

Memorandum

To: ISO Board of Governors
From: Steve Berberich, President and Chief Executive Officer
Date: August 24, 2016
Re: CEO report

This memorandum does not require Board action.

OVERALL SYSTEM CONDITIONS

Summer conditions have been relatively normal, with periodic heat waves and sustained moderate conditions. The biggest operational challenges so far this summer have been a multi-day heat storm that occurred at the end of July into early August, resulting in the current year-to-date peak load of 46,232 MW and, on August 16 and 17, when the Blue Cut Fire forced several 500kv lines out of service while the system was carrying high loads. In both instances, grid reliability was maintained. We particularly appreciate the coordination with Southern California Edison as the fires forced transmission lines from service.

Southern California reliability remains a focus for the ISO, given the ongoing outage of the Aliso Canyon gas storage facility. So far this summer, the mitigation measures and coordination efforts that we enacted in cooperation with the California Public Utilities Commission, the California Energy Commission, the Los Angeles Department of Water and Power and SoCal Gas have been effective at avoiding any electric system reliability issues. Fortunately, and in addition to these coordinating efforts, circumstances have been largely favorable; loads have been relatively modest, there have been no major mismatches between day-ahead and real-time load forecasts, and most importantly, there have been no significant outages on the system. We will continue to be watchful and diligent as we move into the final month of summer.

REACTIVE POWER REQUIREMENTS

The ISO acknowledges the need for renewables to provide grid services that have traditionally been provided by thermal resources. This comports with one of our key strategies – to enable renewables to integrate renewables. In this month's Board meeting, we are taking steps to fulfill this strategy, while also complying with the recent FERC Order 827 that requires non-synchronous generators to provide reactive power capability. In support of these efforts, Management is proposing several changes to requirements for asynchronous generators to enable the provision of reactive power. However, the ISO is

taking this a step further by also proposing that automatic voltage control capability be included in our interconnection requirements. Although this is directly responsive to a FERC order, the availability of reactive power is something that the ISO has sought for some time.

ENERGY IMBALANCE MARKET

The Energy Imbalance Market Governing Body is now seated and conducted its first organizing meeting on August 8-9 and will conduct its first public meeting on August 30, 2016. We are pleased to be working with the new governing body and supporting their role in market oversight.

On August 1, 2016, Puget Sound Energy (PSE) and Arizona Public Service (APS) began non- financially binding parallel operations in the EIM. To date, the parallel operations have been successful; both PSE and APS are on track to begin financially binding participation in the market on October 1.

REGIONALIZING THE GRID

California and the West are at a major inflection point, as the grid deals with increasing levels of utility-grade renewables and manages significant growth in distributed generation. If we are to maintain reliability and mitigate upward pressure on costs, collaborating regionally is among our most impactful tools as we strive to integrate renewables. As we collaborate with stakeholders to develop new power supply models that will be valuable to neighboring states, we know that the ultimate design must respect each state's policy prerogatives. We also acknowledge that the design must not be undermined by inappropriate cost shifts. We remain dedicated to continuing the regional conversation and to understanding the perspectives of parties from all affected states.

On July 26, 2016, the California Energy Commission (CEC), Public Utilities Commission (CPUC) and California Air Resources Board (CARB) held a public workshop where the California Senate Bill 350 regionalization studies were presented by the independent consultants and key governance principles were discussed. We thank the stakeholders who participated and provided their input to this very important dialogue. We want to offer special thanks to CEC Chair Robert Weisenmiller, CARB Chair Mary Nichols, and CPUC Commissioners Carla Peterman, Mike Florio and Liane Randolph for presiding over and participating in the workshop.

Given the remaining open questions around the regional grid, the Governor asked the legislature on August 8 to temporarily pause consideration of legislation that would regionalize the grid during this legislative cycle. We celebrate the Governor's decision and believe the extra time is warranted and positive in helping to answer open questions and better define the governance design and key market elements such as resource adequacy and the transmission access charge.

RENEWABLE GENERATION

Renewable generation continues to reach new peaks on the system as new installations come online. Overall, renewable generation regularly exceeds 10,000 megawatts at peak on most days. Solar generation set a recent peak of 8,375 megawatts on August 9, 2016 at 12:29 PM. Indicative of the fast growth in renewables production, the August 9 peak is 22% higher than the peak reported in the CEO's report during the most recent Board meeting on June 28, 2016. Wind generation has not set a new peak since 2014.