



Memorandum

To: ISO Board of Governors

From: Phil Pettingill, Director of Regional Integration

Date: September 10, 2015

Re: Briefing on PacifiCorp integration

This memorandum does not require Board action.

BACKGROUND

On April 14, 2015, PacifiCorp and the California Independent System Operator Corporation entered into a memorandum of understanding reflecting PacifiCorp's intent to explore joining the ISO's balancing authority as a full participating transmission owner. Since that time, the two entities have been working together to more fully understand the potential benefits and costs, identify necessary tariff modifications, evaluate associated approval processes, and plan the necessary steps for such a transition. Currently, ISO staff are fully engaged and supporting the effort by PacifiCorp to complete its benefits study. If PacifiCorp determines to move forward, the ISO will fully support that effort, and work with PacifiCorp to determine when to execute a formal transition agreement as contemplated by the memorandum of understanding, taking into consideration the multi-state regulatory proceedings needed to support integration. In parallel, the California legislature is exploring potential governance options to support a multi-state ISO balancing authority.

The ISO-PacifiCorp planning effort has identified three key phases, each of which will require extensive engagement with stakeholders and other interested parties. Initially, the ISO must determine the policy and tariff changes needed to significantly expand its balancing authority area outside of California. After these policy and tariff issues have been addressed with stakeholders and a clear path to resolution has been determined, PacifiCorp can seek the necessary authorizations from the regulatory entities in the six states where it serves electric customers. Finally, the ISO will need to implement the software and market design changes with a full set of market simulations for all market participants. This three phase approach underscores the need for the ISO to engage with stakeholders early.

ISO management plans to begin engagement and collaboration with stakeholders as soon as the identified initiatives are ready for discussion. The ISO would need to resolve multi-state issues for any large scale integration. The PacifiCorp exploration is driving the ISO to look at the associated impacts now. These stakeholder processes

are central to discuss and formulate the necessary policy changes to the ISO tariff. Ultimately, these are the policy changes that will reshape the ISO into a regional organization that supports the Western region's environmental and energy goals and the regulatory policies for multiple state utility commissions and the Federal Energy Regulatory Commission (FERC). Currently, the ISO has identified at least six stakeholder initiatives that will have varying start times and will run in parallel through the middle of 2016. The ISO plans to initiate the following stakeholder processes beginning in Q4 of 2015:

1. Regional Transmission Access Charge Structure
2. Compliance with California's Greenhouse Gas Regulations
3. Resource Adequacy Rules
4. Full Network Model Enhancements
5. Metering Rules Update
6. Transitional Implementation Items

PHASE I INITIATIVES

We have identified three key phases to this effort and are bringing to the Board an update on phase I. This phase focuses on determining the policy and tariff changes necessary to significantly expand the ISO's balancing authority, and is a critical first step in the process.

Prior to formal outreach to PacifiCorp's regulatory community outside of California, PacifiCorp and the ISO must understand any new rules that will apply. We must evaluate policies for their impact on State and Federal regulations and may need to make changes with the ISO market and operations. The ISO is committed to transparency and stakeholder engagement and will develop its policies in a comprehensive public process. Given that stakeholder processes can take a year or more, Management believes the ISO needs to quickly identify those issues that are on the critical path for PacifiCorp integration. Once policy issues are resolved, PacifiCorp can make its formal filings with state regulators and the ISO and PacifiCorp can begin the detailed implementation work.

The six key phase I stakeholder processes are described more fully below:

- 1. Regional Transmission Access Charge Structure:** Combining the balancing authority areas of PacifiCorp and the ISO will bring together two large and diverse transmission systems and substantially expand the geographic scope of the ISO balancing authority area. It is therefore appropriate for the ISO to consider whether its current regional transmission access charge (TAC) structure should remain as it is presently designed or should be revised. The ISO currently has a "postage stamp" high voltage TAC, which means that all loads pay the same rate for transmission facilities

above 200 kV. The primary guiding principles will be to align transmission cost allocation as closely as possible with distribution of the benefits of those facilities, and to ensure that allocation of costs are perceived as fair by stakeholders and "just and reasonable" by FERC. In an upcoming TAC stakeholder initiative, the ISO will explore options for revising the TAC structure, as well as the option of not changing it, to determine how best to align transmission cost allocation with benefits and fairly consider the interests of all affected parties.

2. **Compliance with California's Greenhouse Gas (GHG) Regulations:** This initiative will determine how costs for generation to comply with California's greenhouse gas regulations will be treated in the integrated forward market. As a guiding principle, the ISO will seek to leverage the existing GHG design developed for the energy imbalance market (EIM) and extend it to the day-ahead market, as appropriate. Generators are only subject to these regulations, including costs of purchasing required "allowances," to the extent that they are located within California or serve California load. The EIM currently has a methodology that enables generation resources to include GHG compliance costs in their offers to supply California load. Similar provisions must be developed for the integrated forward market to address GHG compliance costs for resources should the ISO balancing authority area expand significantly outside of California.
3. **Resource Adequacy Rules:** Resource adequacy (RA) is a mandatory planning and procurement process to ensure resources are secured by load serving entities to meet the ISO's forecast system, local, and flexible capacity needs. Since the five new PacifiCorp states outside of California do not have RA programs, the ISO will need to evaluate regional RA program applicability. Our goal will be to have a forward planning and procurement process that ensures sufficient resources are available to the ISO to serve load under stressed and unstressed conditions, using a framework that is consistent with the RA program rules currently in place in the ISO balancing area. The rules should allow for regional differences, but ensure that individual load serving entities meet their respective requirements without "leaning" on other load serving entities.
4. **Full Network Model Enhancements:** The ISO implemented the first phase of full network model enhancements last year, allowing the ISO market to model unscheduled electrical flow within the ISO balancing area resulting from generation and load outside of the ISO. Next, this initiative will address policy issues to provide pricing enhancements for energy scheduled outside of the ISO balancing authority area.
5. **Metering Rules Update.** This initiative will review and modify metering provisions to simplify and add flexibility in providing revenue-quality meter

data to the ISO. The diversification of resource technologies and improvements to revenue quality meters create an opportunity to provide improved benefits to existing and new ISO participants.

6. **Transitional Implementation Items:** There are other PacifiCorp procedures that are different from current ISO transmission owners. For example, PacifiCorp's transmission interconnection processes are based on a serial queue vs. a cluster queue. For transmission planning, the ISO currently relies on load forecast information provided by the California Energy Commission, which does not include PacifiCorp regions in other states. The ISO will need to identify additional sources of load forecast information. Another example involves the need for new operating procedures to manage the transition of PacifiCorp's transmission lines to ISO operational control. Further, we intend to review the ISO grid management charge framework to support a transition of PacifiCorp and other integration entities. All of these issues will need to be understood and considered in consultation with stakeholders in order to integrate PacifiCorp.

CONCLUSION

Resolution of the key policy issues described above is integral to transition planning and the successful engagement with state regulatory agencies before the end of 2016. Because we anticipate long process times for these initiatives, it's necessary to begin now.

Once the first phase is complete, PacifiCorp intends to seek the necessary authorizations from the regulatory entities in the six states where it serves electric customers, and the ISO can begin to implement the software and market design changes necessary.

Due to the criticality of needing more detailed information and understanding potential modifications to policies related to a PacifiCorp integration, ISO management plans to initiate the stakeholder processes listed above beginning in Q4 of 2015.

Additionally, ISO Management will provide the Board of Governors regular updates on these stakeholder initiatives and the PacifiCorp transitional planning efforts.