style-type: none"> • CRRs associated with all Reliability Upgrades and Delivery Upgrades that are found to be cost-effective by the CAISO should be allocated like CRRs associated with all transmission included in the TAC – that is, allocated to LSEs based on the LSE load and resource delivery requirements (as contemplated in MD02) • CRRs associated with Delivery Upgrades that are not found to be cost-effective by the CAISO should be allocated to the entity that pays for the Delivery Upgrade