

Memorandum

To: ISO Board of Governors
From: Steve Berberich, President and Chief Executive Officer
Date: May 7, 2015
Re: CEO report

This memorandum does not require Board action.

OVERALL CONDITIONS

Operating conditions have been normal for the spring season with low loads and continued maintenance in preparation for summer peak operations. Of note, the California drought continues into its fourth year. The California Department of Water Resources (DWR) found no snow whatsoever on April 1 during its manual survey at 6,800 feet in the Sierra Nevada Mountains. This was the first time in 75 years of early-April measurements at the Phillips Station snow course that no snow was found there.

The statewide snowpack had less water content than any April 1 reading since 1950. Clearly, this will impact available hydro resources. However, as we have noted in our summer assessment, we don't expect material operating issues as the diminished hydro is being largely offset by continued growth in renewable generating resources.

As studies previously indicated, we have growing instances of substantive over-generation. For instance, the ISO sent an approximate 1,000 MW over-generation event notice to market participants on April 2 at 3:50 a.m. The ISO balancing area control error exceeded control area balancing limits for 25 minutes which is within the 30-minute criteria, but uncomfortably close to the limit. The over-generation notice ended at 5:00 a.m.

PACIFICORP INTENT TO JOIN THE ISO

On April 14, 2015, PacifiCorp and the ISO entered into a memorandum of understanding outlining PacifiCorp's intent to join the ISO's balancing authority as full participating transmission owner. If implemented, this historic step would be immensely beneficial to the electric customers of in both ISO and PacifiCorp's service areas. Given that the western portion of PacifiCorp is a winter peaking system and the ISO is a summer peaking system, the benefits of the combined systems will require less capacity due to resource and load diversity. In addition, this partnership will allow both PacifiCorp and the ISO to leverage the lowest cost resources on a daily-ahead and five-minute dispatch basis. Further benefits will accrue from the lower costs of reserves and other ancillary services as well as sharing

resources to meet the ever-increasing need for ramping and system flexibility as increasing levels of renewables are introduced into the systems.

ENERGY IMBALANCE MARKET BENEFITS

The first quarter EIM benefits have been published indicating that benefits remain as expected from pre-implementation studies. In the first quarter of 2015, the benefits of EIM were \$5.26 million bringing the total benefits of EIM since the start to over \$11 million. These benefits reflect the benefits of optimized transfers within and between balancing areas participating in the EIM. This quarter, we quantified the flexible reserve benefits and estimated avoided renewable curtailment of 8,660 MWh. Although 5-minute transfers between PacifiCorp and ISO started in February, these benefit results do not quantify the 5-minute transfer benefits which we intend to add next quarter.

RENEWABLE GENERATION

A new solar generation peak of 6,038 MW was established on April 28, 2015 at 1:27 p.m. Wind generation peak remains at 4,768 MW set April 12, 2014. For perspective and demonstrating the growth of renewables on the system, the top solar production in April of 2014 was 4,474 MW.