

Docket No.: A.22-05-002 et al.
Exhibit No.: _____
Date: 08/05/2022
Witnesses: Maria Belenky
Commissioner: John Reynolds
ALJs: Garrett Toy and Jason Jungreis

**SUPPLEMENTAL TESTIMONY OF OHMCONNECT, INC. ON THE DEMAND
RESPONSE AUCTION MECHANISM PILOT**

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. THE UTILITIES SHOULD BE DIRECTED TO CONDUCT AUCTION MECHANISM SOLICITATIONS IN 2023, FOR 2024 DELIVERIES, AS A CONTINUED PILOT WITHOUT FURTHER TECHNICAL REFINEMENTS	1
III. COMMENTS ON THE NEXANT REPORT	3
A. Concluding That Dram Resources Are Not Competitive in the Wholesale Market Without Proper Benchmarking Is Inappropriate.....	3
B. The Nexant Report’s Conclusions of “Over-Reporting” of Market Performance Are Not Supported by the Evidence.	5
C. DRPs Should Have an Opportunity to Review and Validate the Data Specific to Them Ahead of the Publication of the Final Report on the DRAM Pilot.....	8

EXHIBITS

Exhibit A	Statement of Qualifications of Maria Belenky
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1 **I. INTRODUCTION**

2 My name is Maria Belenky, and I am the Market Development Manager at OhmConnect,
3 Inc. (“OhmConnect”). OhmConnect’s business address is 371 3rd Street, 2nd Floor, Oakland,
4 California 94607. I have been employed at OhmConnect for four years. Prior to that I served as
5 the lead technical expert on national climate and clean energy policy at Washington D.C.-based
6 consulting firm Climate Advisers. I regularly participate in various proceedings at the California
7 Public Utilities Commission (“Commission”). My Statement of Qualifications is attached as
8 Exhibit A.

9 OhmConnect is a third-party Demand Response Provider (“DRP”) founded in 2013 and
10 headquartered in Oakland, California. The company provides Demand Response (“DR”)
11 services to residential retail electric customers in California pursuant to Electric Rules 24
12 (Pacific Gas and Electric Company (“PG&E”) and Southern California Edison Company
13 (“SCE”)) and 32 (San Diego Gas & Electric Company (“SDG&E”)). Specifically,
14 OhmConnect’s free software service notifies households of impending DR events and rewards
15 them for their energy reductions, without requiring purchase or installation of additional
16 hardware. OhmConnect is registered to participate as a DRP in the wholesale electricity market
17 operated by the California Independent System Operator Corporation (“CAISO”). OhmConnect
18 has also participated in the Demand Response Auction Mechanism (“DRAM” or “Auction
19 Mechanism”) pilot since its inaugural auction in 2015.

20 My testimony 1) concludes that investor-owned utilities (“IOUs”) should be directed to
21 conduct an additional Auction Mechanism solicitation during the 2023 bridge year with the same
22 budget that was approved for 2022, and 2) discusses substantive issues and conclusions
23 presented in the DRAM Report submitted by Nexant (now Resource Innovations) and Gridwell
24 Consulting on June 24, 2022 (“Nexant Report” or “DRAM Evaluation”).

25 **II. THE UTILITIES SHOULD BE DIRECTED TO CONDUCT AUCTION**
26 **MECHANISM SOLICITATIONS IN 2023, FOR 2024 DELIVERIES, AS A**
27 **CONTINUED PILOT WITHOUT FURTHER TECHNICAL REFINEMENTS**

28 Yes, the Commission should order IOUs to hold an additional DRAM auction in 2023 for
29 deliveries in 2024 before the future of the pilot is decided in Phase 2 of this proceeding. First,
30 the interim DRAM Evaluation shows improving performance on nearly every indicator assessed

1 by the Nexant team. DRAM resources are increasingly active in the CAISO market¹—I delve
2 deeper into this metric below—and market performance is showing steady improvement.²
3 Importantly, the pilot is also continuing to engage new customers, including low-income
4 customers, to demand response.³ IOU DR programs have not been able to demonstrate the same
5 type of customer engagement, as evidenced by witness testimony in this proceeding. The few
6 metrics that show some deterioration—for example, qualifying capacity and demonstrated
7 capacity has decreased somewhat in recent years—likely reflect changes in the program design
8 (e.g., introduction of the QC assessment, narrowing of the option to invoice based on the must-
9 offer obligation (“MOO”)) rather than a true worsening of performance. To be sure, there
10 continues to be room for improvement and some aspects of the DRAM design may need to
11 change if it is adopted as a long-term procurement mechanism. However, the evaluation’s
12 findings do not suggest that approving an additional auction based on the current DRAM design
13 for the 2023 bridge year would be unwise. On the contrary, if the trends observed in the Nexant
14 Report continue, many metrics by which DRAM resources are measured should continue to
15 show better outcomes through 2024.

16 Second, a scenario in which DRAM is paused for 2024 but adopted as a long-term
17 procurement mechanism in 2025 and beyond would significantly undermine regulatory certainty
18 and potentially depress future participation. Pursuing a pilot on a clearly laid out timeline and,
19 within that timeline, determining that it is not in the best interest of the State may be
20 disappointing, but it allows time for planning and adaptation. The DRAM, on the other hand,
21 has been plagued by a “stop and start” approach since the beginning, introducing persistent
22 uncertainty that is extremely detrimental to the growth of any industry.

23 Given the continued improvement in performance demonstrated in the Nexant Report, as
24 well as the harm that persistent regulatory uncertainty can levy on an industry, the Commission
25 should continue the DRAM pilot in the 2023 bridge year. To balance the value of continuity
26 with prudent use of ratepayer funds, the Commission can adopt the same budget for the 2023
27 auction as was approved for 2022.

28

¹ Nexant Report at 96: “there has been an upward trend in scheduling rates and scheduling effectiveness starting in 2019.”

² See *id.* at 131, Table 9-3.

³ *Id.* at 4-5.

1 **III. COMMENTS ON THE NEXANT REPORT**

2 **A. Concluding That DRAM Resources Are Not Competitive in the Wholesale**
3 **Market Without Proper Benchmarking Is Inappropriate.**

4 The Nexant Report concludes that “bid prices for DRAM resources in the energy
5 wholesale market were generally not competitive.”⁴ The final DRAM evaluation should clearly
6 define “competitive” offer prices to effectively judge the performance of DRAM resources on
7 this criterion. Absent a clear definition of what constitutes “competitive” for DR—for example,
8 a target schedule rate or scheduling effectiveness determined with the use-limited nature of the
9 resource in mind—it is impossible to objectively conclude that DRAM as a whole succeeded or
10 failed on this metric. Because Nexant did not present a policy-informed target or goal post for
11 the resource, the Nexant Report’s conclusion that DRAM resources were not offered at
12 competitive prices represents a subjective opinion, not an objective assessment of fact.

13 Nexant reached the conclusion that DRAM resources were not competitive in the
14 wholesale market in three ways: 1) by comparing them to a select set of other resource types; 2)
15 by calculating their scheduling rates; and 3) by determining their scheduling effectiveness. With
16 regard to the first line of analysis, the Nexant Report concluded that “IFOM [in-front of the
17 meter] storage resources and peaker plants have higher scheduling rates than both IOU DR and
18 DRAM resources....” and that “IOU DR programs seem to be more active in getting the capacity
19 scheduled in the DA market compared to DRAM resources, indicating that the IOU DR
20 programs are offered in at prices that are more ‘competitive’ than DRAM resources in that
21 market.”⁵

22 First, determining the competitiveness of demand response based on a comparison with
23 the scheduling rates of natural gas peaker plants and IFOM storage is inappropriate and should
24 not be made in the final DRAM evaluation. While the overarching goal of demand response is to
25 reduce reliance on peaker plants, a reasonable observer would not conclude that DR resources
26 should be dispatched at the same frequency to be valuable in displacing some portion of gas
27 generation. The same holds true for IFOM storage. DR resources comprise households and
28 businesses, each with a unique cost-benefit calculation that drives their decision to participate in
29 DR events. Households and businesses will generally not tolerate being dispatched anywhere

⁴ *Id.* at 10.

⁵ *Id.* at 92.

1 near the frequency of power plants and batteries. They represent a fundamentally different
2 resource that, while still valuable, will always be more use-limited.

3 The report’s comparison of DRAM resources to IOU DR is more informative; however,
4 it too does not lead to any actionable conclusions. Nexant reports that IOU DR resources were
5 scheduled more frequently than DRAM resources in the CAISO market in 2020. From this, the
6 report infers that these resources were offered at more competitive prices and, therefore, they
7 performed better than DRAM resources on this particular criterion. While it is true that IOU DR
8 was scheduled more frequently that year, testimony in this proceeding highlights that the
9 frequency of dispatch led to significant customer attrition. For example, in its testimony, SCE
10 described in detail the impact that the frequency of dispatch had on enrollment in its Summer
11 Discount Plan (“SDP”):

12 “in 2020, SDP was dispatched for an average 30 hours per customer over 13 event
13 days, resulting in an average 195 MW load reduction...The frequency and
14 duration of these events, however, came at an increased cost to participating
15 customers, resulting in approximately 17,000 residential customers...leaving the
16 program.”⁶

17 SCE then noted that they were directed by the Commission to reduce the number of
18 mandatory SDP events—the opposite of what the report suggests should be done for DRAM in
19 order for its resources to be considered competitive—to stem disenrollment:

20 “As directed by the Commission in 2021, SCE made significant program changes
21 designed to increase enrollments by removing the 20-hour economic dispatch
22 requirement, increasing residential incentives by 25%, and offering a \$50 sign up bonus
23 through 2022. SDP was dispatched for only six hours in 2021 and SCE observed a six
24 percent decrease in attrition.”⁷

25 SCE’s SDP is the largest economic IOU DR program. It was likely heavily represented
26 in the data analyzed by Nexant for the purposes of the scheduling rates comparison. Not only
27 would the same analysis look very different in 2021—SDP was only dispatched for six hours last
28 year—it is unclear whether a “higher” scheduling rate that results in substantial customer
29 attrition can be considered a good or desirable outcome by the Commission.

30 This tradeoff, frequency of dispatch versus customer retention, is absent from the report’s
31 broader analysis of DRAM scheduling rate and scheduling effectiveness. The evaluation team

⁶ Ex. SCE-03, SCE’s 2023-2027 Proposed Demand Response Programs By Category at 33-34.

⁷ *Id.* at 34.

1 presents its findings in Table 7-12, reproduced below. The scheduling rates are in the low single
 2 digits, while the scheduling effectiveness reaches as high as 13 and 22 percent in 2020 in the
 3 day-ahead and real-time markets, respectively, in 2020 and 16 percent in the real-time market in
 4 2021.

5 **Table 1. DRAM Scheduling Rates and Scheduling Effectiveness (Table 7-12, Nexant**
 6 **Report)**

Year	Scheduling Effectiveness		Scheduling Rate	
	Day-ahead	Real-time	Day-ahead	Real-time
2018	9%	9%	1%	4%
2019	2%	3%	0%	1%
2020	13%	22%	1%	1%
2021	7%	16%	2%	2%

7
 8 Because the evaluation reaches the conclusion that DRAM resources were *not* offered
 9 into the CAISO wholesale market at competitive prices, it is reasonable to assume that Nexant
 10 judges these rates to be too low. There is no discussion, however, of what constitutes a
 11 “desirable” or “benchmark” rate against which the DRAM results could objectively be measured.
 12 If a scheduling effectiveness of 16 percent is not considered desirable, is 20 percent, or 35
 13 percent? Stakeholders have not tackled this admittedly very difficult question at the policy level
 14 and the evaluation does not attempt to do so either—outside of comparing the resource to gas
 15 peaker plants and batteries, neither of which are human beings, and IOU DR programs that lost
 16 customers due to the frequency of dispatch. As such, it is inappropriate to conclude that the
 17 numbers above reflect either a good or poor outcome, or use the results to argue that DRAM
 18 should not be continued in the 2023 bridge year.

19 To make a real and substantive assessment of the competitiveness of the resource in the
 20 wholesale market, the Commission should engage stakeholders to develop targets or
 21 benchmarks, for the purposes of evaluation only, that take into account the unique nature of the
 22 resource.

23 **B. The Nexant Report’s Conclusions of “Over-Reporting” of Market**
 24 **Performance Are Not Supported by the Evidence.**

25 To better assess market performance of DRAM Sellers, Nexant compares 2020
 26 performance using three separate calculations: 1) the DRP’s CAISO settlement data, 2) Nexant-

1 calculated performance using the same baseline methodologies, and 3) the data submitted to
2 Energy Division Staff via the DRAM quarterly reports. Following this analysis, the evaluators
3 broadly conclude that “[i]n most event hours, DRPs overreport their delivered energy.”⁸ This
4 statement reaches far beyond the evidence actually presented in the report and unnecessarily
5 suggests nefarious intent on part of the DRPs. The explanation, in fact, may be much simpler.

6 First, in its discussion of over-reporting, the Nexant team cites over-reporting both in the
7 DRAM quarterly reports and CAISO settlements relative to Nexant’s own calculations.
8 Discrepancies between the two sources and Nexant’s calculations, however, are not on the same
9 scale and have vastly different implications. It is important to review each comparison
10 separately.

11 Figure 9-3 of the report presents a comparison of performance resulting from all three
12 calculations, for all DRPs, aggregated across the entire year. The largest source of discrepancy
13 between the DRP and Nexant’s calculations is clearly data from the DRAM quarterly reports,
14 particularly in November and December of 2020. This is likely entirely due to unintended errors
15 made by DRPs in completing the quarterly report.

16 2020 was the first year that such reporting was required of DRAM Sellers, and the
17 learning curve was steep for both the reporting DRP and Energy Division Staff managing the
18 data collection and aggregation. The reporting template changed several times, necessitating
19 multiple resubmissions, and reporting errors were easy to make and difficult to catch.
20 Specifically, a new template was introduced in November 2020, which could have led to the
21 greater scale of errors seen in November and December of that year. While it is important to
22 understand the root cause of these discrepancies if they persisted into 2021 and beyond,
23 stakeholders should not draw any conclusions of intentional over-reporting based on this
24 comparison. In the end, these discrepancies are likely the result of benign errors made by DRPs
25 as part of the learning curve. Finally, because the quarterly reports are not used for payment,
26 either for energy at the CAISO or capacity with the IOUs, these errors affect reporting only and
27 do not influence DRP compensation.

28 The more interesting comparison is performance calculated for the purposes of CAISO
29 settlement and Nexant’s recreation of these calculations. Overall, the discrepancy here is much

⁸ Nexant Report at 151.

1 smaller and trends both positive (Nexant’s calculations show higher performance) as well as
2 negative. One possible explanation for the difference is that, while Nexant is using the same
3 meter data used by DRPs, it is doing so much later, with fewer gaps in interval data for any one
4 customer. As the report discusses at length, DRPs continue to experience delays in receiving
5 customer meter data from IOUs. It is possible, indeed it is often the case, that DRPs have to
6 settle at the CAISO with substantial portions of meter data missing. To complete settlement, the
7 missing data must be estimated. To the extent that Nexant received a more complete data set
8 many months after the CAISO settlement deadline faced by DRPs, it would naturally yield
9 somewhat different performance results.

10 Another factor that is likely contributing to the noted discrepancies is the complexity and
11 quality of the data that was used to reproduce DRPs’ calculations. The Nexant Report detailed at
12 length the data challenges the evaluation team encountered. Specifically, the report notes that
13 “[m]issing and problematic data on resources, customers, bidding, meter and settlement data
14 narrowed the number of events the Nexant Team was able to analyze and *decreased the*
15 *accuracy* of which the remaining were analyzed”⁹ and “[d]ue to various data issues, the Team
16 cannot be fully confident that our analysis included the same customers that the DRPs did for a
17 given event.”¹⁰ As a result of these issues “[t]he Team estimated delivered energy for 71.3% of
18 the event hours reported by the DRPs.”¹¹ Given the extensive documentation of the data
19 challenges, it is impossible—not to mention inappropriate—to use the evaluators’ recreation of
20 DRPs’ performance calculations to conclude that DRAM Sellers “over-reported” performance in
21 CAISO settlements. Such a statement implies that the Nexant team’s recalculations of
22 performance were *more accurate* than DRPs’ settlement data. This interpretation is
23 counterintuitive given the well-documented issues the evaluators encountered and the Nexant
24 Team’s own interpretation of the impact these issues had on the accuracy of results.

25 In summary, the heavily caveated calculations presented in the Nexant Report do not
26 support a conclusion of systemic “over-reporting” of performance, much less the insinuation that

⁹ Nexant Report at 153. (emphasis added)

¹⁰ *Id.*

¹¹ *Id.*

1 such over-reporting was intentional. As such, arguments of over-reporting cannot be reasonably
2 used to determine whether or not another DRAM auction should be authorized for 2023.

3 **C. DRPs Should Have an Opportunity to Review and Validate the Data Specific**
4 **to Them Ahead of the Publication of the Final Report on the DRAM Pilot.**

5 DRPs were not provided an opportunity to review the Nexant Report, with their own data
6 unredacted, to ask questions or validate the findings. Allowing parties to review draft data and
7 suggest corrections, if needed, is an integral part of any evaluation or study process. The fact
8 that such a review period was not implemented in the preparation of the Nexant Report
9 introduces avoidable confusion and undermines trust. The evaluation team should ensure that
10 each DRP is able to review its own summary findings before the publication of the final report
11 on the DRAM Pilot.

Exhibit A

STATEMENT OF QUALIFICATIONS OF MARIA BELENKY

Q1. Please state for the record your name, position, and business address.

A1. My name is Maria Belenky. I am the Market Development Manager at OhmConnect and my business address is 371 3rd Street, 2nd Floor, Oakland, California 94607.

Q2. Please summarize your professional and educational background.

A2. I have been employed by OhmConnect for four years, where I lead engagement on resource adequacy and cover other demand response and rate design proceedings before the Commission. Previously, I was a Director of Research & Policy at Climate Advisers, where I led efforts to track and measure the impacts of U.S. climate and clean energy policy on national GHG emissions. I have a BA in Economics and International Relations from the University of Pennsylvania and an MA in Energy, Resources and the Environment from John Hopkins University, School of Advanced International Studies.

Q3. Have you testified previously before the California Public Utilities Commission?

A3. Yes. I have previously testified in this proceeding, in response to PG&E's and CEJA's testimony outlining their proposed DR pilots. I have also served as a witness for the Joint Advanced Rate Parties in Applications (A.) 19-03-002 (SDG&E's General Rate Case Phase 2) and A. 19-11-019 (PG&E's General Rate Case Phase 2). I also previously prepared OhmConnect's testimony in Track 2 of Rulemaking (R.) 17-09-020, to Oversee the Resource Adequacy Program for the 2019 and 2020 Compliance Years.