BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) For Authority To Update Electric Rate Design Effective on January 1, 2020	Application 19-07-XXX

PREPARED DIRECT TESTIMONY OF

WILLIAM G. SAXE

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

JULY 3, 2019

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PREPARED DIRECT TESTIMONY OF

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I. OVERVIEW AND PURPOSE

The purpose of my prepared direct testimony is to present San Diego Gas & Electric Company's ("SDG&E") proposed rate design and rate recovery for the Electric Vehicle High Power ("EV-HP") rate. Specifically, this testimony proposes the introduction of a new optional rate applicable to separately metered direct current fast charging ("DCFC") sites and medium-duty/heavy-duty ("MD/HD") electric vehicle ("EV") sites. As addressed in the prepared direct testimony of SDG&E witness Brittany Applestein Syz, this EV-HP rate is consistent with State policy seeking to accelerate transportation electrification ("TE") in California, including SDG&E's service territory. In addition, my testimony presents the projected illustrative class average rate impacts and residential bill impacts from recovering the proposed revenue requirement to implement SDG&E's interim rate before the EV-HP rate is implemented, as described in the prepared direct testimony of Brittany Applestein Syz. The revenue requirement is presented in the prepared direct testimony of SDG&E witness Woo-Jin Shim.

II. EV-HP RATE DESIGN PROPOSAL

SDG&E is proposing the new EV-HP rate for DCFC and MD/HD separately metered EV charging sites. Currently, energy usage of these EV sites would be served on the standard electric rate for SDG&E's Medium/Large Commercial & Industrial ("M/L C&I") customers, which is Schedule AL-TOU for non-commodity rates (Utility Distribution Company or ["UDC"] rates) and Schedule EECC-CPP-D (Electric Energy Commodity Cost Critical Peak Pricing Default) for commodity rates. As described in the prepared direct testimony of Brittany Applestein Syz, SDG&E proposes for policy reasons to replace the demand charges found in

standard M/L C&I rate design with subscription charges and higher energy charges. In addition, for policy reasons SDG&E proposes to reduce the time-of-use ("TOU") super off-peak commodity energy charges and recover these commodity costs instead through the TOU on-peak commodity energy charges to provide an additional incentive to EV-HP customers to charge during the super off-peak period. The proposed EV-HP rate design reflecting these modifications is described below.

A. Subscription Charge

SDG&E proposes that the non-coincident distribution demand charge ($/kilowatt [kW]) in Schedule AL-TOU be converted to a dollar per month charge called a Subscription Charge. This Subscription Charge recovers the non-coincident distribution demand costs allocated to Schedule AL-TOU based on current Schedule AL-TOU non-coincident demand charges.[1] As shown in Table WS-1 below, this results in two Subscription Charges: (1) Subscription Charge for the first 0-25 kW of service based on the average of the kW range or 12.5 kW; and (2) Subscription Charge for each additional increment of 25 kW service calculated based on 25 kW of demand. As explained in the prepared direct testimony of Brittany Applestein Syz, customers will preselect the Subscription Charge kW demand level to which they wish to subscribe.

[1] Current rates are based on rates effective June 1, 2019, per SDG&E Advice Letter ("AL") 3377-E.

Table WS-1 - Recovery of Non-Coincident Distribution Demand Costs		
	Schedule AL-TOU	**Schedule EV-HP**
Non-Coincident Distribution Demand Charge ($/kW)		
Secondary	$9.12	NA
Primary	$9.07	NA
Subscription Charge ($/Month)		
0-25 kW of Subscription Load		
Secondary	NA	$114.00
Primary	NA	$113.37
Each Additional 25 kW of Subscription Load		
Secondary	NA	$228.01
Primary	NA	$226.74
Note: Schedule AL-TOU and Schedule EV-HP rates shown for secondary and primary service voltage levels.		

B. Eliminate Demand Charges with Higher Energy Charges

SDG&E proposes that the allocated costs for Schedule AL-TOU distribution on-peak, base transmission non-coincident and on-peak, and Reliability Service ("RS") non-coincident demand charges be recovered in energy charges ($/kilowatt-hour [kWh]). SDG&E proposes to recover these costs through energy charges rather than demand charges to eliminate demand charges from the EV-HP rate structure to help accelerate TE adoption, as addressed in the prepared direct testimony of Brittany Applestein Syz. First, to encourage TE adoption, SDG&E proposes to recover allocated distribution on-peak demand costs through on-peak energy charges rather than on-peak demand charges, as shown in Table WS-2 below.

Table WS-2 - Recovery of On-Peak Distribution Demand Costs		
	Schedule AL-TOU	**Schedule EV-HP**
On-Peak Distribution Demand Charge ($/kW)		
Summer		
Secondary	$14.27	NA
Primary	$14.20	NA
Winter		
Secondary	$16.42	NA
Primary	$16.34	NA
On-Peak Energy Charge Adder ($/kWh)		
Summer On-Peak Energy Charge Adder		
Secondary	NA	$0.16751
Primary	NA	$0.15416
Winter On-Peak Energy Charge Adder		
Secondary	NA	$0.16751
Primary	NA	$0.15416
Note: Schedule AL-TOU and Schedule EV-HP rates shown for secondary and primary service voltage levels.		

Second, consistent with the transmission and RS energy charges adopted in SDG&E's Electric Vehicle Grid Integration ("VGI") Pilot Program in Decision ("D.") 16-01-045 and Advice Letter ("AL") 3056-E, the allocated base transmission and RS costs will be recovered in energy charges ($/kWh) rather than demand charges ($/kW), as shown in Table WS-3 below.

Table WS-3 - Recovery of Base Transmission and RS Costs		
	Schedule AL-TOU	**Schedule EV-HP**
Transmission Charges		
Non-Coincident Demand Charge ($/kW)		
Secondary	$15.11	NA
Primary	$14.59	NA
On-Peak Demand Charge - Summer ($/kW)		
Secondary	$3.15	NA
Primary	$3.04	NA
On-Peak Demand Charge - Winter ($/kW)		
Secondary	$0.65	NA
Primary	$0.63	NA
Energy Charge ($/kWh)		
Secondary	($0.01466)	$0.02724
Primary	($0.01466)	$0.02724
RS Charges		
Non-Coincident Demand Charge ($/kW)		
Secondary	$0.00	NA
Primary	$0.00	NA
Energy Charge ($/kWh)		
Secondary	$0.00002	$0.00001
Primary	$0.00002	$0.00001
Note: Schedule AL-TOU and Schedule EV-HP rates shown for secondary and primary service voltage levels.		

C. Lower Super Off-Peak and Higher On-Peak Commodity Charges

SDG&E proposes that the Schedule EECC-CPP-D super off-peak commodity energy charges for summer and winter periods be reduced by $0.03/kWh to provide an additional incentive for EV-HP customers to charge during the super off-peak period. Under SDG&E's proposal, the revenues not designed to be collected from these customers due to the reduction in their super off-peak commodity energy charges will instead be collected in their on-peak commodity energy charges. Because forecasted on-peak commodity determinants are less than

super off-peak commodity determinants based on AL-TOU rate design, the resulting change needed in the on-peak commodity energy charges are around $0.04/kWh. Table WS-4 below presents the resulting commodity energy charges from this proposal based on Schedule AL-TOU rate design.

Table WS-4 - Recovery of Commodity Costs

	Schedule EECC-CPPD	Schedule EV-HP	Change
Commodity Energy Charges ($/kWh)			
Summer: On-Peak Energy			
Secondary	$0.12534	$0.16898	$0.04364
Primary	$0.12473	$0.16816	$0.04343
Summer: Off-Peak Energy			
Secondary	$0.10431	$0.10431	$0.00000
Primary	$0.10383	$0.10383	$0.00000
Summer: Super Off-Peak Energy			
Secondary	$0.08321	$0.05321	($0.03000)
Primary	$0.08293	$0.05293	($0.03000)
Winter: On-Peak Energy			
Secondary	$0.11064	$0.14916	$0.03852
Primary	$0.11014	$0.14848	$0.03835
Winter: Off-Peak Energy			
Secondary	$0.09819	$0.09819	$0.00000
Primary	$0.09779	$0.09779	$0.00000
Winter: Super Off-Peak Energy			
Secondary	$0.08439	$0.05439	($0.03000)
Primary	$0.08412	$0.05412	($0.03000)
CPP Adder ($/kWh)			
Secondary	$1.88487	$1.88487	$0.00000
Primary	$1.88306	$1.88306	$0.00000
Capacity Reservation Charge ($/kW)			
Secondary	$4.68	$4.68	$0.00
Primary	$4.68	$4.68	$0.00

Note: Schedule AL-TOU and Schedule EV-HP rates shown for secondary and primary service voltage levels.

Attachment A presents the EV-HP total proposed rates, which as described above reflect the following modifications to AL-TOU rate design: (a) the Subscription Charge to recover

allocated Schedule AL-TOU non-coincident distribution demand costs; (b) 100% energy charges to recover allocated M/L C&I transmission and RS revenues consistent with the rate design adopted for Schedule VGI; (c) higher on-peak energy charges to recover allocated distribution on-peak demand costs; and (d) adjusted Schedule EECC-CPP-D commodity energy charges[2] that reflect reductions in super off-peak commodity energy charges and increases in on-peak commodity energy charges.

III. COST RECOVERY

Attachment B presents the illustrative class average electric rate impacts and residential monthly bill impacts from recovery of the proposed EV-HP revenue requirement presented in the prepared direct testimony of Woo-Jin Shim, assuming that the entire revenue requirement is recovered in 2021 rates. As described in the prepared direct testimony of Brittany Applestein Syz, this revenue requirement will fund implementation of an interim existing rate discount (i.e., costs associated with manually billing the interim existing rate demand charge discount) during the "freeze period" when SDG&E cannot make changes to its current, legacy billing system. Because the interim billing costs to implement the EV-HP rate are distribution costs, SDG&E proposes to recover these costs through distribution rates.

This concludes my prepared direct testimony.

[2] Consistent with other M/L C&I bundled customers, EV-HP bundled customers will be defaulted to take commodity service on Schedule EECC-CPP-D, which reflect commodity rates without demand charges.

IV. STATEMENT OF QUALIFICATIONS

My name is William G. Saxe. My business address is 8330 Century Park Court, San Diego, California 92123. I am employed as the Rates & Cost Studies Project Manager in the Customer Pricing Department of SDG&E. I have worked for SDG&E since February 2001. Prior to joining SDG&E, I was employed by Sempra Energy, the parent company of SDG&E, from April 1999 through January 2001. In addition, I was employed by the Illinois Commerce Commission ("ICC") from September 1990 through April 1999.

I received a Bachelor of Science degree in Economics from the University of Wisconsin-Madison in 1985. I received a Master of Business Administration degree, with a concentration in Finance, from the University of Wisconsin-Madison in 1990.

I have previously testified before the California Public Utilities Commission on rate design, marginal cost and other issues. In addition, I have previously submitted testimony before the Federal Energy Regulatory Commission ("FERC") and the ICC.

ATTACHMENT A

PROPOSED EV-HP RATES

ATTACHMENT A
EV-HP PROPOSED RATES

NO.	DESCRIPTION (A)	UNITS (B)	TRANSMISSION RATE (C)	DISTRIBUTION RATE (D)	PPP RATE (E)	NUCLEAR DECOMMISSION RATE (F)	CTC RATE (G)	LGC RATE (H)	RS RATE (I)	TRAC RATE (J)	GHG RATE (K)	TOTAL UDC RATE (L)	DWR BOND RATE (M)	EECC RATE (N)	DWR Credit (O)	TOTAL RATE (P)
1	**SCHEDULE NREV**															
2	Subscription Charge (0-25 kW)															
3	Secondary	$/Month		114.00								114.00				114.00
4	Primary	$/Month		113.37								113.37				113.37
5																
6	Subscription Charge (additional 25 kW of load)															
7	Secondary	$/Month		228.01								228.01				228.01
8	Primary	$/Month		226.74								226.74				226.74
9																
10	Basic Service Fee															
11	Less than or equal to 500 kW															
12	Secondary	$/Month		186.30								186.30				186.30
13	Primary	$/Month		50.24								50.24				50.24
14																
15	Greater than 500 kW															
16	Secondary	$/Month		744.64								744.64				744.64
17	Primary	$/Month		59.77								59.77				59.77
18																
19	Energy Charges															
20	On-Peak Energy: Summer															
21	Secondary	$/kWh	0.02724	0.16808	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.21952	0.00503	0.16898	(0.00003)	0.39350
22	Primary	$/kWh	0.02724	0.15473	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.20617	0.00503	0.16816	(0.00003)	0.37933
23																
24	Off-Peak Energy: Summer															
25	Secondary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.10431	(0.00003)	0.16132
26	Primary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.10383	(0.00003)	0.16084
27																
28	Super Off-Peak Energy: Summer															
29	Secondary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.05321	(0.00003)	0.11022
30	Primary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.05293	(0.00003)	0.10994
31																
32	On-Peak Energy: Winter															
33	Secondary	$/kWh	0.02724	0.16808	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.21952	0.00503	0.14916	(0.00003)	0.37369
34	Primary	$/kWh	0.02724	0.15473	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.20617	0.00503	0.14848	(0.00003)	0.35965
35																
36	Off-Peak Energy: Winter															
37	Secondary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.09819	(0.00003)	0.15520
38	Primary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.09779	(0.00003)	0.15480
39																
40	Super Off-Peak Energy: Winter															
41	Secondary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.05439	(0.00003)	0.11140
42	Primary	$/kWh	0.02724	0.00057	0.01476	(0.00003)	0.00066	0.00880	0.00001	0.00000	0.00000	0.05201	0.00503	0.05412	(0.00003)	0.11113
43																
44	CPP Adder															
45	Secondary	$/kWh												1.88487		1.88487
46	Primary	$/kWh												1.88306		1.88306
47																
48	CPP Capacity Reservation Charge															
49	Secondary	$/kW												4.68		4.68
50	Primary	$/kW												4.68		4.68

ATTACHMENT B

ILLUSTRATIVE CLASS AVERAGE RATE AND RESIDENTIAL BILL IMPACTS FROM EV-HP REVENUE REQUIREMENT RECOVERY

ATTACHMENT B
ILLUSTRATIVE CLASS AVERAGE RATE AND RESIDENTIAL BILL IMPACTS FROM EV-HP REVENUE REQUIREMENT RECOVERY IN 2021

Class Average Rate Impacts

		Current 6/1/19 (¢/kWh)	Proposed Rate (¢/kWh)	2021 Change from Current (¢/kWh)	Change from Current (%)
Residential		27.368	27.376	0.008	0.029%
Small Commercial		25.305	25.312	0.007	0.028%
Medium/Large Commercial & Industrial		23.045	23.049	0.004	0.017%
Agriculture		17.625	17.630	0.005	0.028%
Lighting		22.239	22.248	0.009	0.040%
System Total		24.596	24.602	0.006	0.024%

Residential Bill Impacts

	Monthly Energy Usage (kWh)	Current 6/1/19 (¢/kWh)	Proposed Bill ($)	2021 Change from Current ($)	Change from Current (%)
Residential (DR)					
Inland Summer	500	154.22	154.27	0.05	0.032%
Inland Winter	500	144.46	144.49	0.03	0.021%
Coastal Summer	500	159.95	159.99	0.04	0.025%
Coastal Winter	500	145.89	145.92	0.03	0.021%