

Memorandum

To: ISO Board of Governors
From: Steve Berberich, President and Chief Executive Officer
Date: December 7, 2017
Re: CEO report

This memorandum does not require Board action.

OVERALL SYSTEM CONDITIONS

Since the last Board meeting, system conditions have been fairly typical for a fall operating environment. This time of the year is characterized by planned outages on both the transmission and generation systems, most of which can be properly planned and operated around.

On Monday, December 4, massive fires erupted in the Ventura County area of Southern California. Those fires burned under multiple transmission lines causing those lines to relay with about 400 MW of load interrupted. The ISO ordered Mandalay 1, 2 and 3 generating units on to provide in-basin generation replacing the power lost from the lines. All lines were restored to service several hours after they first relayed but, with the fire still burning close to the lines, the generating units were kept online to protect against additional transmission outages.

While this time of the year generally has low power demand, with the change in seasons, the renewable portfolio's operating profile changes. For example, during the summer, solar output provided an average of 9,900 MW at peak but has fallen to an average of 7,400 MW at peak with lower sun angles. Further, with clouds moving in and out, we have seen solar movements of up to 2,000 MW over an hour as well. With storms developing off of the coast and moving inland, wind output can move quickly too. For instance, on Monday, November 27, wind generation increased 1,173 MW in 29 minutes, then one minute later started reducing output 1,145 MW over the next 22 minutes.

GAS/ELECTRIC RELIABILITY

During the week of November 27, the ISO, California Public Utilities Commission, California Energy Commission and Los Angeles Department of Water and Power published an updated Aliso Canyon impact report based on joint studies among the parties examining the winter operating conditions given the ongoing limitations on Aliso Canyon as well as

unplanned pipeline outages. In short, the study finds that with severely limited gas conditions in Southern California, more frequent curtailments of gas to gas generators could occur. Using all of the market tools we have implemented, and absent significant unplanned transmission or generation outages or severe operating conditions, the ISO believes electric reliability can be maintained. We particularly want to thank Los Angeles Department of Water and Power for deferring maintenance on some key power lines to further reduce reliability risk over the winter.

EXPEDITED GENERATOR INTERCONNECTION AND DELIVERABILITY ALLOCATION

At this meeting, Management is seeking Board approval of two generation interconnection policy changes. The first change is to extend the time an interconnection customer may “park” for purposes of receiving transmission deliverability. The need for this change is in order to allow pending projects to preserve their opportunities during the current slowdown in renewable procurement. The second change is administrative and seeks to further streamline the interconnection process by shortening the period interconnecting customers have to submit, correct, and re-submit new requests within the ISO’s validation time frame.

CONGESTION REVENUE RIGHTS

Congestion revenue rights (CRRs) are part of the FERC standard market design and in adherence with that, the ISO offers them to provide hedging opportunities for market participants. The rights are currently offered through both an allocation and auction process and, over the last several years, the auctions have consistently resulted in a net deficit between what is brought in through the auction and what is paid out to the CRR holders in the day-ahead market. As the Board is aware, we began an analysis effort early this year to determine the root cause of the deficits, recently published a paper outlining the result of that analysis, and have embarked on a stakeholder process to examine potential changes to the CRR auction and related market designs. The ISO runs an integrated energy market of approximately \$9 billion a year and it is critical to be careful and holistic in changes to the CRR market so as not to potentially negatively impact energy market prices. We are committed to this effort and expect to have final recommendations on proposed changes to the CRR auction design to the Board in the first half of next year.

RENEWABLE ENERGY PRODUCTION

No new renewable production records have been achieved since the last Board meeting. The most recent solar peak of 9,914 MW occurred on June 17, 2017 at 12:12 p.m. The most recent wind generation peak of 4,985 MW was set on May 16, 2017 at 5:26 p.m. We continue to also get significant renewable generation contributions from geothermal, small hydro and other sources contributing to our generation mix.