Brittney Lee
Regulatory Case Administrator
San Diego Gas and Electric Company
8330 Century Park Court
San Diego, CA 92123-1530

January 11, 2017

Sent via FedEx and electronic mail

Will Maguire
Regulatory Analyst
Energy Division | Market Structure and Design
California Public Utilities Commission
505 Van Ness Avenue, San Francisco, CA 94102

Re: SDG&E's Response to Data Request No. 2; Ocean Ranch Substation Project (Application No. A.16-07-016)

Dear Mr. Maguire:

Enclosed please find San Diego Gas & Electric Company's (SDG&E's) Response to Energy Division's Data Request No. 2, issued on December 23, 2016.

In the enclosed SDG&E Data Response Matrix No. 2, Item 1 is shaded to indicate that the response includes attachments containing confidential information. The text in the matrix is not confidential. Confidential attachments have been omitted and will be submitted pursuant to California Public Utilities Commission Decision No. 16-08-024.

Please do not hesitate to contact me via email at Blee2@semprautilities.com or phone at (858) 637-7995, should you have any questions.

Thank you,

\s\Brittney Lee

Brittney L. Lee
Regulatory Case Administrator

Enclosure

cc: Fritts Golden, Aspen Environmental Group

SDG&E Ocean Ranch Substation Project – A.1607016
Data Request No. 2 Dated December 23, 2016
SDG&E Data Response Matrix No. 2 (01/11/16)

SDG&E Ocean Ranch Substation Project – A.1607016 Data Request No. 2		
Data Request No.	**Request**	**SDG&E RESPONSE**
1	Please provide the substation single line diagram for the following substations. Include all existing transformers (69/12 kV), their MVA ratings for both normal and emergency loading, and the feeders served from each transformer. a. Melrose Substation b. Monserate Substation c. Morro Hill Substation d. San Luis Rey Substation e. San Marcos Substation	Please refer to the system operating diagrams (SOD) contained in Attachment A, which are confidential pursuant to Public Utilities Code §583, Govt. Code § 6254(e), and General Order 66-C. Attachment A includes A-1 Melrose Substation_SOD, A-2 Monserate Substation_SOD, A-3 Morro Hill Substation_SOD, A-4 San Luis Rey Substation_SOD, and A-5 San Marcos Substation SOD. Each diagram depicts the existing 69/12 kV transformers, their MVA ratings and the feeders served from them. SDG&E does not have a 30 minute emergency rating for these transformers. Confidential attachments have been omitted and will be submitted pursuant to California Public Utilities Commission Decision No. 16-08-024.
2	For the 5 substations listed in #1 above, please provide the most recent 10 years of load data. Load data should be provided for each transformer within the different substations. Please indicate if any load transfers were made between the different substations, or other stations not listed above, during the 10 year period.	Please refer to Attachment B2 for the most recent 10-year load data. The data provided is referred to as "raw peak data" because it has not been inspected to verify whether the circuits downstream of the transformer were in normal configuration. SDG&E is a dynamic system and the operations team has the flexibility to shift load around as needed by opening and closing switches on the distribution circuits, resulting in certain circuits being in an abnormal configuration at times. Attachment B1 contains planned load transfers created by Distribution Planning Group between the different substations, (B-1 Transfer Data and B-2 Load Data).

SDG&E Ocean Ranch Substation Project – A.1607016
Data Request No. 2 Dated December 23, 2016
SDG&E Data Response Matrix No. 2 (01/11/16)

SDG&E Ocean Ranch Substation Project – A.1607016 Data Request No. 2		
Data Request No.	**Request**	**SDG&E RESPONSE**
3	Review of CAISO TPP suggests that project scope may include the reconductoring of existing lines between San Luis Rey and the proposed project site to achieve a 175 MVA rating. However, we did not see this scope included in the PEA. Please verify if the reconductoring noted in the CAISO TPP (2014-2015) is part of the project or if the existing lines will remain as they are with the existing conductor.	Per email correspondence with Fritts Golden at Aspen Environmental on 1/3/2017, no response is necessary.
4	For the 69 kV transmission system in the area of the project, please provide a simple single line diagram clearly showing any normally open switches. We are specifically interested in verifying the normal configuration of lines between San Luis Rey, Melrose, San Marcos, Morro Hill, Monserate, Avocado, Pendleton and Pala Substations.	Normally open line switches are typically not implemented in the SDG&E transmission system. In the specific region identified in this question, all line switches in this area are in the normally closed position.
5	Please provide the SDG&E 2014 Internal Forecasting Distribution Planning Report referenced in the PEA on page 2-4, section 2.5. Further, please provide same report for 2015 and 2016. If the 2017 edition of the report is available, please provide.	Please refer to Attachment C. Based on email correspondence with Fritts Golden at Aspen Environmental on January 5, 2017, it was determined that SDG&E would submit a summary of the data contained in the SDG&E Internal Forecasting Report dated 2015 and 2016. (The 2017 report is not available at this time.) Attachment C, contains Table 1: Projected Load Percentages – Without the Proposed Project, (2015 and 2016).

SDG&E Ocean Ranch Substation Project – A.1607016 Data Request No. 2		
Data Request No.	**Request**	**SDG&E RESPONSE**
6	Please provide the GE-PSLF base case(s) used by SDG&E in determining the need for the Ocean Ranch substation. If more than one base case was used (for example different years or seasons) please provide each base case.	Per email correspondence with Fritts Golden at Aspen Environmental on 1/3/2017, no response is necessary.
7	Were any energy efficiency assumptions included in the assessment of need for Ocean Ranch substation? The CAISO planning models for SDG&E include negative loads labeled "EE" which are assumed to be load reductions associated with energy efficiency efforts. Please provide energy efficiency assumptions for the 5 substations listed in question #1 for 2018 and beyond.	No energy efficiency assumptions were included in the assessment of need for the Ocean Ranch substation. The need for the Ocean Ranch Substation is driven by Distribution Planning, which currently does not have a process for incorporating energy efficiency into its Distribution Planning forecast. The CAISO planning model referenced in this Question 7 pertains to the Transmission system, rather than the Distribution system. It is not applicable here.

Confidential attachments have been omitted and will be submitted pursuant to California Public Utilities Commission Decision No. 16-08-024

Attachment A

- **A-1. Melrose SOD**
- **A-2. Monserate SOD**
- **A-3. Morro Hill SOD**
- **A-4. San Luis Rey SOD**
- **A-5. San Marcos SOD**

Attachment B

- **B-1. Transfer Data**
- **B-2. Load Data**

Attachment B-1
Transfer Data

SubName	TransferType	TransferYear	Summer (MW)	RelatedSub
Melrose	From	2007	0.6552	San Luis Rey
Melrose	From	2007	3.276	Shadowridge
Melrose	From	2008	3.5568	Shadowridge
Melrose	Internal	2007	0.8424	Melrose
Melrose	Internal	2008	1.34784	Melrose
Melrose	Internal	2009	1.32912	Melrose
Melrose	Internal	2013	1.2168	Melrose
Melrose	Internal	2015	2.28384	Melrose
Melrose	To	2009	0.5616	Shadowridge
Melrose	To	2014	0.3744	San Luis Rey
Melrose	To	2016	3.744	San Luis Rey
Morro Hill	From	2007	4.00608	San Luis Rey
Morro Hill	From	2008	2.0592	San Luis Rey
Morro Hill	From	2012	6.04656	San Luis Rey
San Luis Rey	From	2014	0.3744	Melrose
San Luis Rey	From	2016	3.744	Melrose
San Luis Rey	Internal	2007	1.3104	San Luis Rey
San Luis Rey	Internal	2008	1.2168	San Luis Rey
San Luis Rey	Internal	2012	2.86416	San Luis Rey
San Luis Rey	Internal	2013	2.28384	San Luis Rey
San Luis Rey	Internal	2015	0.2808	San Luis Rey
San Luis Rey	To	2007	0.6552	Melrose
San Luis Rey	To	2007	4.00608	Morro Hill
San Luis Rey	To	2008	2.0592	Morro Hill
San Luis Rey	To	2012	1.38528	Oceanside
San Luis Rey	To	2012	6.04656	Morro Hill
San Marcos	Internal	2008	9.9216	San Marcos
San Marcos	Internal	2010	3.4632	San Marcos
San Marcos	Internal	2012	0.936	San Marcos
San Marcos	Internal	2015	1.19808	San Marcos
San Marcos	To	2010	1.5912	Escondido
San Marcos	To	2010	2.00304	Lilac
San Marcos	To	2012	0.936	Batiquitos
Monserate	From	2011	1.1232	Pala
Monserate	From	2013	0.67392	Lilac
Monserate	Internal	2013	0.468	Monserate
Monserate	To	2013	1.1232	Pala

Attachment B-2
Load Data

SUBSTATION_NAME	EQUIPMENT_ID	LOAD_YEAR	ACTUAL_MW
Melrose	ME30	2007	28.97
Melrose	ME30	2008	22.5
Melrose	ME30	2009	24.27
Melrose	ME30	2010	25.01
Melrose	ME30	2011	23.06
Melrose	ME30	2012	24.11
Melrose	ME30	2013	21.98
Melrose	ME30	2014	28.55
Melrose	ME30	2015	26.65
Melrose	ME30	2016	26.29
Melrose	ME31	2007	25.02
Melrose	ME31	2008	22.96
Melrose	ME31	2009	24.62
Melrose	ME31	2010	24.62
Melrose	ME31	2011	23.7
Melrose	ME31	2012	24.58
Melrose	ME31	2013	22.5
Melrose	ME31	2014	28.87
Melrose	ME31	2015	27.16
Melrose	ME31	2016	26.38
Melrose	ME32	2007	25.64
Melrose	ME32	2008	21.04
Melrose	ME32	2009	23.61
Melrose	ME32	2010	25.48
Melrose	ME32	2011	23.24
Melrose	ME32	2012	20.47
Melrose	ME32	2013	20.8
Melrose	ME32	2014	21.7
Melrose	ME32	2015	27.4
Melrose	ME32	2016	22.25
Melrose	ME33	2007	27.4
Melrose	ME33	2008	22.09
Melrose	ME33	2009	25.36
Melrose	ME33	2010	21.84
Melrose	ME33	2011	23.75
Melrose	ME33	2012	22.26
Melrose	ME33	2013	21.91
Melrose	ME33	2014	22.79
Melrose	ME33	2015	28.03
Melrose	ME33	2016	21

Attachment B-2
Load Data

SUBSTATION_NAME	EQUIPMENT_ID	LOAD_YEAR	ACTUAL_MW
Morro Hill	MH30	2007	13.24
Morro Hill	MH30	2008	9.6
Morro Hill	MH30	2009	13.54
Morro Hill	MH30	2010	15.72
Morro Hill	MH30	2011	16.04
Morro Hill	MH30	2012	11
Morro Hill	MH30	2013	10.38
Morro Hill	MH30	2014	12.12
Morro Hill	MH30	2015	13.24
Morro Hill	MH30	2016	11.29

Attachment B-2
Load Data

SUBSTATION_NAME	EQUIPMENT_ID	LOAD_YEAR	ACTUAL_MW
San Luis Rey	SA33	2007	22.68
San Luis Rey	SA33	2008	24.54
San Luis Rey	SA33	2009	23.91
San Luis Rey	SA33	2010	28.48
San Luis Rey	SA33	2011	26.25
San Luis Rey	SA33	2012	27.3
San Luis Rey	SA33	2013	26.15
San Luis Rey	SA33	2014	28.84
San Luis Rey	SA33	2015	28
San Luis Rey	SA33	2016	26.97
San Luis Rey	SA34	2007	22.17
San Luis Rey	SA34	2008	24.13
San Luis Rey	SA34	2009	26.03
San Luis Rey	SA34	2010	26.37
San Luis Rey	SA34	2011	24.51
San Luis Rey	SA34	2012	25.57
San Luis Rey	SA34	2013	24.61
San Luis Rey	SA34	2014	26.98
San Luis Rey	SA34	2015	26.19
San Luis Rey	SA34	2016	25.08
San Luis Rey	SA35	2007	28.92
San Luis Rey	SA35	2008	24.54
San Luis Rey	SA35	2009	23.15
San Luis Rey	SA35	2010	24.41
San Luis Rey	SA35	2011	23.61
San Luis Rey	SA35	2012	25.65
San Luis Rey	SA35	2013	25.59
San Luis Rey	SA35	2014	25.66
San Luis Rey	SA35	2015	27.38
San Luis Rey	SA35	2016	21.97
San Luis Rey	SA36	2007	28.52
San Luis Rey	SA36	2008	24.21
San Luis Rey	SA36	2009	22.75
San Luis Rey	SA36	2010	24.04
San Luis Rey	SA36	2011	23.29
San Luis Rey	SA36	2012	25.25
San Luis Rey	SA36	2013	25.16
San Luis Rey	SA36	2014	25.31
San Luis Rey	SA36	2015	26.96
San Luis Rey	SA36	2016	24.57

Attachment B-2
Load Data

SUBSTATION_NAME	EQUIPMENT_ID	LOAD_YEAR	ACTUAL_MW
San Marcos	SM30	2007	26.51
San Marcos	SM30	2008	25.36
San Marcos	SM30	2009	26.62
San Marcos	SM30	2010	25.51
San Marcos	SM30	2011	27.19
San Marcos	SM30	2012	26.22
San Marcos	SM30	2013	22.98
San Marcos	SM30	2014	25.48
San Marcos	SM30	2015	24.95
San Marcos	SM30	2016	23.36
San Marcos	SM31	2007	26.12
San Marcos	SM31	2008	24.84
San Marcos	SM31	2009	26.05
San Marcos	SM31	2010	25.8
San Marcos	SM31	2011	26.77
San Marcos	SM31	2012	26.33
San Marcos	SM31	2013	22.58
San Marcos	SM31	2014	24.95
San Marcos	SM31	2015	24.64
San Marcos	SM31	2016	22.46
San Marcos	SM32	2007	26.33
San Marcos	SM32	2008	26.64
San Marcos	SM32	2009	25.16
San Marcos	SM32	2010	21.94
San Marcos	SM32	2011	20.39
San Marcos	SM32	2012	25.85
San Marcos	SM32	2013	22.44
San Marcos	SM32	2014	24.66
San Marcos	SM32	2015	21.15
San Marcos	SM32	2016	21.55
San Marcos	SM33	2010	24.23
San Marcos	SM33	2011	20.46
San Marcos	SM33	2012	25.96
San Marcos	SM33	2013	21.7
San Marcos	SM33	2014	23.37
San Marcos	SM33	2015	20.54
San Marcos	SM33	2016	18.16

Attachment B-2
Load Data

SUBSTATION_NAME	EQUIPMENT_ID	LOAD_YEAR	ACTUAL_MW
Monserate	MN30	2007	20.24
Monserate	MN30	2008	18.28
Monserate	MN30	2009	16.35
Monserate	MN30	2010	18.01
Monserate	MN30	2011	31.84
Monserate	MN30	2012	17.24
Monserate	MN30	2013	15.92
Monserate	MN30	2014	17.69
Monserate	MN30	2015	18.68
Monserate	MN30	2016	15.55
Monserate	MN31	2007	21
Monserate	MN31	2008	16.43
Monserate	MN31	2009	16.23
Monserate	MN31	2010	17.94
Monserate	MN31	2011	31.83
Monserate	MN31	2012	17.14
Monserate	MN31	2013	16.72
Monserate	MN31	2014	17.61
Monserate	MN31	2015	18.59
Monserate	MN31	2016	15.49

Attachment C

- **Projected Load Percentages – Without the Proposed Project**

Attachment C
Projected Load Percentages – Without the Proposed Project

Table 1: Projected Load Percentages – Without the Proposed Project (2015 and 2016)

Substation	Year	Banks	2018	2019	2020	2021
Melrose	2015	ME3031	100%	102%	103%	104%
		ME3233	81%	82%	83%	83%
	2016	ME3031	97%	98%	100%	100%
		ME3233	86%	87%	89%	89%
Morro Hill	2015	MH30	89%	90%	91%	91%
	2016	MH30	100%	101%	101%	102%
San Luis Rey	2015	SA3334	98%	98%	99%	100%
		SA3536	97%	98%	99%	99%
	2016	SA3334	100%	101%	102%	103%
		SA3536	102%	103%	104%	105%

Source: SDG&E Internal Forecasting Reports, 2015 and 2016.