Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: July 8, 2014

Re: **Decision on contingency reserve cost allocation**

This memorandum requires Board action.

EXECUTIVE SUMMARY

On November 13, 2013, the Federal Energy Regulatory Commission (FERC) approved a new regional reliability standard for contingency reserves submitted by the North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC). The new standard applies to balancing authorities and reserve sharing groups in the WECC region and specifies the quantity and types of required contingency reserves to ensure reliability. Contingency reserves consist of spinning reserves and non-spinning reserves. This new contingency reserve standard becomes effective on October 1, 2014 and changes the way the ISO will calculate its contingency reserve requirement.

The ISO tariff currently allocates the costs of procuring contingency reserves to scheduling coordinators in a manner that is consistent with the existing reliability standard. As the new standard changes the contingency reserve requirement calculation, Management proposes to revise the way it allocates contingency reserve costs to be consistent with the new standard. This memorandum describes how Management proposes to align the cost allocation with the new requirement, and also describes two related changes: no longer allowing credits for excess self-provision of contingency reserves and not allowing capacity e-tags for recallable energy.

> ***Moved, that the ISO Board of Governors approves the contingency reserve cost allocation proposal, as described in the memorandum dated July 8, 2014; and***
>
> ***Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.***

DISCUSSION AND ANALYSIS

Alignment of Cost Allocation and Reserve Calculation

Under the current WECC contingency reserve standard, each balancing area's contingency reserve requirement is based on the greater of:

(a) The loss of generating capacity due to forced outages of generation or transmission equipment that would result from the most severe single contingency; or

(b) The sum of five percent of the load responsibility served by hydro generation and seven percent of the load responsibility served by thermal generation.

The ISO allocates contingency reserve costs to scheduling coordinators consistent with these requirements. Specifically, the ISO determines each scheduling coordinator's reserve obligation based on the amount of hydro and thermal generation resources used to serve their load. The cost of procuring contingency reserves is allocated to scheduling coordinators based on their share of the total reserves obligations. The allocation can result in a charge or a credit. A credit can arise if a scheduling coordinator is importing firm power because the contingency reserves are procured from the source balancing authority instead of within the ISO.

The WECC's new contingency reserve requirement is based on the greater of:

(a) The loss of on-line generation due to the most severe single contingency; or

(b) The sum of three percent of hourly integrated load plus three percent of hourly integrated generation.

The new reliability standard simplifies the calculation of the contingency reserve requirement as it does not consider the fuel source of generation serving load or the type of energy associated with imports or exports. This difference enables a simpler approach to allocating the cost of reserve procurement.

To maintain consistency between the contingency reserve requirement and allocation of contingency reserve procurement costs, Management proposes to allocate these costs to scheduling coordinators using the following formula:

Scheduling coordinator's contingency reserve obligation = 6% metered load + 3% exports – 3% imports

For example, if a scheduling coordinator has 100 MW of metered load served by internal generation, its reserve obligation is 6 MW. The ISO must procure contingency reserves of 3 MW for the load and 3 MW for the generation. If a scheduling coordinator has 100 MW of metered load served by an import, its reserve obligation is 3 MW (6%*100 MW metered load – 3%*100 MW imports). This aligns with what the ISO must

procure for contingency reserves as the new standard (part b) requires contingency reserves for 3% of the 100 MW of load (3 MW), but does not require the ISO to procure contingency reserves for the import because the source balancing authority must carry the 3 MW of reserves for the generation supporting its export to the ISO. If a scheduling coordinator has a 100 MW export served by internal generation, its reserve obligation is 3 MW (6%* 0 MW metered load + 3%*100 MW exports). This also aligns with what the ISO must procure for contingency reserves as the new standard (part b) requires contingency reserves for 3% of the 100 MW of generation (3 MW), but does not require the ISO to procure contingency reserves for the load served in the sink balancing authority.

In addition to this general formula for determining contingency reserve requirements and cost allocation, the proposal also includes provisions for handling dynamic transfers that are described below.

Dynamic transfers

Dynamic transfers are imports or exports that can be dispatched every five minutes. The new contingency reserve standard specifies rules for determining whether the importing or exporting balancing authority must procure the contingency reserves for dynamic transfers. Similar to static imports and exports, the default is that the source balancing authority is responsible for carrying the contingency reserves. However, the standard enables balancing areas to contractually agree to transfer the contingency reserve responsibility for dynamic transfers. Currently, the tariff provides that the ISO will take on the reserve obligation for dynamically-scheduled imports, which is contrary to the default rule under the new standard. Management does not propose to change this obligation. For dynamically scheduled exports, which the ISO currently does not have, Management proposes to modify the pro-forma dynamic scheduling agreement to state that the receiving balancing authority is responsible for the contingency reserves. As a result, under the new contingency reserve standard the ISO will exclude dynamic transfers from its calculation of a scheduling coordinator's contingency reserve cost obligation. Since the ISO will procure contingency reserves for dynamic imports, a scheduling coordinator will not receive the 3% credit for dynamic imports in its portfolio, which means scheduling coordinators will effectively be charged for the cost of the contingency reserve for the dynamic imports.

Energy Imbalance Market (EIM) transfers

Under EIM, dynamic scheduling is used to account for the energy resulting from EIM transfers between balancing authorities. In order to have similar treatment for both EIM static and dynamic intertie schedules, Management proposes to treat contingency reserve obligations for dynamic EIM transfers differently than other dynamic schedules as described above. Specifically, Management proposes to include EIM transfers in the calculation of contingency reserve cost obligations. This will result in the EIM entity scheduling coordinator being charged and paid for contingency reserves procured as a result of the EIM transfer, depending on the direction of their EIM transfer. If there is an

EIM transfer into the ISO, the EIM entity scheduling coordinator will receive a payment equal to the 3% of the hourly transfer. If there is an EIM transfer out of the ISO, the EIM entity scheduling coordinator will be charged for 3% of the hourly transfer. This cost allocation approach aligns incentives for tagging EIM intertie transactions to maximize available EIM transfer capability in real-time.

The last two elements of Management's proposal pertain to limits on the amount of contingency reserve that can be self-provided and a disallowance of recallable energy imports.

Capping credits for self-provision

A scheduling coordinator can reduce its obligation for contingency reserve costs by self-scheduling certified capacity as contingency reserves. Currently, scheduling coordinators can self-schedule contingency reserves in excess of their share of the obligation and receive a credit for the excess self-supply. Management proposes that scheduling coordinators no longer obtain a credit for excess self-provision. Self-provision is provided to reduce a scheduling coordinators exposure to cost allocation and should not be used for additional compensation.

Capacity tags for recallable energy

Management proposes not to accept capacity e-tags for recallable energy. Recallable energy e-tags are a new type of e-tags created by WECC to facilitate the implementation of the new contingency reserve standard by reserve sharing groups. Under this type of e-tag, the associated energy is recallable within ten minutes of activation of reserves and is included in the source balancing authority's generation resources meeting its contingency reserve procurement requirement. Recallable energy e-tags allow reserve requirements to be transferred between balancing authorities. However, the ISO does not participate in any reserve sharing groups and Management has not identified any benefits of accepting this tag type that would justify the additional implementation complexity.

POSITIONS OF THE PARTIES

Stakeholders generally support the elements of Management's proposal. In particular, they support the changes to the cost allocation of contingency reserves and agree that the calculation of a scheduling coordinator's contingency reserve obligation should be consistent with the procurement requirement calculation of new reliability standard. However, some stakeholders expressed the need to address tangential issues such as the treatment of energy types for intertie transactions and potential market optimization enhancements to evaluate EIM transfers based upon the potential cost of contingency reserves. These issues are outside the scope of this initiative and can be raised in the annual stakeholder initiatives catalog process to prioritize future market enhancements. The 2014 stakeholder initiatives catalog process will commence in late Q3 2014.

CONCLUSION

Management requests Board approval for the changes to the contingency reserve cost allocation. The proposed changes align a scheduling coordinator's contingency reserve obligation with the new contingency reserve procurement requirement. The proposed cost allocation will be implemented when the new procurement requirement becomes effective on October 1, 2014.