

Rulemaking No.: 13-09-011 (DR)
Exhibit No.: JDRP-2
Witnesses Mona Tierney-Lloyd
Colin Meehan
Commissioner Michael Peevey
ALJ Kelly Hymes

**PHASE TWO AND PHASE THREE
REBUTTAL TESTIMONY OF
JOINT DEMAND RESPONSE PARTIES
(EnerNOC, Inc., Comverge, Inc. & Johnson Controls, Inc.)**

Rulemaking 13-09-011
Demand Response (DR)
Phases Two (Foundational Issues) & Three (Future DR Program Design)

*May 22, 2014**

* By electronic mail sent to the Service List in R.13-09-011 on May 16, 2014, assigned ALJ Hymes granted a two-day extension from May 20 to May 22, 2014, for parties to serve Rebuttal Testimony.

R.13-09-011 (DR)
PHASE TWO AND PHASE THREE
REBUTTAL TESTIMONY OF
JOINT DR PARTIES

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* The Statements of Qualifications for Mona Tierney-Lloyd and Colin Meehan are included in Exhibit JDRP-1, Appendix C, and are incorporated by reference herein.

1 R.13-09-011 (DR)
2 PHASE TWO AND PHASE THREE
3 REBUTTAL TESTIMONY OF
4 JOINT DR PARTIES

5
6 I.
7 **PHASE THREE ISSUES**
8

9 **A. RESOURCE ADEQUACY CONCERNS**

10
11 **Q. A1. Have you reviewed the testimony of John Goodin on behalf of the**
12 **California Independent System Operator (CAISO), identified as Exhibit ISO-**
13 **DR001 and served on May 6, 2014?**

14
15 A. A1. Yes.

16 **Q. A2. Do you agree with Mr. Goodin’s opinion that “supply and load modifying**
17 **demand response [should] receive different resource adequacy**
18 **treatment”?**¹

19
20 A. A2. No.

21 **Q. A3. Please explain.**

22
23 A. A3. First, Mr. Goodin testifies that “[f]undamentally, load modifying demand
24 response and supply-side demand response resources have different goals that
25 determine eligibility for resource adequacy qualification.”² Joint DR Parties
26 disagree with this conclusion. The purpose of resource adequacy (RA) is to
27 provide the CAISO with capacity that is available when and where it is needed.³
28 As a result, the qualifying characteristic for a demand response (DR) resource
29 should be its dispatchability, whether it is categorized as Supply or as Load
30 Modifying. This is consistent with the California Public Utilities Commission’s
31 (CPUC’s or Commission’s) rules on how resources are to be counted and given
32 RA credit⁴.

¹ Ex. ISO-DR001, at p. 3 (CAISO (Goodin)).

² *Id.*

³ Decision (D.) 04-01-050 at, pp. 10-11.

⁴ D.04-10-035, at p. 53.

1 Second, a fictitious premise is created by CAISO, that the California Energy
2 Action Plan loading order somehow limits load-modifying DR from qualifying for
3 RA.⁵ The loading order is foremost to provide priority for the use of DR and
4 energy efficiency, which the CAISO respects as it calls for DR in its dispatch
5 process. The distinction between DR that is categorized as dispatchable Supply-
6 side DR and that which is categorized as dispatchable Load-Modifying DR is
7 artificial, as both, by virtue of being dispatchable, qualify for RA.

8 As explained in Exhibit JDRP-1, DR resources that are currently supply-side
9 resources, which are dispatchable by the IOUs, will be treated like load modifiers
10 unless they are bid into the wholesale market.⁶ Thus, it is only the component of
11 being integrated into the wholesale market, not the characteristics of the
12 resource, which will determine whether the resource is a supply-side resource or
13 a load modifier. The characteristics of dispatchable “load modifying resources”
14 that are not bid into the wholesale market may be similar or identical to supply-
15 side resources.⁷ As explained in Exhibit JDRP-1, load modifying resources are
16 “either tariffs with rates, to which customers can choose to respond to the market
17 signals, or they are dispatchable resources, based upon system conditions, that
18 are not bid into the wholesale market.”⁸

19 Third, in his testimony, Mr. Goodin accepts that both Supply-Side and Load-
20 Modifying DR “have [RA] benefits” and Load Modifying DR “can reduce [RA]
21 need.”⁹ But then Mr. Goodin testifies that “[l]oad modifying resources may
22 mitigate the resource adequacy need, but should not count toward the resource
23 adequacy requirement,”¹⁰ but never recognizes or connects this to the CPUC’s
24 requirement that DR that is dispatchable qualifies for RA¹¹.

⁵ Ex. ISO-DR001, at pp. 4-5 (CAISO (Goodin)).

⁶ Ex, JDRP-1, at p. 23 (Joint DR Parties (Meehan/Tierney-Lloyd)).

⁷ *Id.*, at p. 54 ((Joint DR Parties (Meehan/Campbell/Tierney-Lloyd)).

⁸ *Id.*

⁹ Ex. ISO-DR001, at p. 5 (CAISO (Goodin)).

¹⁰ *Id.*

¹¹ D.04-10-035, at p. 53.

1 In contrast, PG&E Witness Tougas testifies correctly that, in order to avoid
2 “disadvantaging” one resource type over the other or “diminishing the value of
3 one relative to the other,” it is essential that “both Load-Modifying Resource DR
4 and Supply Resource DR receive comparable RA value that reflects the
5 generation capacity they are avoiding.”¹² In this proceeding, PG&E has
6 previously articulated the differences between supply-side and demand-side DR,
7 as follows:

8 “The only difference between supply-side and demand-side DR
9 should be how the product is utilized, rather than its level of
10 reliability or whether the program is ‘customer-focused’ . . . The
11 reality is that regardless of how DR is classified, it is ultimately a
12 customer-focused program that must deliver reliable performance.
13 Customers create the need for generation, provide the DR, and
14 choose whether to participate in a DR program. Therefore, any DR
15 program, whether supply-side or demand-side, must have a
16 customer focus.”¹³

17 PG&E has also suggested improvements that could be made to increase the
18 visibility of DR to the CAISO and better integrate demand side DR into the
19 wholesale market.¹⁴ Joint DR Parties believe these suggestions have merit and
20 warrant additional discussion.

21 Fourth, Mr. Goodin testifies that “[l]oad modifying [DR] is not like a supply-side
22 resource, which is available to the ISO when and where needed.”¹⁵ This
23 statement is incorrect. Dispatchable Load Modifying DR is available when and
24 where the CAISO wants and needs this resource. As explained in Exhibit JDRP-
25 1, the Aggregator Managed Portfolio (AMP) contracts, Capacity Bidding
26 Programs (CBP), Base Interruptible Programs (BIP), and Demand Bidding
27 Programs (DBP) have the primary characteristics necessary to be viewed as
28 supply resources. Specifically, they can deploy within a predictable timeframe
29 and with a predictable level of accuracy to meet the needs of the system operator

¹² Ex. PG&E-1, Volume 1, at p. 2-1 (PG&E (Tougas)).

¹³ R.13-09-011 (DR) PG&E Response to Phase Two Foundational Questions (December 13, 2013), at p. 4.

¹⁴ *Id.*, at pp. 12-13.

¹⁵ Ex. ISO-DR001, at p. 5 (CAISO (Goodin)).

1 or utility.¹⁶ These existing DR programs contribute to RA by meeting the peak
2 demand needs on the system, which occur infrequently, thus deferring the need
3 to build or buy incremental generating capacity to meet those few hours of need.

4 **B. SUPPLY RESOURCES ISSUES**

5 **1. DR Participation in CAISO Wholesale Market**

6
7 **Q. B1. Have you reviewed the testimony of Neil Millar on behalf of the**
8 **California Independent System Operator (CAISO), identified as**
9 **Exhibit ISO-DR002 and served on May 6, 2014?**

10
11 A. B1. Yes.

12 **Q. B2. Do you agree with Mr. Millar’s assessment of the “supply-side**
13 **demand response (DR) resource characteristics” that are required to**
14 **“mitigate reliability concerns” and, in turn, permit DR to participate**
15 **in the CAISO markets?¹⁷**

16
17 A. B2. No.

18 **Q. B3. Please explain.**

19
20 A. B3. To begin with, in his testimony, CAISO witness Millar seeks to impose a
21 precondition to mandated DR participation in the CAISO wholesale
22 market. Namely, Mr. Millar testifies that “supply-side demand response
23 resources must be integrated into the CAISO market if these resources
24 are to be available to mitigate reliability concerns.”¹⁸ This testimony
25 presupposes that the characteristics of demand response that “mitigate
26 reliability concerns” have been adequately and/or fairly defined. In fact,
27 this step has not been completed by CAISO. More importantly, no such
28 definitions have been adopted by the CPUC to support corresponding
29 directions to its jurisdictional investor-owned utilities (IOUs) that, in turn,
30 appropriately balance the CPUC’s responsibilities not only to “ensure
31 safety and reliability in the electrical system,” but also to maintain just and

¹⁶ Ex. JDRP-1, at p. 39 (Joint DR Parties (Tierney-Lloyd/Meehan/Campbell)).

¹⁷ Ex. ISO-DR002, at p. 2 (CAISO (Millar)).

¹⁸ *Id.*

1 reasonable rates and to “implement procurement-related policies to
2 protect the environment.”¹⁹

3 In his testimony, Mr. Millar discusses three general characteristics that
4 must be considered in assessing the effectiveness of DR programs to
5 meet local capacity needs: Duration, Availability, and Response Time. Mr.
6 Millar admits, however, that requirements for duration and availability
7 “depend greatly on the specific circumstances in each local area” and
8 these can “evolve over time.”²⁰ Mr. Millar also testifies that availability
9 requirements “vary on a case-by-case basis.”²¹ In contrast, the response
10 time requirement is quite specific—the resource must be able to respond
11 within 30 minutes.²²

12 First, as explained in Exhibit JDRP-1, none of the rules, whether for
13 flexible, generic system or local RA, are finalized. They are all in some
14 state of flux. Since the definition of RA is the primary driver behind the
15 value of DR and is driving the desire for DR to participate in the wholesale
16 market, the lack of definition is a problem in terms of being able to
17 conclusively say whether integration into the wholesale market will be
18 successful or not. These definitions must be fully defined and understood
19 by market participants before they can develop a resource or determine
20 the value of the resource.²³

21 In fact, not only in Exhibit JDRP-1, but in other CPUC proceedings,
22 CAISO’s claim that DR resources need to be dispatchable within 30
23 minutes in order for the CAISO to count DR resources as contingency
24 resources has been contested, and the matter remains unsettled.²⁴ To
25 the best of the Joint DR Parties’ knowledge, no other ISO or RTO requires

¹⁹ D.14-03-004, at pp. 12-13.

²⁰ Ex. ISO-DR002, at p. 6 (CAISO (Millar))

²¹ *Id.*, at p. 5.

²² *Id.*, at p. 6.

²³ Ex. JDRP-1, at p. 27 (Joint DR Parties (Meehan/Tierney-Lloyd)).

²⁴ See, D.14-03-004, at pp. 57-58; R.12-03-014 (Long Term Procurement Plan (LTPP) (Track 4)); EnerNOC, Inc. (EnerNOC) Opening Brief, at pp.15-17.

1 DR resources to be dispatched within 30 minutes in order to qualify as a
2 local capacity resource. Instead, to qualify, these DR resources simply
3 need to be located in the local area and dispatched as instructed by the
4 ISO or RTO.

5 In addition, on further examination of CAISO's position, it is not even clear
6 that CAISO will require dispatch within 30 minutes as the only criteria for
7 demand response to qualify as a local capacity resource.²⁵ In fact,
8 testimony by CAISO witnesses in the Long-Term Procurement Plan
9 (LTPP) proceeding similarly suggested that the criteria for DR qualification
10 as a local capacity resource could vary by local capacity area and is, as of
11 yet, unknown.²⁶

12 In sum, CAISO has yet to define other parameters regarding the DR
13 resource's availability, including either the frequency with which the
14 resource could be dispatched or the duration of the dispatch. In fact, the
15 primary considerations of what constitutes a "local capacity resource,"
16 including DR, should be that the resource is located in the local capacity
17 area and is capable of being dispatched within the Local Capacity Area.
18 These are attributes that DR has now and should certainly be taken into
19 account in relying on these resources to identify or meet local capacity
20 requirements.

21 **Q. B4. Have you reviewed the Direct Testimony of Calpine Corporation**
22 **(Calpine) served on May 6, 2014?**

23
24 A. B4. Yes.

25 **Q. B5. Do you agree with Calpine's witness Mr. Barmack that DR procured**
26 **to satisfy RA obligations must "meet the same performance**
27 **requirements as other RA resources" in order to avoid**
28 **compromising reliability?"²⁷**

29
30 A. B5. No.

²⁵ R.12-03-014 (LTPP) (Track 4) EnerNOC Opening Brief, at p. 15 (with citation to the Track 4 testimony of CAISO witness Sparks).

²⁶ *Id.*, at pp.15-16 (with citation to the Track 4 testimony of CAISO witness Millar).

²⁷ Direct Testimony of Calpine Corporation, at p. 3 (Calpine (Barmack)).

1 **Q. B6. Please explain.**

2 **A. B6.** Mr. Barmack appears to be arguing that in order for resources to be
3 “comparable” in terms of meeting RA obligations they must have exactly
4 the same performance requirements. The Federal Energy Regulatory
5 Commission (FERC) has already ruled on this issue and has recognized
6 that different resources may have different operating characteristics and
7 still provide resource adequacy.²⁸

8 Exhibit JDRP-1 identifies a troubling trend toward comparability of
9 resource requirements meaning that DR has to abide by the same
10 requirements as generation, like a Must Offer Obligation (MOO), that
11 increases the administration of the resource without evidence that a MOO
12 will provide any greater utility to the CAISO and may not result in any
13 greater utilization of the resource than was experienced under the IOU
14 contracts.²⁹ Because, ultimately, high prices, or an abnormal peak
15 requirement (whether it be for generic or ramping resources), will
16 determine when DR resources are of the greatest utility to the system, not
17 for providing base-load energy and not for “normal” daily fluctuations in
18 load. If neither high prices or abnormal peaks or ramps occur, no one
19 should be surprised when DR is not dispatched. If the impetus for
20 integrating DR into the wholesale market is to have DR become an
21 economic resource and be included in the CAISO’s least-cost, security
22 constrained dispatch, then economics will dictate when best to dispatch
23 the resource, which may still be infrequently, given the energy price
24 dynamics in the wholesale market at this time.³⁰

25 In addition, DR resources have provided valuable resource adequacy in
26 several markets throughout the U.S., such as ERCOT and PJM, without
27 being required to offer into the energy market. The intent of a must offer
28 obligation is to prohibit generation from exerting market power by

²⁸ FERC Docket No. RM10-17-000; Order No. 745 (2011) (134 FERC ¶ 61,187).

²⁹ Ex. JDRP-1, at p. 27 (Joint DR Parties (Tierney-Lloyd/Meehan))

³⁰ *Id.*

1 withholding resources. While a must offer obligation may make sense for
2 generators, customers providing demand response cannot reasonably be
3 expected to maintain availability 8,760 hours per year. By requiring
4 customers wishing to provide valuable DR resources to the DRAM to offer
5 into the energy market, DR resources will be limited, and, in turn, the cost
6 of DR procurement in the DRAM will be increased.

7 **2. Demand Response Auction Mechanism (DRAM)**

8 **Q. B7. Have you reviewed the Prepared Testimony of Kevin Woodruff on**
9 **behalf of The Utility Reform Network (TURN) served in R.13-09-011**
10 **on May 6, 2014?**

11
12 A. B7. Yes.

13 **Q. B8. Do you agree with Mr. Woodruff's opinion that "ideally, all DR**
14 **programs and procurement should be subject to procurement using**
15 **the DRAM, or at least to valuation using the pricing data the DRAM**
16 **would provide"?**³¹

17
18 A. B8. A key qualifier to Mr. Woodruff's testimony is the use of the word "ideally."
19 In fact, Mr. Woodruff further testifies that he believes that there are
20 "several issues" that "must be clarified or modified" before he "can support
21 the implementation of DRAM."³²

22 **Q. B9. With that qualification, do you agree with Mr. Woodruff's list of**
23 **"issues" that need to be resolved before DRAM can be implemented**
24 **or are there other reasons for proceeding with caution in moving**
25 **forward with DRAM now?**

26
27 A. B9. No. Joint DR Parties do not agree with Mr. Woodruff's list of "issues" that
28 must be resolved before implementing the DRAM. First, the list is
29 incomplete. It is necessary to establish whether the DRAM will provide a
30 sustainable market to grow DR in California to meet the Commission's
31 goals. It is necessary to establish whether this is the case prior to

³¹ Prepared Testimony of Kevin Woodruff on behalf of The Utility Reform Network (TURN), at p. 2 (TURN) (Woodruff).

³² Id.

1 deciding whether or not to consider transitioning existing, successful DR
2 programs into the DRAM.

3 Second, it is true, as Mr. Woodruff testifies, that the DRAM may be able to
4 provide a useful benchmark for the evaluation of some existing DR
5 programs. However, Mr. Woodruff is incorrect in asking that existing DR
6 programs should be terminated by the end of 2016, or phased out by 2018
7 at the latest.³³ It is possible and even beneficial to maintain several
8 avenues of participation in DR programs for customers with widely varying
9 needs and capabilities. Given the untested nature of the DRAM proposal
10 and other concerns identified in Exhibit JDRP-1, a decision to terminate
11 existing DR programs in the 2016-2018 timeframe would have a chilling
12 effect today on participation in those programs.

13 It is important to recognize that the success of any DR program rests
14 ultimately on the interests and desires of the end-user providing the DR
15 resource. Joint DR Parties believe that this proceeding to date has not
16 adequately addressed the end-user impacts of decisions being
17 considered. An exclusive focus on the DRAM mechanism without
18 considering customer interests both within the DRAM and more broadly
19 will likely be to the detriment of growing DR in California.

20 As PG&E witness Mr. Ho has testified, PG&E shares this view:

21 “[I]n order to maximize the amount of cost-effective DR in
22 California, the Commission should pursue an action plan to
23 increase the benefits and reduce the costs and risks to
24 participating customers and providers of DR programs.”³⁴

25 According to Mr. Ho:

26 “[I]f the Commission’s goal is to obtain more DR, we should
27 explore how to get existing DR customers to provide more

³³ Prepared Direct Testimony of Marcel Hawiger on behalf of TURN, at p. 15 (TURN (Hawiger)).

³⁴ Ex. PG&E-1, Volume 1, at p. 1-4 (PG&E (Ho)).

1 DR, as well as how to get new customers into DR
2 programs.”³⁵

3 Finally, as discussed in Exhibit JDRP-1, several structural issues with the
4 DRAM auction and price cap mechanism remain unresolved and are likely
5 to lead to less cost-effective market outcomes.³⁶

6 **III.**
7 **CONCLUSION**
8

9 The purpose of this rebuttal testimony (Exhibit JDRP-2) is to respond to the
10 testimony of other parties from the perspective of Demand Response Providers (DRPs)
11 who participate both in California as well as other markets in the United States and
12 globally on the key issues relative to the design being contemplated for integrating DR
13 resources into the CAISO market and the policy being considered on resource
14 adequacy for DR resources going forward. Joint DR Parties urge consideration by the
15 Commission of the issues, concerns, and recommendations made in their Opening
16 Testimony (Exhibit JDRP-1) and this rebuttal (Exhibit JDRP-2) in or before taking any
17 further steps toward integrating DR resources into the wholesale market.

³⁵ Ex. PG&E-1, Volume 1, at p. 1-410 (PG&E (Ho)).

³⁶ Ex. JDRP-1, at p. 41-44 (Joint DR Parties (Meehan/Campbell/Tierney-Lloyd)).