

Comments of the Staff of the California Public Utilities Commission (CPUC) on the California Independent System Operator's (CAISO's) Commitment Cost Enhancements Phase 3

Submitted by	Company	Date Submitted
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The Staff of the CPUC appreciates the opportunity to comment on the Commitment Cost Enhancements (CCE) Phase 3 revised straw proposal issued November 3rd, 2015.

I. Background

In the day-ahead market, CAISO commits generating resources and publishes a financially binding day-ahead schedule. The costs CAISO considers when making unit commitment decisions include the costs of starting up resources (start-up costs), the costs of running resources at their minimum operating levels (minimum load costs), and transition costs, among other things. (CAISO Tariff, section 31.3). On a 30-day basis, scheduling coordinators for “use-limited resources” participating in CAISO’s markets may choose either the proxy cost option¹ or the registered cost option for specifying their start-up costs or minimum load costs. All other resources must use the proxy cost option.

These two options are designed to compensate resources for start-up and minimum load costs while also mitigating potential market power concerns by setting a cap on the resources’ allowed daily bids for those costs. For Resource Adequacy (RA) resources, which are subject to a must-offer requirement, CAISO also generates cost-based bids when a scheduling coordinator does not submit a bid. (CAISO Tariff, § 30.7.3.1, 40.6.8, Appendix A, and definition of “generated bid.”) The theory behind these rules is that: “[i]f the resource bids reflect the opportunity costs associated with dispatching the resource at particular times, then the resource’s ability to only run [during limited] hours can be appropriately optimized.” (CAISO filing at FERC, June 2015). CAISO made significant changes to their market design in 2014/ 2015 which led indirectly to the need to revisit the design of Commitment Costs, especially for Resource Adequacy resources. (CAISO tariff §30.4) The need to revisit the commitment costs was not necessitated by a CPUC decision.

The “Commitment Cost Enhancements 2” initiative focused on the definition of “use-limited.” FERC denied the tariff amendments CAISO filed after this initiative which would have amended the definition of “use-limited.” FERC Docket No. ER15-1875-000, 152 FERC ¶ 61,185. CAISO’s tariff, as it stands presently un-revised, defines a “use-limited resource” as:

¹ Under the proxy cost methodology, scheduling coordinators may submit daily start-up cost bids that are up to 125 percent of CAISO’s daily estimated start-up costs based on each generator’s physical characteristics and a daily natural gas price index. Under the registered cost methodology, scheduling coordinators may submit start-up cost bids that are fixed for the month for up to 150 percent of CAISO’s estimated start-up costs based on each generator’s physical characteristics and natural gas futures prices for the month.

[a] resource that, due to design considerations, environmental restrictions on operations, cyclical requirements, such as the need to recharge or refill, or other non-economic reasons, is unable to operate continuously. This definition is not limited to Resource Adequacy Resources.”

Furthermore, at present, some resources, such as hydroelectric generating units, proxy demand response resources, reliability demand response resources, and participating load (including pumping load) are “deemed to be use-limited resources and are not required to apply for such status.” (As re-stated in the CCE2 FERC filing).

Summary of CAISO’s CCE 3 Proposal

CPUC Staff understands that CAISO currently proposes to do the following in the CCE 3 initiative:

- Change the definition of “use-limited” to apply only to air quality regulation, and design limitations that can be ascertained by the “manufacturer specifications” for a resource.
- Specify that contractual limitations on the number of starts for a unit in a given year/ month which are not directly mandated by a local air quality management district (AQMD) are not “regulatory” and therefore are not eligible to be reflected through Opportunity Cost bidding.
- Remove the “default” use limited category for Proxy Demand Response resources, and storage resources.
- Thereby require that many resources that are currently either deemed use-limited by CAISO, or which the CPUC has decided are use-limited, must now bid in to the market at all hours and may be dispatched whenever CAISO determines they are the most “economic resource.”

Proposal to exclude contract provisions from definition of “Use-Limited”

In essence, the prior proposed CAISO amendments to the definition of “use-limited” are being proposed again in the CCE 3 initiative, but re-branded as *clarifications* of the prior proposal. The result of the current proposed tariff changes being adopted would be that many RA resources, with contracts approved by the CPUC that include limitations on the number of starts per year or month, would not be eligible for the registered cost option or opportunity cost bidding, and would be forced to use the “proxy cost option.” Because CAISO estimates the start-up costs of a resource, and not the resource operator/ scheduler, there would not be a way for these resources to indicate unavailability through proxy costs.

Therefore, the practical result is that, many resources that have limitations on their number of starts could have all their starts used up at the beginning of the year, or month, and therefore may not be available during critical peak periods to support reliability. This has particular implications for Flexible RA resources because it may result in their unavailability during the periods of highest ramping need, currently estimated to be in December. While in theory CAISO’s market should be able to optimize the dispatch of these valuable resources, in fact the market will be unable to if this proposal is implemented,

because there will be no way for the potential opportunity cost of their unavailability to be reflected in their start up and minimum load costs.

On the issue of CAISO's proposed definitional change: FERC ruled:

34. The Commission, however, rejects the proposed tariff revisions related to use-limited resources. These proposed revisions have not been shown to be just and reasonable. In particular, the Commission finds that the proposed tariff language is not sufficiently transparent in describing how CAISO will determine what capacity is use-limited. Additionally, the Commission finds that CAISO has not sufficiently explained or justified the potential effect on market participants of changing from a definition of use-limited resource to use-limited capacity. Finally, the Commission finds that CAISO removed clarifying language from the tariff regarding the use-limited registration process without any justification. (at para 34)

Another significant point of disagreement in CCE 2 was whether or not CAISO should respect an LRA's approval of contracts that have use-limitations in them. On the issue of deference to contract provisions, FERC said:

CAISO has failed to discuss in sufficient detail the interaction of contractual limitations with economic and non-economic limitations, and has *not supported its position that allowing economic limitations could unnecessarily reduce CAISO's flexibility in ensuring reliability.* (at para 35)

However, in the new CCE 3 initiative, rather than discussing the issue of how contractual limitations may be reflections of non-economic limitations, or why allowing economic limitations to be considered would affect reliability, CAISO has instead amended to definition to explicitly remove contractual limitations from any consideration. Furthermore CAISO's justification to FERC was that having to honor these limitations would diminish CAISO's ability to ensure reliability, but the CCE 3 Straw Proposal makes no attempt to justify this earlier position.

Implications of Proposal to change tariff definition of use limited:

CPUC Staff is concerned that Load Serving Entities (LSEs) who entered into long-term contracts containing start, run hour, or other limits, may be over-committed by the modified commitment cost rules, which would result in those resources being unavailable at potentially critical times, and, it could result in additional and unnecessary wear and tear on the units. This would make those LSEs exposed to Capacity Procurement Mechanism (CPM) and Resource Adequacy Availability Incentive Mechanism (RAAIM) penalties, resulting in additional ratepayer costs. In the long term, if LSEs cannot contract based on economic factors, RA contracts may become significantly more expensive. This represents a potential ratepayer impact not considered in this initiative. It could also create unnecessary negative reliability impacts when these resources are not available as they could have been but for this proposed change.

In the proposal, CAISO argues that if they allow contractual limitations to remain as part of the definition of "use-limited" then all contracts in the future will be written to contain limitations on the

number of starts. As part of a local-regulatory authority, CPUC Staff finds this to be a very weak argument, premised on the assumption that the CPUC and other LRAs will not weigh the costs and benefits to ratepayers when approving RA contracts. Clearly, weighing ratepayer costs and benefits is an integral part of the CPUC's duties, and the CPUC would have no interest in suddenly approving long term contracts with unreasonable and unjustified limitations on the number of starts.

In truth, there are various reasons why the CPUC approves contracts with use-limitations, and, while often those limitations are environmentally related, they may not be directly tied to a specific local air quality limitation, for example. Rather, they may be based on environmental concerns of a local community where the resource is located. Alternatively, they may be based on concerns regarding the cost associated with unit wear-and-tear on a unit over time, all of which must be borne by the ratepayer. These types of start limitations are not "economic" considerations, as CAISO seems to qualify them.

Also, the clarification of "design limitations" will not sufficiently include most resources that do have inherent limitations on the number of starts based on their design, because these are not necessarily contained in the "manufacturers' specifications." An important consideration is that while a unit may be *able to operate* in a certain way and to start/ cycle frequently, for many resources, this will dramatically decrease the life of the unit and/or increase the frequency of needed maintenance. The CPUC considers all of these factors when reviewing and approving long term contracts, and therefore these contracts should be respected. The CPUC is also primarily concerned with both ratepayer costs and reliability when approving long term contracts, and therefore, attempts to ensure that resources designed to be "peakers" or to provide reliability services primarily at critical times of year will be available when most needed. Ignoring this therefore creates serious potential for decreased reliability when units that could have been available are forced to undergo maintenance because they were over-dispatched.

In short, there are many complex factors that are considered when the CPUC uses its decisionmaking authority to weigh the public interest in approving or denying generation contracts and it is inappropriate for the CAISO to diminish the importance the public interest plays in deciding what limits should be placed in a contract. There must be a way for the CAISO's dispatch system to respect these limitations, and therefore the registered cost option must be maintained for resources that are "use-limited" for economic or contractual interests, as represented in CPUC approved RA contracts.

Restricting the Definition of "Use Limited"

CAISO is proposing to restrict many types of resources from the definition of "use-limited." CPUC staff believes this is a contradiction with earlier CAISO statements in CCE Phase 2:

Proxy demand and reliability demand response resources are deemed use-limited by the tariff and the ISO does not propose any changes to this status. Reliability demand response resources do not have non-zero start-up or minimum load costs and therefore do not have commitment cost-related opportunity costs. Proxy demand resources may have shut-down costs and minimum load costs that the ISO may consider. However, both can have energy-based opportunity costs. The ISO would only calculate these costs to include in a default energy bid if these resources were mitigated as part of the market power mitigation process. But since demand response is not subject to mitigation, there is no need for the ISO to calculate these costs. Proxy demand resources can directly reflect opportunity cost in the energy bids up

to the offer cap and reliability demand response resources are already required to bid in near the offer cap.

The current proposal removes Demand Response and thermal storage resources from the definition of “use-limited” resources, even though DR is inherently use-limited. Demand Response resources were not designed to bid into the CAISO market every day, and in fact requiring them to do so appears inconsistent with their original purpose. For reliability, environmental, and policy reasons the market needs DR resources to be available only when certain load, resource, and market conditions are present. To ensure the availability of these resources during critical peak periods, it is crucial that they be able to be defined as “use limited” so that the DR participants do not become fatigued, etc. This is essentially another type of resource “wear and tear,” but, in the case of DR, these resources are businesses and other types of electric customers and ratepayers.

The CA State legislature recently ordered the utilities to procure Storage, finding that this is a critical technology to develop for the integration of renewables. CAISO’s proposal may result in overusing storage resources, which could reduce the life of those resources over the number of cycles. This will diminish our ability to test the capability of these resources to assist with integrating renewables.

Conclusion and Recommendations

CPUC Staff, therefore, recommends that CAISO define “use-limited” to include resources with contractual limitations contained in long-term contracts considered and approved by the CPUC for at least a three-year period. Furthermore, resources should be allowed to reflect contractual limitations on the number of starts (as contained in CPUC approved long-term contracts) in their opportunity costs. This would mean that contractual use limits (common to DR and storage resources) are defined as “regulatory” reasons for use-limitations. This would remove many of our concerns with this proposal. This three-year period should provide the CAISO and CPUC time to explore impacts to RA capacity. It would also allow the generators, LSEs and scheduling coordinators sufficient time to consider the cost and feasibility basis for renegotiating long term procurement contracts.

While allowing the scheduling coordinators to submit bids that represent start-up costs would help, it is insufficient to defer resolution of the opportunity cost bidding issue for the “bidding rules” initiative, which does not yet have a proposal for review, and will likely go before CAISO’s board and FERC long after this initiative’s proposal.

Furthermore, Demand Response and Storage resources should be maintained as default use-limited resources and allowed to reasonably control their availability to avoid unnecessary fatigue of the resources. This would also avoid a reduction in the reliability services they are able to provide during critical time-periods when they are most valuable to the system.