

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Marsh Landing LLC)
_____)

Docket No. ER20-1074

**MOTION TO INTERVENE AND COMMENTS OF THE CALIFORNIA INDEPENDENT
SYSTEM OPERATOR CORPORATION**

The California Independent System Operator Corporation (CAISO) respectfully files this motion to intervene and comments pursuant to Rule 214 of the Commission’s Rules of Practice and Procedure¹ and the Commission’s February 26, 2020, Notice of Combined Filings, in this proceeding. The CAISO requests that the Commission accept the Black Start Agreement between the CAISO and Marsh Landing LLC (Marsh Landing).

The Black Start Agreement will facilitate installing a battery electric storage system at the Marsh Landing Generating Station (MLGS), which is an existing simple cycle power plant. This battery system will support MLGS’s provision of black start service for a five-year term. This capability will significantly improve system restoration capabilities in northern California, especially in the San Francisco Bay Area, thereby saving life and property and mitigating the potential for catastrophic economic disruption to the region in the event of a system-wide power outage.

The CAISO selected MLGS to provide black start service through a competitive solicitation process in 2017 based on a number of factors, including, but not limited to, technical criteria and Marsh Landing’s indicative price bid. The parties have spent

¹ 18 C.F.R. § 385.214 (2018).

considerable time negotiating the terms and conditions for black start service based on CAISO tariff requirements and mandatory reliability standards.² The CAISO has reviewed and evaluated the costs to install black start capability at MLGS with the assistance of an independent consultant. The CAISO's consultant determined that the costs of the overall project are reasonable.

Notwithstanding the CAISO's consultant's findings, the CAISO acknowledges that the California Public Utilities Commission has expressed concerns with the costs of installing black start capability at MLGS under the Black Start Agreement. However, Marsh Landing's indicative bid in the competitive solicitation was lower than the bids of other feasible alternatives to provide needed black start capability. The Commission should balance any concerns raised in this proceeding with the fact that delay in issuing an order accepting the Black Start Agreement by May 1, 2020 will jeopardize the schedule to install black start capability at MLGS, thereby prolonging a solution to the reliability need in the San Francisco Bay Area. As explained in its filing, under its engineering procurement and construction contract, Marsh Landing must release its final notice to proceed by May 15, 2020.³ Without a timely order accepting the Black Start Agreement, Marsh Landing's engineering procurement and construction costs to install black start capability at MLGS could increase, and the project could face delays, thereby harming transmission customers in northern California.

² Although Pacific Gas and Electric Company (PG&E) is not a party to this agreement, PG&E supports acceptance of the agreement. PG&E will incorporate MLGS into its system restoration plan as a black start resource through operating procedures the parties will develop. Requirement 11 of EOP-005-03 provides in part:

“Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement.”

³ Marsh Landing transmittal letter in ER20-1074 dated February 25, 2020 at 5.

I. DESCRIPTION OF THE PROCEEDING

On February 25, 2020, Marsh Landing submitted, pursuant to Section 205 of the Federal Power Act, an agreement to provide the CAISO with black start service from MLGS. The CAISO is a signatory to the agreement. By its notice on February 26, 2020, the Commission established March 17, 2020 as the date for motions to intervene.

II. DESCRIPTION OF THE CAISO AND COMMUNICATIONS

The CAISO is a non-profit public benefit corporation organized under the laws of the State of California with its principal place of business at 250 Outcropping Way, Folsom, California 95630. The CAISO is a Balancing Authority and Transmission Operator responsible for the reliable operation of the electric grid consisting of the transmission systems of a number of utilities, including PG&E, as well as the coordination of day-ahead and real-time energy and ancillary services markets. The CAISO must comply with mandatory reliability standards applicable to Balancing Authorities and Transmission Operators, including EOP-005-3 that requires the CAISO to maintain a system restoration plan. Pursuant to Commission Rule of Practice and Procedure 203(b)(3), the CAISO respectfully requests that all communications and notices concerning this proceeding be provided to:

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III. CAISO INTEREST

As the Balancing Authority and Transmission Operator responsible for maintaining reliability of PG&E's transmission system that is part of the CAISO Controlled Grid, and as a party to the Black Start Agreement with Marsh Landing, the CAISO has a unique interest in any Commission proceeding that affects this Black Start Agreement. Accordingly, the CAISO has a direct and substantial interest in this proceeding and requests that it be permitted to intervene with full rights as a party. Because no other party can adequately represent the CAISO's interests in this proceeding, the CAISO's intervention is in the public interest and should be granted.

IV. COMMENTS

The CAISO strongly supports acceptance of the Black Start Agreement filed by Marsh Landing. Acceptance of the agreement will facilitate the installation of black start capability at the power plant and will enhance grid resilience in northern California by enhancing system restoration in the CAISO system.

A. Background

In 2016, as part of its efforts to review its system restoration plan and in consultation with participating transmission owners, the CAISO determined additional black start capability was necessary to ensure service restoration time in the San Francisco Bay Area is reasonably consistent with that of other major population centers

in California. Although mandatory reliability standards do not specify a restoration time during a black start event, the current restoration time for the San Francisco Bay Area far exceeds restoration times for other major metropolitan areas in California. As such, a need exists for additional black start support.

Recognizing that it might need to procure additional black start capability and that such procurement would create costs, the CAISO clarified the rules for allocating the costs of black start procurement. The CAISO tariff provides that it will allocate costs associated with procuring incremental black start capability to the participating transmission owner (PTO) in which the black start generator is located as Reliability Services Costs.⁴ The PTO will then recover these costs from transmission customers under its Reliability Services transmission owner tariff on file with the Commission.⁵ Even though PG&E is not a party to the Black Start Agreement with Marsh Landing, it is obligated under the Transmission Control Agreement to comply with the CAISO's tariff and make payments for the costs of black start capability that Marsh Landing will install at MLGS.⁶

B. Additional Black Start capability will enhance system restoration times in the San Francisco Bay Area

Additional black start capability is necessary to ensure service restoration times in the San Francisco Bay Area during a black start event are reasonably consistent with

⁴ *Cal. Indep. Sys. Operator Corp.*, 161 FERC ¶ 61,116 (2017).

⁵ CAISO tariff section 11.4.2; *see also* Appendix A to CAISO tariff, definition of Reliability Services Costs.

⁶ See section 16 of the Amended and Restated Transmission Control Agreement among the CAISO and Transmission Owners. A copy of this agreement is posted on the CAISO's website: <http://www.caiso.com/Documents/TransmissionControlAgreement.pdf>

that of other major population centers in California. Currently, the restoration times in San Francisco Bay Area are approximately twice as long as in Los Angeles and San Diego. Obtaining black start service from MLGS will dramatically reduce the time to restore service in the event of a widespread system outage.

The CAISO and PG&E's current system restoration plans for the San Francisco Bay Area rely on black start capability from facilities on PG&E's hydro-electric system. If a widespread system outage were to occur that requires implementing a black start procedure, the CAISO would need black start capability to restart other generation and restore power to the grid. Restoring generation and load requires a controlled process that balances the addition of generation with the addition of load. This process takes a longer time if a Black Start Resource is located remotely from other resources and loads. In the case of the San Francisco Bay Area, the restoration process requires additional facilities to be restored prior to energizing a 230 kV electric bus on the backbone 230 kV substation loop within the San Francisco Bay Area. By securing black start capability closer to this 230 kV substation loop (e.g., MLGS), the CAISO and PG&E will greatly improve system restoration times in the San Francisco Bay Area so they are comparable with other major metropolitan areas within the CAISO system. Any event that requires the CAISO to implement a black start procedure to restore load in the San Francisco Bay Area would have an exceedingly high, adverse impact on public safety and welfare. Reducing the amount of time needed to restore the electric system under these conditions would save lives and property and mitigate the potential for catastrophic economic disruption within the San Francisco Bay Area and northern California as a whole.

C. The CAISO selected MLGS to provide black start service based on multiple factors

Based on the need for black start to support system restoration the San Francisco Bay Area, the CAISO conducted a competitive solicitation process to assess the capability of generators to provide black start service and obtain indicative bids for the cost of providing this service. The CAISO identified technical requirements to determine whether the resource could qualify to provide black start service by energizing a dead transmission bus within a targeted timeframe and maintaining operation to facilitate the restoration of the 230 kV substation loop.

The CAISO received several proposals and applied multiple selection factors, including, among others, estimated service commencement date, locational diversity within a specified electrical area, and estimated cost of service and capital costs. The CAISO completed a comparative analysis and issued a report identifying the resources that qualified to provide black start service to meet the identified need. The CAISO selected two resources – MLGS and another resource located within the San Francisco Bay Area – as best suited to provide this service.⁷ These resources are well-positioned to help restart the system. Also, they have different electrical locations within the San Francisco Bay Area, thus providing alternative paths to restore the San Francisco Bay Area 230 kV substation loop.⁸

⁷ The CAISO selected Russell City Energy Center as the other resource to install black start capability. See *Russell City Energy Company, LLC*, 169 FERC ¶ 61,097 (2019); *Russell City Energy Company, LLC*, 169 FERC ¶ 61,193 (2019).

⁸ A copy of the CAISO's report that details its technical criteria and selection factors is available at the following link:
<http://www.caiso.com/Documents/GreaterBayAreaBlackStartServiceProviderFinalSelectionReport.pdf>

D. The CAISO tariff and mandatory reliability standards serve as the basis for the provision of black start service under the Black Start Agreement

For Marsh Landing to provide black start capability from MLGS to support the CAISO's and PG&E's system restoration plans, it must comply with a number of CAISO tariff requirements⁹ and NERC reliability standard EOP-005-03. These requirements include, among others, starting during a black start event without any support from the CAISO system, energizing a dead transmission bus with a target timeframe, maintaining minimum operating times, maintaining specified reactive power and voltage control capabilities, and implementing communications equipment and protocols. In addition, black start resources must meet specific testing and training requirements. These requirements formed the basis for the technical specifications in the Black Start Agreement negotiated by Marsh Landing and the CAISO. They also underpin the capital investment Marsh Landing must make and the operating and maintenance practices it will implement at MLGS.

E. The CAISO assessed project costs under the Black Start Agreement by engaging an independent evaluator

In addition to examining supporting documentation for Marsh Landing's project and development costs to install a battery electric storage system and related equipment, the CAISO engaged a consultant to assess the costs of equipment and labor required to install black start service under the agreement. The CAISO's consultant reviewed various capital and operational cost components, including the costs set forth in Marsh Landing's engineering procurement and construction contract.

⁹ See *generally* Appendix D of the CAISO tariff pertaining to Black Start Generating Units.

The consultant's overall approach was to verify the costs for each capital and operational cost category by using supporting documents such as contracts or statements of work, and a bottom-up estimate of the costs using its best judgment.

From the CAISO's consultant's point of view, the project represents a complex use of a battery system. As explained in Marsh Landing's filing, the battery system will be custom designed to start-up MLGS units during a black start event and will be used solely to enable the provision of black start capability. The design of the battery system will maintain a full charge, enabling it to provide black start service when needed. In addition, the battery system will not be located on a new site but must be constructed and integrated at the site of an existing power plant site. After reviewing all cost components, the CAISO's consultant observed that the overall capital cost of the project is higher than the nominal estimate it developed using a bottoms-up approach to estimate the costs of the project. However, given the complexity of this project which involves integrating a battery energy storage system at an existing power plant and maintaining that system to support black start capability over a five year period, the CAISO's consultant determined that the higher than average cost remains within a reasonable range. The CAISO's consultant also reviewed the calculations provided by Marsh Landing for the operating costs to provide black start capability as well as contracts and statements of work. Based on its expertise, the CAISO's consultant found these costs to be reasonable.

V. CONCLUSION

The Commission should issue an order by May 1, 2020 accepting the Black Start Agreement between the CAISO and Marsh Landing. The Black Start Agreement will benefit transmission customers by enhancing system restoration capability in the San Francisco Bay Area in the event of a wide-spread power outage that requires the CAISO to implement a black start procedure.

Dated: March 13, 2020

Respectfully submitted,

/s/ Andrew Ulmer

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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the captioned proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 13th day of March, 2020.

/s/ Martha Sedgley
Martha Sedgley