



Memorandum

To: ISO Board of Governors

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

Date: April 24, 2017

Re: Decision on black start and system restoration proposal

This memorandum requires Board action.

EXECUTIVE SUMMARY

Pursuant to North American Electricity Reliability Corporation mandatory reliability standard EOP-005-2, System Restoration and Blackstart Resources, transmission operators must have plans for system restoration following widespread outages. These plans must be approved by the transmission operator's reliability coordinator. The ISO operates under an approved system restoration plan which is developed collaboratively by aggregating the restoration plans of the participating transmission owners (PTOs) and augmenting them with any additional requirements. To date, the participating transmission owners have secured the black start resources and absorbed any incremental cost associated with securing this service. The ISO's tariff also provides that the ISO may contract with resources to secure black start service.

The ISO operates under an approved system restoration plan. However, based on the ISO's review of the timelines associated with the ISO's and PTOs' system restoration plans, additional black start capability is necessary to ensure that service restoration time in the Greater Bay Area is reasonably consistent with that of other major population centers in the state. To secure this additional capability, the ISO proposes to contract with a participating generator(s) on a cost-of-service basis. Under this approach, the black start service provider would submit its costs to the Federal Energy Regulatory Commission for acceptance under Section 205 of the Federal Power Act. The incremental cost for the provision of this service is relatively small compared to the overall cost of electricity supply, but fair cost allocation nonetheless remains an important consideration. To this end, the ISO proposes to amend its tariff to more comprehensively allocate incremental black start costs to transmission customers who receive the benefits.

Accordingly, Management proposes to implement tariff changes to identify the costs of black start capability as a reliability services cost, which will allow the applicable PTO to

allocate these costs to transmission customers under its reliability services tariff. Although the ISO has tariff authority to contract with black start resources, existing tariff provisions provide little direction on how the ISO would select resources. To address this, Management also proposes to implement a competitive solicitation process to evaluate potential black start resources. Management seeks Board approval of both the proposed cost allocation rule and the competitive solicitation process for selecting black start resources, including the exercise of the ISO's black start procurement authority on a cost of service basis.

Management recommends the following motion:

Moved, that the ISO Board of Governors approves the proposal for black start and system restoration, as described in the memorandum dated April 24, 2017; 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

After developing its system restoration plan to comply with NERC standard EOP-005-2, the ISO, in consultation with the PTOs, determined that the estimated restoration time in the Greater Bay Area was not consistent with that of other high density areas in the state. Black start resources in southern California are more evenly distributed near major load centers, while the Greater Bay Area relies on remote resources. As a result, the ISO determined it is necessary to secure additional black start capability to ensure an adequate level of black start service exists for all major load centers in its balancing authority area.

Currently, all black start resources relied upon in the ISO's restoration plan are either owned by the PTO, or under contract with the PTO through a power purchase arrangement. These resources are currently subject to three-party agreements with a zero price term between the ISO, the applicable PTO and the generator. The ISO tariff provides authority for the ISO to enter into black start contracts that also compensate resources for black start capability. The ISO's tariff also provides that scheduling coordinators with demand on the ISO system should pay for this capability. The ISO expects that any new contract it enters to procure additional black start capability will require the ISO to compensate the resource owner to provide that capability. Based on feedback from stakeholders, Management proposes to amend the ISO tariff to define this cost as a reliability services cost. Under this new approach, the ISO will invoice the participating transmission owner where the black start resource is located, and the participating transmission owner will recover the cost from transmission customers under its reliability services tariff. This is how the ISO currently allocates the costs of reliability-must run units.

In order to exercise its tariff authority to contract for additional black start capability, Management recommends utilizing a competitive solicitation process. Management plans to describe this process in its request for proposal, which will include the following steps:

1. The ISO, in consultation with the applicable PTO, will develop a black start technical specification document that defines requirements and key selection criteria.
2. The ISO will conduct an onsite meeting with stakeholders to review the technical requirements and selection criteria and answer interested parties' questions.
3. The ISO will issue a request for proposals for incremental black start resources.
4. The ISO will apply the technical criteria and evaluate the proposals. The ISO will consult with the applicable PTO with respect to how each offer meets the technical requirements.
5. The ISO will apply its selection criteria and select the most technically and commercially viable offer based on the technical and cost data submitted. As part of this selection, the ISO will consider the nature of the costs and whether they are reasonable, as well as what assurances exist that the prospective black start resource will continue to operate over the term of the black start agreement.
6. The ISO will initiate a contracting process with the black start resource. The contract will be a three-party agreement between the ISO, the PTO and the black start resource.

In addition, Management proposes using a cost of service model for compensating black start resources. Under this approach, the black start service provider would submit its costs to the Federal Energy Regulatory Commission for acceptance under Section 205 of the Federal Power Act.

POSITIONS OF THE PARTIES

Stakeholders generally support or do not oppose Management's cost allocation proposal, which generally aligns with allocating the costs to those that benefit from the procurement of the black start capability. In response to stakeholder input, Management modified the steps it will take to evaluate bids in the competitive solicitation process and is working to make technical specifications and a sample black start agreement available to interested bidders.

Throughout the initiative, stakeholders agreed that the ISO should base compensation for black start capability on a cost-of-service model.

CONCLUSION

Management requests Board approval for this proposal. The proposed changes will enable the ISO to provide an estimated restoration time in the Greater Bay Area that is consistent with that of other major population centers in the state, while allocating the costs for these black start resources to customers who are receiving the benefits.