Application: A.21-12-

Exhibit No.: SDG&E-

Witness: Taylor Marvin

PREPARED DIRECT TESTIMONY OF

TAYLOR MARVIN

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

DECEMBER 17, 2021

TABLE OF CONTENTS

I. INTRODUCTION 1

II. THE PROPOSAL IS CONSISTENT WITH COMMISSION AND STATE POLICY 2

III. THE MECHANICS OF THE PROPOSAL 3

A. Customer Eligibility 4

IV. CONCLUSION 5

V. STATEMENT OF QUALIFICATIONS 6

PREPARED DIRECT TESTIMONY OF
TAYLOR MARVIN
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

I. INTRODUCTION

My name is Taylor Marvin. I am the Clean Transportation Strategy Project Manager for San Diego Gas & Electric Company's ("SDG&E"). My testimony supports SDG&E's application for a new optional electric commodity credit-for-export rate applicable to separately-metered electric vehicle ("EV") customers outside of single-family homes who take commodity service from SDG&E.[1]

As this new commodity credit-for-export rate offers compensation for energy exports to the grid from EVs, SDG&E refers to this rate as the Vehicle-to-Grid Commodity Export rate ("V2G-Export"). The optional V2G-Export rate is open to EV customers taking distribution service on Schedule EV-High Power ("EV-HP"), which was approved by the California Public Utilities Commission ("Commission") in D. 20-12-023.

SDG&E submits this application for the V2G-Export rate pursuant to Ordering Paragraph ("OP") 9 of D.20-12-023, which directs SDG&E "to file an application for an optional dynamic rate designed to encourage commercial EV charging within 12 months of that decision." The proposed export rate consists of the California Independent System Operator's ("CAISO") day-ahead price to provide customers sufficient time to determine whether to export to the grid, as well as Peak Energy Payments ("PEP") to incentivize exports during peak events. As a commodity credit-for-export rate based on CAISO's day-ahead price that offers compensation to grid exports from commercial EVs customers—thus offering additional financial benefits from

[1] EV is defined as definition from Decision ("D.")20-09-025 at 9, available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M347/K774/347774886.PDF

operating EVs and encouraging EV adoption—the proposed V2G-Export rate fulfills the requirements of D.20-12-023, OP 9.

SDG&E's proposal is also intended to support California's aggressive transportation electrification ("TE") and climate goals. The compensation provided by the V2G-Export rate to EV customers that export energy back to the grid is designed to support numerous state and Commission directives to incentivize V2G. Additionally, the proposal has the potential to increase reliability by sending appropriate price signals that incentivize grid exports during periods of peak demand for electricity.

This application thus requests approval of the V2G-Export rate consisting of the CAISO day-ahead hourly price, and PEP applicable to energy exports during defined peak periods.

The Prepared Direct Testimony in support of this Application are organized as follows:

- My testimony describes the policy justifications for the proposed V2G-Export rate; and
- Ray Utama's testimony describes the proposed V2G-Export rate design in detail.

II. THE PROPOSAL IS CONSISTENT WITH COMMISSION AND STATE POLICY

The V2G-Export rate application is consistent with D.20-12-03, reflects SDG&E's commitment to accelerating TE, and supports existing state TE policy. On July 3, 2019, SDG&E filed Application ("A.") 19-07-006 to propose the EV-HP distribution rate, an optional rate intended to reduce the cost of charging for EV customers outside of single-family homes. The Commission approved the EV-HP rate in D.20-12-023. SDG&E plans to open the EV-HP rate to customer enrollment by January 1, 2022.

D.20-12-023 directs SDG&E to file an application for a dynamic rate option for commercial EV customers within 12 months of that decision. As the proposed V2G-Export rate

is expected to increase adoption of EVs by offering compensation for V2G grid exports, this application fulfills that decision's direction.

California state policy and prior Commission decisions also support expanding bidirectional V2G charging. Senate Bill ("SB") 676 declares that it is the policy of the state and the intent of the Legislature to accelerate electric vehicle grid integration ("VGI"), a broad category that includes bidirectional V2G charging and discharging.[2] D.20-09-035 clarified that interconnection applicants from V2G customers with bidirectional direct current EV Supply Equipment ("DC EVSE") may request permission to switch to bidirectional mode after completing the utility Rule 21 interconnection process and prompted the development of V2G Alternating Current ("AC") pilots.[3] V2G AC Pilots were approved in Commission Resolution E-5165.[4] And in D.20-12-029, the Commission found that incenting the export of energy from EVs to the grid would help develop technologies and programs to support the grid during times of need, and that it is reasonable to explore credit-for-export compensation for V2G as a near-term objective for advancing VGI.[5]

III. THE MECHANICS OF THE PROPOSAL

The proposed V2G-Export rate is an optional commodity credit-for-export rate that sets compensation for grids exports. V2G-Export does not set rates for energy *imports* from the grid. Customers enrolling in the V2G-Export rate will be billed for energy imports on their existing SDG&E commodity rates, which are outside the scope of and unchanged by this application.

---

[2] SB 676 Section 1 (2019). *See also* California Public Utilities ("PU") Code Section 740.16 (1)(2).

[3] D.20-09-035 OP 41 and OP 44.

[4] Commission Resolution E-5165 at OP 1.

[5] D.20-12-029 Finding of Fact 14 and Conclusion of Law 19.

In addition, the Utility Distribution Company ("UDC") rates (non-commodity rates) of eligible customers enrolling in the proposed V2G-Export rate will continue to be billed through the approved Schedule EV-HP, which is likewise outside the scope of this application. For example, a commercial EV fleet interested in engaging in V2G exports will be billed for their electricity imports from the grid on the existing Schedule EV-HP and an existing SDG&E commodity rate such as Schedule Energy Electric Commodity Cost Critical Peak Pricing Default ("EECC-CPP-D"). Only this customer's *exports* to the grid will be compensated by Schedule V2G-Export.

A. Customer Eligibility

The V2G-Export rate is open to bundled customers taking distribution service on Schedule EV-HP. Schedule EV-HP is an optional rate open to separately-metered EV charging outside of single-family homes; non-EV load is not permitted to take service under EV-HP. As a commodity rate, the V2G-Export rate is open to bundled SDG&E customers only.

Because SDG&E cannot reasonably purchase energy commodity from customers who themselves purchase energy commodity from another provider, the proposed V2G-Export rate is not open to customers of other Load Serving Entities ("LSE") such as Community Choice Aggregators ("CCAs") or Direct Access ("DA") providers. CCAs and other LSEs in SDG&E's service territory may choose to offer their customers a commodity credit-for-export rate similar to the proposed SDG&E V2G-Export. If dynamic credit-for-export rates become more common in the future, alignment and cooperation between distribution utilities and other LSEs will be necessary to prevent customer confusion and inconsistent V2G offerings. SDG&E looks forward to cooperating with local CCAs to ensure that the benefits of V2G credit-for-export rates are available to all utility customers, including those served by CCAs.

Pursuant to D.20-09-035 and Resolution E-5165, V2G-Export customers who wish to export energy to the grid must complete a Rule 21, Generating Facility Interconnections agreement before having the bidirectional mode on their EVSE enabled by the manufacturer or an approved third-party installer. To avoid unduly complex billing, an electric meter serving EV load engaging in V2G export under V2G-Export is not permitted to enroll in Net Energy Metering ("NEM"). A customer's facility meter may enroll in NEM while their separate EV meter is enrolled in V2G-Export. To prevent double compensation, customers receiving export credit under V2G-Export cannot simultaneously receive export credit through the Emergency Load Reduction Program ("ELRP"). Bundled customers who wish to engage in V2G grid exports are not required to be compensated under V2G-Export and may instead receive compensation under other programs or rates offered by SDG&E.

Individual SDG&E TE infrastructure programs may have program requirements that preclude certain sites from enrolling in the EV-HP rate and therefore the proposed V2G-Export commodity credit-for-export rate.

IV. CONCLUSION

SDG&E requests that the Commission approve the proposed V2G-Export rate.

V. STATEMENT OF QUALIFICATIONS

My name is Taylor Marvin and I am the Clean Transportation Strategy Project Manager for SDG&E. My business address is 8306 Century Park Court, San Diego, California, 92123. I have held this position for approximately eleven months. Prior to this role, I was the Clean Transportation Business Development Advisor for SDG&E for approximately 18 months. I received an undergraduate degree in Economics and International Studies from the University of California San Diego and a master's degree in International Affairs from the University of California San Diego. I have not previously testified before the California Public Utilities Commission.