UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Interconnection Queuing Practices) Docket No. AD08-2-000

INTERCONNECTION STATUS REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR

Pursuant to the Commission's Order on Technical Conference issued in the above-referenced docket on March 20, 2008 ("March 20 Order"),[1] the California Independent System Operator ("CAISO") submits this report on the status of its generator interconnection queue and efforts to develop any necessary queue management improvements. Specifically, the March 20 Order directed each Regional Transmission Organization ("RTO") and Independent System Operator ("ISO") to file a status report with the Commission that describes:

- The current size of the RTO's or ISO's interconnection queue, i.e., number of pending Interconnection Requests[2] ("IRs") and total megawatts represented by those requests;
- The current projected timeframes for processing pending IRs;
- The nature and extent of any problems that have led to any queue backlogs, including a discussion of how Clustering has or has not alleviated those problems; and
- Stakeholder discussions on queue reforms and provide a schedule for selecting and implementing any necessary reforms, including a target date for filing any necessary tariff amendments or waivers.[3]

The CAISO addresses each item identified in the March 20 Order.

---

1 *Interconnection Queuing Practices,* 122 FERC ¶ 61,252 (March 20, 2008).

2 Capitalized terms have the meaning set forth in Appendix A, Master Definitions Supplement, to the CAISO Tariff.

3 March 20 Order at P 9.

I. CURRENT SIZE OF THE INTERCONNECTION QUEUE

The table below summarizes the size and status of the CAISO's generator interconnection queue as of April 18, 2008. Active projects exclude IRs that have withdrawn from the queue or resulted in an executed interconnection agreement.

In total, there are 265 active projects in the CAISO's generator interconnection queue, including 35 submitted IRs that await validation. The active projects represent approximately 77,614 MW with the pending IRs awaiting validation accounting for 4,048 MW of that total. Over two-thirds of the active projects are renewable resources that total approximately 50,000 MW. The CAISO's historic peak demand experienced during the summer of 2006 was 50,270 MWs.

	# of Projects	Total MW
Active Projects in the Queue	265	77614
Active Renewable Projects in the queue	183	48114
Active Projects in Feasibility Study Stage	102	33379
Active Projects in System Impact Study Stage	55	18418
Active Projects in Facilities Study Stage	37	9209
Active Projects in LGIA Negotiation Stage	36	12560.
Projects not yet data adequate, but have submitted an IR	35	4048
Renewable Projects not yet data adequate but have submitted an IR.	31	2150

II. PROJECTED TIME FRAME FOR PROCESSING IRS

The following estimate of the time needed to process currently pending IRs is based on application of the CAISO's existing centralized interconnection study procedures and practices, which generally track the Commission's Order No. 2003 *pro forma* Large Generator Interconnection Procedures ("LGIP"). Under the CAISO's centralized study procedures, processing and analytical activities are assigned to the CAISO and Participating

Transmission Owners ("PTOs") in a manner that strikes the appropriate balance between the CAISO, as an independent transmission provider with grid-wide responsibilities, and the PTOs, as transmission owners with specialized knowledge of their respective systems.[4] The centralized study process supports an efficient distribution of Interconnection Study responsibilities. As such, the current backlog is not linked to the structure of that process or the level of resources devoted by the CAISO or PTOs to managing pending IRs.

Instead, the current backlog, and the resulting time estimate to process the backlog, is primarily a function of the data interdependency and iterative nature of the serial study approach historically used by the CAISO under the centralized study process, and that approach's incompatibility with the timely processing of a large volume of IRs in electrically-related and transmission constrained areas of the grid. The serial approach intrinsically has limited capability to simultaneously process proposed generation projects that are electrically related. The constraint occurs because of data dependency. The study for a higher-queued project must be largely completed before the study process for an electrically-related project lower in the queue can begin. This constraint impacts each study phase of the LGIP, i.e., Feasibility Study, System Impact Study, and Facilities Study. Accordingly, the exact number of studies that can be in actively processed at any time depends on a large number of factors that can impact the ability to finish the studies in a timely manner, including the requested point of interconnection of the IRs, the availability of capacity on the transmission system affected by the interconnection, and the amount of restudies that are required if queued-ahead requests withdraw.

Given that 134 of the 229 active projects that remain in one of the three Interconnection Study phases are located in the Southern California Edison Company ("SCE") service territory, the estimated time by which the CAISO could process all existing

[4] See, *California Independent System Operator Corporation*, 112 FERC ¶ 61,009 (July 1, 2005), *clarifications and extension of time granted, reh'd denied*, 112 FERC ¶ 61,231 (Aug. 26, 2005).

active projects in the interconnection queue will be contingent on the time necessary to address the pending IRs in SCE's service territory. SCE's system has roughly five electrically-related geographic areas where generators are requesting interconnection. Assuming four studies can be performed simultaneously under a serial study approach for each of the five areas, the CAISO has a "capacity" to process roughly 20 studies at any time for SCE's service territory (additional studies can be simultaneously conducted for the service territories of the other PTOs). Further, if it is assumed for simplicity that each IR can be completely studied through the Interconnection Facilities Study in six months, regardless of where it currently falls in the study process, it would take approximately 3.35 years to complete all studies for the active projects currently in the CAISO queue (134 / 20 x 6 mos. = 40.2 mos). It should be noted that this estimate is likely to be very conservative in that it ignores the impact of the approximately 38 projects still in the study phase, totaling approximately 2600 MW, requesting interconnection to SCE's distribution system whose impact on the CAISO Controlled Grid must also be considered. As discussed below, the CAISO is pursuing process reforms, including full utilization of its existing Clustering authority, to address the deficiencies inherent in the ability of the serial approach to manage a high number of electrically-related IRs and to reduce the time needed to fully process IRs in its current interconnection queue.

III. NATURE AND EXTENT OF PROBLEMS THAT LED TO QUEUE BACKLOGS

1. Cause and Nature of Problems

The ISO/RTO Council Whitepaper on Interconnection Queue Management Process, submitted in this docket on January 10, 2008, details the common challenges facing ISOs and RTOs that have led to queue backlogs in many parts of the country.[5] The CAISO also identified a similar set of causes hindering the efficient management of IRs in the CAISO

[5] "Comments of the ISO/RTO Council," *Interconnection Queuing Practices,* FERC Docket No. AD08-2-000 (Jan. 10, 2008).

footprint in its prepared statement for the December 7 Technical Conference.[6] The gravamen of both comments is that a "perfect storm" of a favorable political climate, procurement mandates, and interconnection policies have combined to trigger a proliferation of interconnection requests unexpected under the original assumptions underlying the Order No. 2003 procedures. In particular, the CAISO believes each of the following factors has contributed to create the current gridlock in the interconnection process in California:

- The creation of regular, competitive procurement processes for both conventional and renewable generation in California has facilitated project financing;
- Renewable generation developers have sought to take advantage of the favorable regulatory policies, including California's aggressive Renewables Portfolio Standard ("RPS") and Federal and State tax incentives (production tax credit, investment tax credit, etc.);
- The relative ease and low cost of entrance and exit from the queue have led developers to secure queue positions, regardless of whether the developers are truly ready or capable of going forward with their projects.
- The nature of renewable generation is such that it typically develops in smaller increments over a period of time (differing from conventional generation which tends to develop in larger increments all at once), leading to a higher number of requests than would have otherwise occurred if only conventional generation entered the queue; and

[6] "Prepared Statement of the California Independent System Operator Corporation for Technical Conference on Generator Queuing Practices," *Interconnection Queuing Practices*, FERC Docket No. AD08-2-000 (Dec. 13, 2008).

- Many generators have sought interconnection in similar geographic areas, the majority of which are remote from load centers and already transmission constrained.

As noted above, it is this proliferation of IRs that has overwhelmed the CAISO's interconnection process. The CAISO's current queue has active projects totaling 77,614 MW, far in excess of its historic peak demand. Even assuming California's aggressive RPS goals, the vast majority of these projects will not be developed. Studying them serially results in unreasonable and unrealistic studies that do not provide any value to the Interconnection Customers (ICs) nor do they inform the procurement process with accurate information. Further, the serial study process causes a delay for any one project to ripple through all the projects lower in the queue as the studies build on each other. This deficiency is exacerbated by the fact that many of these IRs are located in the same geographic area, or have requested interconnection to transmission facilities which are already congested.

For example, the Tehachapi/Big Creek/Path 26 corridor has nearly 10,000 MW of requests, and similarly large clusters of projects exist in the East of Lugo corridor (15,300 MW), Devers-Valley area (12,700 MW) and North of Lugo corridor (6,700 MW). This "piling on" effect makes studying requests serially nearly impossible, as it causes base cases to be severely voltage constrained to the point of voltage collapse (base cases do not solve). Multiple requests in a given area also increase the likelihood that withdrawals of higher-queued generators will require potentially endless rounds of restudies of multiple projects behind them in queue. Finally, studying IRs serially can lead to sub-optimal design for the transmission system because of the lumpy nature of transmission upgrades. The serial approach might suggest a number of smaller upgrades, when what is optimal for the system would be a larger, more comprehensive upgrade.

2. CAISO Experience with Clustering

The CAISO's only experience to date with Clustering arose from developing the plan of service for the Tehachapi Renewable Transmission Project (TRTP), in conjunction with SCE, the CPUC, and the CEC in 2006. The transmission plan was developed to integrate 19 projects, comprising 4,350 MW of wind and other generation in the Tehachapi

region. These 19 projects entered the CAISO interconnection queue from 2003 to March 2006. To be able to study the combined impact of the 4,350 MW of generation, the CAISO successfully petitioned the Commission for a waiver of certain tariff provisions. In particular, the petition requested that the Commission allow for a wider queue cluster window than the 180-days prescribed in the CAISO tariff. The Commission granted the waiver, allowing for the CAISO to study the combined impact of the TRTP cluster in one grouped system impact study.

The Tehachapi Clustering experience has been unequivocally positive, for both efficiency gains in the study process and improved design for the overall grid. An additional benefit of Clustering is that group studies are less impacted by the withdrawal of a single generator. However, Clustering without further queue reforms will not by itself effectively address the fundamental problem of reducing the unrealistic level of requests and capacity seeking interconnection and the uncertainties associated with project withdrawals and restudies. Thus, the CAISO has been exploring with its stakeholders additional reforms that adjust the current approach by requiring greater developer commitment.

IV. STATUS OF STAKEHOLDER DISCUSSIONS AND SCHEDULE FOR REFORMS

The CAISO initiated discussions with its stakeholders regarding the need for generator interconnection reform prior to the Commission's December 2007 Technical Conference, and commenced a formal stakeholder process in earnest almost immediately after the conference. The following outlines the stakeholder outreach that the CAISO pursued to obtain input on developing more efficient interconnection procedures:

- January 18, 2008 - CAISO posted Issues Identification Paper on its website
- January 25, 2008 - Stakeholder Meeting held at CAISO offices in Folsom
- January 31, 2008 - Stakeholder comments received
- February 12, 2008 - CAISO posted Draft Proposal on its website
- February 19, 2008 - Stakeholder Meeting held at CAISO offices in Folsom

- February 26, 2008 - Additional Stakeholder comments received
- February 28, 2008 - Stakeholder Conference Call
- March 12, 2008 - CAISO Posted Revised Draft Proposal
- March 13, 2008 - Stakeholder Conference Call
- March 20, 2008 - Stakeholder Conference Call
- March 26, 2008 - CAISO Board of Governors Presentation (informational)
- March 27, 2008 - Stakeholder Conference Call

Materials generated by the stakeholder process, including draft reform proposals and stakeholder comments, can be found on the CAISO Website at http://www.caiso.com/1f42/1f42c00d28c30.html.

The CAISO has already taken steps pursuant to its existing CAISO Tariff authority to implement interconnection process reforms. In particular, the CAISO has exercised its discretion under the LGIP to establish a schedule for a future Queue Cluster Window.[7] One significant objective accomplished by establishing a future Queue Cluster Window is to define the boundary of the current backlog of IRs. The CAISO anticipates that it will make two filings with the Commission to transition to the reformed procedures, which will facilitate relieving the current backlog and improving future queue efficiency.

The first filing will be a request for waivers of specific provisions of the current LGIP intended, *inter alia*, to temporarily pause work on certain studies to allow the CAISO to focus on expeditiously completing "later stage" IRs, while completing development of the general process reforms. The CAISO expects to make the wavier request filing this month.

[7] See, CAISO Market Notice at http://www.caiso.com/1fa3/1fa38314678f0.html.

The second filing will seek amendments to the CAISO Tariff, pursuant to Section 205 of the Federal Power Act, in order to implement the new reform procedures developed during the stakeholder process. The CAISO expects to make this filing in the June 2008 time frame.

Respectfully submitted,

/s/Grant Rosenblum
Grant Rosenblum
Senior Counsel
California Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630
Tel (916) 351-4400
Fax (916) 608-7296

April 21, 2008

CERTIFICATE OF SERVICE

I hereby certify that I have served, by electronic and United States mail, a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission in this proceeding.

Executed on April 21, 2008, at Folsom, California.

/s/Susan L. Montana
Susan L. Montana
smontana@caiso.com