July 26, 2019

The Honorable Kimberly D. Bose
Secretary
Federal Regulatory Energy Commission
888 First Street, NE
Washington, DC 20426

Re: California Independent System Operator Corporation
Response to Deficiency Letter
Docket No. ER19-1641-___

Dear Secretary Bose:

On April 22, 2019, the California Independent System Operator Corporation (CAISO) filed tariff revisions to enhance its generator retirement provisions and reliability must-run (RMR) program, and to incorporate into the RMR framework its risk-of-retirement procurement authority currently under the capacity procurement mechanism (CPM) (April 22 Tariff Amendment). On July 19, 2019, the Commission issued a letter notifying the CAISO that it's April 22 Tariff Amendment is deficient and that additional information is necessary to process the filing (Deficiency Letter). The Commission requested the CAISO provide information as follows:[1]

Revisions to Section 41.1 of the CAISO tariff and Pro Forma RMR Contract:

CAISO proposes to revise section 41.1 of the CAISO tariff and section 4.1 of the pro forma RMR contract in Appendix G to the CAISO tariff to replace language that limits dispatch of RMR resources to meeting local reliability needs or managing congestion on non-competitive paths with language giving CAISO the right to issue any dispatch notice for any product and service. CAISO states that maintaining reliability on a rapidly transforming system might involve meeting flexible and system capacity needs besides the local capacity needs traditionally met by RMR resources. CAISO explains that examples of flexible and system capacity needs include insufficient system operating reserves to meet established reliability criteria, insufficient ramping capability to meet operational

[1] Per the Commission's Deficiency Letter, if the CAISO proposes no changes to tariff records, the CAISO can attach a single tariff record with no changes. The CAISO is proposing to modify the effective date of the proposed tariff changes, but notes that there are no substantive tariff changes. Accordingly, no clean or marked tariff attachments are included with this filing. Additionally, consistent with the Commission's Deficiency Letter, the CAISO is submitting the instant filing using Type of Filing Code 180 – Deficiency Filing.

criteria, and insufficient system inertia to meet planning and/or operational criteria. Please explain:

a. the criteria or types of criteria CAISO plans to use to determine whether a specific resource should be retained to meet system or flexible reliability needs under an RMR contract and that no other resource can meet these needs; and

b. whether and, if so, how CAISO will evaluate longer term solutions that will reduce the need for the RMR contract for system or flexible reliability needs.

CAISO Response to a:

As an initial matter, the CAISO notes that neither its existing tariff nor the proposed tariff revisions expressly mention using RMR to meet system and flexible capacity needs. As the CAISO indicated in its April 22 Tariff Amendment filing (and in the proposed tariff language), it will not use RMR to backstop system and flexible (and local) resource adequacy capacity deficiencies.[2] The CAISO will only use CPM to backstop for resource adequacy showing deficiencies.

CAISO tariff section 41.3 provides that "[i]n addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies as necessary, to ensure compliance with Reliability Criteria."[3] Reliability Criteria are defined in Appendix A of the CAISO tariff as "[p]re-established criteria that are to be followed to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions." Thus, the CAISO is only authorized to enter into RMR Contracts to meet North American Electric Reliability Council (NERC), Western Electricity Coordinating Council (WECC), or CAISO-established reliability standards that cannot be met without designated RMR resources.

The CAISO anticipates that local reliability needs in Local Capacity Areas will generally drive any RMR designations, but the CAISO must be able to utilize its RMR authority to designate a retiring resource that the CAISO needs to

[2] Revised CAISO tariff section 41.3.

[3] The CAISO performs Local Capacity Technical Studies to identify Local Capacity Areas and the amount of Local Capacity Area Resources (in MW) that must be available to the CAISO in each Local Capacity Area. *See* CAISO tariff section 40.3.1. A Local Capacity Areas is a transmission constrained area as defined in the Local Capacity Technical Study. *See* CAISO tariff Appendix A, definition of "Local Capacity Area." As indicated above, the CAISO's existing tariff expressly contemplates that the CAISO can perform other technical studies to support RMR designations "in addition to the Local Capacity Technical Study" as necessary to ensure compliance with Reliability Criteria.

comply with all Reliability Criteria. The CAISO discusses some Reliability Criteria that could necessitate RMR designations to meet reliability needs occurring outside of Local Capacity Areas.

The NERC "BAL" Reliability Standards are reliability requirements that pertain to resource and demand balancing, which must be maintained while serving load, and are imposed on balancing authorities, like the CAISO. These NERC Reliability Standards include BAL-001-2, BAL-002-3, and BAL-003-1.1. NERC Reliability Standard BAL-002-WECC-2a also sets specific levels for contingency reserves that balancing authorities in WECC also must meet. Meeting these Reliability Standards might require the CAISO to retain a retiring generator as an RMR resource.

For example, NERC Reliability Standard BAL-003-1.1 requires balancing authorities to have sufficient frequency response to help maintain interconnection frequency within predefined bounds. NERC Reliability Standard BAL-001-2 requires balancing authorities to operate such that Control Performance Standard 1 "is greater than or equal to 100 percent for the applicable interconnection in which it operates for each proceeding 12 consecutive calendar month period."[4] These Reliability Standards require the CAISO to manage frequency and frequency response across an entire calendar year, which includes managing ramping events at all times and not just during peak load conditions. A shortage of resources could impair the CAISO's ability to serve load and meet these Reliability Standard obligations. A CAISO study might show that it will have difficulty meeting these reliability requirements absent designating a retiring generator as an RMR resource.

NERC Reliability Standard BAL-002-WECC-2a requires balancing authorities to maintain a minimum amount of Contingency Reserve that is "the greater of either:

- The amount of Contingency Reserve that is equal to the of the loss of the most severe single contingency;
- The amount of Contingency Reserve equal to the sum of three percent of hourly integrated Load plus three percent of hourly integrated generation."[5]

A CAISO technical study might show that unit retirement would result in the CAISO having insufficient capacity to meet the requirements of NERC Reliability

[4] Standard BAL-001-2 – Real Power Balancing Control Performance, p. 1, available at http://www.nerc.com/files/BAL-001-2.pdf.

[5] WECC Standard BAL-002-WECC-2a – Contingency Reserves, p. 1, available at http://www.nerc.com/pa/Stand/Reliability%20Standards/BAL-002-WECC-2a.pdf.

Standard BAL-002-WECC-2a during the year absent designating a retiring resource as RMR.

NERC's Reliability Standard for transmission planning – TPL-001-4 – also provides a potential basis for the CAISO to enter into an RMR Contract with a retiring resource located outside of a Local Capacity Area. A CAISO planning study may identify thermal overload or voltage issues resulting from unit retirements on transmission facilities located outside of a Local Capacity Area. A Corrective Action Plan under NERC Reliability Standard TPL-001-4 can include generation to address an identified deficiency.

Further, local reliability needs may also be identified in areas that have not already been designated Local Capacity Areas, and these remain valid uses of RMR designations as needed. Some examples are also provided where the CAISO might need to procure an RMR resource located outside of a Local Capacity Area, or located outside of the existing Local Capacity Technical Study Criteria set out in the CAISO tariff.[6]

NERC Reliability Standards TPL-001-3 and TOP-001-4 set the overarching requirements for planning and operating transmission systems reliably. Further, the CAISO Planning Standards are an example of CAISO-established reliability standards that exceed the otherwise applicable NERC or WECC Reliability Standards. The primary guiding principle of the CAISO Planning Standards is to "develop consistent reliability standards for the ISO grid that will maintain or improve transmission system reliability to a level appropriate for the California system."[7] For example, the CAISO Planning Standards have an extreme event reliability standard for the San Francisco Peninsula, given the area's unique conditions, to mitigate the risk of extreme events.[8] On the other hand, NERC Reliability Standard TPL-001-4 does not require mitigation plans to be developed for extreme events.[9] Section 6 of the CAISO Planning Standards does not allow consequential load dropping in high density urban load areas[10] in lieu of expanding transmission or local resource capability to mitigate NERC Reliability Standard TPL-001-4 P1-P7 contingencies and impacts on the 115 kV or higher voltage systems.

---

6 CAISO tariff section 40.3.1.1.

7 CAISO Planning Standards, Section 1.

8 The CAISO Planning Standards also provide that the CASIO may consider other areas of the system on a case-by-case basis as part of transmission planning assessments. *Id.*, Section 7.

9 *Id.,* Section 7.1.

10 For purposes of the CAISO Planning Standards, a high density urban load area is not necessarily the same as a Local Capacity Area. Appendix A to the CAISO tariff, definition of "Local Capacity Area." *Id.,* p.8, fn. 3.

CAISO Response to b:

Under CAISO tariff section 41.3, the CAISO not only determines which resources it requires to become RMR resources, it also determines which resources "it no longer requires to be [RMR] resources."[11] When making this determination, the CAISO "will be evaluating whether there are any more cost-effective options that are available or may be made available to avoid the need for a[n] [RMR] Contract."[12] There are several avenues that the CAISO can explore to evaluate longer-term solutions to non-local reliability requirements that might mitigate the need for an RMR Contract.

First, the CAISO can coordinate with the California Public Utilities Commission (CPUC) through the integrated resource plan (IRP) process (or other resource procurement processes) to identify resource procurement/development required to address any reliability need. This can include*, inter alia,* new market-participating generation, storage, or demand response, whichever meets the particular reliability need. The CAISO actively participates in the CPUC's IRP process.

Second, the CAISO can consider in its transmission planning process both transmission and non-transmission solutions as alternatives to an RMR Contract. For example, the CAISO could consider potential transmission upgrades to connect to remote resources that could meet the reliability need. The CAISO could also consider transmission upgrades to alleviate internal constraints that limit access to generation in generation pockets.

Third, for deficiencies outside of a Local Capacity Area identified under NERC Reliability Standard TPL-001-4, longer-term solutions to an RMR Contract can include new transmission lines or transmission line upgrades, other types of transmission facilities, storage, new generation, demand response, or other non-transmission solutions.

Conclusion

The CAISO requests that the Commission issue an order by September 23, 2019 approving the CAISO's April 22 Tariff Amendment, with the tariff records effective September 28, 2019.[13] The CAISO does not propose any substantive changes to the tariff records, and accordingly, it includes no clean or

[11] As the CAISO indicated in its tariff amendment transmittal letter, the CAISO has approved "replacement" facilities that will allow it to terminate the few remaining RMR Contracts it has in the near future. April 22 Tariff Amendment, pp. 24, 36.

[12] CAISO tariff section 41.3.

[13] The proposed effective date is consistent with the Commission's notice requirement pursuant to *Duke Power Company,* 57 FERC ¶ 61,215 (1991).

marked tariff attachments with this filing. The CAISO's proposed tariff and *pro forma* RMR Contract revisions significantly enhance the generating unit retirement process and overall RMR construct. The CAISO urges the Commission to approve them promptly to provide certainty to market participants before the annual resource adequacy showings in October and the 2020 Resource Adequacy Compliance Year. Preparations in connection with any new RMR Contract(s) that will be effective January 1, 2020 must commence in September so the RMR Contract and all supporting documentation can be filed with the Commission by November 1, 2019, consistent with the 60-day notice requirement under the Federal Power Act. The CAISO and market participants need to know whether the existing or revised *pro forma* RMR Contract will apply heading into 2020 because the two contracts impose different requirements and obligations (including different supporting documentation requirements). Timely approval of the CAISO's filing will provide the CAISO and market participants with the significant benefits arising from new unit retirement notice requirements and a "modernized" *pro forma* RMR Contract.

Respectfully submitted,

/s/ Anthony J. Ivancovich

Roger E. Collanton
General Counsel
Anthony J. Ivancovich
Deputy General Counsel
Sidney L. Mannheim
Assistant General Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7135
Fax: (916) 608-7222
Email: aivancovich@caiso.com
smannheim@caiso.com

Counsel for the California Independent System Operator Corporation

CERTIFICATE OF SERVICE

I certify that I have served the foregoing document upon the parties listed on the official service list in the captioned proceedings, 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 26th day of July, 2019.

/s/ Grace Clark
Grace Clark