

Exhibit No. \_\_\_\_\_

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Application of San Diego Gas & Electric  
Company (U 902-E) for Approval of the Results  
from Its 2016 Track IV Local Capacity  
Requirement Preferred Resources Request for  
Offers.

Application No. 17-04-\_\_\_\_\_  
(Filed April 19, 2017)

**PREPARED DIRECT TESTIMONY  
OF E BRADFORD MANTZ**

**ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

***\*\*PUBLIC REDACTED VERSION\*\****

**April 19, 2017**



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4 **I. OVERVIEW AND PURPOSE**

5 My testimony provides a summary of the Demand Response (“DR”) contracts selected  
6 and executed in San Diego Gas & Electric Company’s (“SDG&E”) 2016 Track IV, Local  
7 Capacity Requirement Preferred Resources Request For Offers (“Preferred Resources LCR  
8 RFO”), how the contracts meet the necessary RFO conformance requirements, reasons for  
9 selection, and safety considerations.

10 **II. DR PRODUCT TYPES**

11 In accordance with Decision (“D.”) 14-03-004 (“Track IV Decision”), SDG&E issued its  
12 Preferred Resources LCR RFO on February 26, 2016, seeking local capacity requirement  
13 (“LCR”) resources within the following product types: 1) energy efficiency, 2) demand response,  
14 3) renewable resources, 4) distributed generation, and 5) energy storage. As authorized in the  
15 Track 4 Decision, SDG&E sought up to 140 MW in the solicitation.<sup>1</sup> An overview of the Track  
16 IV LCR RFO process, schedules, and a summary of all requirements of the RFO can be found in  
17 the testimony of Patrick K. Charles.<sup>2</sup> My testimony specifically addresses the DR product type  
18 for SDG&E, how the conformance requirements were met, and the reasons for selection.

19 The DR product-type referenced above must count towards SDG&E’s local Resource  
20 Adequacy (“RA”) obligations. SDG&E required the RFO respondents to perform all of the  
21 activities and follow the processes necessary to facilitate the California Independent System

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<sup>1</sup> The Track 4 Decision authorized SDG&E to procure up to 800 MW, at least 200 MW of which must come from preferred resources.

<sup>2</sup> All citations to witness testimony herein are to the prepared direct testimony served concurrently in support of this application.

1 Operator Corporation (“CAISO”) recognition of their resources for RA compliance.  
2 Respondents were required to demonstrate that their contracted resources would meet the  
3 requirements of the current RA Counting Rules.<sup>3</sup> Finally the resource must be dispatchable by  
4 either the CAISO or SDG&E.

5 SDG&E’s Preferred Resources LCR RFO preferred that DR programs begin delivering  
6 as early as 2018 (subject to Commission approval), and some portion of the delivery period must  
7 encompass calendar year 2022 to meet the Track IV Decision requirements.

### 8 **III. RFO STRUCTURE AND SCHEDULE**

9 The bid structure time line is captured in the testimony of Patrick K. Charles and the  
10 evaluation process is captured in the testimony of Scot Rolf.

#### 11 **A. The major SDG&E teams that contributed to the Preferred Resources** 12 **LCR RFO for the DR Agreements were:**

13 As described in the testimony of Patrick K. Charles,<sup>4</sup> SDG&E structured its bid  
14 development, evaluation and negotiation around teams designed to comply with the Code of  
15 conduct developed pursuant to D.07-12-052.<sup>5</sup> For DR, the teams included one that focused  
16 solely on DR. The teams for the DR evaluation are as follows:

- 17 • SDG&E DR Team

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<sup>3</sup> These rules are found in the following sources: Commission decisions, including D.10-06-039, D.11-06-022, D.12-06-025 and D.13.06-024, and the CAISO’s “Flexible Resource Adequacy Criteria and Must-Offer Obligation”, Market Infrastructure Policy Revised Draft Final Proposal (March 7, 2014):

<http://www.aiso.com/Documents/RevisedDraftFinalProposal-FlexibleRACriteriaMustOfferObligation-Clean.pdf>

In sum, the current requirement for energy limited resources is the availability of the resource for three consecutive day for four hours per day.

<sup>4</sup> Testimony of Patrick K. Charles at PKC-15-17.

<sup>5</sup> *Opinion Adopting [the IOU’s 2006] Long Term Procurement Plans* (December 20, 2007).

- 1 • SDG&E Bid Evaluation Team
- 2 • SDG&E Legal & Financial Team
- 3 • Independent Evaluator

4 **1. SDG&E DR Team**

5 The key functions of the SDG&E DR Team were:

- 6 • Develop the agreement and program metrics;
- 7 • Secondary determination of offer compliance;
- 8 • Development of DR Preferred Resources LCR RFO evaluation criteria with the
- 9 Bid Evaluation Team;
- 10 • Evaluation of DR Preferred Resources LCR RFO offers only;
- 11 • Review of shortlisted offers;
- 12 • Select offers for final contract negotiation; and
- 13 • Negotiate agreements with the shortlisted counterparties with the Legal and
- 14 Financial team

15 **2. SDG&E Bid Evaluation Team**

16 The key functions of the SDG&E Bid Evaluation Team were:

- 17 • Determination of offer compliance;
- 18 • Development of overall Preferred Resources LCR RFO evaluation criteria;
- 19 • Evaluation of all Preferred Resources LCR RFO offers regardless of type, *i.e.*,
- 20 evaluate DR against other products bidding into this RFO; and
- 21 • Assess and determine the viability of proposed projects;
- 22 • Select offers for final contract negotiation.

1                   **3.     SDG&E Legal & Financial Team**

2           The key functions of the SDG&E Legal & Financial Team were:

- 3           •     Support the development of all contractual documents between SDG&E and  
4           selected offers; and  
5           •     Perform checks regarding the financial health of respondents and establish  
6           security requirements.

7                   **4.     Independent Evaluator**

8           The key functions of the Independent Evaluator were:

- 9           •     Ensure the RFO processes followed industry best practices; and  
10          •     Ensure that external third-party offers were not disadvantaged in relationship to  
11          SDG&E offers.

12                   **B.     Relationships among the Preferred Resources RFO teams**

13           The relationships among the teams were specifically structured to avoid having the  
14           personnel that developed the agreement, the evaluation metrics and and Legal and Finacial  
15           Teams to have to much control over the process per the Ccode of Conduct.

16                   **1.     Bid Evaluation Team**

17           The Bid Evaluation Team followed the Code of Conduct.

18                   **2.     SDG&E Legal & Financial Team**

19           The Legal & Financial Team assisted the DR Team in negotiating the agreements and  
20           establishing the necessary security.

21                   **3.     Independent Evaluator**

22           The Independent Evaluator provided technical expertise to the DR Team in developing an  
23           open and fair process for managing the negotiations of the DR Agreements. SDG&E’s Preferred  
24           Resources LCR RFO team scheduled a Pre-bid Conference/Bidders Outreach Event on April 13,

1 2016 to give bidders an overview of the RFO and allow them to ask any RFO-related questions.  
2 This was followed by a period where bidders could submit written questions about the RFO,  
3 which closed on June 17, 2016.

#### 4 **IV. RESOURCE CRITERIA**

5 The Commission's Cost Effectiveness Protocols<sup>6</sup> determined that Load Modifying  
6 Resource DR has no capacity value and that only Supply Side resources as defined by the  
7 Commission<sup>7</sup> would be considered for RA capacity value. The requirements were:

- 8 1. Minimum resource capacity of 500 kW in aggregate.
- 9 2. The DR resource must be a supply side resource.<sup>8</sup>  
10 Permanent load shifting based on technology or behavior would not be  
11 considered.<sup>9</sup>
- 12 3. Bids that are supported by resources that are already being subsidized under  
13 another CPUC regulated program would not be considered.
- 14 4. Load reduction of the resource must be consistent with the Commission  
15 requirements regarding the use of back-up generation for DR. Fossil fuel  
16 emergency back-up generation resources would not qualify as a demand  
17 Response Resource in the RFO based on the Commissions policy statement  
18 on back-up generation.<sup>10</sup>
- 19 5. Resources must be dispatchable, either by the CAISO or SDG&E.

#### 20 **V. DESCRIPTION OF SELECTED AGREEMENTS**

21 The following sections describe the SDG&E projects selected for negotiations stemming  
22 from the 2016 Preferred Resources LCR RFO. The two Resource Adequacy Purchase

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<sup>6</sup> See D.14-06-050. Phrases in initial caps are terms defined in the cited decisions.

<sup>7</sup> See D.14-03-026 at 20.

<sup>8</sup> See D.14-03-026.

<sup>9</sup> SDG&E currently has an existing Permanent Load Shifting (PLS demand response program; *see*, [http/ /www.sdge.com/business/demamd-response/permanent-load-shifting](http://www.sdge.com/business/demamd-response/permanent-load-shifting)).

<sup>10</sup> See D.16-09-056 and D.11-10-003 on back-up generation.

1 Agreements (Buyer Dispatch Option) that were selected are NRG Curtailment Solutions, Inc.  
2 and OhmConnect, Inc.

3 **A. NRG Curtailment Solutions, Inc. terminated**

4 After negotiations concluded, NRG notified SDG&E that they would not be able to  
5 execute the agreement and terminated their involvement in the RFO.

6 **B. The OhmConnect DR Agreement is Reasonable and a Good Value**

7 SDG&E shortlisted OhmConnect's proposal because it relies on a combination of  
8 behavioral and automated changes by the customer to achieve energy usage reductions. To elicit  
9 behavioral changes, OhmConnect sends out emails, text messages (SMS) and push notifications  
10 on the OhmConnect app to request that users actively reduce and be aware of time periods where  
11 there is an energy reduction event (or #OhmHour).

12 For automated reductions, OhmConnect taps into existing WiFi APIs with thermostats  
13 such as Nest, ecobee, Honeywell, and Schneider Electric, smart plugs such as Belkin Wemo,  
14 Schneider Wiser, and iHome, and electric car charging stations such as the Siemens Versicharge  
15 and eMotorWerks JuiceBox. These devices are automatically turned off during the energy  
16 reduction event.

17 OhmConnect has participated in the Demand Response Auction Mechanism ("DRAM")  
18 pilots with all three of the California IOU's. OhmConnect is also one of the largest participating  
19 Demand Response Providers ("DRP's") in SDG&E's DRAM pilots for both 2016 and 2017.  
20 SDG&E saw this as a benefit since OhmConnect has a successful track record of attracting  
21 customers.

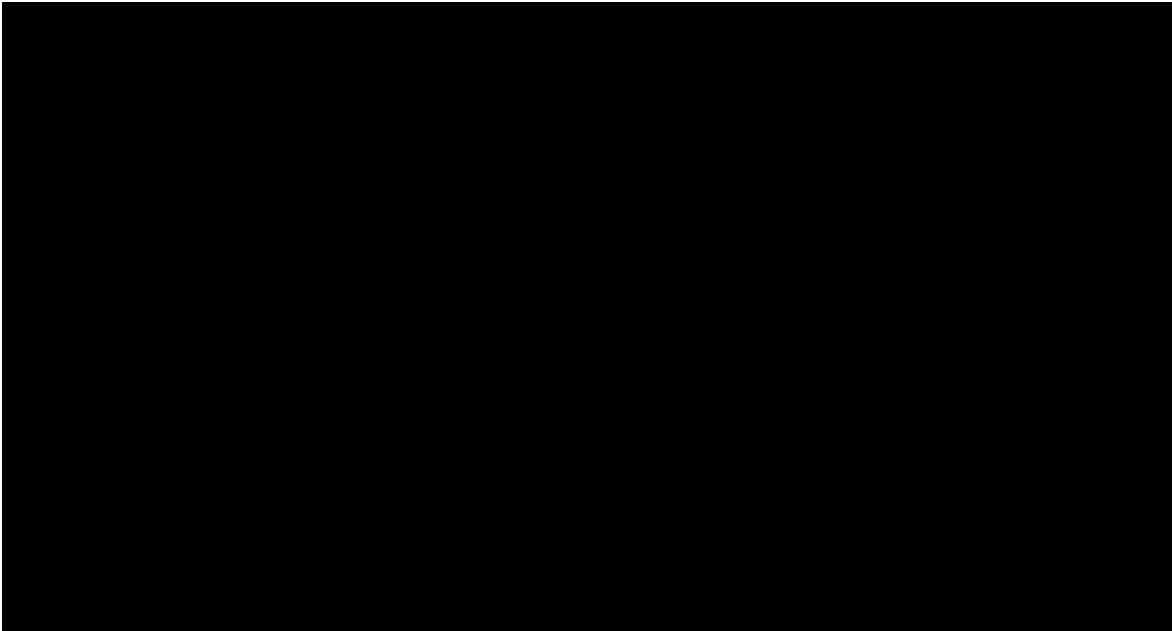
22 Another benefit to SDG&E is that OhmConnect's program cost offered in the Preferred  
23 Resources LCR RFO was lower than the program costs for the contracts they were awarded in  
24 the DRAM 2016 and 2017 pilots. In addition, OhmConnect's redlines and comments on the



1 RFO's pro-forma contract had relatively few material modifications, leading to a smooth  
2 negotiations between the parties. Other qualitative benefits for SDG&E and our ratepayers  
3 include the 5-year contract term for program stability, and the fact that OhmConnect is acting as  
4 its own Scheduling Coordinator for working with integration into the CAISO markets.

5 In this Agreement OhmConnect will focus on contracting with incremental residential  
6 customers not currently in a demand response program within SDG&E's service territory.

7 The Ohmconnect agreement will provide a Supply Side resource that will be integrated  
8 into the CAISO wholesale market and will be available to be bid in by the CAISO or SDG&E,  
9 subject to the following restrictions:



10  
11 OhmConnect will provide SDG&E [redacted]

12 [redacted] 4.5 MW [redacted]

13 The agreement has a fiveyear term starting in January 1, 2018 (subject to receiving all  
14 needed regulatory approvals) and will end December 31, 2022.

15 OhmConnects's capacity price [redacted]

16 [redacted]

1 The price SDG&E will pay OhmConnect is lower than the capacity payments they receive from  
2 their DRAM Agreements. This shows that DR that is procured via the RFO Process can  
3 compete with and be cost-effective against other procurement product types, and that future DR  
4 Agreements for third party DR should be procured through a competitive all-source RFO format  
5 to give the ratepayers the best value.

6 SDG&E submits that the Terms and Conditions of the OhmConnect Agreement are  
7 reasonable and a good value for ratepayers.

### 8 C. Safety Considerations

9 In Section 8.01 (a) of the OhmConnect Agreement SDG&E addresses safety. The  
10 Agreement states that the Seller shall at all times operate the Project safely, in accordance with  
11 Prudent Electrical Practices, Applicable Laws, Permit Requirements and applicable California  
12 utility industry standards. Each of the RFO respondents were asked to respond if they were  
13 going to operate the facilities or programs in accordance to applicable laws and safety standards  
14 as part of the conformance check process to be considered conforming in the RFO.<sup>11</sup>

## 15 VI. QUALIFICATIONS

16 My name is E Bradford Mantz. My business address is 8335 Century Park Court, San  
17 Diego, California, 92123. I am employed by SDG&E as Demand Response & Segmentation  
18 Manager in Program Operations for Customer Programs. My responsibilities include  
19 the design, implementation and management of Demand Response programs for SDG&E. I  
20 have been employed by SDG&E since 2010.

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<sup>11</sup> See, for example, the Energy Storage RFO document, located in Pat Charles' testimony at Attachment A, p. 12, participation criteria 15.

1 I graduated from University of Texas, Austin with a Bachelor's of Arts in Business  
2 Administration with an emphasis in Marketing and Petroleum Land Management and a minor in  
3 Geology.

4 I have testified previously before the California Public Utilities Commission.

5 This concludes my prepared direct testimony.