

Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: August 18, 2011

Re: Decision on Generator Interconnection Procedures Phase 2

This memorandum requires Board action.

EXECUTIVE SUMMARY

In recent years, the context for new generation interconnection has changed in California as a result of state environmental policies, such as the 33% Renewable Portfolio Standard, which have resulted in a large influx of renewable generation projects seeking to interconnect to the ISO grid. The ISO has already made important enhancements to its interconnection and transmission planning processes to align with the new policy context, but Management continues to identify needs for additional changes as the ISO and its stakeholders gain more experience in the new context. Management is seeking the Board of Governors' approval of its proposed generator interconnection procedures phase 2 provisions. This effort is a continuation of the initiative commenced last year to enhance and streamline the generator interconnection procedures, which combined small and large generator interconnection requests into a single cluster study process, and created two new streamlined study tracks¹ to allow qualified projects to proceed independently of – and more quickly than – the cluster study.

Management developed the proposed 18 generator interconnection provisions submitted for Board approval to:

- Resolve holdover issues from the generator interconnection procedures phase 1 initiative last year;
- Address impacts on interconnection policies deriving from the new transmission planning process approved by FERC last year; and

¹ The independent study process allows projects of any size to be studied for reliability only and on a shorter study track. The fast track study process allows projects under 5 MW to be studied with minimal cost and study time.

• Provide additional flexibility to projects across the interconnection process through enhancements to: 1) the initial study process; 2) the process for repowerings and small generators; 3) posting requirements; and 4) deliverability assessments.

The generator interconnection procedures phase 2 stakeholder initiative contained 28 different topics spanning a diverse set of activities in all areas of the generator interconnection procedures. These topics were divided into five "work group" areas to narrow the focus and improve the efficiency of stakeholder meetings to work on the issues. Stakeholders were active participants in those work group sessions and helped develop the various elements of the proposal. The resulting 18 provisions that involve changes to the tariff proposed for Board approval will achieve the following benefits:

- Greater certainty around interconnection and study processes;
- Improved interconnection-related repayment provisions for generation developers with phased projects;
- Additional flexibility for reductions in project size;
- More streamlined interconnection processes for smaller resources, repowerings and conversions of qualifying facilities;
- Greater clarity on interconnection cost and security requirements;
- Abandoned plant protection for participating transmission owners; and
- New partial deliverability and interim deliverability options for generation projects.

A few additional topics that were included in the initial scope of the proposal were later deferred and are not included for approval. Management expects that the evolving state and federal policy landscape most likely will continue to require enhancements to the interconnection procedures, and has already planned a generator interconnection procedures phase 3 initiative to begin in early 2012. That phase will address the topics deferred from phase 2 and others that may be identified by that time. In addition, Management has started a separate stakeholder initiative to address the need for greater coordination between generator interconnection and transmission planning, and plans to bring a proposal on this topic to the Board for decision in December.

Management recommends that the Board approve the 18 generator interconnection procedures phase 2 provisions described in Attachment 1 to this memorandum and authorizes Management to develop the necessary tariff revisions.

Moved, that the ISO Board of Governors approves the proposed tariff change regarding the generator interconnection procedures, as described in the memorandum dated August 18, 2011 and Attachment 1 thereto; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

BACKGROUND

Interconnection Reform Prior to Generator Interconnection Procedures Phase 2

In 2008, the ISO implemented fundamental generator interconnection reforms that, among other things, abandoned the prior serial study approach in favor of a new cluster approach and introduced new financial security provisions intended to reduce the then-existing project backlog and provide developers with greater cost and schedule certainty. In September 2009, the ISO adopted additional modifications that recalibrated the financial security posting provisions to better align with existing economic conditions. In August 2010, the ISO obtained authority to waive financial security postings for network upgrades funded by participating transmission owners.

Most recently, in October 2010, in response to a proliferation of small generation interconnection requests, the ISO filed a proposal to combine its small and large generation interconnection study processes into a single cluster study approach, which FERC approved on December 16, 2010. This reform has significantly streamlined the overall interconnection study process and provides greater cost and schedule certainty to small generators, which now account for over 3,000 MW of renewable resources in the ISO's interconnection queue. On the same date FERC also approved the ISO's new transmission planning process, which included significant steps toward greater integration between generation interconnection and transmission planning.

The Generator Interconnection Procedures Phase 2 Initiative

Since the generator interconnection procedures phase 2 stakeholder process began in March 2011, ISO staff and stakeholders have invested a great deal of time in stakeholder meetings, work groups and conference calls to improve virtually every aspect of the interconnection process. Importantly, stakeholders have not only participated, but have actually submitted the source material for many of the proposals currently before the Board. These include:

- Southern California Edison submitted proposals on abandoned plant, suspension provisions and post-phase 2 study plan of service;
- GenOn submitted proposals on repowering and deliverability assessments for small projects;
- CalWEA proposed greater flexibility to allow a generator to expand capacity without submitting a formal interconnection request;
- Ormat submitted proposals to allow expansion 'behind the breaker' without triggering a new interconnection request;
- Large Solar Association submitted proposals on interim deliverability, draft phase 2 study report clarifications, modifications to interconnection security requirements and modification of project size; and
- Large Solar Association submitted proposal on timing of financial security postings.

As noted above, the numerous improvements included in this proposal do not represent the end of this initiative. Much work lies ahead in tariff and business practice manual development, and Management expects stakeholders to be equally involved in these upcoming activities. In addition, as noted above, Management intends to begin a new phase 3 initiative early in 2012 to consider further improvements to the generator interconnection procedures. Therefore, given the large list of potential topics for consideration with stakeholders that could lead to enhancements, the present initiative should not be viewed as the final opportunity to obtain beneficial improvements to the generator interconnection procedures, but only as a significant step to address the most urgent needs.

POSITIONS OF THE PARTIES

Stakeholder Process

Between March and July 2011, ISO staff conducted four stakeholder meetings, 12 work group meetings and several stakeholder calls. Staff also provided four opportunities to provide written comments. As noted above, many stakeholders provided written material that Management used as a basis to develop the proposals in the revised draft final proposal published on June 30, 2011 and the addendum that was published on July 22, 2011. ISO staff also conducted outreach to individual stakeholders to gain additional insight into positions and areas of concern. Some elements of the final phase 2 proposal were not supported or were contested by several stakeholders. Stakeholder comments and Management's response are discussed in the matrix in Attachment 2.

Elements of the proposal that have not received broad stakeholder support.

<u>Substantial Performance</u> – Much of the developer community expressed concern that a generation project would face excessive risk due to the fact that the ISO could hold a developer in breach or terminate an interconnection agreement if the full MW amount of the project is not completed. Management has partially addressed this concern with the proposal that allows a generation project to reduce its size under certain circumstances (see reduction in project size, item 5 in Attachment 1). Developers are still concerned, however, that for size reductions beyond what these new provisions allow, the possibility of breach or termination still exists, and it is not sufficiently clear what the consequences of such action would be. Management has identified this matter for further discussion as part of the phase 3 initiative.

<u>Abandoned Plant (Item 14 in Attachment 1)</u> – The municipal utilities, including Six Cities and the Bay Area Municipal group, do not support the abandoned plant provisions on grounds that shifting all risk of abandoned plant costs to transmission ratepayers negates effective transmission project management by the participating transmission owners. The Bay Area Municipal group also asserts that the FERC abandoned plant approval process is an effective means to determine cost responsibility and should not be bypassed. FERC staff has indicated this proposal could be problematic as it goes against FERC precedent. There are clear circumstances in which a participating transmission owner could be obligated to fund network upgrade costs above the amounts posted by interconnection customers. If construction of the upgrade is later terminated, the participating transmission owner must apply to FERC for abandoned plant cost recovery. ISO tariff provisions approving abandoned plant cost recovery under the circumstances identified in this initiative would decrease uncertainty for the participating transmission owner and simplify the FERC filing process. To allay the concerns of the municipal parties, such a tariff provision would apply only to costs that were prudently incurred by the participating transmission owner, and would not obviate FERC's ability to review the prudency of the participating transmission owner's expenditures. Management therefore believes that such provisions impose minimal risk on transmission ratepayers.

<u>Repayment Provisions for Phased Projects (Item 6 in Attachment 1)</u> – Developers and one participating transmission owner argue that repayment for funding of network upgrades should begin when the generation project or the specified generation project phase reaches commercial operation, regardless of whether the associated transmission network upgrades are yet in service. They assert that the purpose of holding the interconnection customer's funds is only to mitigate the risk to ratepayers that the generation project may not be completed, but once commercial operation is achieved, that risk no longer exists and there is no further reason to hold the funds.

Based on FERC Order 2003, which provided the regulatory basis for ISOs and RTOs to develop generation interconnection procedures, it is appropriate to hold interconnection customer funds for network upgrades until those network upgrades are completed and the generation project achieves commercial operation. However, Management's proposal allows the parties to each interconnection agreement – the interconnection customer and the participating transmission owner – to determine the extent to which completion of network upgrades should be a condition for repayment of the customer's funds.

<u>Project Size Reductions (Item 5 in Attachment 1)</u> – Developers asked the ISO to allow a 20% "safe harbor" for project size reductions instead of the 5% proposed by Management. They assert that 5% is too small to address the risk that permitting and environmental challenges could force projects to be substantially re-sized after the interconnection agreement is signed.

Today's generator interconnection rules allow no safe harbor at all, such that any failure of a developer to put the project into operation at the full MW amount could trigger a breach of the interconnection agreement. The proposal for a 5% safe harbor is an important improvement because it allows a 5% reduction for any reason, and thus may cover diverse problems such as the failure of the facility to perform at its intended nameplate capacity, or small configuration changes to address environmental or land-use restrictions. Management believes that the 5% safe harbor is the largest reasonable amount for this provision because: (a) if this amount were increased significantly, it would undermine incentives for developers to specify their actual project size intentions, and would instead invite developers to deliberately over-size their projects with the expectation that they could exercise a cost-free reduction option later; and (b) if permitting or environmental challenges force a larger reduction in project size, the ISO will consider the customer's request on a case by case basis (in the two

instances where this has occurred in the past the ISO has approved the size reductions). Some developers recognized the benefits of Management's proposal and supported the 5% reduction safe harbor.

Partial Termination Provisions – Special provisions for partial termination of a generation project were developed last year in response to a request by several developers with renewable projects that are being developed in phases. The special provisions allow a developer to cancel a later phase of a generation project by payment of a pre-specified charge rather than face the uncertain consequences of a breach of the interconnection agreement as would otherwise be required. During the generator interconnection procedures phase 2 stakeholder process, the ISO sought to standardize these provisions in the tariff. However, SCE, SDG&E and the CPUC do not support the proposal. SCE has voiced concern that the proposal as presently structured could cause unnecessary transmission upgrades to be built and could add uncertainty to the back end of the interconnection process. Specifically, SCE is concerned that it could remain unclear for some period of time exactly what the final project build out and associated transmission facilities will be. SCE advocates that these provisions not be hard-wired into the tariff, as they are complicated and casespecific to each project. Further, SCE argues that these situations should be negotiated individually upon a request of the developer and then filed as non-pro forma contracts. SDG&E recommends that projects instead use multiple interconnection requests. The CPUC has requested changes to the proposal, such as the amount of the termination charge (i.e., that it be much higher than proposed). Also, it believes that a better approach is to not standardize this complex issue in the tariff at this time and instead discuss it further in the separate initiative to integrate the generator interconnection procedures and the transmission planning process. In addition, although several developers have offered conditional support for the concept, they do not support several of the specific provisions of the proposal.

Given that there is not broad support for the proposal, Management believes that it is not appropriate at this time to attempt to standardize this complex issue and hard-wire provisions in the tariff. Rather, Management recommends that the option of partial termination be preserved and available for use when requested by the developer. It can then be negotiated among the parties, as it was successfully done in 2010 for two projects and for one project so far this year. FERC has already approved the use of partial termination provisions in the two interconnection agreements that were filed last year. With FERC approval of interconnection agreements that incorporate these provisions, the ISO, participating transmission owners and developers have a template to work from should the scenario present itself in future interconnection agreement negotiations. This topic also can be addressed in phase 3 if stakeholders desire to revisit this topic.

MANAGEMENT RECOMMENDATION

Management requests Board approval of the 18 generator interconnection procedures phase 2 proposals described in Attachment 1. The benefits of implementing these mechanisms will further improve and streamline interconnection procedures across nearly all aspects of the interconnection process.

Provisions submitted for Board decision Generator Interconnection Procedures Phase 2 Initiative (Items that require tariff changes)

Item No.	Торіс
1	Generators interconnecting to non-participating transmission owner facilities in ISO
	balancing authority area - Develop procedures to perform deliverability studies when a
	generator is connecting to the transmission facilities of a non-participating transmission owner
	that is located inside the ISO balancing authority area.
2	<u>Iniggers for Financial Security Posting Deadlines</u> – Add a new step in the ISO study
	and develop provisions on the concept of "substantial errors" that would trigger a revision of a
	report
3	Definitions of start of construction and other transmission construction phases and
Ŭ	posting requirements at each milestone – Include new provisions to allow generation
	projects to post the third and final security posting based on the separate and discreet
	generation phases being built.
4	Information provided by ISO through internet postings – Develop new tariff guidelines to
	clearly state what information the ISO considers to be confidential and must be posted to a
	protected ISO web site.
5	Reduction in generator project size for permitting or other extenuating circumstances –
	Allow developers to reduce the size of their project by 5% after execution of the interconnection
	agreement for any reason, and greater than 5% for environmental or permitting reasons on a
	Case by case basis.
6	Repayment of Interconnection customer funding for network upgrades associated with
	project to be repaid for network upgrades based on when the commercial operation date of the
	approved to be repaid for hetwork upgrades based on when the commercial operation date of the
	specified in the interconnection agreement is achieved.
7	Accommodate gualifying facility conversions, repowering, deliverability at distribution
	level and other special circumstances associated with small projects, including potential
	modifications to independent study process and fast track study process - (1) Add
	provisions explaining how a review would be conducted to determine whether a repowering or
	reconfiguring generation project will be subject to interconnection procedures,(2) add provisions
	how a review would be conducted when a qualifying facility converts to a participating generator
	status, (3) add new tariff procedures to allow the fast track study process to apply to existing
	facilities using the independent study process, and (5) slorify how reconical and business criteria for
	delivershility when renewering or recentiquing
8	Second and third financial security posting requirements to offset participating
0	transmission owner funded network ungrades (incorporating ISO's interconnection
	procedures 2010 tariff waiver into generator interconnection procedures) - Add tariff
	provisions to allow an interconnection customer to be relieved of the obligation to post the
	second and third financial security postings for network upgrades that the participating
	transmission owner has committed to upfront fund on behalf of the interconnection customer.

Item No.	Торіс
9	Interconnection agreement insurance requirements - Revise insurance requirements in the
	interconnection agreement to relieve the ISO from procuring insurance, to add others as
	additional insurers and to require the participating transmission owner to tender insurance
	information only when requested by the interconnection customer.
10	Adjusted versus non-adjusted dollars in interconnection study reports and
	interconnection agreements – Standardize the use of time-adjusted dollar calculations used
	by the participating transmission owners in the calculation of interconnection and study cost
4.4	reports.
11	Financial responsibility cap and maximum cost responsibility – Clarify that the
	interconnection customer's maximum cost responsibility is the lower of the phase 1 or phase 2
10	interconnection study cost estimates.
12	Posting cap to initiatical security postings of participating transmission owners
	<u>naticipating transmission owner's interconnection facilities is the same as for the participating</u>
	transmission owner's network ungrade financial security posting requirements
13	Interconnection agreement suspension rights – Amend the suspension provisions to clarify
10	the conditions under which an interconnection customer could suspend network upgrades that
	are common to multiple generating facilities.
14	Participating transmission owner 100% abandoned plant recovery – Add new abandoned
	plant provisions to apply to prudently incurred expenses when the participating transmission
	owner is required under certain circumstances to upfront finance network upgrades if an
	interconnection customer withdraws, if a change in the base case causes additional network
	upgrades to be constructed above the maximum cost responsibility of the generators, or if
	through the transmission planning process additional network upgrades are required that had
	not been set forth in the interconnection agreement.
15	Partial deliverability as interconnection option – Add provisions to allow an interconnection
	customer to select partial deliverability as an option in the study process.
16	Technical requirements under interconnection agreement – Apply the same technical
	requirements for both small (up to 20 MW) and large (greater than 20 MW) asynchronous
	generators that connect to the ISO grid.
17	<u>Off-peak deliverability assessment</u> – Amend the tariff provisions requiring the ISO to conduct
	an off-peak deliverability study for interconnecting generators where the fuel source
	substantially occurs during the off-peak hours (i.e., wind) to state that the off-peak deliverability
10	assessments are performed for informational purposes only.
δľ	<u>Operational partial and interim deliverability assessment</u> – Add new tariff authority to
	2 interconnection study