

Memorandum

To: ISO Board of Governors

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

Date: May 9, 2012

Re: **Briefing on Renewable Generation in the ISO Generator Interconnection Queue**

This memorandum does not require Board action.

EXECUTIVE SUMMARY

The information included in this briefing represents the status of renewable generation in the California Independent System Operator Corporation's generator interconnection queue as of April 24, 2012. Key highlights include:

1. The current ISO queue contains approximately 59,000 MW (40,000 renewable) actively seeking to interconnect to the ISO controlled grid;
2. Of the over 35,000 MW that entered the queue through the Cluster 4 window, approximately 6,500 MW remain in the queue, 6,000 MW of which are renewable, with the majority withdrawing following the phase I studies;
3. Changes in renewable projects in the queue since the last generator interconnection queue update include approximately 7,300 MW of additional capacity that entered the queue through the Cluster 5 open windows and approximately 24,000 MW of project withdrawals, the majority being Cluster 4 projects; and
4. The ISO queue currently contains over three times the additional renewable generation capacity needed beyond what is already operating to reach the California mandated 33% Renewable Portfolio Standard requirement by 2020. Interconnection studies have been completed for two-thirds of this capacity with the remaining on track for completion in 2013.

DISCUSSION

The following graphs illustrate the renewables in the ISO queue from several perspectives, such as changes by study group and insight into the size and type of renewable projects in the ISO queue.

Figure 1 shows the reduction in renewable projects from the interconnection queue since the October, 2011 Board briefing. The nearly 17,000 MW change is the result of the addition of approximately 7,300 MW of renewables that applied during the Cluster 5 open windows for new projects and nearly 22,000 MW of project capacity that withdrew from Cluster 4. Cluster 4 phase 1 reports were issued to the interconnection customers in early January 2012, and their initial financial security postings were due mid to late April. As a result of the posting requirement, 78% of Cluster 4 renewable generation project capacity chose to withdraw rather than post their initial financial security.

Figure 1
Change in Renewable Capacity in ISO Queue since October Update

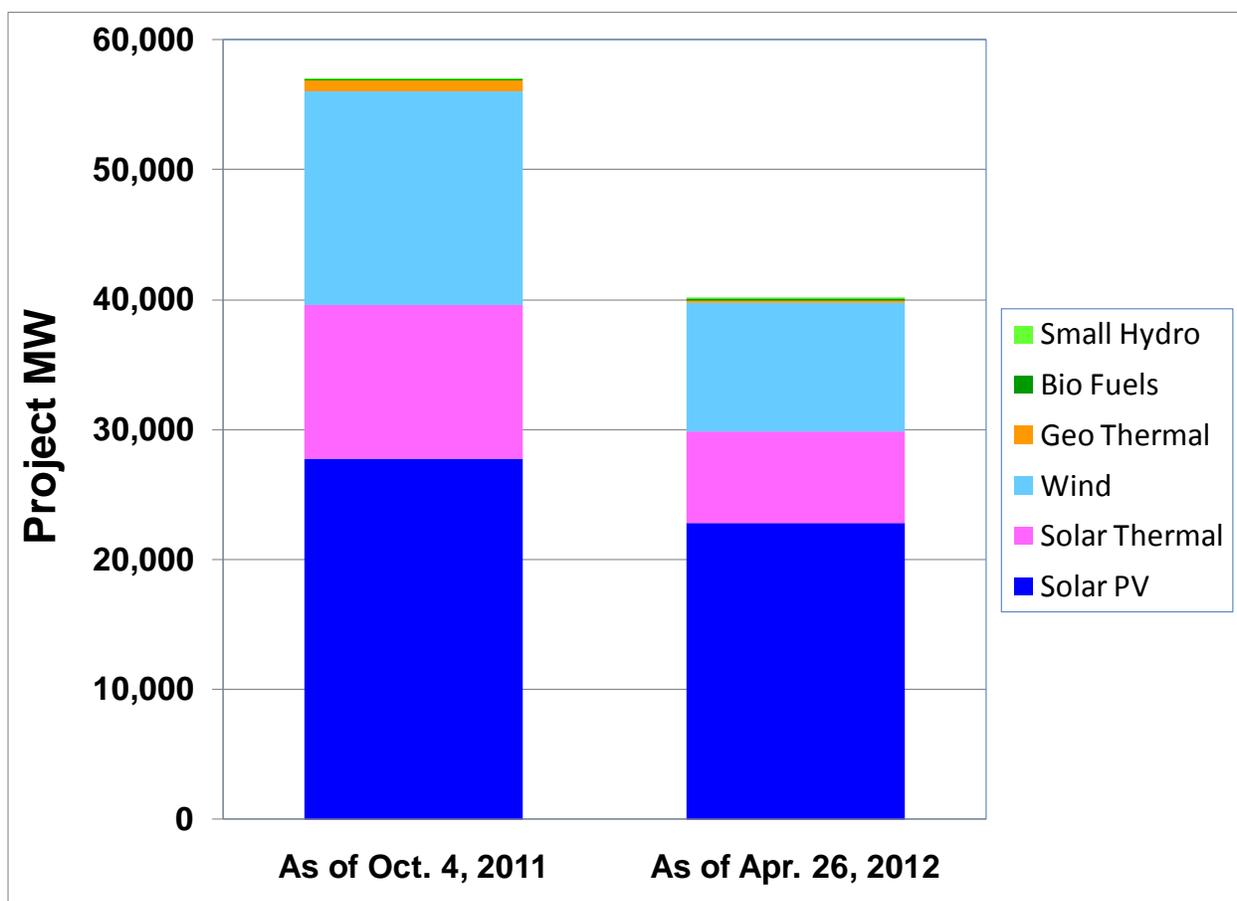


Figure 2 shows the change in renewable capacity in the queue by study group, which graphically displays the changes described above. Regarding Cluster 5, 991 MW of renewable projects were received during the October-November early window in 2011 and 6,351 MW were received in the standard March open window.

Figure 2
Changes in Renewable Generation Capacity in the ISO Queue
(changes by study group since October 2011 update)

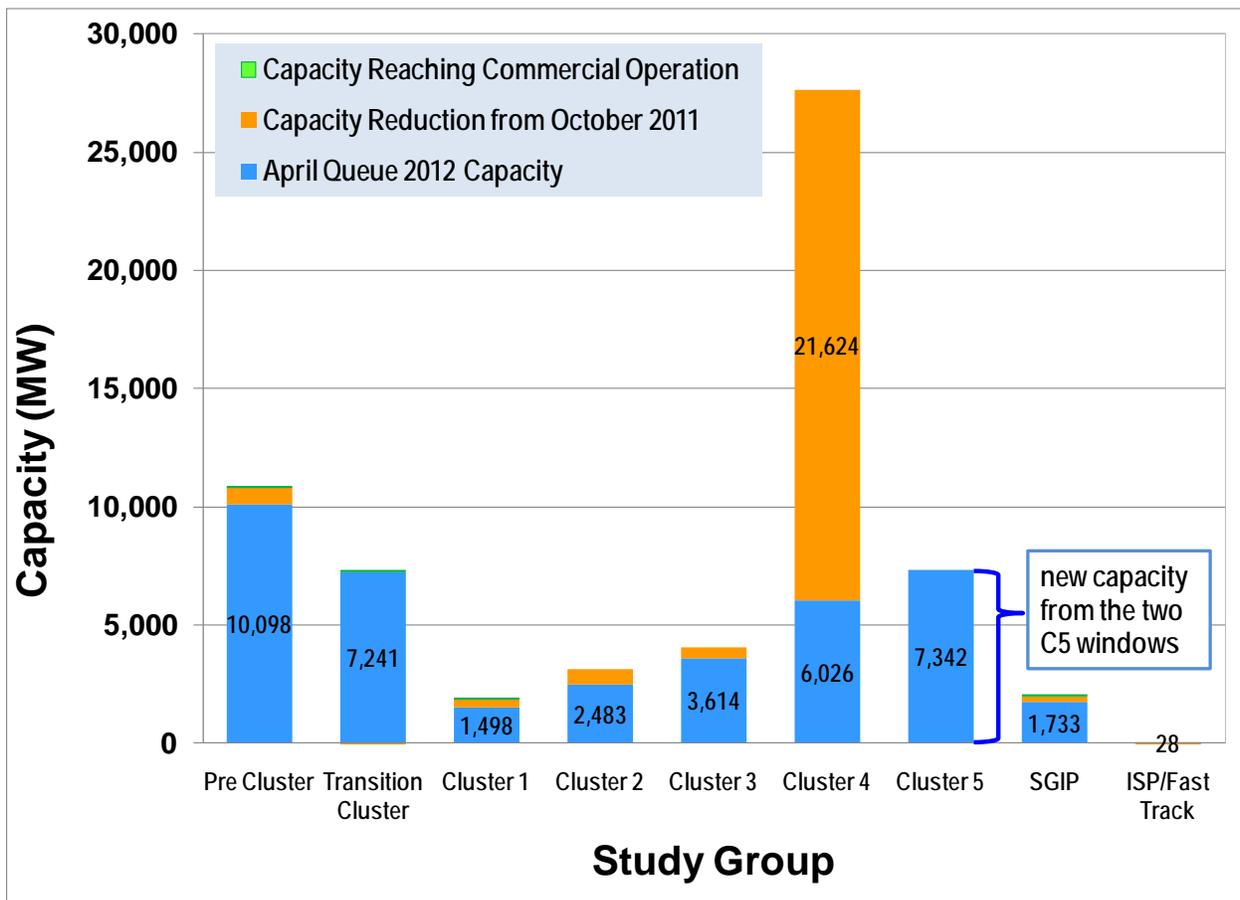


Figure 3 shows the amount of renewable generation capacity that has completed the ISO study process and the capacity still in the study process. The two-phase cluster study process identifies the transmission network upgrades required to safely and reliably interconnect to the ISO control grid and the upgrades needed to make a project fully deliverable (for those projects opting for full capacity deliverability status). Figure 3 illustrates the amount of renewable capacity that have currently completed their required studies and the amount of those that will have all studies completed as of the end of 2012 and 2013. To date, the ISO has completed interconnection studies for approximately 27,000 MW of projects that remain in the queue, two times the additional renewable generation capacity needed beyond what is already operating to reach the California mandated 33% Renewable Portfolio Standard requirement by 2020.

Figure 3
Renewable Capacity Amount by Study Status
of Projects in the ISO Queue

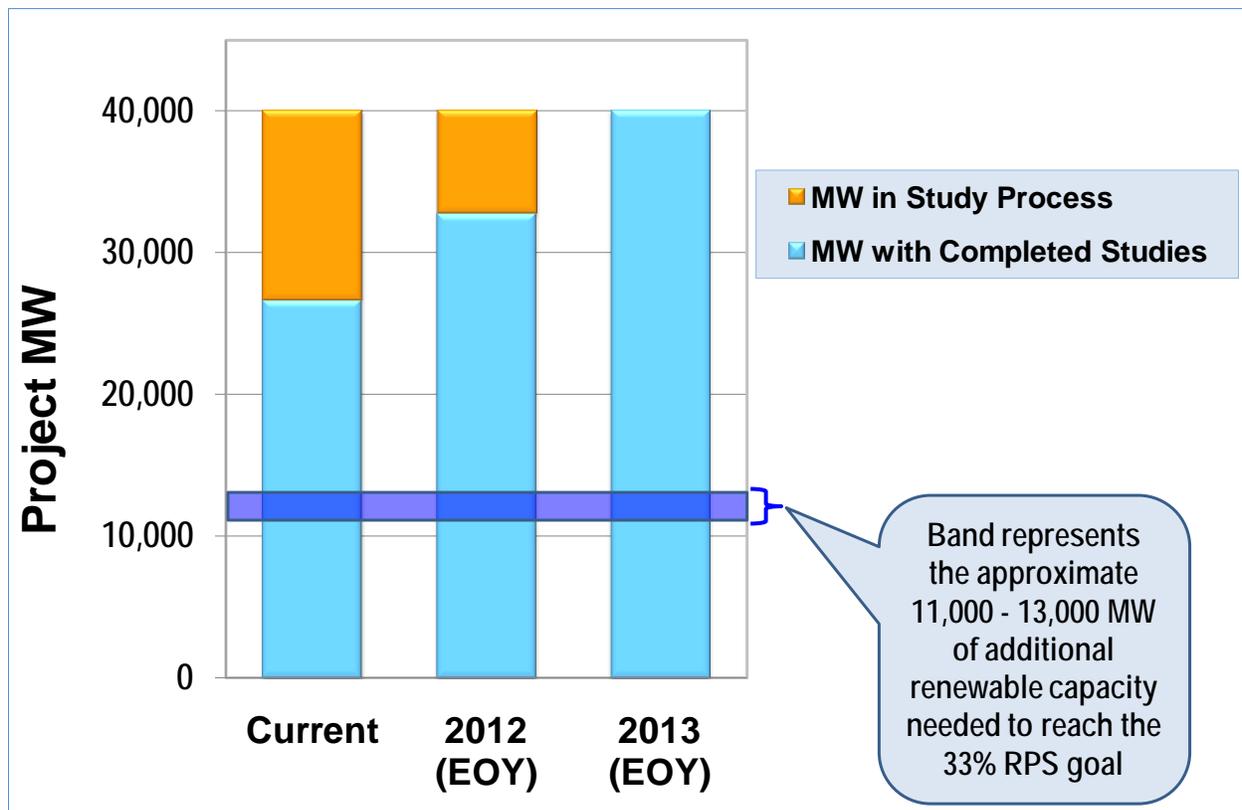


Figure 4 provides insight into the amount of generation capacity in the ISO queue by project size and type. Solar PV is the dominant generating technology for all size ranges. Figure 4 also provides a breakdown of the capacity in the ISO queue by the number of projects for each project size category. Projects in the 100 to 500 MW sized project category make up 58% of project capacity, however, the 1 to 20 MW size category continues to have the largest number of projects.

Figure 4
MW of Renewable Projects in ISO Queue
by Size and Type

