

**Comments of Powerex Corp. on  
Resource Adequacy Enhancements Working Group Meeting**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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Powerex appreciates the opportunity to submit comments on the CAISO’s June 10, 2020 Resource Adequacy Enhancements working group meeting. During the meeting, CAISO provided additional information regarding its proposed transition to the use of unforced capacity (“UCAP”), including the production simulation that it plans to use to establish the total UCAP requirement (*i.e.* the total amount of system capacity needed to cover peak demand, with resources de-rated to take into account forced outages and other resource availability factors) as well as CAISO’s proposed approach to calculating the UCAP rating of individual resources.

Powerex strongly supports CAISO’s effort to take steps to modify the Resource Adequacy (“RA”) framework to ensure that sufficient physical capacity is committed on a forward basis to allow CAISO to reliably operate its system. Incorporating information about resource availability in the calculation of the quantity of capacity that a resource is eligible to sell, and establishing the total UCAP requirement would help achieve this objective by more accurately and efficiently accounting for forced outages, planned outages, and other factors.

In the following sections, Powerex offers the following observations for the CAISO’s consideration:

- First, CAISO should calculate the total UCAP requirement for each applicable period based on the assumption that CAISO will not receive any additional imports beyond those associated with RA contracts during evening peak periods on high demand days.
- Second, CAISO should calculate the UCAP of individual resources by de-rating the net qualifying capacity (“NQC”) of resources to take into account resource unavailability.

**I. The Analysis For Establishing UCAP Requirements Should Not Assume That Non-RA Resources Will Be Available To The CAISO**

At the working group meeting, CAISO provided detail regarding its efforts to establish a study methodology for setting the total UCAP requirement. Among other things, CAISO explained that it will conduct sensitivity analyses varying the level of short-term imports available from external markets to inform the total UCAP requirement and the potential need for backstop procurement through the capacity procurement mechanism.

The CAISO balancing authority area (“BAA”) has long relied on voluntary short-term imports from other entities in the west to compensate for gaps in its RA program and to allow California ratepayers to avoid investing in sufficient physical capacity to maintain reliability. It is therefore perhaps unsurprising that CAISO proposes to continue to assume that a certain quantity of voluntary short-term imports will continue to be available, including during peak demand periods, without RA commitments. CAISO’s presentation during the working group meeting suggests that

CAISO is planning to use the analyses conducted as part of CAISO’s 2020 Summer Loads and Resource Assessment (“Summer Assessment”) as the basis for setting the total UCAP requirement. As shown in the figure from the Summer Assessment excerpted below, even CAISO’s conservative case assumed approximately 9,000 MW of available imports during peak periods.<sup>1</sup>

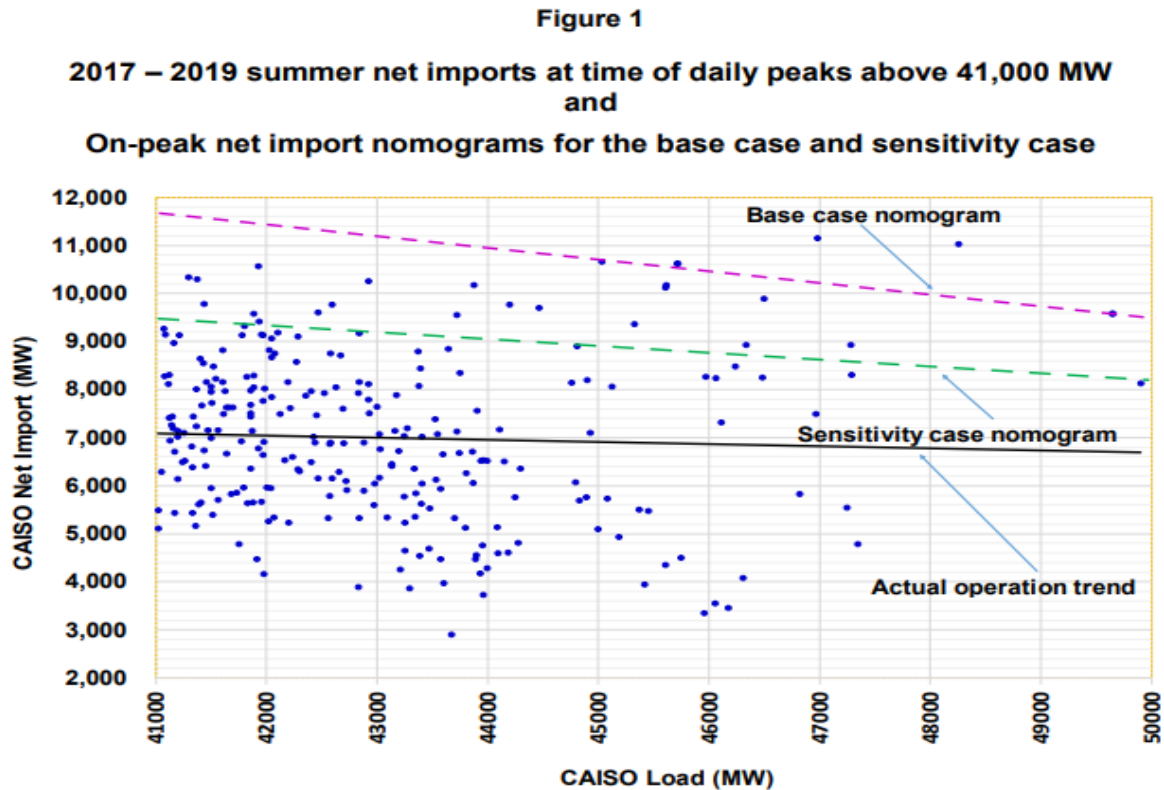


Figure 1 shows CAISO net imports at time of daily peaks above 41,000 MW vs. CAISO load from 2017 to 2019.

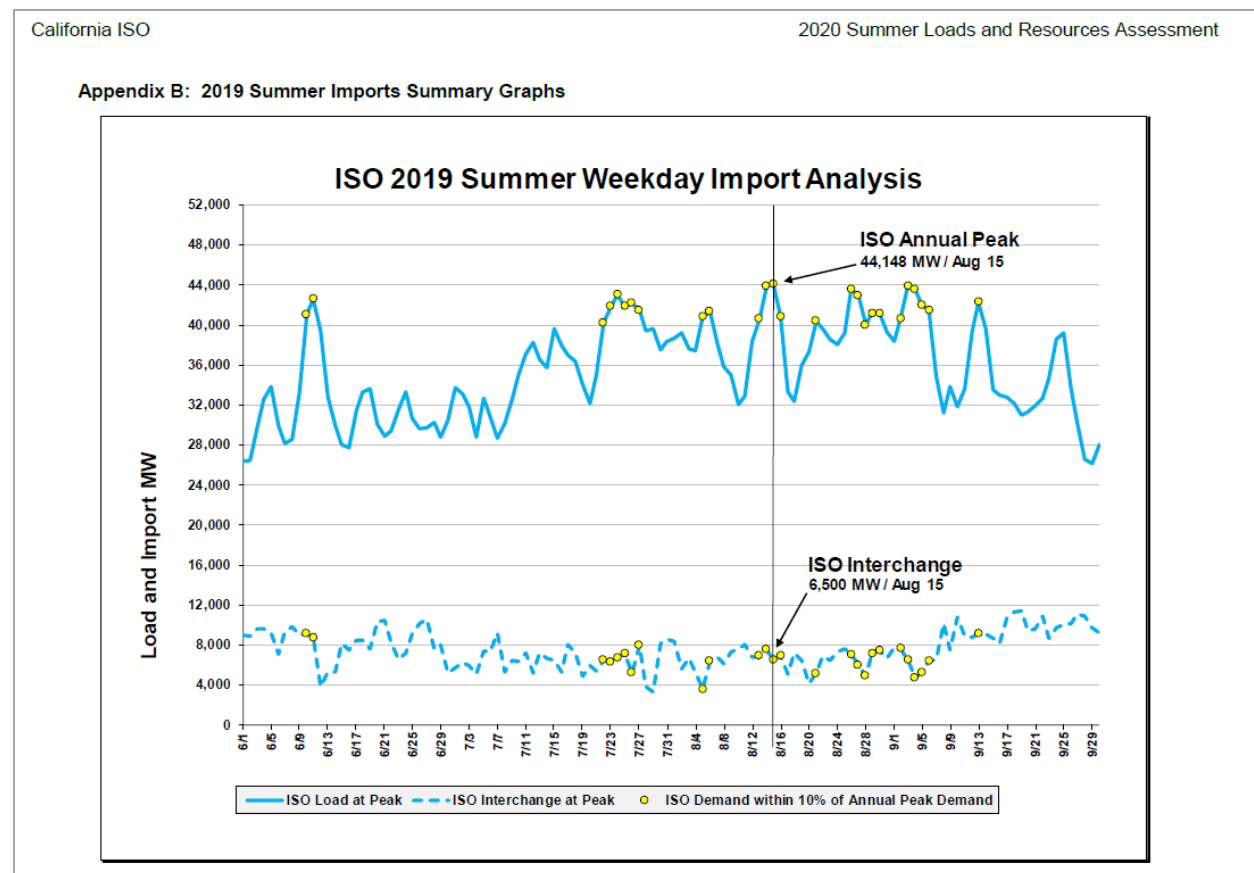
Powerex believes that this is a dangerous and unwarranted assumption that is (i) entirely inconsistent with recent experience and (ii) fails to further take into account tightening grid conditions outside of California in the years ahead. In practice, the quantity of imports that have actually been available to the CAISO during peak hours during peak demand periods has often been quite limited in recent years. For instance, the Summer Assessment indicates that “[t]he maximum net import recorded a decline trend from 11,147 MW in 2017 to 8,792 MW in 2019.”<sup>2</sup> Even more concerning than the decline in the *maximum* level of imports during peak load hours is the *minimum* quantity of imports that the CAISO BAA can be confident of receiving, which has ranged from a low of 2,898 MW in 2018 to 4,743 MW in 2019 during peak periods.<sup>3</sup> Furthermore, the level of imports actually delivered into the CAISO BAA during peak periods of 2019 has **frequently been no more than** the quantity of imports secured on a forward basis through the

<sup>1</sup> Cal. Indep. Sys. Operator Corp., 2020 Summer Loads and Resources Assessment at 4 (May 15, 2020).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.* at 5.

RA program. The two charts below, taken from the Summer Assessment<sup>4</sup> and the California Public Utilities Commission’s Resource Adequacy report,<sup>5</sup> show the imports into the CAISO BAA during peak load periods in summer 2019 to the quantity of RA imports shown for each month in the final month-ahead RA showing.



**Table 7: All Imports Shown on 2019 Month Ahead RA Plans by LSE Type (MW)**

LSE Type	May	Jun	Jul	Aug	Sep
IOU	1,298	1,763	1,743	1,713	2,323
CCA	1,220	1,324	1,337	1,783	1,697
ESP	180	191	358	349	339
<b>Total</b>	<b>2,698</b>	<b>3,278</b>	<b>3,438</b>	<b>3,844</b>	<b>4,359</b>

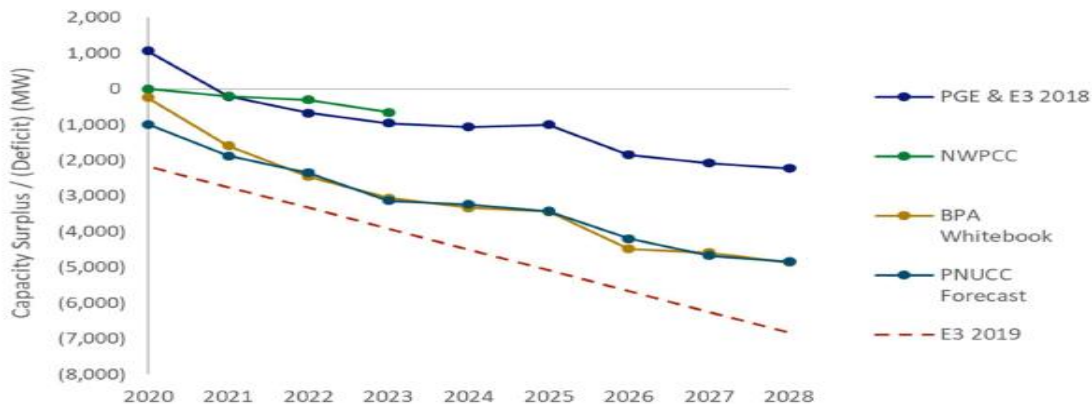
As demonstrated above, the quantity of imports that CAISO can assume that it will receive with a high degree of confidence during peak periods is about 4,000 MW—a quantity that is generally consistent with the quantity of imports that are committed by California LSEs on a forward basis to meet RA requirements, which ranged from 2,698 to 4,359 MW during the summer months of

<sup>4</sup> *Id.* at 64.

<sup>5</sup> *Cal. Pub. Util. Comm’n, The State of The Resource Adequacy Market – Revised at 13 (Jan. 13, 2020), available at: <https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442463739>.*

2019. This illustrates that there is *already* no basis for CAISO to assume that it will receive *any* imports above the quantity that has been committed on a forward basis through the RA program during high demand periods in California and throughout the west.

The quantity of energy that is available in the external short-term markets will only become further constrained in the coming years. It is widely recognized supply is rapidly tightening throughout the west as states across the region seek to retire large quantities of fossil fueled generation resources as states due to increasingly stronger environmental policies. For instance, a recent WECC analysis estimates that approximately 14 GW of coal and natural gas-fired resources will be retired in states outside of California between 2019 and 2028.<sup>6</sup> The result is that the quantity of residual capacity across the broader region is rapidly declining, with many utilities increasingly facing the prospect of capacity shortfalls in the coming years. Indeed, as reflected in the figure excerpted below from an analysis prepared for the Northwest Power Pool (“NWPP”), numerous studies that have evaluated resource adequacy in the Northwest region in the coming decade have uniformly concluded that the region will face capacity shortfalls in the coming years without decisive action.<sup>7</sup>



These changes have prompted numerous utilities in the Northwest to begin working together to identify regional solutions that will help ensure that utilities are able to reliably and efficiently serve their load in the coming years. Most notably, a number of the utilities in the Northwest have organized an effort through the NWPP to establish a regional RA framework that would help ensure that entities participating in the RA program have access to sufficient resources to maintain reliability, while also capturing the investment savings associated with supply and demand diversity.

Collectively, these factors make it increasingly likely that the only import capability that will be available to California from external regions during tight conditions will be capacity that has been explicitly committed on a forward basis to meet the reliability needs of the CAISO BAA. This does not mean that there will not be any surplus capability in external regions during many other periods. For instance, summer-peaking systems may have excess capacity available during the

<sup>6</sup> WECC, Pricing Event of March 2019 – System Impact Assessment (Aug. 20, 2019), *available at*: [https://www.wecc.org/Reliability/PricingEvent\\_Paper\\_Final.pdf](https://www.wecc.org/Reliability/PricingEvent_Paper_Final.pdf).

<sup>7</sup> Northwest PowerPool, Exploring a Resource Adequacy Program for the Pacific Northwest: An Energy System in Transition at 6, *available at*: [https://www.nwpp.org/private-media/documents/2019.09.30\\_E3\\_NWPP\\_RA\\_ExecSum.pdf](https://www.nwpp.org/private-media/documents/2019.09.30_E3_NWPP_RA_ExecSum.pdf)

winter; likewise, winter-peaking systems may have excess capacity in the summer. It would be wrong to assume, however, that CAISO can count on this capacity being made available to California on a short-term basis unless it has been contracted for in advance. In some cases, those entities with surplus capacity available during a particular season may have sold the available capacity to other utilities within the western region—many of which are increasingly seeking to enter into multi-year forward commitments to secure the limited surplus capacity that exists within the region. In other cases, this capacity may be unavailable due to the utility's decision to schedule outages during its off-peak season.

In short, calculating minimum UCAP requirements (and, more generally, the total amount of capacity needed in the System RA program) based on the assumption that there will be imports available through the short-term markets (in excess of those that have been committed on a forward basis) would perpetuate the shortcomings of the existing RA program. Such an approach would largely undermine the purpose of adopting a minimum UCAP requirement in the first place: to ensure that CAISO has sufficient capacity available to allow it to reliably operate its system with a high degree of confidence. The result would be that it would be increasingly likely in the years ahead that CAISO would encounter periods during which it would not have the resources necessary to serve load and maintain the reliability of its system.

In addition, calculating RA requirements in a manner that assumes that a certain quantity of reliability needs will be met through short-term imports also would hamper the ability of CAISO to meet any resource sufficiency tests adopted in connection with the effort to establish an extended day-ahead market ("EDAM"). Notably, the gaps in California's existing RA program have already led to CAISO systematically leaning on short-term imports in its existing Day Ahead market—and also through the Energy Imbalance Market—to compensate for the lack of adequate physical supply committed to the CAISO BAA. Continuing to calculate RA requirements in a manner that is likely to result in the CAISO being systematically short on capacity will make it impossible for CAISO to participate in an EDAM with a truly robust and accurate resource sufficiency framework.

## **II. CAISO Should De-Rate NQC To Calculate UCAP**

CAISO explained that it was considering two primary options for the calculation of UCAP:

- Option 1: CAISO would calculate UCAP through a two-step process: (1) CAISO would conduct a resource deliverability assessment and adjust a resource's qualifying capacity for deliverability, creating deliverable qualifying capacity ("DQC"); and (2) CAISO would apply a non-availability factor to DQC, resulting in the net qualifying capacity ("NQC") of the resource.
- Option 2: CAISO would de-rate NQC for forced outages to calculate UCAP.

Powerex encourages CAISO to move forward with Option 2: a framework that de-rates the NQC to reflect the availability of the resource to calculate UCAP. Powerex recognizes that certain parties have argued that the use of UCAP may impact existing contracts by allowing sellers to escape RAIM penalties while the buyer sees a decrease in the amount of capacity available to meet its RA requirements. Powerex believes, however, that limiting the ability of suppliers to sell RA to an amount that takes into account historical performance is critical to ensuring that the quantity of capacity that is actually available during a given period is sufficient to allow CAISO to reliably operate its system when resource unavailability is taken into account.

Powerex also believes that it is critical that CAISO continue to reject requests to reduce the planning reserve margin ("PRM") to reflect the transition to the use of UCAP. As a practical matter, reducing RA procurement requirements based on resource availability would offset any potential benefits of transitioning to the use of UCAP. The purpose of shifting to the use of UCAP is to ensure that CAISO consistently has sufficient capacity available to it to allow it to reliably operate its system. Making a downward adjustment to the PRM to take into account resource availability would undermine this objective and simply serve to reduce the total quantity of capacity committed through the RA program.