

**Comments of Powerex Corp. on  
Flexible Resource Adequacy Criteria and Must Offer Obligations Phase 2  
Second Revised Flexible Capacity Framework**

Submitted by	Company	Date Submitted
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Powerex appreciates the opportunity to provide comments on the April 27, 2018 Flexible Resource Adequacy Criteria and Must Offer Obligation – Phase 2 Second Revised Flexible Capacity Framework (“Second Revised Framework”), and on information presented at the May 3, 2018 stakeholder meeting in this initiative (“Presentation”). Powerex appreciates the extensive dialogue and engagement in this stakeholder process to date. Powerex continues to support the conceptual elements of the Second Revised Framework, and believes these principles could form the basis of a sound and robust Flexible Resource Adequacy (“Flexible RA”) framework that could ensure that CAISO has sufficient capacity available to meet flexible ramping needs in a cost effective manner.

Powerex has significant concerns, however, about the manner that these principles are proposed to be implemented. A Flexible RA program, no matter how sound its conceptual underpinnings, will fail to meet its goals if *either* demand is materially understated or if supply is materially overstated. Although Powerex believes the Second Revised Framework theoretically provides a sound framework for addressing flexible capacity needs, Powerex is concerned that, as applied, the framework will systematically overstate the amounts of flexibility that can actually be provided by existing in-state resources as a result of two design flaws:

1. Reliance on resource characteristics contained in the Master File, rather than requiring resources to demonstrate flexibility under real-world conditions (as CAISO requires for resources providing spinning reserve, for instance); and
2. Failure to account for planned and forced unit outages or de-rates. The Second Revised Framework neither de-rates the quantity of Flexible RA that a resource may sell, nor does it increase the quantity of Flexible RA that LSEs must procure to account for planned and forced generation outages. Instead, the Second Revised Framework merely requires “substitution,” without any measures to ensure that substitute resources with the required flexible attributes will, in fact, be available

Powerex urges the CAISO to reconsider its approach to these specific issues. If supply is substantially overstated, the Flexible RA program will do little to ensure CAISO operators have access to the resources needed to reliably and safely operate the grid in real-time. The shortcomings of the Second Revised Framework will instead require CAISO operators to rely excessively on short-term measures, including relying on voluntary supply offers at the CAISO interties, offers of day-ahead imbalance reserve, as well as potentially leaning on flexible capacity through the EIM (notwithstanding the EIM's resource sufficiency requirement, which is not effective at preventing such leaning due to multiple gaps in how the evaluation is applied to the CAISO BAA<sup>1</sup>). While Powerex agrees that it is appropriate for CAISO to use these short-term measures *to position and schedule resources* to ensure that CAISO is able to meet its energy and capacity needs in real-time, such short-term measures are not an appropriate substitute for steps to *ensure*, on a forward basis, an adequate level of resources is installed and committed to being available in the first place.

An effective Flexible RA program must also address the current allocation of Maximum Import Capability ("MIC"). The MIC allocation was originally intended to ensure that LSEs' contracts for RA capacity from external resources did not exceed the capability of the intertie where the supply would enter the CAISO grid. However, there is rapidly mounting evidence that the allocation process has resulted in the vast majority of intertie capacity being allocated to a small number of incumbent LSEs, who do not utilize their full allocated MIC to support RA contracts. Rather than ensuring that RA contracts with external resources do not exceed intertie capability, the MIC allocation has effectively become a critical barrier that blocks cost-effective RA procurement from external resources. This increases costs to California consumers, particularly customers of smaller or new LSEs who are unable to obtain MIC at desired delivery points, and are forced to meet their RA requirements under higher-cost arrangements. It also enables internal resources to charge more for RA, since stranded MIC allocation reduces direct competition from external resources. This is manifest in different prevailing prices for System RA procured from internal resources and from external resources, despite the paths available for delivery of System RA from external resources repeatedly not being close to fully utilized.<sup>2</sup>

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<sup>1</sup> Powerex recently submitted extensive comments on the gaps it believes exist in the current resource sufficiency tests, and their potential implications, particularly for the CAISO BAA. See <http://www.caiso.com/Documents/PowerexComments-RS-EnergyImbalanceMarketOfferRulesTechnicalWorkshop-Apr30-2018.pdf>

<sup>2</sup> It is Powerex's understand that, in other forward capacity markets, price separation between regions, or between internal and external regions, occurs only if the limits on capacity procurement between regions have actually been reached. As has been repeatedly documented by the California Public Utilities

Finally, Powerex believes two aspects of the Second Revised Framework’s determination of flexible capacity needs require clarification. First, Powerex requests that CAISO explain the significant reduction in the estimated need for 5-minute flexible capacity. Second, while Powerex agrees that intertie awards that cannot be delivered due to circumstances beyond the control of a supplier (e.g., unit outages or transmission de-rates) are properly viewed as a source of imbalances that the CAISO must be prepared to balance in real-time, Powerex does not agree that it is appropriate to use Flexible RA (or other reserve procurements) to backstop CAISO’s acceptance of speculative supply at its interties.

**I. The Benefits Of The FRAC-MOO Conceptual Framework Will Be Negated If Supply Is Overstated**

The Second Revised Framework describes the manner in which the CAISO will define the quantity it needs for each of three types of flexible resources. The determination of the required quantity of each product is based on an analysis of the most severe actual grid conditions the CAISO has experienced. As the CAISO explained at the stakeholder meeting, it “must be prepared to address the largest uncertainties that occur with the shortest notice.”<sup>3</sup> Consequently, the total flexible capacity needs will be set based on the maximum absolute value of forecast monthly imbalances.<sup>4</sup> The requirements are further broken down for 15-minute flexibility (based on the maximum forecast imbalance, plus incremental flexible ramping need) and for 5-minute flexibility (based on the average quantity of flexible ramping product uncertainty need).

Powerex supports the CAISO’s proposal to define flexibility needs based on careful analysis of the actual “real-world” ramping needs experienced over different time intervals in each month. Powerex is concerned, however, that this same empirical “real-world” approach is not reflected in the manner that CAISO proposes to qualify the amount of flexibility that internal resources are qualified to provide. Failing to put in place measures to ensure that a resource is actually capable of providing the full amount of flexibility that it *commits* to providing can render the Flexible RA program ineffective, leaving the CAISO no better able to manage the grid’s ramping challenges.

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Commission in its reports on resource adequacy, the amount of System RA actually procured from external resources is only a fraction of the quantity that could be procured if intertie capability were fully (or even substantially) utilized.

<sup>3</sup> Presentation at 17.

<sup>4</sup> Presentation at 17.

Powerex believes there are at least three major gaps in the Second Revised Framework related to the eligibility of resources to provide Flexible RA capacity that must be addressed.

**A. The Ability Of Resources To Provide Flexible Capacity Should Be Subject To Real-World Demonstration, Similar To The Requirements For Ancillary Services**

In its prior comments in this initiative, Powerex recommended that resources be required to make a demonstration of their ability to provide flexible capacity prior to being qualified to provide a particular product.<sup>5</sup> Powerex noted that reliance on technical attributes contained in the master file for each resource may significantly overstate the resources' real-world capabilities. And given that Flexible RA is procured to ensure reliability on a forward basis, reliance on theoretical attributes could undermine reliability if those attributes are overstated. Powerex noted that resources must currently go through a certification process, including real-world demonstration of response capabilities, in order to be qualified to provide spinning reserve in the CAISO markets. A similar approach was suggested for qualifying resources to provide each of the proposed Flexible RA products.

In the Second Revised Framework, CAISO rejects the need for any such verification of resource capabilities.<sup>6</sup>

While the ISO understands the concerns raised by Powerex and BPA, the ISO believes that the development of the imbalance reserves will ensure sufficient flexibility is maintained in [the] day-ahead market to address flexible capacity needs in real-time. As a result, the ISO's current analysis . . . shows that resource commitments and imbalance reserves awards can ensure flexibility is available in real-time. In short, imbalance reserves will provide for a more efficient use of system flexibility, while FRACMOO2 will ensure sufficient capacity is available to address the imbalance needs.<sup>7</sup>

Powerex believes that this response misses the point. Powerex agrees that the day-ahead imbalance reserve product can help ensure *available* resources are *positioned* more efficiently than they are today. However, the imbalance reserve product will only be able to position resources that actually make themselves available each day and does

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<sup>5</sup> *Comments of Powerex Corp. on Flexible Resource Adequacy Criteria and Must Offer Obligations Phase 2 Revised Flexible Capacity Framework*, (February 21, 2018), at 5-9. Available at: <http://www.caiso.com/Documents/PowerexComments-RevisedDraftFlexibleCapacityFrameworkProposal.pdf>.

<sup>6</sup> Second Revised Framework, at 24 and 38.

<sup>7</sup> Second Revised Framework at 39.

not provide any assurance that sufficient resources actually will be available to allow CAISO to maintain reliability. The purpose of the Flexible RA program is to ensure that sufficient resources *are* made available by contracting with resources on a year-ahead basis. The Flexible RA program can only achieve this objective if the resources that *sell* flexible capacity on a year-ahead basis are, in fact, able to physically respond in the specified manner. It is of little value to procure 100 MW of 5-minute Flexible RA from a resource that is only capable of increasing its output by 60 MW over the required time interval. Powerex reiterates its concern that the Second Revised Framework does not propose any mechanism to verify the capabilities of resources prior to relying on them to help manage reliability in real-time.

As noted in Powerex's prior comments, there is a major inconsistency between the flexible capacity that CAISO calculates is available from existing in-state resources—which significantly exceeds the amount the CAISO estimates it would need to manage imbalances in real-time—and the numerous instances in which CAISO has experienced significant operational challenges balancing load and generation. It simply seems implausible to claim that the existing grid has the ability to move over 10,000 MW from one 5-minute interval to the next,<sup>8</sup> when net *hourly* load ramps that are far smaller are causing significant operational challenges.

Powerex respectfully requests that CAISO reconsider developing criteria and verification procedures to ensure that the Flexible RA products that a resource is qualified to sell are supported by the demonstrated real-world capabilities of the resource.

#### **B. The FRAC-MOO Framework Must Account For Planned And Forced Outages Of Resources Providing Flexible RA**

The quantity of Flexible RA product that resources can provide is based on the effective flexible capacity of each resource, which is limited by the resource's total net qualifying capacity. Neither of these measures account for the *availability* of a resource, however. This is potentially very problematic, since the procurement requirements for Flexible RA are proposed to be based on the quantity of flexible capacity the CAISO actually anticipates to require at some point during each month. That is, ***planned or forced***

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<sup>8</sup> See CAISO Presentation on Revised Draft Framework Proposal, (February 7, 2018) at 76. Available at: <http://www.aiso.com/Documents/Agenda-Presentation-RevisedDraftFlexibleCapacityFrameworkProposal-FlexibleRACriteria-MustOfferObligationsPhase2-Feb72018.pdf>

***outages of resources that have committed to provide Flexible RA can potentially result in the CAISO not having the full amount of flexible capacity that it requires.***

The potential shortfall in flexible capacity actually available to the CAISO due to outages can be substantial. For instance, during the peak demand hours in July, August and September of 2017, total forced and planned unit outages totaled between 6,000 and 7,000 MW.<sup>9</sup> This represented approximately 12-15% of the contracted RA capacity in each of those months. If similar outage rates are experienced by resources providing Flexible RA products, it would mean that approximately 2,000 MW of Flexible RA capacity that was contracted for in advance may not actually be available to CAISO operators.

Powerex recognizes that the existing RA and Flexible RA mechanisms rely on “substitution” of resources that are unavailable. This appears inappropriate for a product that is intended to be reliably procured in advance, and that is critical to maintaining reliability. In effect, imposing a “substitution” obligation is no different than permitting LSEs to simply rely on procuring a portion of their Flexible RA requirements in the short-term markets. The Second Revised Framework appears to envision that all Flexible RA needs be met on a year-ahead basis, as it requires that 100% of the monthly need be procured for year-ahead showings.<sup>10</sup> Powerex supports this design principle. However, achieving this objective requires ensuring that forward procurement of Flexible RA is sufficient to cover expected outage rates of the resources providing the product.

Powerex therefore recommends that CAISO ensure that the procurement of Flexible RA does not rely on short-term markets to substitute for resources that are unavailable due to planned or forced outages. This can be accomplished either by grossing up the procurement requirements by the expected rate of outages, or by reducing the eligibility of each resource to provide Flexible RA by the resource’s specific historic average outage rate. Powerex understands that incorporating the projected availability of resources is a well-established element of other forward procurement mechanisms in other organized markets, and it urges CAISO to explore such a design as part of the Flexible RA enhancements.

### **C. Eligibility Of VERs To Provide Flexible RA**

Powerex supports all resources, including VERs, being eligible to provide all the grid services that they are technically capable of providing, including Flexible RA. Powerex notes, however, that the manner in which VERs provide upward Flexible RA requires that

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<sup>9</sup> CAISO published daily reports on unit status (*i.e.*, the “1515 reports”). See <http://www.caiso.com/market/Pages/OutageManagement/UnitStatus.aspx>

<sup>10</sup> Second Revised Framework at 22.

the output of a resource be curtailed ahead of time, to a level less than the output it would otherwise be capable of producing. Specifically, solar generation providing upward Flexible RA can really only do so if its output is curtailed for the entire “belly of the duck” period; otherwise, these resources are contributing to the grid’s net load ramping challenges rather than contributing to addressing them. Powerex therefore believes that the CAISO should develop specific operating criteria and measures that ensure VERs providing upward Flexible RA indeed curtail output as needed to provide this capability. The proposed limitation on 25% procurement from solar resources is not the appropriate mechanism for addressing the potential concerns associated with procuring upward Flexible RA from VERs.

## **II. The MIC Allocation Has Become A Barrier To Competitive Procurement Of System RA And Must Be Urgently Addressed**

As Powerex has explained in detail in this proceeding, Powerex believes that there is growing evidence that the existing framework used to allocate intertie capacity for purposes of California’s RA program—the MIC framework—greatly impedes the efficient and least-cost procurement of RA capacity. Under that framework, CAISO allocates MIC on each intertie to LSEs through a 13-step process, which is largely based on an LSE’s load ratio share. Notably, there is no requirement that LSEs that receive an allocation of MIC capability fully utilize their allocations or make unused intertie capability available to third parties. To the contrary, an LSE is given complete discretion regarding whether to simply hold the capability—effectively “stranding” the associated capability by making it unavailable to third parties—or selling the capability for financial profit.

When the MIC allocation was first proposed, a number of stakeholders expressed concern about the potential competitive and economic implications of the MIC allocation framework. For example, the California Municipal Utilities Association noted that “having a few large entities control unused rights, without express conditions on the sale of those unused rights, may create opportunities for the exercise of market power and competitive advantages over other LSEs that may desire those rights to enter into power transactions.”<sup>11</sup> Other parties expressed similar concerns and suggested that safeguards should be implemented to prevent against the potential adverse consequences of the MIC allocation, such as redistributing unused rights to the CAISO for reallocation.<sup>12</sup>

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<sup>11</sup> *Cal. Indep. Sys. Operator Corp.*, Motion to Intervene and Protest of the California Municipal Utilities Association, Docket No. ER07-648-000 at 2 (filed Apr. 12, 2007).

<sup>12</sup> *Cal. Indep. Sys. Operator Corp.*, Motion to Intervene and Protest on Behalf of the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California, Docket No. ER07-647-000 (Apr. 12, 2007)

Unfortunately, Powerex believes the concerns expressed by these commenters have largely come to pass. Although Powerex recognizes the need to ensure that RA contracts entered into with external suppliers do not exceed the delivery capability on the associated intertie, Powerex believes that the practical effect of the existing MIC allocation has been to allocate, and largely strand, limited intertie capability to a handful of the largest CAISO LSEs, to the detriment of (i) external suppliers, (ii) new and smaller LSEs, and (iii) the efficiency of the CAISO markets more generally. In effect, the existing MIC allocation process allows a small set of large, incumbent LSEs to request and receive MIC allocation volumes on CAISO interties that have significantly exceeded their own procurement of RA from external suppliers.

For 2018, 86% of the import capability on the Pacific AC Intertie (“PACI”), and 82% of the import capability of the Pacific DC Intertie (“PDCI”) has been allocated to just two entities: Southern California Edison and Pacific Gas & Electric.<sup>13</sup> Neither of these entities fully utilized its MIC allocation in its annual RA showings.<sup>14</sup> As shown in the table below, this is not an anomaly, but rather reflects a persistent pattern: the two largest, incumbent LSEs have requested and are allocated the vast majority of MIC on the key interties capable of supporting RA procurement with clean, flexible resources located in the Northwest, and yet those same LSEs consistently appear to not use their full MIC allocation for that intended purpose.<sup>15</sup>

	2018		2017		2016		2015	
	PACI	PDCI	PACI	PDCI	PACI	PDCI	PACI	PDCI
Total MIC Allocated	1808	1267	2108	1283	2232	1544	2113	1544
% to SCE and PG&E*	86%	82%	84%	78%	82%	75%	77%	75%
All MIC Used In Annual RA Showing?								
SCE	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
PG&E	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Because there is no method to restrict or even discourage LSEs from requesting and receiving a MIC allocation well in excess of their expected RA contracting needs, and no process to automatically reallocate or otherwise release unused capacity, the result of

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(stating that the MIC allocation framework would allow large LSEs to “become proverbial trolls at the bridge, demanding payment of unilaterally determined tolls for the use of Import Assignments which are granted to them at no cost, which convey no right to actual transmission service, and which they do not need to serve their own customers”).

<sup>13</sup> See “2018 Holders of Import Capability.pdf” at <http://www.caiso.com/planning/Pages/ReliabilityRequirements/Default.aspx>.

<sup>14</sup> See “2018 Import Capability Used on Annual Resource Adequacy Plans.pdf” at the location above.

<sup>15</sup> Data for 2016 and 2017 is available at the same location. Data for prior years is archived at <http://www.caiso.com/planning/Pages/ReliabilityRequirements/ReliabilityRequirementsArchive.aspx>.



this process appears to be that only a small fraction of RA is procured from external resources. In the California Public Utilities Commission's 2016 report on resource adequacy (the last year currently available), it observed that only "5 to 9 percent of [committed RA] capacity was from imports."<sup>16</sup> Moreover, the RA procured from imports represented no more than 40% of the RA that could be procured from external resources if all MIC was made available to be utilized efficiently.<sup>17</sup>

A further harmful consequence of the inefficient MIC allocation is that significantly less MIC capability is available to support transactions by new and smaller LSEs that seek to procure RA with external suppliers. In practice, Powerex believes that this is having a number of significant, adverse consequences.

- First, smaller LSEs that do not receive sufficient MIC allocations to support their desired contracts often are forced to purchase MIC capability from incumbent LSEs that have been allocated MIC capability well in excess of their planned needs. In particular, Powerex is aware of numerous instances in which smaller LSEs have been forced to purchase MIC capability at significant cost from the larger, incumbent LSEs, despite evidence that the relevant interties were not even close to being fully utilized (and that the selling LSEs had acquired their MIC allocation at no costs). As a practical matter, requiring smaller LSEs to purchase MIC capability to support their forward RA contracts with external suppliers, particularly when there is significant excess, unused MIC available on an intertie, increases the cost of meeting RA requirements. Powerex believes that such an approach is highly inefficient, creates opportunities for undue discrimination, and is fundamentally inconsistent with open access principles.
- Second, when a smaller LSE is unable to acquire a sufficient allocation of MIC capability through the MIC framework or is unable to acquire MIC capability from the large, incumbent LSEs at a reasonable price, the smaller LSE will be forced to meet its RA requirements exclusively using the capability of internal resources, even when external suppliers are capable of meeting RA needs on a more efficient and cost-effective basis. Ultimately, this artificially constrains and reduces the

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<sup>16</sup> California Public Utilities Commission, *The 2016 Resource Adequacy Report* (June 2017) at 15. Available at: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442453942>.

<sup>17</sup> The maximum RA imports in any month was 4,770 MW (CPUC, op cit.), which is approximately 40% of the 11,665 MW reported by CAISO as the "Total Import Capability to be shared" through the MIC allocation process. See [http://www.caiso.com/Documents/Step6\\_2016AssignedandUnassignedRAImportCapabilityonBranchGroups.pdf](http://www.caiso.com/Documents/Step6_2016AssignedandUnassignedRAImportCapabilityonBranchGroups.pdf)

supply options available to serve load, reduces competition, and undermines the objective of least-cost procurement.

- Third, to the extent that an LSE is unable to obtain a sufficient MIC allocation to enter into contracts with external suppliers as desired and unable to find sufficient substitute capacity within the CAISO, the result may be that the LSE is unable to procure sufficient capacity on a forward basis to meet its RA requirements. In that case, CAISO may be forced to rely upon its capacity procurement mechanism and/or other out-of-market procurement mechanisms to ensure that sufficient capacity is available to meet reliability requirements.
- Fourth, the price charged for RA from internal resources to *all LSEs* can be considerably higher, as the stranded MIC reduces the ability of external resources to compete directly with internal resources to supply RA. Powerex believes these higher prices can both materially harm external suppliers and raise costs to consumers.

The available data points clearly to the conclusion that the current MIC allocation acts as an inefficient barrier that prevents LSEs from procuring RA from resources outside of California, undermines competition between LSEs and between internal and external suppliers, and ultimately harms California consumers. Powerex believes that the shortcomings of the existing MIC allocation framework must be addressed immediately in order to ensure that both the RA and Flex RA programs are able to achieve their objectives of ensuring that CAISO has sufficient resources available to maintain reliability on an efficient and least-cost basis. Unless addressed, it is highly likely that these same issues will undermine the ability of the proposed Flexible RA framework to achieve its objectives, result in higher costs for consumers, and potential shortfalls in LSEs' Flexible RA procurements.

Finally, Powerex urges the CAISO to provide additional transparency into the amount of unused MIC on each intertie, by posting the total MIC capability, the total MIC allocated, the total MIC used for annual RA showings, the total MIC used for monthly RA showings, and the total MIC unused for each year for each intertie.

### **III. Powerex Requests Additional Clarification On The Required Quantity of Flexible Capacity**

As discussed above, Powerex is supportive of the detailed analytical approach to identifying the most severe imbalance conditions that the CAISO must be prepared to address, and using such conditions to guide the calculation of the quantity of flexible capacity that must be procured on a forward basis to support reliability. There are two

aspects related to the determination of flexible capacity needs which Powerex requests be clarified by CAISO.

**A. The Second Revised Framework Significantly Reduced The Estimated Need For 5-Minute Flexible Capacity**

In the Revised Draft Framework, CAISO estimated that the need for 5-minute flexible capacity would vary between approximately 3,300 MW and 4,200 MW.<sup>18</sup> The Second Revised Framework, however, estimates that the need for 5-minute flexibility will be precisely 1,000 MW in each month.<sup>19</sup> Moreover, the prior proposal expressly stated that the estimate of 5-minute flexible capacity should include 600 MW of regulation reserve.<sup>20</sup> This implies that the current proposal estimates that imbalances that must be addressed in RTD will be limited to 400 MW, which is dramatically less than prior CAISO analyses of the maximum error range between FMM and RTD.<sup>21</sup> Powerex requests that CAISO provide additional explanation on this significant revision in the proposed framework.

**B. It Is Inappropriate To Include Speculative Supply Awarded On CAISO Interties In The Calculation Of Real-Time Imbalance Needs**

The presentation on the Second Revised Framework listed several “drivers” of upward and downward imbalance reserve.<sup>22</sup> Among the identified drivers of upward imbalance reserve is “[i]mports that do not tag their IFM schedule.” Powerex agrees that imports are subject to factors such as unit outages or transmission de-rates that create a risk of non-performance, just as these types of factors create a risk that an in-state resources may not be able to perform.

Where these factors are beyond the control and foresight of the scheduling coordinator representing the resource, it is appropriate and necessary for CAISO to procure and maintain reserves, including Flexible RA, to be able to manage the unanticipated failure of day-ahead or real-time supply awards to physically deliver. But Powerex does not believe it is efficient or appropriate for CAISO to procure reserves, including Flexible RA, in order to backstop import schedules that fail to deliver because the schedule was merely a speculative offer by a marketer, unsupported by physical supply and transmission from the outset.

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<sup>18</sup> CAISO Presentation on Revised Draft Framework Proposal, (February 7, 2018) at 76.

<sup>19</sup> Revised Draft Framework, at 22.

<sup>20</sup> CAISO Presentation on Revised Draft Framework Proposal, (February 7, 2018) at 76.

<sup>21</sup> CAISO Presentation on Revised Draft Framework Proposal, (February 7, 2018) at 40.

<sup>22</sup> Presentation at 15.

Under the current CAISO rules for offering supply at intertie scheduling points, a scheduling coordinator does not need to specify the physical supply or transmission service that will support the energy being offered. It is only when the scheduling coordinator submits a valid e-Tag that CAISO has information and visibility into the physical supply and transmission arrangements through which the schedule will be satisfied. Such e-Tags are not required until the WECC scheduling deadline of 20 minutes prior to the start of the delivery hour, however.

It is therefore possible, under the existing framework, for a scheduling coordinator to offer to sell energy at a CAISO intertie on a purely speculative basis. Powerex recognizes that CAISO intends to explore measures to reduce intertie delivery failures in a different stakeholder initiative. Powerex believes it is far preferable for CAISO to reduce or eliminate its acceptance of speculative intertie supply in the first instance, rather than requiring California consumers to incur the cost of procuring Flexible RA and other reserve products to backstop the risks associated with continuing to accept speculative supply in its markets.