

**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 POWEREX CORP. ON LIMITED REHEARING OF
DECISION 19-10-021**

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Pursuant to *Administrative Law Judge’s Email Ruling Setting Process and Schedule for Limited Rehearing of Decision 19-10-021*, issued on March 20, 2020, Powerex Corp. (“Powerex”) hereby provides these comments. Powerex appreciates the opportunity to comment on the issues set forth by the March 12, 2020 Decision 20-03-016, *Order Granting Limited Rehearing of Decision 19-10-021* (“March 12 Rehearing Order”) issued by the California Public Utilities Commission (“Commission”).

Powerex concurs fully with the Commission’s previous determination that steps should be taken to ensure that contracts that count towards meeting California resource adequacy (“RA”) requirements represent the forward commitment of real physical capacity, and with the Commission’s determination on rehearing that insufficient evidence exists to support key elements of Decision (“D.”) 19-10-021. Powerex offers comments on the Commission’s distinction between resource-specific and non-resource-specific import RA contracts and its imposition of a self-scheduling requirement on the latter, outlining in particular how D.19-10-021 can be modified to ensure that physical capacity from external resources will be committed and available to serve load within California when called upon.

Powerex’s comments address four key points:

First, as a threshold matter, the Commission will be able to ensure resource adequacy in the coming years only if it considers and specifically addresses both the needs of the California Independent

System Operator Corp. (“CAISO”) grid and what is required to make RA participation workable for external entities with surplus physical capacity that can be committed to California on a forward basis. Such an approach has the potential to maximize the volume of potential import RA capacity available to LSEs, which will necessarily also minimize costs to California ratepayers. Contracting for RA with external resource suppliers represents the “low hanging fruit” for California ratepayers as it can ensure cost-effective resource adequacy by avoiding the substantial costs associated with building new resources.

Second, the Commission should determine that the definition of “resource-specific” resources should not be limited to only pseudo-tied or dynamically scheduled external resources; such a limited definition would be overly restrictive, highly unworkable, and is not necessary to ensure that RA contracts represent the forward commitment of real physical resources. In particular, adopting such a definition would unnecessarily limit California’s access to over 4,700 MW of physical capacity from the Pacific Northwest (“PNW”),¹ since pseudo-tie and dynamic scheduling arrangements, with limited exception, are unavailable on the external transmission paths connecting PNW resources to California. In addition, such arrangements are completely unworkable for the multi-facility coordinated hydro systems of the PNW, which represent the primary source of available external surplus capacity. Rather than adopting a needlessly restrictive definition of resource-specific import capacity, the Commission can achieve its primary objective—to ensure that capacity committed to meet RA requirements “can be relied upon to perform”²—by adopting a definition of resource-specific that, in coordination with the CAISO, will ensure that all RA contracts are supported by the forward commitment of real, identified

¹ See California ISO Maximum RA Import Capability for year 2020 (showing the Maximum Import Capability of 3,130 MW at MALINE500; 1,559 MW at NOB_ITC; and 80 MW at CASCADE_BG), <http://www.caiso.com/Documents/ISOMaximumResourceAdequacyImportCapabilityforYear2020.pdf>.

² D.05-10-042, mimeo at 103 (Conclusion of Law No. 3).

physical capacity. Requiring delivery to be arranged on Firm transmission, rather than limiting delivery to pseudo-tied or dynamically scheduled arrangements, will strongly support this objective.

Third, the Commission should eliminate the self-scheduling requirement. As described below, adopting a self-scheduling requirement will in no way serve the Commission’s objective of ensuring that all RA contracts “can be relied upon to perform,” because the act of self-scheduling does not require or result in the forward commitment of genuine physical supply. Instead, a self-scheduling requirement will create a quagmire of operational and economic challenges in the CAISO markets.³ Ensuring that import RA contracts can be relied upon to perform is better ensured through contract provisions that require sellers to (a) identify and commit real physical capacity on a forward basis, and (b) commit to arrange delivery on Firm transmission from the applicable generation resource to the CAISO boundary when called upon. Imposing such contractual requirements is wholly within the Commission’s authority and provides the clearest means to resolve the issue the Commission originally identified as its key concern.

Fourth, the Commission should eliminate non-resource-specific contracts from the RA program altogether, to ensure only genuine physical capacity participates in the RA program. All import RA contracts should be resource-specific (*i.e.*, backed by identifiable, surplus, physical generation capacity

³ As explained in detail in Powerex’s application for rehearing, Powerex believes that adopting a self-scheduling requirement would intrude upon the Federal Energy Regulatory Commission’s (“FERC”) jurisdiction and violate the U.S. Constitution. Specifically, Powerex’s application for rehearing argued that D.19-10-021 (i) constitutes an unlawful intrusion on, and thus is preempted by, FERC’s jurisdiction over wholesale markets under the Federal Power Act in violation of the Supremacy Clause of the U.S. Constitution; (ii) violates the Commerce Clause as an undue restraint on interstate commerce; (iii) violates the Equal Protection Clause by imposing new and unfair rules on out-of-state entities; (iv) violates the Due Process Clause by materially modifying RA requirements without affording entities reasonable notice and opportunity for comment; and (v) constitutes an unlawful Taking of property without just compensation. Because those claims by Powerex were not included among the claims on which the Commission granted limited rehearing in the March 12 Rehearing Order, Powerex expressly preserves its rights to pursue those claims in any appropriate manner and forum.

that requires the delivery of Firm energy on Firm transmission when called upon, including through pseudo-tie, dynamic and non-dynamic scheduling arrangements).

I. FACTORING IN THE NEEDS OF THE CAISO GRID AND EXTERNAL SUPPLIERS WITH REAL, DELIVERABLE, SURPLUS CAPACITY WILL ENSURE THE GOALS OF THE RA PROGRAM ARE REALIZED

Truly achieving reliability while concurrently minimizing costs to California ratepayers requires not only consideration of the reliability needs of the CAISO grid, but also what is required to make participation workable for external entities with surplus physical capacity that could be committed on a forward basis. As the Commission evaluates modification of the rules governing RA imports, it is critical that the Commission take into account the needs and key considerations of the substantial group of external resource suppliers that actually have the ability to help California meet its reliability needs. Taking into account the needs and interests of these suppliers is necessary to maximize the participation of real physical and deliverable capacity in the RA program, thereby allowing California to maintain reliability and minimize costs to its ratepayers. But a failure to recognize and take into account these needs and interests has the potential to substantially impede participation by real physical suppliers, which in turn means that one or more of the following are likely to occur:

1. California ratepayers will face excess costs associated with building new resources, when existing external resources could have met the same RA needs, but were discouraged and/or prevented from participating;
2. California load-serving entities (“LSEs”) will contract with marketers selling “paper capacity” RA, which does not commit real physical resources and hence are likely to fail to perform when California is most in need of resources to ensure reliability; and/or
3. California LSEs will simply be unable to comply with their RA requirements.

To prevent any of these undesirable outcomes from occurring, it is helpful to first examine the two major regions adjacent to California that might be the source of potential import RA: the Desert Southwest and PNW.

Similar to California, the Desert Southwest region is retiring significant amounts of fossil generation and installing new renewable resources, particularly solar resources. Given this rapidly changing resource mix, the Desert Southwest region can no longer be expected to have any significant ability to supply additional RA to California beyond those resources already under contract to California LSEs (*i.e.*, the Palo Verde Nuclear Generating Station, Hoover and the Intermountain Power Project).

The PNW region is also retiring significant fossil generation, but there are numerous hydro utilities that still have surplus capacity that could be committed on a forward basis to supply California's reliability needs. However, and as described in Section II, requiring either a pseudo-tie or dynamic scheduling arrangement would eliminate PNW participation, as such arrangements are, with limited exception, generally not available on the major transmission paths connecting PNW resources to California, and are not workable for the multi-facility coordinated hydro systems in the PNW. Accordingly, factoring in both the reliability needs of the CAISO grid and also the requirements to enable PNW resources to commit surplus capacity on a forward basis to California is essential to ensuring a reliable, robust supply of external resources participating in the RA program.

II. THE COMMISSION SHOULD CLARIFY THAT RESOURCE-SPECIFIC CONTRACTS ARE NOT LIMITED TO DYNAMICALLY-SCHEDULED OR PSEUDO-TIED RESOURCES

D.19-10-021 does not define "resource-specific" and "non-resource-specific," but imposes particular requirements that depend on which of the aforementioned categories a resource falls into. Energy Division Staff has proposed that "resource-specific" be limited only to dynamically-scheduled or pseudo-tied resources.⁴ While RA requirements must be changed to ensure physical capacity is deliverable,⁵ the Commission should not require either pseudo-tie or dynamic scheduling arrangements because such arrangements are neither necessary to ensure reliability nor workable for potential

⁴ See, *e.g.* CPUC Energy Division Staff Resource Adequacy Import Proposal, R.19-11-009 at 4 (Feb. 28, 2020).

⁵ See Section III, *infra*.

suppliers of physical capacity from PNW hydro entities, and would thereby reduce supply options for California LSEs and increase the costs to California ratepayers of meeting RA requirements.

A. Requiring a Pseudo-Tie Arrangement Is Unworkable for Multi-Facility Coordinated Hydro Systems in the Pacific Northwest

Requiring a pseudo-tie arrangement would be highly unworkable for multi-facility coordinated hydro systems in the Northwest. The effect of a pseudo-tie would be to “move” a physical unit from its home balancing authority area (“BAA”) to the CAISO BAA and would require operating the pseudo-tied resource on a “stand-alone” basis. This is fundamentally inconsistent with the operation of multi-facility hydro systems, in which individual generation resources are managed on a coordinated basis in order to optimize the operation of the system as a whole. For that reason, a pseudo-tie does not represent a viable scheduling option for PNW multi-facility hydro systems.

B. Requiring a Dynamic Scheduling Arrangement Would Limit California’s Access to Resource-Specific RA from the Pacific Northwest

Requiring dynamic scheduling would also significantly limit California’s ability to access over 4,700 MW of real physical supply from the PNW. It is important to recognize that dynamic scheduling capability on transmission paths between the PNW and California is severely limited, as it is enabled for only 600 MW, and only on the California-Oregon Intertie (“COI”).⁶ The amount of dynamic scheduling capability available represents less than 20% of CAISO’s COI capacity (3,200 MW), and about 12% of the total Firm transmission on the COI (4,800 MW).

But even the limited amount of dynamically-scheduled deliveries that are technically possible would almost certainly be unworkable for supporting forward contracts under California’s RA program, for at least two reasons:

⁶ There is no dynamic scheduling capability on the Pacific DC Intertie (3,100 MW total; 1,622 MW to CAISO).

First, all of the dynamic scheduling capability available on the COI is currently made available to support transfers in the Energy Imbalance Market (“EIM”). But dynamic transfers in the EIM occur between participating areas of the EIM, and do not deliver the output of a specific resource or group of resources, as would be necessary to ensure performance of a resource-specific forward contract under the RA program.

Second, all transmission customers with Firm transmission rights on the COI are eligible to request dynamic scheduling capability for the use of those rights. The allocation of limited dynamic scheduling functionality among the Firm transmission customers that request this ability occurs one day at a time, under a *pro rata* allocation framework. Any particular transmission customer therefore faces significant uncertainty regarding the quantity of dynamic scheduling capability they will be allocated each day, or whether they will be allocated any at all. As a result, it would not be possible for a transmission customer to commit to any specific level of dynamic scheduling capability on a forward basis, such as would be required under an RA contract.

C. Pseudo-Tie and Dynamic Scheduling Arrangements Are Not Necessary To Achieve The Objectives Of The RA Program

In addition to being highly unworkable, adopting a narrow definition of resource-specific that is limited to pseudo-tied and dynamically scheduled resources is not necessary in order to ensure that RA contracts can be counted upon to meet California’s reliability needs. The only material difference between deliveries that are pseudo-tied or dynamically scheduled and deliveries on “static” transmission is that the former can be dispatched on a 5-minute basis. While the ability to be dispatched on a 5-minute basis may be a valuable characteristic for specific types of flexibility services, it is unnecessary and irrelevant for providing capacity to meet peak demand, which is the core objective of the System RA program.

In its proposal to require a pseudo-tie or dynamic scheduling arrangement for “resource-specific” contracts, Energy Division Staff has not identified 5-minute dispatch capability as its rationale for this proposal. Instead, Energy Division Staff has pointed to the availability of real-time telemetry, visibility into the underlying resource, and the ability to exceptionally dispatch the resource⁷; but none of these attributes are inherently limited only to resources that deliver their output through pseudo-tied or dynamically scheduled transmission. If these attributes are important to ensuring resources committed under the RA program will be able to perform when needed—and Powerex agrees that certain of the attributes that have been identified by Energy Division Staff are—then the Commission and CAISO should incorporate them as requirements for all RA resources, *regardless of transmission scheduling granularity*.

As further discussed below, the CAISO and Powerex have submitted specific proposals in Rulemaking (“R.”) 19-11-009 that would provide for visibility into the specific resource or group of resources supporting each RA contract, including sharing of operational data and a daily e-Tag submission to verify that the capacity was indeed available and deliverable if needed by the CAISO.⁸ These proposals would also authorize the CAISO to exceptionally dispatch the identified resources, comparable to RA resources located within the CAISO grid.⁹ The Commission should consider the proposals set forth by the CAISO and Powerex to formulate specific attributes to ensure the Commission can rely upon forward committed capacity to be delivered when called upon and collaborate with the CAISO to establish these attributes.

⁷ R.19-11-009, Energy Division Track 1 Proposal, *Report on Resource Adequacy Imports* at 28-29 (February 2020), <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M328/K292/328292363.PDF>.

⁸ See R.19-11-009, CAISO Track 1 Proposal at 3-6 (Feb. 28, 2020); R.19-11-009, Powerex Track 1 Proposal at 19 (Feb. 28, 2020).

III. THE SELF-SCHEDULING REQUIREMENT FOR NON-RESOURCE-SPECIFIC CONTRACTS SHOULD BE ELIMINATED

A. The Self-Scheduling Requirement For Non-Resource-Specific Contracts Will Not Lead to the Commitment of Real Physical Capacity

The requirement to self-schedule energy deliveries imposed by D.19-10-021 does not address the risks of “speculative supply” from non-resource-specific RA contracts, the very problem D.19-10-021 sought to address.¹⁰ Even with a self-scheduling requirement, a marketer would continue to be able to enter into an RA contract without committing any physical capacity on a forward basis to support its obligation, and instead rely on its ability to purchase energy in the short-term bilateral markets to support any delivery obligations under its RA contract. Thus, even with a self-scheduling requirement, California consumers would continue to be exposed to the risk that energy may not be available for purchase in the short-term markets when it is most needed.

It will generally always be cheaper for marketers to speculate on their ability to acquire supply in the short-term markets than to invest in real physical capacity and firm transmission, even if it means that they may be required to pay a modest penalty or liquidated damages in perhaps a handful of critical hours when they are unable to obtain the energy necessary to support deliveries to California. As a result, even with a self-scheduling requirement, it is highly likely that a significant quantity of external marketers will continue to sell “paper capacity” to California LSEs.

At the same time, the significant risks and uncertainties associated with a self-scheduling requirement will greatly reduce the quantity of suppliers with real physical capacity that will be willing to provide capacity to California in the first place.¹¹

¹⁰ D.19-10-021, mimeo at 3.

¹¹ *See, e.g.*, R.17-09-020 Comments on Proposed Decision: CAISO Comments at 2; Powerex Comments at 8-10; AReM Comments at 4; Calpine Comments at 2; CalCCA Comments at 8-9; Middle River Power Comments at 1-5 (Sept. 26, 2019).

B. A Self-Scheduling Requirement Would Create Operational Challenges And Market Distortions

The Commission has recognized that the RA program’s goal of ensuring that “capacity is available when and where it is needed means that the [RA] program design must be consistent with the CAISO’s operational needs.”¹² As Powerex, the CAISO, and other parties have explained, however, adopting a self-scheduling requirement would create new operational challenges for the CAISO and undermine the efficient functioning of the market in several respects:

- *First*, a self-scheduling or must-deliver requirement would compel deliveries to the CAISO grid even when the CAISO market price is less than the seller’s actual cost of delivering the energy. The financial losses anticipated from such uneconomic deliveries will result in increased prices for RA contracts, or a reduction in the willingness of sellers to enter into RA contracts, or both. This will translate to increased RA costs to California ratepayers.
- *Second*, adopting a self-scheduling or must-deliver requirement will increase congestion on the CAISO interties and create new operational challenges by reducing the flexibility of imports, increasing the need for CAISO to obtain flexibility from other dispatchable resources, and increasing renewable curtailment.
- *Third*, requiring self-scheduling will lead to the operation of higher-cost and higher-emitting resources to meet California’s needs, effectively preventing CAISO from obtaining electricity from the most efficient resources available.
- *Fourth*, requiring self-scheduling will block economic transfers and impede greater regional coordination and cooperation.
- *Finally*, adopting a self-scheduling requirement would interfere with the efficient and equitable use of transmission under the Open Access Transmission Tariff (“OATT”) framework on external systems, effectively allowing entities that have secured RA commitments with holders of CAISO import capability to “step ahead” of those customers that have secured firm transmission reservations under the OATT framework.

IV. THE COMMISSION SHOULD ADOPT REQUIREMENTS THAT ENSURE THAT ALL IMPORT RA CONTRACTS ARE RESOURCE-SPECIFIC

To ensure reliability, the Commission should require that all import RA contracts be “resource-specific,” and require the forward commitment of real physical capacity that is deliverable to the CAISO. To achieve reliability at least cost to California ratepayers, the Commission should define

¹² D.05-10-042, mimeo at 10.

“resource-specific” in a manner that is workable for as broad a set of potential suppliers of real physical capacity as possible. The Commission should not needlessly limit these options by imposing requirements that are unrelated to ensuring that “capacity can be relied upon to perform.” For this reason, Powerex urges the Commission not to link “resource-specific” to either pseudo-tie or dynamic scheduling arrangements, and also to abandon any further efforts to pursue a self-scheduling requirement.

The CAISO and Powerex have put forward specific requirements in R.19-11-009 that would achieve this objective. These requirements are summarized in the table below, and described in detail in the Track 1 proposals submitted by Powerex and CAISO.¹³

¹³ See R.19-11-009, CAISO Track 1 Proposal (Feb. 28, 2020); R.19-11-009, Powerex Track 1 Proposal (Feb. 28, 2020).

Category	Requirement	Purpose	CAISO	Powerex
Time of RA Showing	Upfront identification of physical resource(s) supporting RA Contract	Ensure forward commitment of physical capacity	Yes	Yes
	Representation that resource is expected to be surplus to needs of Source BA and any commitments to other entities	Ensure physical capacity is not double-counted	Yes	Yes
	Commitment that all deliveries will be Firm Energy and supported by necessary contingency reserve <i>and</i> balancing reserves	Ensure capacity can be relied upon to be delivered when called upon		Yes
	Commitment that deliveries will be scheduled on Firm or Conditional Firm (7-F) transmission rights from source to the designated CAISO intertie	Ensure delivery will be on transmission service not already committed to a higher-priority use	Yes	Yes
General Requirements for CAISO Market Participation	Registration of resource (or aggregation of resources) with CAISO	Enable participation in CAISO market as a Resource-Specific Resource	Yes	Yes
	Import Bid Cost Verification for bids over \$1,000/MWh	Ensure comparability to internal resources	Yes	Yes
	Local Market Power Mitigation (and DEB Registration)	Ensure comparability to internal resources		Yes
Day-Ahead Obligations	Day ahead Must-Offer Obligation for all hours of RA contract period	Requirement to make RA resource available to CAISO in each hour	Yes	Yes
	Approved Day ahead e-Tag for every hour of the operating day	Allow CAISO to verify that the RA resource identified at time of showing is actually being made available	Possibly	Yes
	Firm (or Conditional Firm) Transmission from Source to CAISO intertie for full RA contract quantity	Allow CAISO to verify that the RA resource is deliverable on firm transmission service	Yes	Yes
Real-Time Obligations	Real-Time Must Offer Obligation for all hours with DA market award	Requirement to make RA resource available to CAISO in each hour with day-ahead award	Yes	Yes
	Exceptional Dispatch Obligation during AAH Hours (unless intertie is full on Day-Ahead basis)	Ensure access to resource in hours most needed by CAISO BAA		Yes
	Approved DA e-Tag must remain in place for each hour with a real-time obligation (and for full quantity)	Allow CAISO to verify that RA resource continues to be available to meet all real-time obligations	Possibly	Yes
	Real-time data-sharing and monitoring (e.g., telemetry)	Ensure committed resource capability remains available to the CAISO through the operational timeframe	Yes	Yes

Powerex encourages the Commission to work with the CAISO to modify import RA requirements in a manner consistent with the proposals set forth above.

Respectfully submitted,

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