

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2016 and 2017 Compliance Years.

Rulemaking 14-10-010
(Filed October 16, 2014)

**COMMENTS OF COMVERGE, INC., CPOWER, ENERNOC, INC.,
AND ENERGYHUB, (“JOINT DR PARTIES”) ON
STUDY PLANS FOR FLEXIBLE CAPACITY REQUIREMENTS TOPICS**

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Comverge, Inc., CPower, EnerNOC, Inc., and EnergyHub (“Joint DR Parties”)

respectfully submit these Comments on the Study Plans for Flexible Capacity Requirements (FCR) Topics. These Comments are timely filed and served pursuant to the Commission’s Rules of Practice and Procedure and the Assigned Commissioner and Administrative Law Judge’s (ALJ’s) Phase 3 Scoping Memo and Ruling issued on September 13, 2016 (Phase 3 Scoping Memo).

**I.
INTRODUCTION**

The Phase 3 Scoping Memo acts to combine in a new Phase 3 “issues previously scoped for Phase 2, Track 2 with additional issues for a planned resolution in June 2017.”¹ Thus, “Phase 3 will address four primary issues: local and flexible RA requirements for 2018, a durable form of FCR, multi-year RA requirements, and Effective Load Carrying Capacity (ELCC) of wind and solar resources.”² The Phase 3 Scoping Memo, however, also acknowledges that the issue of a “durable” FCR “structure” had already been the subject of Comments filed on February 5 and June 29, 2016, as well as a Workshop held on April 5, facilitated and summarized in a Workshop Report filed by Energy Division on June 1, 2016.

¹ Phase 3 Scoping Memo, at p. 2.

² Id.

The Joint DR Parties were among those that participated in the April 5 Workshop and filed Comments on June 29 to address “Track 2” (durable FCR structure) issues and proposals for an “Anticipated Late 2016 Decision” by the Commission.³ As the new Phase 3 Scoping Memo makes clear such a decision will not be forthcoming by year’s end, and the Phase 2, Track 2 FCR issues will now be part of a broader decision to be issued in “Phase 3” in June 2017.

While the Phase 3 Scoping Memo includes the issues originally included within the scope of Phase 2, Track 2, it now seeks expanded analysis and data on FCRs, including their impact on reliability and resources procured by Load Serving Entities (LSEs) to meet RA requirements since the adoption of the interim FCR methodology in the 2015 RA year.⁴ To that end, the Phase 3 Scoping Memo poses additional, detailed “Guiding Questions” for that purpose, the answers to which it acknowledges will require further reports and market data from both the Commission Staff and the California Independent System Operator (CAISO).⁵

II. TIME AND INFORMATIONAL LIMITATIONS ON FIRST COMMENT TASK

The first threshold “comment” opportunity in Phase 3 (due today) is described in the adopted schedule as “Study Plans for FCR Topics.”⁶ According to the Phase 3 Scoping Memo:

“For the Study Plans on FCR Topics, we request the parties propose ideas on how to inform the Commission’s understanding of the guiding and scoping questions above. We encourage parties to propose plans for their own analytic work or research, either individually or as a group. Further, parties may pose suggestions for Staff analysis or research. Finally, parties may present information or analysis directly in response to the questions.”⁷

Given the very *limited* amount of time (10 days) afforded by the Phase 3 Scoping Memo to respond to wholly changed expectations for the originally described Phase 2, Track 2, and the

³ Phase 2 Scoping Memo (12-23-15), at p. 3.

⁴ Phase 3 Scoping Memo, at p. 4.

⁵ *Id.*, at pp. 5-6.

⁶ *Id.*, at p. 8.

⁷ *Id.*, at pp. 8-9.

expanded questions it poses and data it seeks, this “scope” for this first set of Comments due today is inappropriately broad. Further, it fails to fully acknowledge the input and FCR proposals offered by parties in detail on June 29, 2016, and gives this direction even while confirming that much of the “data” required to inform answers to the “Guiding Questions” has not yet been, but must be, provided by government agencies (either Commission Staff or the CAISO).

Faced with this expanded scope and short response time, what the Joint DR Parties can do today is to *renew* their FCR proposals offered in their June 29 Comments to ensure their inclusion and consideration in the now expected Phase 3 June 2017 Decision. This request is especially important where those proposals were specifically *deferred* in the Commission’s June 2016 Decision (D.16-06-045) to the originally defined “Phase 2, Track 2” that has been fully subsumed in the new Phase 3.

To that end, the Joint DR Parties restate their FCR proposals herein and ask that each be included among the “FCR Topics” to be studied and then resolved in the Phase 3 June 2017 Decision. Certainly, the Joint DR Parties are prepared to conduct further analysis in support of its proposals, but will benefit from the “data” and “helpful analysis” that has yet to be provided, but will be forthcoming from Staff and CAISO,⁸ in doing so. No meaningful additional analysis than has already been provided by the Joint DR Parties in support of their proposals is possible today with only the 10-day notice afforded by the Phase 3 Scoping Memo and without that additional “data” and “analysis” expected from Staff and CAISO.

⁸ Phase 3 Scoping Memo, at pp. 5-6.

III.
JOINT DR PARTIES' PROPOSALS FOR INCLUSION
AS "FCR TOPICS" IN THE PHASE 3 "STUDY PLAN"

A. The Joint DR Parties' Track 2 Proposals Must Be Included as FCR Topics, as Anticipated and Relevant to Phase 3.

For the reasons stated above, the Joint DR Parties' renew their request made in their June 29 Comments for the following 3 proposals to be included as "FCR Topics" to be studied in Phase 3. Each of these proposals or "topics" were first offered by the Joint DR Parties for inclusion in the Track 1 June 2016 Decision,⁹ but were either deferred to or considered relevant for Phase 2, Track 2 by D.16-06-045. As noted above, Phase 2, Track 2 has now been combined and included in Phase 3 by the Phase 3 Scoping Memo.¹⁰

Therefore, it remains the Joint DR Parties' position that these proposals *are* Phase 3 "FCR Topics" and should be adopted for the 2018 RA Compliance year and beyond, especially given that each "is overdue and very much needed not only in response to changing grid conditions, but current and expected Demand Response requirements."¹¹ These proposals include:

JDRP Proposal #1: Flexible capacity RA attributes (Effective Flexible Capacity (EFC)) should be separated (or unbundled) from System RA attributes (Net Qualifying Capacity (NQC)) for Demand Response (DR) and storage;

JDRP Proposal #2: 2-hour Maximum Cumulative Capacity (MCC) buckets should be adopted; and

JDRP Proposal #3: RA value for a combined resource (DR, energy efficiency, storage) should be recognized and adopted.¹²

⁹ Joint DR Parties RA Proposals (January 15, 2016), at pp. 2-11.

¹⁰ Phase 3 Scoping Memo, at p. 2.

¹¹ Joint DR Parties Track 2 Comments (June 29, 2016), at p. 3.

¹² Joint DR Parties Track 2 Comments, at p. 3; also citing, Joint DR Parties' RA Proposals (January 15, 2016), at pp. 2-11.

As noted above, D.16-06-045 also specifically took the following action to defer each of these proposals to Track 2 (now Phase 3) of this proceeding. Thus, on JDRP Proposal #1, the Commission in D.16-06-045 acknowledged that multiple parties, including the Joint DR Parties, had offered and supported proposals to unbundle EFC from NQC. While this issue had been before the Commission previously, the Commission decided “again [to] defer this issue until Track 2.”¹³ In doing so, D.16-06-045 confirmed that “[t]his issue is naturally connected to our consideration of a durable flexible capacity product in Track 2” and “encourage[d] parties in Track 2 to present more detailed proposals on this subject, addressing implementation details such as how CAM resources should be allocated and controls to avoid double counting.”¹⁴

D.16-06-045 also addressed proposals for a 2-hour Maximum MCC bucket (JDRP Proposal #2) and, again while having previously deferred “this idea” in the prior RA annual decision (D.15-06-063), chose to do so again based on the need for further analysis. In this case, consistent with D.16-06-045 and given the “increasing focus on grid reliability,” discussion of the Track 2 April 5 Workshop provided further analysis on this proposal in Track 2, and the Commission in D.16-06-045 “encourage[d] interested parties to actively participate and collaborate with staff on this issue.”¹⁵ Of further significance, the Phase 3 Scoping Memo confirms the inclusion of this topic in Phase 3, stating: “[W]e note that parties and staff have previously discussed the appropriate role of the Maximum Cumulative Capacity buckets; we consider this issue related to FCRs and in scope for this phase.”¹⁶

Finally, D.16-06-045 confirms that several parties supported the JDRP Proposal #3 for demand response combined with other Loading Order preferred resources or storage to receive

¹³ D.16-06-045, at p. 49.

¹⁴ Id.

¹⁵ Id., at p. 44.

¹⁶ Phase 3 Scoping Memo, at p. 7.

RA credit for reduced load at a customer site.¹⁷ The Commission concluded in D.16-06-045 that it “support[s] the goal of simple mechanisms for establishing RA capacity.”¹⁸ Nevertheless, D.16-06-045 again declined to adopt that proposal “at this time,” but indicated that the Commission “remain[s] open to a proposal of this type once tools to implement the potentially complicated measurements needed to monitor demand reductions for combined resources are established.”¹⁹

Clearly, it is the Commission’s expectation that the JDRP Proposals #1 through #3 are relevant “FCR Topics.” The Joint DR Parties, therefore, request their inclusion in the “Study Plans for FCR Topics,” with a commitment to undertake and complete any additional analysis that the Commission determines is required to adopt these RA Program changes in the June 2017 Decision.

B. Joint DR Parties’ Proposed FCR Topics for Inclusion in the Study Plans.

The Joint DR Parties have detailed their FCR proposals several times in this proceeding, including their RA Proposals filed on January 13, participation at the April 5 Workshop, and their Track 2 RA Comments filed on June 29. The Joint DR Parties have demonstrated the basis for, and analysis supporting, each of these proposed RA Program changes, as follows:

1. JDRP Proposal #1: Unbundling EFC and NQC for DR and Storage.

For Demand Response (DR) and Storage resources, the flexible and underlying system/local RA attributes should be separated.²⁰ In doing so, the Joint DR Parties have provided analysis demonstrating that the Commission’s earlier determination requiring DR and

¹⁷ D.16-06-045, at pp. 44-45.

¹⁸ *Id.*, at p. 45.

¹⁹ *Id.*

²⁰ January 15 JDRP RA Proposals, at pp. 6-8; June 1 ED Workshop Report, at Topic 3.

storage resources to meet NQC and EFC together is inappropriate and results in less flexibility available to the grid for these resources.²¹

Specifically, to qualify for either generic or local Resource Adequacy, a resource has a must offer obligation (MOO) that calls for the resources to be available for four hours of dispatch per day for three consecutive days between the months of April and October and between the hours of 1 and 6 PM. To qualify for Flexible RA, a resource would have to be available in all months, on non-holiday weekdays, for five hours in either the morning or the evening hours. To be a combined flexible and system/local resource adequacy resource would, in some months, require it to be available for more than 10 hours/day.

However, while this level of availability is simple for a non-use limited generator whose existence is simply to provide energy, capacity, and related services, it is something that a DR resource, which is backed by customer premises, was not designed to do. In addition, as a combined resource, the NQC/EFC is reduced to the lowest common denominator, thereby limiting the resource's ability to provide more capacity than it could provide as either a system/local resource or a flexible capacity resource. Lastly, the number of customers that would be able to meet both requirements is a much smaller pool of customers.

Taken together, this requirement combining NQC and EFC limits DR participation for resource adequacy and reduces that participation to a much lower level than if the resource requirements were separated from each other. The fact of the matter is that recruitment for providing resource adequacy would be targeted to either being a "peaking" resource or being a flexible capacity resource, and those portfolios would likely be separate and without overlap.

In this regard, a DR resource can provide ramping services or peak reliability – but very few customers would be willing or able to participate in a program that required such a broad

²¹ D.14-06-050, Appendix B; January 15 JDRP RA Proposals, at p. 6.

level of curtailment so as to provide both. It would be a much better use of this high, Loading Order preferred DR resource to unbundle these requirements and allow a DR resource to either meet RA MOO or EFC MOO, whichever is most appropriate for the customer (or aggregation of customers) to provide.

For bi-directional Storage Resources, the EFC of the resource is frequently, if not always, in excess of its NQC. The current EFC calculation formulas limit the amount of Flexible RA that a bi-directional resource can sell by adjustments to its NQC – this prohibits a resource from providing to the grid its full flexibility. A Storage resource may be more capable meeting the MOO of both generic/local RA and of Flexible RA. However, this cap leaves benefits that could accrue to the system on the table.

Properly accounting for all of these facts in the RA Program requires the unbundling of EFC from NQC for DR and storage resources. Further, this change can be accommodated simply in the RA compliance program. The current EFC and NQC lists could be revised to utilize the unbundled and uncapped EFCs and the compliance forms calculations could be adjusted for these resource types.

In addition, permitting a resource to have an EFC value without having an NQC value would allow DR and storage to achieve their best and highest grid functions where more flexibility is needed for intermittent resource integration. Leaving this rule unchanged, however, would again create a mismatch of MOO hours that can limit participation and result in the EFC for DR and storage, which is usually higher, being capped at the resource's NQC and limit the ability of these bidirectional from providing full flexibility.²²

This proposal does not require a complete unbundling of system RA attributes from Flexible RA attributes (such that the same resource could sell the system and flexible attributes

²² June 1 ED Workshop Report, at Topic 3.

of that resource separately). Instead, for certain resources (DR and storage) that may not be able to qualify for a system RA attribute, these resources should be allowed to qualify as a Flexible RA resource only, and, in turn, LSEs should be permitted to contract with that resource to fulfill their Flexible RA obligation (but not their system RA obligation.)²³

As the Joint DR Parties have demonstrated:

“A DR resource can provide ramping services or peak reliability – but very few customers would be willing or able to participate in a program that required such a broad level of curtailment so as to provide both. It would be a much better use of this high, loading-order resource to unbundle these requirements and allow a DR resource to either meet RA MOO or EFC MOO, whichever [is most appropriate for] the customer (or aggregation of customers) [to provide].”²⁴

Continued delay in unbundling EFC and NQC for DR also has a deleterious effect where event based DR resources are required to be integrated into the CAISO markets in order to have RA capacity value. Such a circumstance makes it inappropriate to continue to stall a key decision on how DR resources effectively can fulfill flexible capacity requirements. In this regard, the 2017 Demand Response Auction Mechanism (DRAM) program was authorized to procure local and flexible DR resources in addition to the system resources procured in the 2016 DRAM. It is not yet known what level of flexible resources have been procured in this solicitation. However, the Joint DR Parties believe that, if there is a lack of robust offering of flexible RA resources into that solicitation, the lack of resolution on whether and how a resource can qualify as flexible without meeting a system RA MOO requirement will be a stymying force in achieving that transition.

The delay in unbundling EFC and NQC for DR continues to mean that opportunities are missed to evaluate this RA procurement mechanism with workable flexible RA rules for demand response resources. Already any changes to the flexible RA rules will not be known for the

²³ Id.

²⁴ Joint DR Parties RA Proposals (January 15, 2016), at p. 3.

anticipated 2018 -2019 DRAM solicitation set to launch early in Q1 2017. Adoption of this proposal is also supported by the CAISO's Flexible Capacity Requirements (FCR) study, adopted in D.16-06-045, which calls for expanding the Flexible RA Capacity needs in 2017. It is clear that the Commission's June 2017 Decision for the 2018 RA Year must not further delay, but should adopt this much needed RA Program change relative to FCR.

2. *JDRP Proposal #2: Adoption of 2-Hour MCC Buckets.*

As noted above, the Phase 3 Scoping Memo specifically includes consideration of the “appropriate role of the Maximum Cumulative Capacity buckets” as “related to FCRs and in scope for this phase.”²⁵ As the Joint DR Parties have recited in prior filings, prior to 2012, the Commission's counting rules for DR were separated into two categories: one for resources with maximum event lengths of up to two hours per event and one for resources with maximum event lengths of over two hours per event. In D.11-06-022, the Commission required that all DR resources should be dispatchable for at least four hours to meet the same requirements as conventional supply-side resources. Shortly following that decision, the Commission issued D.11-11-003 creating a new MCC bucket for DR resources beginning in 2013.

However, since then, the needs of the grid have been changing (e.g., shifting from peak needs to ramping needs) as the result of renewables procurement and integration. The CAISO expects a mismatch between the current design of Time-of-Use (TOU) rates, which encourage a reduction in demand during afternoons in favor of evening usage, and the likely availability of electricity over the coming years.²⁶

As such, the development and adoption of a new 2-hour MCC bucket is overdue and should not be deferred again, as it was in D.16-06-045 and previous RA decisions. Specifically,

²⁵ Phase 3 Scoping Memo, at p. 7.

²⁶ R.15-12-012 (Electric Rates), at p. 14-15.

a new 2-hour MCC bucket will increase reliability during periods of highest need and permit the inclusion of additional technology types. Allowing for a 2-hour MCC bucket should significantly increase the use of DR resources. Aggregators can approach more customers who have more constraints on their availability to be dispatched for four hours. Two-hour minimum dispatch requirements may allow customers who have previously decided not to participate in DR programs to participate. This could actually allow DR resource participation to grow.

In addition, with the exception of 2015 dispatches by PG&E, two-hour dispatches have been fairly routine, in terms of the manner in which DR has been utilized. Two-hour dispatch requirements could also allow more storage resources to participate as RA resources. Some storage resources may experience battery life reduction if dispatched for four continuous hours versus 2 hours. Two-hour dispatches also allow storage resources to offer more capacity in that 2-hour period than would be available in a four-hour dispatch. For example, a 100 kW resource that must dispatch over a 4 hour period could only offer 25 kW in each hour, whereas it could offer 50 kW for a 2-hour dispatch.

The Joint DR Parties also demonstrated at the April 5 Workshop that DR, dispatched for 1 to 2 hours, is meeting a shorter duration need and, either as aggregated or in combination with storage, could provide value from a two-hour product.²⁷ In addition, preliminary modeling results for DR presented by the E3 consulting group at the April 5 Workshop confirmed many of the points made by the Joint DR Parties regarding DR. According to E3, “a two-hour capacity product would provide a significant share of the capacity value provided by the current standard capacity product” and that “value provided by resources with short durations can be measured through ELCC [effective load carrying capability] techniques.”²⁸ Southern California Edison

²⁷ June 1 ED Workshop Report, at Topic 5.

²⁸ June 1 ED Workshop Report, at Topic 5.

Company (SCE) also commented on the positive benefit and reduced ratepayer costs that can be provided by product diversity, which, for the reasons offered by the Joint DR Parties, a 2-hour MCC bucket would provide. As in the case of the unbundling of EFC from NQC, this change (a short duration product) is certainly one that will enhance grid and resource flexibility and certainly should be included as one of the “FCR Topics” to be studied and adopted in Phase 3.

3. *JDRP Proposal #3: RA Value for a Combined Resource.*

As stated in its previous filings in support of this proposal, there is now a higher likelihood that a customer location can employ and will be employing multiple distributed resources (storage, DR, and energy efficiency) at its premise. The combination of these resources may have implications for the amount of DR a customer can provide. But, from the perspective of the system operator, whether at the distribution or transmission level, if these are behind-the-meter resources, they all appear as load reductions.²⁹

To address this shortcoming, the Joint DR Parties do not believe that it is necessary to complicate the RA measurement of the combination of resources by trying to superimpose individual RA calculation methodologies. Instead, when these resources exist in combination, it should be up to the aggregator/energy manager to determine how multiple resources at a customer site will be managed. As such, if an aggregator or energy manager believes that they can consistently provide 50 or 100 kW of load reduction at a customer premise, either through allowable renewable generation, demand reductions or storage, then they should be able to establish the achievable load reduction and be held accountable for it.

To implement this proposal, it is also not necessary to develop new baseline methodologies for each resource type and, again, leave the determination of which baseline methodology most realistically represents the customers load shape and can measure its load

²⁹ Joint DR Parties RA Proposals (January 15, 2016), at p. 10.

reductions. It may, however, be necessary to consider new baseline methodologies that contemplate multiple resource participation. While the Joint DR Parties concede, as stated by D.16-06-045, that the “tools” to implement this proposal do not yet exist, the Joint DR Parties believe that the analysis to be undertaken in Phase 3 permits, and can include, the development of a process by which “demand reductions for combined resources” can be measured.³⁰

IV. CONCLUSION

Based on the scope, goals, and “guiding questions” established for Phase 3, the Joint DR Parties again strongly recommend that their 3 proposals detailed above be included as “FCR Topics” in the “Study Plan” to be developed for Phase 3 and be adopted in the June 2017 Decision. The Joint DR Parties are prepared to conduct further analysis as necessary and the information and data expected from Staff and CAISO is made available.

Respectfully submitted,

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³⁰ Joint DR Parties RA Proposals (January 15, 2016), at p. 10.

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