

Memorandum

To: ISO Board of Governors
From: Steve Berberich, President and Chief Executive Officer
Date: December 11, 2013
Re: **CEO report**

This memorandum does not require Board action.

OVERALL CONDITIONS

The fall operating season has generally not presented major operating challenges. However, the low loads of the season allow generator and transmission owners to take outages for maintenance and upgrades. These outages have been extensive this fall and have to be carefully coordinated to ensure reliability and smooth market operations. We expect this to be a continued trend as extensive work is being done on the transmission system to facilitate renewable interconnections.

As is the norm this time of the year, the system peak load has transitioned from afternoons, driven by warm weather and air conditioning loads, to an early evening peak supporting lighting loads. With winter holidays upon us, seasonal decorative lighting causes the evening peak load to increase rapidly, often as much as 120 MW per minute over a two hour period.

SIGNIFICANT EVOLUTION OF THE GRID

This year was significant in terms of those things previously predicted that are becoming reality, plant closures that are driving new, innovative solutions, and regional initiatives that are becoming a reality. Each bears mentioning.

Rapid growth of renewables

This last Board meeting of the year offers an opportunity to acknowledge the significant changes we have seen on the grid in 2013. California is on track to meet its renewable energy goals, as shown by a near tripling of solar production compared to 2012. Not surprisingly, the “duck” began to take shape this fall with more and more reduction of mid-day demand caused by system and distribution level solar resources coupled with peak demand after sunset. Nevertheless, the grid is being operated reliably and early investments in forecasting, technology and a 24/7 renewable desk are helping us stay ahead of the changes that are occurring.

Market adaptation

Our markets are also changing to help us adapt to the growing variability of resources in addition to the long-standing variability in demand. Market changes, such as implementation of a 15 minute market, will help us manage variability much more effectively. This is largely because we will be able to receive and reflect renewable production forecasts much closer to real-time, thus enabling a more accurate and efficient dispatch to meet real-time imbalances. We have also developed new payment mechanisms to compensate resources for their ramping capability, which will help compensate flexible generation for the value it provides to the system. In addition, we have enhanced our regulation market to provide opportunities for new technologies, such as storage, to provide regulation services and have provided additional compensation incentives that reward resources that can accurately follow a regulation signal. Importantly, we are also on track to implement an energy imbalance market that will co-optimize California ISO and PacifiCorp real-time dispatch by the fall of next year. The result will be enhanced renewable integration capabilities in addition to improved reliability and lower consumer costs.

Loss of SONGS

The SONGS closure also represents a change that is driving evolution of the grid. Base load generation totaling 2,250 MWs is no longer available to serve load in San Diego and southern Orange County. This closure coupled with the looming loss of once-through cooled power plants and growing demand creates a significant risk to reliability in the region. We are working in alignment with California's energy policy leadership to maintain reliability with energy efficiency, demand response, and distributed generation in addition to conventional generation and transmission. As part of our effort to procure alternatives to conventional generation and transmission, the ISO and CPUC are working together to develop a framework for forward procurement of demand response for meeting reliability needs in the area.

Once-through cooling compliance

The clock continues to tick on compliance of once-through cooling plants with state water quality regulations. Several plants that are not yet in compliance are located in the regions impacted by the closure of SONGS. One of these plants has a 2017 compliance date and others have compliance dates in 2020. We do not need to replace all of the capacity of these plants but some portion will be needed for local reliability, in addition to energy efficiency, demand response, and distributed generation. The result will be new, more flexible units that will both permit higher levels of renewable integration and improve local reliability.

Regionalism

Regionalism will play a critical role in reducing the need for conventional resources in California, improve reliability, and benefit California ratepayers. It will also provide the same benefits to participants outside of California and help the region manage higher levels of renewable generation. Those joining our energy imbalance market

will gain value from sharing regional assets, the portfolio effect of geographic diversity in renewable energy production, and technology that automatically optimizes the dispatch of resources every five minutes.

Joint reliability framework

We are pleased to present the Joint Reliability Plan developed cooperatively by the California Public Utilities Commission and the California ISO, and the Joint Plan outlines common goals and principles for three initiatives but does not commit either organization to specific policy outcomes. The three initiatives are development of: (1) multi-year resource adequacy requirements; (2) a market-based replacement to the ISO's existing backstop procurement tariff; and (3) a unified long-term reliability planning assessment.

The CPUC voted unanimously to adopt the Joint Reliability Plan at its November 14, 2013 business meeting, but expressed concern that the ISO's administration of a forward procurement mechanism would create a FERC jurisdictional market that may not recognize state policies for load serving entities to procure preferred resources. The joint CPUC and ISO staff discussions have identified the opportunity for voluntary procurement by load serving entities seeking to fulfill their resource adequacy obligations as long as this activity is authorized by the CPUC or other local regulatory authority. The ISO is committed to work with the CPUC, FERC and stakeholders to ensure that any backstop procurement mechanism will only be used to cure capacity deficiencies and will not replace CPUC-directed procurement of preferred resources. Management supports this proposal as a critical step in ensuring a reliable grid into the future.

RENEWABLE GENERATION

Solar and wind generation have not reached new peaks since the last Board report. The peak for solar generation peak is 2,886 MW and was set September 26, 2013, at 1:07 p.m. The wind generation peak is 4,302 MW; attained on June 23 at 12:22 a.m. Installed capacity is just over 5,800 MW for wind and just over 4,750 MW for solar.