

CDWR Comments on Reliability Services Working Group meeting on April 23, 2014

April 30, 2014

California Department of Water Resources (CDWR) appreciates the opportunity to provide its comments on April 23 Reliability Services Working Group meeting discussions. CDWR respectfully submits the following comments:

1) Opportunity cost bidding of start-up and minimum load costs for use-limited dispatchable resources: In the FRAC MOO stakeholder process, use of these costs was considered only for thermal use limited resources (ULR). Does CAISO intend to apply this requirement to hydro use limited resources here? If the proposed provision would apply to non-thermal use limited resources, how are the use limitations of such resources treated under newly standardized must offer and incentive mechanism? If this provision would not apply to hydro resources, how are hydro resource use limitations addressed without penalty for not being available due to use limitations?

2) The presentation refers in several places to “dispatchable resources,” sometimes in the context of gas-fired resources (e.g. Slides 9, 10, 14) but other times more broadly (e.g. Slides 20, 22, 25). CDWR requests that CAISO clarify what it means by “dispatchable resources” and eventually provide a definition in the tariff. Although the current tariff has related definitions (such as Dispatch, Dispatch Instruction, and Non-Dispatchable ULR) the current tariff does not define Dispatchable Resource. The ISO Masterfile has a column to describe a resource as Dispatchable, but the Masterfile definition of the term is simply “Designates a dispatchable resource”. Given the significance of “dispatchable resource,” the term should be clearly defined along with “Non-dispatchable resource.”

3) ISO on slide 11 indicates it will develop a Unit Commitment and Dispatch Optimization Model. Is this model intended only to address dispatchable gas-fired ULRs? Will other ULRs have an opportunity to bid opportunity costs?

4) On slide 13, ISO proposes to use opportunity costs for Starts, Run hours, and Energy limits to be included in the Start Up cost, minimum load cost, and default energy bid. Is this intended to suggest that with higher compensation (opportunity cost), physical use limitation violations can be accepted? Or is it assumed that at the higher compensation (at opportunity cost) price, the resource will not clear the market and hence will not be dispatched beyond its use limitations? Does CAISO intend that use-limited resources can be ordered to operate in violation of environmental standards or license conditions if the payment is high enough, or if circumstances cause such a resource to receive a dispatch order that contravenes its legal obligations?

5) Slide 18: ISO indicates that it is reviewing default Qualifying Capacity (QC) criteria. DWR does not oppose the ISO setting default criteria for LRAs that fail to adopt their own criteria, but would oppose the imposition of QC criteria on LRAs that do adopt their own criteria. Please clarify the ISO’s intent.

6) The ISO proposes on Slide 23 to develop a must-offer obligation for Proxy Demand Resources (PDR) which would require PDRs to economically bid or self-schedule all RA Capacity on non-holiday weekdays

during peak hours of the month (April-October HE14:00-18:00; other months HE17:00-21:00). On Slide 20, however, the ISO proposes to leave the must-offer obligation for Pumping Load unchanged. Pumping Load, which is Participating Load, is a demand response resource and should be treated similarly to PDR specifically with regard to must offer hours. Therefore CDWR believes that must-offer obligation for Pumping Load should be modified to only require offers during non-holiday weekdays during peak hours as specified for PDR.

7) Slide 21-22: These slides provide an example of existing MOO requirements for: (a) non-use limited generating resource and (b) use limited non-hydro and dispatchable resources. There is a third category of resource (described in section 40.6.4.3.2) that exists today which is use limited hydro non-dispatchable resource for which MOO is a bit different from slides 21-22 (shown under the tariff section below). This third category of resource includes Hydro Generating Unit and Pumping Load (Participating Load).

As described above, CDWR believes that the MOO hours for Participating Load should be made consistent with the MOO hours for Proxy Demand Resources as described in 6 above. Moreover, the MOO for Participating Load should be clarified and made consistent with the Participating Load Agreement. Pursuant to the recent restatement of the CDWR Participating Load Agreement (PLA), Participating Load can provide only non-spin (no energy) in the IFM to satisfy resource adequacy obligation because of the model limitation and energy bid in the real time. Therefore, the MOO requirement for this resource should reflect this specific provision.

Additionally, the Participating Load (pumping load) and hydro resources MOO should reflect the fact that ULRs are not subject to ancillary services (A/S) MOO, in contrast to the non-ULRs which are subject to A/S MOO also.

Moreover, the current MOO requires Pumping Loads (participating load) to bid or self-schedule “for their expected available Energy or their expected as-available Energy.” (Tariff § 40.6.4.3.2). The difference between “available Energy” and “as-available Energy” should be clarified or the terms should be defined as they relate to MOO.

Finally, CDWR’s understanding is that a Pumping Load would be unable to provide supply without being a Participating Load with a Participating Load Agreement (PLA) with ISO, which implies that a Pumping Load must be a Participating Load. Pumping Load is defined as “A hydro pumping resource that is capable of responding to Dispatch Instructions by ceasing to pump”. Participating Load is defined as “An entity, including an entity with Pumping Load or Aggregated Participating Load (PLA), providing Curtailable Demand, which has undertaken in writing by execution of a Participating Load Agreement to comply with all applicable provisions of the CAISO Tariff”. Tariff section 30.5.2.3 indicates Participating Load includes a Pumping Load. Pumping Load representing a Participating Load in the section 40.6.4.3.2 would also require inclusion of its ability to provide only non-spin in the IFM (instead of expected available energy or expected as-available energy) as mentioned in the recently revised PLA with CDWR.

8) Slide 23: PDRs, like Participating Load, are valuable resources that can support grid reliability under the most stressed condition on a daily basis. CDWR therefore supports the principle of limiting the MOO hours for PDRs to non-holidays weekdays during peak hours of the month (April-October HE14:00-18:00;

other months HE17:00-21:00). However, bidding during those MOO hours may not be feasible when the underlying demand is absent for any reason. When the underlying demand is absent, in effect, it would appear that the PDR resource complied with a dispatch order in advance. In other words, it causes no reliability concern, rather it helps ISO grid by not having load. So, it would be illogical to count such hours against availability when a bid is not provided because of absence of underlying demand. ISO's proposal to exempt resources on "off-peak opportunity outage" and "short notice opportunity outage" from the availability calculation (on slide 79) is made on the basis that such resources help ISO reliability. Similarly, any Demand Response resource, whether a PDR or a Participating Load (Pumping Load), that helps system reliability by not having underlying demand (for any reason) is equivalent to a generating resource generating already. Therefore, it is logical to exempt such a resource from bidding for the part of the capacity for which the underlying demand is partially or entirely absent.

For example, if the RA capacity is 50 MW but the underlying load @HE14:00 on a particular day is 20 MW, the resource can offer only 20 MW during that hour of the day. It should not be penalized for not offering the additional 30 MW because the demand of additional 30 MW does not exist. When 30 MW demand does not exist during HE14:00, the absence would not harm ISO grid reliability; rather, it would help in terms of reliability. Additionally, there should not be any requirement for the load to be kept at the 50 MW level during that hour in order to be ready to be dropped. The ISO FRAC MOO revised straw proposal¹ addressed underlying demand for DR resources at section 6.1.4, stating:

"A demand response resource may not be able to be called upon until the underlying load has sufficient discretionary load to reduce or cannot be called during certain hours. For example, the same PDR may only be able to drop 5 MW when the underlying demand is operating at baseload levels but 10 MW when the underlying demand has increased and includes more discretionary load. The ISO does not want to constrain demand response resources based on their ability to drop load from baseline levels (i.e. at 5:00 AM or 10:00 PM)"

This concept (that no offer can be made if underlying demand does not exist) should also hold for the availability assessment of a Participating Load (pumping load), at least for generic RA purposes. This is more significant for wholesale pumping loads such as CDWR's Participating Loads, for which daily schedules may change at different levels. CDWR would like to discuss this matter with ISO along with existing LRA provisions, prior to publication of the ISO straw proposal.

9) Slide 26: ISO indicates that ISO is not proposing Flexible Capacity must offer requirements at this time and intends instead to propose them in 2016 during the first quarter. What are the requirements for flexible capacity resources under 2015 flexible RA showings? Do they have to follow generic RA rules only or must abide by the flexible RA rules?

10) Slide 36: The existing Tariff provision "**40.6.4.1 Registration of Use-Limited Resources**" should remain unchanged. This provision states: "Hydroelectric Generating Units, Proxy Demand Resources, and Participating Load, including Pumping Load, are deemed to be Use-Limited Resources for purposes

¹ <http://www.caiso.com/Documents/RevisedStrawProposal-FlexibleResourceAdequacyCriteria-MustOfferObligations.pdf>

of this Section 40 and are not required to submit the application described in this Section 40.6.4.1". By nature these resources are use limited, more so for such resources that are hydraulically linked operationally such as CDWR pumps and generators.

11) As discussed in slide 33, a change in the definition of Use Limitation should include the pumping needs for hours beyond super-peak hours and related to the hydraulic linkage of a water delivery system. The current definition of Use-Limited Resource is:

"Use-Limited Resource – A resource that due to design considerations, environmental restrictions on operations, cyclical requirements, such as the need to charge or refill, or other non-economic reasons, is unable to operate continuously on a daily basis, but is able to operate for a minimum set of consecutive Trading Hours each trading day"

It should be modified to:

"Use-Limited Resource – A resource that due to design considerations, environmental restrictions on operations **or restrictions due to hydraulic linkage in a water delivery system**, cyclical requirements, such as the need to charge or refill, or other non-economic reasons, is unable to operate continuously on a daily basis, but is able to operate for a minimum set of consecutive Trading Hours each trading day"

12) Slide 58: ISO indicates that the incentive mechanism will be based on provided bids rather than forced outages. Forced Outages may occur for reasons outside of the resource operator's control. For example, if there is a transmission outage, the resource may be taken offline and cannot offer bid or self-schedule. A resource should not subject to the unavailability penalty for reasons beyond its control. There should be a way to exempt resources in such circumstances.

13) Slide 63: Bidding evaluation hours: ISO proposes to evaluate 24 hours bidding or a contract based subset of bidding hours. There may be imports based on hydro resources which may not be able to generate 24 hours. Such contracts would be unfairly penalized if availability assessment hours are made 24 hours a day.

14) Slide 63: Currently, ISO does not evaluate availability beyond super-peak hours, though ISO is proposing to change to some other forms of evaluation that may be based on resource category. ISO has not demonstrated a need for changing the time period for the availability assessment, though it states that there is a substantial amount of MWs that is exempt from availability assessment. Why the time period for availability assessment is to be widened is not explained or demonstrated. As discussed during FRAC MOO stakeholder process, must offer requirement for generic and flexible RA are different and their temporal need may be different for must offer. Therefore, at this stage, ISO should focus on designing availability assessment mechanism for flexible RA which could be different from existing generic RA provisions.

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