

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee the
Resource Adequacy Program, Consider
Program Refinements, and Establish Annual
Local and Flexible Procurement Obligations
for the 2019 and 2020 Compliance Years

Rulemaking 17-09-020
(Filed September 28, 2017)

**COMMENTS OF THE CALIFORNIA INDEPENDENT
SYSTEM OPERATOR CORPORATION**

Roger E. Collanton
General Counsel
Anthony Ivancovich
Deputy General Counsel
Anna A. McKenna
Assistant General Counsel
Jordan Pinjuv
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom California 95630
Tel.: (916) 351-4429
jpinjuv@caiso.com

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I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides comments on the Commission’s *Proposed Decision Clarifying Resource Adequacy Import Rules* (Proposed Decision) issued in this proceeding on September 6, 2019. The CAISO appreciates the opportunity to provide these comments.

II. Discussion

A. Background

The CAISO greatly appreciates the Commission’s efforts to ensure that all resource adequacy imports are supported by real, tangible capacity; however, the CAISO is concerned the proposed solution will not deliver the intended results and could harm the market and reliability.

Failure to ensure there are physical resources backing resource adequacy capacity can lead to significant degradation of CAISO systems at times of critical need. To mitigate the risk that comes from “speculative” supply, the Proposed Decision would require all resource adequacy imports to flow energy during the CAISO’s availability assessment hours. The CAISO believes this proposed solution will lead to inefficiencies in both the energy and capacity markets, will not achieve its intended objective, and runs counter to state environmental policy goals.

As noted in its comments to *Assigned Commissioner’s Ruling*,¹ the CAISO recommended

¹ *Assigned Commissioner’s Ruling Seeking Comment on Clarification to Resource Adequacy Import Rules* (July 3, 2019), Proceeding No. R.17-09-020 (RA Import Ruling).

that resource adequacy imports should only be subject to must-flow or must-take provisions if a resource receives a market-based dispatch from the CAISO. The CAISO noted that “[m]ust-take resources reduce the flexibility of system resources needed to operate the grid.”² The Proposed Decision notes “that market inefficiencies may result from this type of firm energy requirement.”³ The only example of such market inefficiencies provided in the Proposed Decision is self-scheduling during negative price intervals. However, as the CAISO describes in greater detail below, the Proposed Decision’s must-flow requirement would have numerous inefficiencies that may prove costly for ratepayers and impact system reliability.

The CAISO also appreciates the Commission’s efforts to continue clarifying the transmission requirements for resource adequacy capacity. The CAISO believes the Commission should use the North American Electric Reliability Corporation’s (NERC) terminology to define its standards to remove any ambiguity regarding firm transmission requirements.

B. Impacts of Must-Flow Requirements

In this section, the CAISO summarizes the material negative impacts that a resource adequacy must-flow requirement will have on California ratepayers. This list is not exhaustive, but it illustrates the potential unintended consequences that the must-flow requirement will have.

- **Imports would no longer meet ramping needs.** In the day-ahead market, import levels increase as the net load peak is reached and decrease after the net load peak. This shaping allows imports to follow changes in net load, helping the system meet daily, critical ramping needs. Given the direction of the Proposed Decision, the Commission would foreclose the ability for resource adequacy imports to help the CAISO shape net-load ramps. Instead, the Proposed Decision would enforce self-schedules of block imports when flexibility is necessary. The block energy takes flexibility away from the market and system operator.
- **The need for other dispatchable resources would increase.** Imports that participate in the CAISO with economic bids are shaped to balance changes in load and operate around inflexible, self-scheduled supply. Requiring self-

² CAISO’s Comments on RA Import Ruling (July 19, 2019), p. 2 (internal quotation marks omitted).

³ Proposed Decision, p. 9.

schedules for imports increases the need for flexible generation because it increases the amount of inflexible supply. In the event there is insufficient flexible supply, the market may be unable to reach an economic solution, resulting in administrative pricing at the bid floor or bid cap.

- **Imports would no longer be available to meet net load ramping or uncertainty needs.** The CAISO is developing new flexible resource adequacy products as well as a new day-ahead market product called Imbalance Reserves. Imbalance Reserves will help the CAISO address uncertainty between the day-ahead and real-time markets. Self-scheduled resources will be unable to provide imbalance reserves because the market will not be able to co-optimize a self-scheduled resource's energy and capacity. A driver for developing Imbalance Reserves was to procure real-time dispatch flexibility from imports. Scheduling Coordinators for imports incur costs to be available for real-time dispatch. For example, an import scheduled in the 15-minute market must submit an e-Tag prior to the operating hour with a transmission profile sufficient to cover its Imbalance Reserve awards. The Imbalance Reserves will provide the import with compensation to cover its cost to remain available for dispatch in real-time.
- **Increased instances of Energy Imbalance Market (EIM) resource sufficiency evaluation failure.** To benefit from EIM transfers with other balancing authority areas, the CAISO must first pass a capacity and flexible ramping sufficiency test.⁴ The capacity test ensures there are sufficient economic bids to cover differences between day-ahead schedules and the 15-minute CAISO demand forecast. The flexible ramping sufficiency test ensures acceptable ramp capability exists over a 15-, 30-, 45-, and 60-minute period. Large changes in intertie schedules that are inconsistent with the net load movement due to extensive self-scheduling would require more flexible resources for the CAISO balancing authority area to pass the flexible ramping sufficiency test.
- **Must-flow requirements will likely reduce the amount of available resource adequacy import capacity.** The energy associated with resource adequacy

⁴ The capacity test is set forth in CAISO Tariff section 39.34(l), and the flexible ramping sufficiency test is set forth in CAISO Tariff section 29.34(m).

import capacity is not necessarily economic on a daily basis. However, the Proposed Decision would essentially force resource adequacy importers to either price their capacity to account for a requirement to deliver uneconomic energy at times or sell that capacity elsewhere. For example, because prices can be negative during some of the must-flow hours, resource adequacy importers will have to factor in the costs of paying to deliver energy when the CAISO is actually curtailing self-scheduled resources. This will either increase resource adequacy capacity costs or decrease the amount of capacity provided by imports, potentially decreasing the amount of energy imported from zero greenhouse gas emitting northwest hydro. This will also decrease energy revenues to internal flexible generation, exacerbating early retirement of generators and capacity shortfall situations.

- **Market price distortions can result in increased capacity prices for internal resources.** Most generators rely heavily on energy market revenues to supplement capacity payments. The more revenues resources receive from energy markets, the lower capacity price they demand to ensure that fixed costs can be recuperated. However, if imports are forced to flow power into the CAISO during peak intervals, then the overall impact may result in a reduction in peak energy prices. This means that generators will be forced to increase capacity prices to compensate for the loss of energy market revenues.
- **Block delivery of resource adequacy imports may run counter to state policy objectives.** Inflexible block energy must be scheduled at the level needed to meet hourly peak demand. As a result, dispatchable resources will have to be scheduled at lower levels before and after the peak than would have occurred if the imports participated in the market economically. This can lead to additional renewable curtailment because the “PMin burden,” *i.e.*, the total generation resources dispatched to their minimum output levels, needed to meet peak will increase.

The must-flow requirement will have significant material impacts on energy and capacity markets that are not commensurate with the benefits gained by reducing speculative capacity. Based on the foregoing considerations, the CAISO recommends that the Commission modify the

Proposed Decision to remove the must-flow requirement for resource adequacy imports.

C. Firm Transmission Should be Defined Using NERC-Accepted Terms

The Proposed Decision currently reaffirms that resource adequacy imports should have firm transmission rights. Specifically, the Proposed Decision states that “the contracted energy product from the source balancing authority cannot be curtailed for economic reasons or bumped by a higher priority claim to the transmission.”⁵ The CAISO reads this statement to require firm transmission equivalent to NERC’s 7-F firm point-to-point transmission service.⁶ The CAISO requests the Commission confirm that these two standards are equivalent by noting that resource adequacy capacity should have 7-F firmness.

III. Conclusion

The CAISO appreciates the opportunity to provide these comments and recommends that the Commission modify the Proposed Decision to remove the must-flow requirement for resource adequacy imports.

Respectfully submitted,

By: /s/ Jordan Pinjuv

Roger E. Collanton
General Counsel
Anthony Ivancovich
Deputy General Counsel
Anna A. McKenna
Assistant General Counsel
Jordan Pinjuv
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom California 95630
Tel.: (916) 351-4429
jpinjuv@caiso.com

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⁵ Proposed Decision at pp. 10-11.

⁶ See NERC’s Transmission Service Reservation Priorities, <https://www.nerc.com/pa/rrm/TLR/Pages/Transmission-Service-Reservation-Priorities.aspx>.