

Application of SAN DIEGO GAS & ELECTRIC  
COMPANY (U 902 E) For Authority To  
Update Electric Rate Design Effective on January  
1, 2015

Application 14-01-027  
Exhibit No.: (SDG&E-\_\_\_\_\_) )

**PREPARED REBUTTAL TESTIMONY OF**  
**KENNETH E. SCHIERMEYER**  
**ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**  
**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**

**December 12, 2014**



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**Attachment A: CEC’s 2013 Adopted Forecast of Installed Nameplate Capacity for the Behind-the-Meter PV**

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**PREPARED REBUTTAL TESTIMONY OF  
KENNETH E. SCHIERMEYER  
(CHAPTER 4)**

**I. OVERVIEW**

The purpose of my testimony is to reply to the opening testimony of William A. Monsen, on behalf of The City of San Diego, regarding the adoption rate of behind-the-meter solar Photovoltaic (“PV”). Behind-the-meter solar PV is a component of the overall sales forecast presented in my Direct Testimony (Chapter 4). For the reason cited below, the Commission should adopt the behind-the-meter solar PV forecast presented in my prepared direct testimony and associated workpapers.

My rebuttal testimony reaches the following conclusions with regard to Mr. Monsen’s position that “SDG&E’s assumptions regarding behind-the-meter solar PV are likely over-aggressive” and “[a]s a result, SDG&E’s estimate of the impact of behind-the-meter solar PV on net load is likely overstated.”<sup>1</sup>

- Mr. Monsen is comparing SDG&E’s proposed forecast of behind-the-meter solar PV with the PV forecast used in the California Energy Commission’s (“CEC”) 2013 Adopted Forecast.
- The CEC’s 2013 adopted forecast of behind-the-meter solar PV is under-predicting actual adoption.
- For this reason, the Commission should reject Mr. Monsen’s proposed argument.

**II. BEHIND-THE-METER SOLAR PV ASSUMPTIONS**

**A. Behind-The-Meter Solar PV Forecasts**

Mr. Monsen states that SDG&E’s forecasts of behind-the-meter solar PV installations are overly aggressive. He compares SDG&E’s forecast of installed nameplate capacity with the

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<sup>1</sup> Testimony of William A. Monsen on behalf of The City of San Diego Concerning the Application of San Diego Gas & Electric Company for Authority to Update Electric Rate Design, November 14, 2014, Page 36, line 17-19.

1 CEC's 2013 adopted forecast of capacity delivered at time of system peak, without recognizing  
2 that such forecasts change from year to year. Moreover, although these are two different metrics,  
3 Mr. Monsen postulates that they are comparable and that "the growth rate in peak deliveries  
4 should be equal to or higher than the growth rate in nameplate capacity".<sup>2</sup> SDG&E obtained the  
5 CEC's 2013 adopted forecast of installed nameplate capacity for the behind-the-meter PV and it  
6 is included in attachment A for comparison purposes. Finally, Mr. Monsen calculates a  
7 compound annual average growth rate of almost 23% per year through 2017 for SDG&E's RDW  
8 forecast and slightly less than 16% per year for the latest adopted CEC forecast.<sup>3</sup> As shown  
9 below, compared to actual recent adoption rates, both of these forecasts are lower through 2014  
10 and should not be viewed as overly aggressive.

11 **B. Evaluation of Actual Behind-The-Meter Solar PV**

12 SDG&E reports monthly installations of behind-the-meter solar PV to the California  
13 Public Utility Commission ("CPUC") as part of the Monthly AB 327 Net Energy Metering  
14 ("NEM") Program Limit Report.<sup>4</sup> As of November 26, 2014, SDG&E reported to the CPUC that  
15 312.7 MW of installed behind-the-meter solar PV installations had taken place.<sup>5</sup> This represents  
16 a 40% compound annual average growth rate since 2012 and is comparable to a compound  
17 annual average growth rate of 36% for SDG&E's RDW forecast and 25% for the CEC 2013  
18 adopted forecast.

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<sup>2</sup> Testimony of William A. Monsen on behalf of The City of San Diego Concerning the Application of San Diego Gas & Electric Company for Authority to Update Electric Rate Design, November 14, 2014, Page 36, line 13-14.

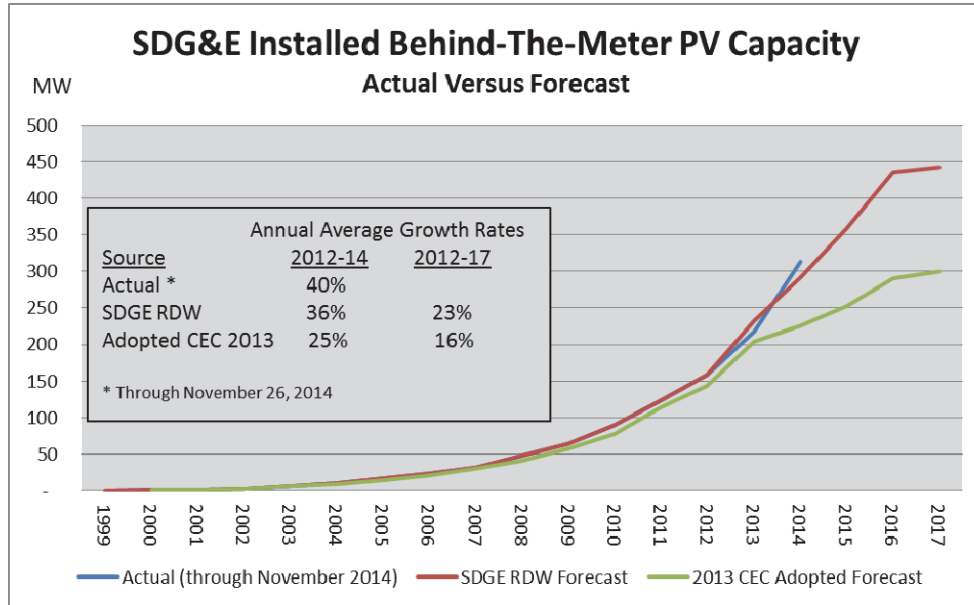
<sup>3</sup> Monsen, Page 35, line 8 and 16.

<sup>4</sup> Included as attachment B and also available on SDG&E's website at <http://www.sdge.com/clean-energy/net-energy-metering/overview-nem-cap>

<sup>5</sup> In the report, the cumulative NEM installations total 322.3 MW and behind-the-meter solar PV represents 97% (or 312.7 MW) of total installations. Remaining NEM installations include Fuel Cell and Wind generation.

1 **III. CONCLUSION**

2 The Commission should reject Mr. Monsen’s argument that SDG&E’s forecast of  
3 behind-the-meter solar PV installations is overly aggressive. The current adoption rate, as  
4 measured by the compound average growth rate, is greatly outpacing the CEC’s 2013 adopted  
5 forecast and slightly outpacing SDG&E’s submitted RDW forecast:



6 To reach SDG&E’s 2017 installed capacity forecast of 442 MW, there would only need  
7 to be 129 MW of solar installations over the next 3 years. That would represent a compounded  
8 average growth rate of only 12% per year. Time will tell if SDG&E attains the level of 442 MW  
9 of installed capacity of behind-the-meter solar PV by 2017, but the most recent 2-year trend  
10 indicates that it is very likely that the forecasted level presented in SDG&E’s testimony will be  
11 met or exceeded.

12 This concludes my prepared rebuttal testimony.

# Attachment A

SDG&E Installed PV Capacity: Based on Data Received from the California Energy Commission  
CEC 2013 Adopted Forecast

Scenario  
Mid Demand

Year	Residential			Non-Residential		
	Capacity (MW)	Energy (GWH)	Peak (MW)	Capacity (MW)	Energy (GWH)	Peak (MW)
1998	0	0	0			
1999	0	0	0			
2000	0	0	0	0	0	0
2001	1	0	0	0	0	0
2002	2	2	1	0	0	0
2003	3	3	1	2	2	1
2004	5	5	2	4	5	2
2005	7	8	3	8	8	4
2006	9	11	4	12	14	6
2007	13	14	6	17	22	7
2008	16	20	8	26	30	11
2009	25	29	11	32	47	16
2010	39	52	19	39	55	19
2011	54	76	26	59	78	28
2012	74	107	35	70	106	33
2013	106	176	54	98	143	46
2014	115	201	56	110	182	53
2015	134	241	64	119	200	56
2016	160	294	77	130	218	61
2017	161	294	77	139	232	65
2018	163	294	77	149	249	70
2019	164	295	77	160	266	75
2020	180	327	85	171	285	80
2021	206	378	97	183	304	85
2022	239	442	112	194	323	91
2023	276	517	130	205	341	96
2024	318	600	150	216	359	101

# Attachment B





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## Overview - NEM Cap

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### Monthly AB 327 Net Energy Metering (NEM) Program Limit Report<sup>1</sup>

**Data updated as of November 26, 2014**

Smart Grid

<b>Total Available Megawatts (MW) Cap</b>	<b>607 MW</b>	<b>5% of 12,134 MW</b>
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+ [Preservation Properties](#)

<b>#</b>	<b>MWs</b>
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#### Applications Received in November 2014

(New requests for NEM interconnection)

1,727	12.1
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#### Email

[Email Us](#)

#### Total NEM Applications in Queue as of November 2014

(Total pending requests for NEM interconnection)

2,576	26.8
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#### Telephone

Residential: 1-800-411-7343  
Business: 1-800-336-7343

#### Cumulative NEM Installations<sup>2</sup>

(Projects approved for NEM interconnection)

45,672	322.3
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#### Follow Us



#### NEM Installations and Applications in Queue

(Cumulative MW Installed under NEM + NEM MW in Queue)

48,248	349.2
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**Percentage**  
2.9%

## Remaining MW to Cap

**257.8**

(NEM Cap minus Cumulative MW installed under NEM + NEM MW in Queue)

### NOTES:

<sup>1</sup>The purpose of this report is to adhere to Public Utilities (PU) Code Section 2827(c)(4)(C), which directs each large electrical corporation to file a monthly report with the California Public Utilities Commission detailing the progress toward the NEM program limit.


This report includes all systems either seeking interconnection or interconnected under the NEM program pursuant to PU Code Section 2827 (e.g., solar, wind, fuel cells using renewable fuels, etc.)

<sup>2</sup>Includes cumulative installations approved for NEM interconnection since NEM inception in 1996 (does not include systems that terminated NEM interconnection with the utility).

### More Information

- [Cap History](#) (pdf)
- [AB 510 Legislation](#)\*

For more information regarding Interconnection Applications, Electrical Standards, and Permission to Operate, please call us at 1-800-411-7343 or email our Net Energy Metering department at [netmetering@semprautilities.com](mailto:netmetering@semprautilities.com).

 *By clicking the link, you will leave www.sdge.com and transfer directly to the website of a third party provider which is not part of SDG&E. The Terms and Conditions and Privacy Policy on that website will apply.*

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Safety	Energy Waves	Privacy Policy	Procurement
Energy Innovation Center	Energy Management Tool	Privacy Notice	RFPs and RFOs
Additional Languages	Home Area Network	Terms & Conditions	Supplier Diversity
Total Electric Rate	Green Button		Supplier Documents
	Energy Data Request		Vendor Portal

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