

Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2024 General Rate Case
Application: A.22-05-015/-016 (cons.)
Exhibit: SDG&E-22-R-E

REVISED
PREPARED DIRECT TESTIMONY OF
ARTHUR ALVAREZ
(FLEET SERVICES)

ERRATA
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



May 2023

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Appendix A – Glossary of Terms AA-A-1

SUMMARY OF REQUEST

FLEET SERVICES (In 2021 \$)	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
Total Non-Shared Services	38,071	52,731	14,660
Total Shared Services (Incurred)	N/A	N/A	N/A
Total O&M	38,071	52,731	14,660

Summary of Requests

- San Diego Gas & Electric Company’s (SDG&E or Company) total Test Year (TY) 2024 estimated Operations and Maintenance (O&M) request for Fleet Services is \$52.731 million, an increase from base year of \$14.660 million. Increase from base year is primarily driven by an increase in vehicle leasing costs to support replacement of end-of-life vehicles, Electrification¹ and Zero-Emission Vehicle (ZEV)² goals.
- SDG&E requests \$23.824 million for Lease and License Costs, an increase from base year of \$7.880 million. Increase from base year is primarily driven by existing lease obligations, committed orders for vehicle acquisitions and planned vehicle replacements, including Electrified and Zero-Emission Vehicles, and vehicles additions to the Fleet required by various operating groups to meet operational demands of each business unit.
- SDG&E requests \$25.123 million for Maintenance Operations, an increase from base year of \$6.330 million to maintain, repair, and fuel Fleet vehicles and power-operated equipment at eleven maintenance garages throughout the service territory. Increase from base year is primarily driven by increasing fuel costs and incremental FTEs to maintain our Fleet vehicles.

¹ Electrification is an SDG&E defined term and includes the following: Battery Electric, Plug-in Hybrid, Non-Plug in Hybrid, Battery-Powered Idle Mitigation Systems, Electric Power-Take-Off vehicles. Please note overlap in some instances with ZEV definition.

² California Air Resources Board’s (CARB) ZEV definition includes the following: Battery Electric, Plug-in Hybrid, and Hydrogen-Fuel Cell vehicles. Please note overlap in some instances with Electrification definition. See CARB, *Zero-Emission Vehicle Program*, available at <https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-program/about>.

- SDG&E requests \$3.784 million for Fleet Management, an increase from base year of \$0.450 million. Increase from base year is primarily driven by a new Telematics system, incremental FTEs for data analysis and support of Electrification and ZEV goals.

**ERRATA REVISED PREPARED DIRECT TESTIMONY OF
ARTHUR ALVAREZ
(FLEET SERVICES)**

I. INTRODUCTION

A. Summary of Fleet Services Costs and Activities

My prepared direct testimony supports the SDG&E Fleet Services 2022, 2023, and 2024 O&M cost forecasts for Test Year 2024 non-shared services. Fleet Services requests \$52.731 million in O&M expense for TY2024 non-shared services, an increase of \$14.660 million above 2021 adjusted-recorded costs. Table AA-1 summarizes my sponsored costs. Previously, SDG&E Fleet services included shared-services O&M expenses, however, since the previous GRC, SDG&E has re-aligned business units and SDG&E Fleet Services no longer incurs any shared-services expenses.

**TABLE AA-1
SDG&E Company
Test Year 2024 Summary of Total Costs**

FLEET SERVICES (In 2021 \$)	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
Total Non-Shared Services	38,071	52,731	14,660
Total Shared Services (Incurred)	N/A	N/A	N/A
Total O&M	38,071	52,731	14,660

SDG&E’s Fleet Services responsibilities include the design, acquisition, maintenance, repair, fueling, and disposal of vehicles and related equipment to support SDG&E’s operating groups in the transmission and delivery of natural gas and electric service to SDG&E’s customers. SDG&E Fleet Services manages over-the-road (OTR) vehicles like automobiles, sport utility vehicles (SUV), light-duty trucks, medium-duty trucks, heavy-duty trucks, and trailers as well as non-over-the road (non-OTR) vehicles and equipment like forklifts, construction equipment, off-road vehicles, generators, and lifting equipment. Fleet Services provides critical daily support to SDG&E crews to ensure that vehicles and equipment are ready and available for use. The intent of this section of my testimony is to describe the key activities performed by the Fleet Services organization and to provide context for Fleet Services’ General Rate Case (GRC) request.

1 SDG&E Fleet Services manages and maintains a Fleet of over 2,100 individual vehicles
2 and equipment, inclusive of OTR vehicles and non-OTR vehicles. SDG&E's Fleet is represented
3 below in several different views based on vehicle type, fuel type, and Electrified and ZEV
4 designations in Table AA-2 through Table AA- 5.

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TABLE AA-2
SDG&E Fleet Composition by Major Group and Fuel Type

MAJOR GROUP	BI-FUEL CNG	DED CNG	DIESEL	DIESEL HYBRID	ELECTRIC	E-PTO DIESEL	E-PTO UNLEADED	NON PLUG IN HYBRID	NONE	PLUG-IN HYBRID	UNLEADED	Grand Total
1. AUTOMOBILES		3			7			28		15		53
2. COMPACT TRUCK VANS								14			200	214
3. LIGHT TRUCK VANS	72	2	27				12	60		65	584	822
4. MEDIUM DUTY TRUCK			172	4		61	8			5	135	385
5. HEAVY DUTY TRUCK		3	214			12						229
6. MECHANIZED TRAILER			60						33		10	103
7. NON MECHANIZED TRAILER			8						177		4	189
8. P.O.E. / M.W.E.	2		51		29						6	88
9. OTHER			33									33
Grand Total	74	8	565	4	36	73	20	102	210	85	939	2,116

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TABLE AA-3
SDG&E Fleet Composition by Major Group and Engine Power Type

MAJOR GROUP	ELECTRIFIED	INTERNAL COMBUSTION ENGINE	NO FUEL	ZERO EMISSION VEHICLE	Grand Total
1. AUTOMOBILES	28	3		22	53
2. COMPACT TRUCK VANS	14	200			214
3. LIGHT TRUCK VANS	72	685		65	822
4. MEDIUM DUTY TRUCK	73	307		5	385
5. HEAVY DUTY TRUCK	12	217			229
6. MECHANIZED TRAILER		70	33		103
7. NON MECHANIZED TRAILER		12	177		189
8. P.O.E. / M.W.E.		59		29	88
9. OTHER		33			33
Grand Total	199	1,586	210	121	2,116

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TABLE AA-4
SDG&E Fleet Composition by Major Category & Fuel Type

MAJOR CATEGORY	BI-FUEL CNG	DED CNG	DIESEL	DIESEL HYBRID	ELECTRIC	E-PTO DIESEL	E-PTO UNLEADED	NON PLUG IN HYBRID	NONE	PLUG-IN HYBRID	UNLEADED	Grand Total
A. Automobile		3			7			28		15		53
B. Compact Pick-Up											188	188
C. Compact Van											12	12
D. Compact SUV								14				14
E. Mid-Size SUV										39	35	74
F. Full-Size Pick-Up	72	2	27				11	28		26	548	714
H. Full-Size & Medium-Duty Van			38	4				32			23	97
J. Medium-Duty Pick-Up			134			61	9			5	113	322
L. Heavy-Duty Truck		3	214			12						229
M. Mechanized Trailer			98						5		8	111
N. Non-Mechanized Trailer			1						205		6	212
P. Construction Equipment			13									13
Q. Forklift	2		32		20							54
R. Piece of Equipment			8		9						6	23
Grand Total	74	8	565	4	36	73	20	102	210	85	939	2,116

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**Table AA-5
SDG&E Fleet Composition by Major Category & Engine Power Type**

MAJOR CATEGORY	ELECTRIFIED	INTERNAL COMBUSTION ENGINE	NO FUEL	ZERO EMISSION VEHICLE	Grand Total
A. Automobile	28	3		22	53
B. Compact Pick-Up		188			188
C. Compact Van		12			12
D. Compact SUV	14				14
E. Mid-Size SUV		35		39	74
F. Full-Size Pick-Up	39	649		26	714
H. Full-Size & Medium-Duty Van	36	61			97
J. Medium-Duty Pick-Up	70	247		5	322
L. Heavy-Duty Truck	12	217			229
M. Mechanized Trailer		106	5		111
N. Non-Mechanized Trailer		7	205		212
P. Construction Equipment		13			13
Q. Forklift		34		20	54
R. Piece of Equipment		14		9	23
Grand Total	199	1,586	210	121	2,116

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1 SDG&E Fleet Services is broken out into three distinct activities: A) Lease & License
 2 Costs, B) Maintenance Operations, and C) Fleet Management.

3 **TABLE AA-6**
 4 **Test Year 2024 Summary of Total Costs by Activity**

FLEET SERVICES (In 2021 \$)			
Categories of Management	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
A. Lease and License Cost	15,944	23,824	7,880
B. Maintenance Operations	18,793	25,123	6,330
C. Fleet Management	3,334	3,784	450
Total Non-Shared Services	38,071	52,731	14,660

5 SDG&E Fleet Services Lease and License Costs include the repayment of principal,
 6 interest, California (CA) use tax and CA DMV license fees for SDG&E leased Fleet vehicles as
 7 well as offsetting salvage proceeds from the sale of replaced assets at auction.

8 SDG&E Fleet Services Maintenance Operations staffs eleven maintenance and repair
 9 garages at ten sites throughout the service territory as far north as Orange County and as far east
 10 as Pine Valley. Each of the eleven garages is responsible for maintaining a fluid number of
 11 vehicles to ensure vehicles are safe to operate and meet all federal, state, and local laws and
 12 regulations. Maintenance Operations also includes the procurement of bulk gasoline and diesel
 13 fuel for SDG&E’s underground storage tanks at eight of the ten sites for dispensing into Fleet
 14 vehicles.

15 SDGE&E Fleet Services Fleet Management is responsible for vehicle replacement
 16 planning, vehicle design, project management, and acquisition of vehicles as well as support
 17 operations like finance, compliance management, vehicle licensing, leasing program
 18 management and fleet management system and fuel management system technical support. Fleet
 19 management also includes management and supervisor staff that provide oversight, training, and
 20 leadership to the eleven maintenance and repair garages.

21 **B. Support To and From Other Witnesses**

22 My testimony also references the testimony and workpapers of several other witnesses,
 23 either in support of their testimony or as referential support for mine.

- 1 • R. Scott Pearson and Gregory S. Flores; RAMP to GRC Integration – Ex. SCG-
2 03/SDG&E-03, Chapter 2;
- 3 • Estela de Llanos; Sustainability Policy – Ex. SDG&E-02;
- 4 • Pat Kinsella; Gas Distribution – Ex. SDG&E-04;
- 5 • Rick Chiapa, Steve Hruby, and Aaron Bell; Gas Transmission Operations and
6 Construction – Ex. SDG&E-06;
- 7 • Amy Kitson and Travis Sera; Gas Integrity Management Programs – Ex.
8 SDG&E-09;
- 9 • Tyson Swetek; Electric Operations O&M – Ex. SDG&E-12;
- 10 • Jonathan Woldemariam; Wildfire Mitigation and Vegetation Management – Ex.
11 SDG&E-13;
- 12 • Daniel Baerman; Electric Generation – Ex. SDG&E-14;
- 13 • Fernando Valero; Clean Energy Innovations – Ex. SDG&E-15;
- 14 • David H. Thai; Customer Service Field Operations – Ex. SDG&E-17;
- 15 • Dale Tattersall; Real Estate, Land Services & Facility Operations – Ex. SDG&E-
16 23;
- 17 • Ben W. Gordon; Information Technology - Policy, Chapter 1 – Ex. SDG&E-25,
18 Ch 1;
- 19 • William J. Exon; Information Technology - Capital, Chapter 2 – Ex. SDG&E-25,
20 Ch 2; and
- 21 • Kenneth Deremer; Safety, Risk & Asset Management Systems – Ex. SDG&E-31.

22 **C. Organization of Testimony**

23 My testimony is organized as follows:

- 24 • Introduction
- 25 • Risk Assessment Mitigation Phase (RAMP) Integration
- 26 • Fleet Sustainability Initiatives
- 27 • Building a Better Business (BBB) – Optimization Initiative
- 28 • Non-Shared Costs
- 29 • Conclusion

1 **II. RISK ASSESSMENT MITIGATION PHASE INTEGRATION**

2 Certain costs supported in my testimony are driven by activities described in SDG&E’s
3 May 17, 2021, Risk Assessment Mitigation Phase (RAMP) Report (2021 RAMP Report).³ The
4 2021 RAMP Reports presented an assessment of the key safety risks for Southern California Gas
5 Company (SoCalGas) and SDG&E and proposed plans for mitigating those risks. As discussed
6 in the testimony of the RAMP to GRC Integration witnesses R. Scott Pearson and Gregory S.
7 Flores (Ex. SCG-03/SDG&E-03, Chapter 2), the costs of risk mitigation projects and programs
8 were translated from the 2021 RAMP Reports into the individual witness areas.

9 In the course of preparing the SDG&E Fleet Services GRC forecasts, SDG&E continued
10 to evaluate the scope, schedule, resource requirements, and synergies of RAMP-related projects
11 and programs. Therefore, the final presentation of RAMP costs may differ from the ranges
12 shown in the 2021 RAMP Reports. Table AA-7 below provides a summary of the RAMP-
13 related costs supported in my testimony:

14 **TABLE AA-7**
15 **Summary of RAMP O&M Costs**

RAMP Report Risk Chapter	BY 2021 Embedded Costs (\$000)	TY 2024 Estimated Total (\$000)	TY 2024 Estimated Incremental (\$000)
SDG&E-Risk-8 Incident Involving an Employee	\$ 548	\$ 848	\$ 300
Sub-total	\$ 548	\$ 848	\$ 300
Total RAMP O&M Costs	\$ 548	\$ 848	\$ 300

16 **A. RAMP Risk and Cross-Functional Factor Overview**

17 As summarized in Table AA-7 above, my testimony includes costs to mitigate the safety-
18 related risks and cross-functional factors included in the RAMP report. These risks and factors
19 are further described in Table AA-8 below:

³ See Application (A.) 21-05-011, SDG&E 2021 Risk Assessment and Mitigation Phase Report, (Chapter SDG&E-Risk-8) Incident Involving an Employee (May 17, 2021) for more details regarding the utilities’ RAMP Report and costs supported in my testimony.

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TABLE AA-8
RAMP Risk Chapter Description

SDG&E-Control 15- Enhanced Employee Driving Training (Vehicle Technology Programs)	SDG&E has installed vehicle technology on our company fleet. The technology allows SDG&E to develop safety metrics to provide a comprehensive view of the vehicle driver data and fleet performance through data driven vehicle analytics. SDG&E-8-28
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3 In developing my request, priority was given to these key safety risks to assess which risk
4 mitigation activities SDG&E Fleet Services currently performs and what incremental efforts are
5 needed to further mitigate these risks. While developing the GRC forecasts, SDG&E evaluated
6 the scope, schedule, resource requirement, and synergies of RAMP-related projects and
7 programs to determine costs already covered in the base year and those that are incremental
8 increases expected in the test year.

9 Messrs. Pearson and Flores (Ex. SCG-03/SDG&E-03, Chapter 2) discuss all of the risks
10 and CFFs included in the 2021 RAMP Reports and the RAMP to GRC integration process.

11 **B. GRC Risk and CFF Activities**

12 Table AA-9 below provides a narrative summary of the forecasted O&M RAMP-related
13 activities that I sponsored in my testimony. Additionally, in the Telematics Service Fees section
14 of my prepared direct testimony, I provide justification for Capital RAMP-related expenses
15 forecasted in the testimony of Ben W. Gordon and William J. Exon; Information Technology,
16 Policy, Chapter 1 and Chapter 2: Information Technology Capital, and Forecasts – (Ex. SDG&E-
17 25), workpapers 00920BG and 00920BI.

18 The vehicle technology platform, noted above, allows the company to evaluate driving
19 behaviors by understanding hard braking, hard acceleration, hard cornering, speeding, and
20 seatbelt use. This data enables SDG&E to provide coaching and specific driver training to
21 employees and reinforce safe driving habits. This technology helps improve employee safety by
22 providing information on vehicle location, providing opportunity for driver feedback,
23 discouraging risky driving behaviors, and can serve as a tool to identify and alert drivers of
24 surrounding danger like wildfire.

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TABLE AA-9
Summary of RAMP Risk Activities

RAMP ID	Activity	Description
SDG&E- Risk-8 - C15	Enhanced Employee Safe Driving Training	SDG&E has installed vehicle technology on our company fleet. The technology allows SDG&E to develop safety metrics to provide a comprehensive view of the vehicle driver data and fleet performance through data driven vehicle analytics. SDG&E-8-28

3 Table AA-10 below summarizes the TY 2024 forecast by workpaper associated with the
4 RAMP activities.

5 **TABLE AA-10**
6 **RAMP Activity O&M Forecasts by Workpaper**
7 **In 2021 Dollars (\$000)**

Workpaper	Risk Chapter	ID	Description	2021 Embedded-Recorded	TY 2024 Estimated	Change	GRC RSE
1FS008.000	SDG&E- Risk-8	C15	Enhanced Employee Safe Driving Training	548	848	300	35

8 For each of the workpapers identified in Table AA-10 above, additional descriptions of
9 the RAMP controls and mitigations that comprise these forecasts are discussed within the cost
10 category sections below.

11 The costs for these activities are shown as adjustments to my forecasts and are provided
12 in greater detail in my workpapers. In my workpapers, RAMP mitigation costs are presented as
13 “RAMP-Base” to represent the RAMP-related costs that are embedded in the BY 2021 adjusted-
14 recorded costs and “RAMP-Incremental” to represent TY 2024 estimated incremental costs.

15 **C. Changes from RAMP Report**

16 Changes from the 2021 RAMP Report presented in my testimony, including updates to
17 forecasts, the amount and timing of planned work, and are summarized as follows:

- 18 • Increase from RAMP estimates are primarily driven by the addition of one
19 incremental FTE for data analysis and support of the Telematics program, and the

1 addition of 2,100 licenses for the Electronic Driver Vehicle Inspection Report
2 (eDVIR) program.

3 **III. SUSTAINABILITY AND SAFETY CULTURE**

4 Sustainability, safety, and reliability are the cornerstones of SDG&E's core business
5 operations and are central to SDG&E's GRC presentation. SDG&E is committed to not only
6 delivering clean, safe, and reliable electric and natural gas service, but to do so in a manner that
7 supports California's climate policy, adaptation, and mitigation efforts. In support of the legal
8 and regulatory framework set by the state, SDG&E has set a goal to reach Net Zero greenhouse
9 gas (GHG) emissions by 2045, adopted a Sustainability Strategy to facilitate the integration of
10 GHG emission reduction strategies into SDG&E's day-to-day operations and long-term
11 planning, and published an economy-wide GHG Study⁴ that recommends a diverse approach for
12 California leveraging clean electricity, clean fuels, and carbon removal to achieve the 2045 goals
13 through the lens of reliability, affordability, and equity. The Sustainability Strategy serves as
14 SDG&E's guide to enable a more just and equitable energy future in SDG&E's service territory
15 and beyond. As a "living" strategy, SDG&E will continue to update the goals and objectives as
16 technologies, policies, and stakeholder preferences change. See the Sustainability Policy
17 testimony of Estela de Llanos (Ex. SDG&E-02).

18 In this GRC, SDG&E focuses on three major categories that underpin the Sustainability
19 Strategy: mitigating climate change, adapting to climate change, and transforming the grid to be
20 the reliable and resilient catalyst for clean energy. SDG&E's goal is to contribute to the
21 decarbonization of the economy by way of diversifying energy resources, collaborating with
22 regional partners, and providing customer choice that enables an affordable, flexible, and
23 resilient grid.

24 Many of the activities described in further detail in this testimony advance the state's
25 climate goals and align with SDG&E's Sustainability Strategy. Specifically, the proposed Fleet
26 Electrification and conversion to Zero Emission Vehicles, and the Fleet decarbonization equity
27 model, will drive progress around Climate Mitigation.

⁴ The Path to Net Zero: A Decarbonization Roadmap for California (April 2022), available at https://www.sdge.com/sites/default/files/documents/path_to_net_zero.pdf?nid=21961.

1 As described in the Sustainability Policy testimony of Estela de Llanos (Ex. SDG&E-02),
2 SDG&E is committed to the decarbonization of its fleet in support of California’s sustainability
3 policies that aim to reduce greenhouse gas (GHG) emissions to 40% below 1990 levels by 2030⁵
4 and align with executive orders put in place by Governor Newsom to have five million electric
5 vehicles throughout the state by 2030.⁶ SDG&E has committed to Electrify 100% of its light-
6 duty⁷ OTR Fleet and to transition 30% of the overall OTR Fleet to Zero-Emission Vehicles
7 (ZEV) by 2030; and to operate a 100%⁸ OTR ZEV Fleet by year-end 2035.

8 Included in this request and detailed in the Lease and License Costs section of my
9 testimony is a vehicle replacement plan through TY2024 that will focus on increasing SDG&E’s
10 light-duty Electrified and Zero-Emission Vehicles across several vehicle categories. SDG&E’s
11 proposed acquisition plan includes 518 light-duty Electrified vehicles, including the Ford
12 Maverick, Ram eTorque 1500, and XL Hybrid systems equipped vehicles; these acquisitions will
13 grow SDG&E’s light-duty Electrified Fleet from 18% at the time of this forecast to 54% by year-
14 end 2024⁹. In addition, SDG&E plans to increase its population of Zero-Emission Vehicles by
15 257, through the acquisition of 261 vehicles like Ford Lightning, Mitsubishi Outlander,
16 Chevrolet Bolt, and possibly the inclusion of recently announced all electric pick-up truck
17 offerings from Chevrolet. These acquisitions will grow SDG&E’s overall ZEV Fleet from 5.4%
18 at the time of this forecast to 18% by year-end 2024.¹⁰ SDG&E will require additional
19 infrastructure to support the increasing number of Electrified and ZEVs in the Fleet, including
20 DC Fast charging stations at each SDG&E site that operates Electrified and ZEVs. The costs and

⁵ California Legislative Information, *SB-32 California Global Warming Solutions Act of 2006: emissions limit*, available at https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

⁶ Executive Order B-48-18, available at <https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/39-B-48-18.pdf>.

⁷ Light-Duty is defined as vehicles in SDG&E’s A – H vehicle categories, which mostly aligns with Federal Highway Administration (FHWA) Class 1 – 2 weight categories and includes passenger vehicles all the way up to a full-size service body truck under 10,000 lbs. GVWR.

⁸ Possible exceptions for emergency response vehicles required for the restoration of electric and natural gas service.

⁹ In some instances, SDG&E is replacing an Electrified vehicle with another Electrified vehicle or ZEV.

¹⁰ In some instances, SDG&E is replacing a ZEV with another ZEV.

1 calculations for this additional vehicle charging infrastructure can be found in the prepared direct
2 testimony of Dale Tattersall; Real Estate, Land Services & Facilities Operations – (Ex. SDG&E
3 23).

4 In addition to replacing vehicles with Original Equipment Manufacturer (OEM)-offered
5 Electrified and/or ZEV such as the Chevrolet Bolt and Ram 1500 eTorque, SDG&E has piloted
6 several aftermarket systems to reduce emissions from traditional internal combustion engine
7 (ICE) vehicles. SDG&E is piloting two different XL Hybrid systems designed to reduce
8 emissions and increase MPG, upfitting 32 half-ton cargo vans with a non-plug-in hybrid system
9 that can reduce CO₂ emissions by up to 20% and increase MPG by up to 25% compared to ICE
10 equivalents.¹¹ SDG&E also upfit 26 half-ton work trucks with a plug-in hybrid system that can
11 reduce CO₂ emissions by up to 33% and deliver and increase MPG by up to 50%.¹² SDG&E's
12 Fleet Services is also piloting an idle mitigation system, Grip Idle Mitigation, that shuts off
13 engines but allows auxiliary functions to run on 23 late model medium-duty work trucks. In early
14 2023, SDG&E anticipates the completion of a pilot for one fully electric medium-duty insulated
15 aerial unit (commonly known as a bucket truck) with Terex Utilities, utilizing a Zeus Electric
16 Chassis and a Viatic Smart electric power take-off (ePTO) system.¹³

17 Additionally, and included in the ZEV totals above, is SDG&E's plan to purchase a total
18 of six commercially available hydrogen (H₂) fuel-cell vehicles to better understand the
19 technology, duty cycles, range, maintenance requirements, and determine future application of
20 this emerging and promising technology for SDG&E's Fleet vehicles, particularly in medium-
21 duty and heavy-duty vehicle applications that require long duty cycles and short refueling times.
22 Three light-duty H₂ passenger sedans will be leased for Palomar Energy Center in conjunction
23 with the opening of the hydrogen fuel-cell fueling pump at this site. SDG&E also plans to lease
24 three medium-duty hydrogen-fuel cell work trucks and will co-locate these vehicles at a new and
25 dedicated medium- and heavy-duty vehicle SDG&E hydrogen fuel-cell fueling site that is

¹¹ See XL Fleet, available at <https://www.xlfleet.com/?msclkid=512f45e9b5e211ecb5ebc202cb494c58>.

¹² *Id.*

¹³ PTO systems allow power to be exported from vehicle chassis to power auxiliary systems on a work truck like an aerial unit boom/bucket/crane. These systems typically only operate when a vehicle engine is running, however, an ePTO system operates on battery technology instead of engine power, minimizing the need for vehicles to idle engines to operate auxiliary equipment.

1 planned for 2024. At the time of this forecast, there is a single retail hydrogen fuel-cell station in
2 all of San Diego County¹⁴, which is not located close to any SDG&E Operations Center,
3 therefore SDG&E will require the construction of a dedicated hydrogen fuel-cell refueling
4 station to accommodate this new technology. The details of the new SDG&E hydrogen fuel-cell
5 refueling site can be found in the prepared direct testimony of Dale Tattersall; Real Estate, Land
6 Services & Facilities Operations – (Ex. SDG&E 23).

7 SDG&E forecasts executing on our Electrification and ZEV strategy that will see
8 SDG&E achieve 54% of light-duty vehicles Electrified and 18% of the overall Fleet converted to
9 ZEV by year-end 2024.

10 SDG&E continues to look for additional opportunities to Electrify and convert to ZEV
11 wherever economically feasible and is in constant contact with market participants. SDG&E will
12 continue to monitor and engage with market participants for new Electrified and ZEV market
13 offerings and will look to take advantage of new platforms as they become commercially
14 available in California.

15 Additionally, SDG&E intends to accelerate sustainability benefits to Disadvantaged
16 Communities (DACs)¹⁵ through the monitoring, tracking, visualization, and targeted replacement
17 of vehicles that frequently travel within DACs. SDG&E is excited to announce a brand-new
18 modeling tool, the Community Impact Platform, which combines publicly available census tract,
19 air quality, income, and other data sources with SDG&E’s vehicle telematics data to visualize
20 and track CO2 emissions within each community we serve. SDG&E intends to utilize this
21 innovative modeling technology to pin-point opportunities where SDG&E can accelerate CO2
22 emission reductions to DACs and help bridge the climate equity gap. SDG&E can achieve these

¹⁴ U.S. Department of Energy, Alternative Fuels Data Center Hydrogen Fueling Station Locations: San Diego, *available at* https://afdc.energy.gov/fuels/hydrogen_locations.html#/find/nearest?fuel=HY&location=san%20diego,%20ca.

¹⁵ SDG&E is using the previously applied top 25% highest scoring census tract method established by Senate Bill (SB) 535 to the newest version of CalEnviroScreen 4.0 to define a “Disadvantaged Community.” *See* California Office of Environmental Health Hazard Assessment CalEnviroScreen 4.0 (October 2021), *available at* <https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>; *see also* California Environmental Protection Agency, *SB-535 Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon)* (April 2017), *available at* <https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf>.

1 results through Electrification and conversion to ZEV prioritization of Fleet vehicles that
2 frequent DACs and/or swapping “cleaner” operating assets from one district to another. SDG&E
3 is now able to track and report on Fleet specific emissions within DAC’s that will help SDG&E
4 understand where to focus emission reduction efforts to maximize benefits to DACs in the
5 future. SDG&E was recently recognized for this innovative new approach to provide climate
6 equity with a CIO 100 Award.¹⁶

7 Utilizing this new modeling tool, SDG&E estimates the Electrification and ZEV forecasts
8 proposed in this request will reduce overall GHG emissions in the San Diego region by over 3
9 million pounds of CO2 on an annual basis from 2024 onward, with over 730 thousand pounds of
10 CO2 emissions eliminated from Disadvantaged Communities.¹⁷ This overall level of emissions
11 reduction is the equivalent to growing 22,697 new trees for ten-years or the equivalent of carbon
12 sequestering from 1,624 acres of U.S. Forest over one year.¹⁸ SDG&E estimates that it will
13 remove around 12% of Fleet emissions in just three years as a result of the Electrification and
14 ZEV plan proposed in this GRC.

15 SDG&E Fleet Services intends to continue to build-out this modeling technology and
16 integrate the analysis and results into our vehicle replacement decision making process and
17 develop automation to maximize benefits to DACs. This modeling tool can be further leveraged
18 and modified to include additional projects intended to decarbonize our region like employee
19 commute emission mapping, tree mapping, tree density, solar installations, and other data
20 streams. Capital costs related to this modeling technology can be found in the testimony of Ben
21 W. Gordon and William J. Exon (Ex. SDG&E-25, Chapters 1 and 2), workpaper 00920BB.

22 Safety is a core value and SDG&E is committed to providing safe and reliable service to
23 all its stakeholders. This safety-first culture is embedded in every aspect of the Company’s

¹⁶ San Diego Gas & Electric SDG&E’s Community Impact Platform Earns CIO 100 Award (March 30, 2022), available at <https://www.sdgenews.com/article/sdges-community-impact-platform-earns-cio-100-award#:~:text=SDG%26E's%20award%20was%20in%20recognition,to%20a%20cleaner%20energy%20economy>.

¹⁷ Details of emission calculations can be found in the Lease and License Cost Supplemental Workpapers, 1FS0001.004.

¹⁸ United States Environmental Protection Agency Greenhouse Gas Equivalencies Calculator (March 2022), available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results>.

1 work. In 2020, SDG&E commenced development and deployment of a Safety Management
2 System (SMS), which better aligns and integrates safety, risk, asset, and emergency management
3 across the entire organization. The SMS takes a holistic and pro-active approach to safety and
4 expands beyond “traditional” occupational safety principles to include asset safety, system
5 safety, cyber safety, and psychological safety for improved safety performance and culture.
6 SDG&E’s SMS is a systematic, enterprise-wide framework that utilizes data to collectively
7 manage and reduce risk and promote continuous learning and improvement in safety
8 performance through deliberate, routine, and intentional processes.

9 SDG&E remains focused on identifying and implementing the most cost-effective
10 solutions with the potential to make the greatest impact on reducing GHG emissions, while
11 maintaining a safe and reliable energy system. SDG&E believes that safety, reliability, and
12 sustainability are inextricably linked and fundamental to the Company’s ability to continue to
13 successfully operate. Please see the Sustainability Policy testimony of Estela de Llanos (Ex.
14 SDG&E-02) for additional detail on SDG&E’s Sustainability Strategy and the Safety, Risk and
15 Asset Management testimony of Kenneth Deremer (Ex. SDG&E-31) for additional detail of
16 SDG&E’s Safety Policy.

17 SDG&E Fleet Services is committed to the safety of our employees, customers, and the
18 general public. As mentioned in the RAMP section of my testimony, above, and in further detail
19 in the Telematics Service Fees section of my testimony, below, SDG&E Fleet Services has
20 implemented Telematics Technology into Fleet vehicles that give SDG&E the ability to monitor
21 and coach safe driving behaviors, capture, and improve upon emergency response times and
22 added real-time GPS locations of vehicles and employees to our Emergency Operations Center
23 that can be leveraged during emergency response.

24 **IV. SDG&E FLEET SERVICES O&M COSTS**

25 SDG&E Fleet Services requests \$52.731 million in O&M expense for TY2024 non-
26 shared services, an increase of \$14.660 million above 2021 adjusted-recorded costs. The request
27 is categorized into three major sections 1) Lease & License Costs, \$23.824 million, or 45% of
28 TY2024 request 2) Fleet Operations, \$25.123 million, or 48% of TY2024 request, and 3) Fleet
29 Management, \$3.784 million, or 7% of the TY2024 request.

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**TABLE AA-11
Non-Shared O&M Summary of Costs**

FLEET SERVICES (In 2021 \$)			
Categories of Management	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
A. Lease and License Cost	15,944	23,824	7,880
B. Maintenance Operations	18,793	25,123	6,330
C. Fleet Management	3,334	3,784	450
Total Non-Shared Services	38,071	52,731	14,660

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A. Lease and License Costs

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SDG&E requests \$23.824 million for Fleet Lease and License Costs, an increase of \$7.880 million above 2021 adjusted-recorded costs. As summarized on Table AA-12, below, this request includes expenses for existing lease obligations and CA Department of Motor Vehicle (DMV) license fees, age & mileage replacement of existing vehicles, including Electrified and Zero-Emission Vehicles, vehicle additions to support operating group needs, and offsetting salvage proceeds from the sale of replaced vehicles.

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**TABLE AA-12
Forecast for Lease and License Cost**

FLEET SERVICES (In 2021 \$)			
A. Lease and License Cost	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
Existing Leases and Fees	15,944	15,841	(103)
Replacement Plan and Salvage		7,057	7,057
Vehicle Additions		900	900
Hydrogen Fuel-Cell Vehicles		26	26
Total	15,944	23,824	7,880

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1. Description of Costs and Underlying Activities

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SDG&E typically acquires vehicles through long-term lease agreements ranging from sixty months to one hundred twenty months. SDG&E Fleet Services incurs monthly lease payments and CA use tax for each vehicle over the term of each lease as well as annual CA DMV license fees.

1 SDG&E's Fleet Services TY2024 Leasing costs request of \$23.824 million is comprised
2 of the following; (1) Existing Leases and License Fees request is \$15.841 million, or 67% of the
3 overall Lease and License costs request, and includes repayment of principal, interest, and CA
4 use tax on existing lease obligations at the time of this forecast and CA DMV license fees on
5 existing vehicles and planned acquisitions; (2) Replacement Plan and Salvage request is \$7.057
6 million, or 30% of the overall Lease and License cost request, and includes the repayment of
7 principal, interest, and CA use tax on vehicles SDG&E plans to acquire to replace existing
8 vehicles as well as offsetting salvage proceeds from the sale of replaced vehicles; (3) Vehicle
9 additions request is \$0.900 million, or 4% of the overall Lease and License cost request, and
10 includes the repayment of principal, interest, and CA use tax on vehicles SDG&E plans to add to
11 the Fleet to meet operating group's needs; (4) Hydrogen Fuel-Cell vehicles request is \$0.026
12 million, or 0.1% of the overall Lease and License cost request, and includes the repayment of
13 principal, interest, and CA use tax on hydrogen fuel-cell vehicles SDG&E plans to acquire to
14 replace existing vehicles as well as offsetting salvage proceeds from the sale of replaced
15 vehicles.

16 **Existing Leases and License Fees**

17 Existing leases and License Fees include monthly lease payments, CA use tax, and CA
18 DMV license fees on existing lease obligations. This category of expenses will be at its peak in
19 Base Year + 1 as it represents all existing lease obligations with 12 monthly lease payments and
20 an annual CA DMV license fee payment. As assets are paid-off, and individual lease obligations
21 decrease to zero, payment of that lease will end and thus this category of expense will decrease
22 over time as more assets become fully paid-off.

23 **Replacement Plan and Salvage**

24 Replacement plan and salvage includes monthly lease payments and CA use tax for
25 committed vehicle acquisition with executed purchase orders as well as planned vehicle
26 acquisitions that replace an existing vehicle in the Fleet and includes offsetting salvage proceeds
27 from the sale of replaced vehicles. This category of expense will be at its lowest in Base Year +
28 1 as it represents new lease obligations and will increase over time as more acquisitions are
29 complete and added to the lease portfolio. As an example, a new lease with an effective date of
30 July 1, 2022, will have a partial year of expenses recorded in 2022, with payments for July –
31 December, or 6 payments in 2022, but will have a full-year of payments, or 12 payments, in

1 2023 and 2024; as a result, this single lease obligation will be one-half of payments (expenses) in
2 2022 and a full stream of payments (expenses) in 2023, and 2024.

3 SDG&E replaces vehicles based on a targeted useful life of each vehicle or equipment by
4 asset class; this is typically set by an age & mileage threshold, but is adjusted to account for
5 vehicle condition, maintenance history, repair history, criticality of asset to business unit, and in
6 some instances the availability of suitable commercially available Electrified or ZEV
7 replacements. In addition, as mentioned in the Sustainability, Climate Policy, and Safety Culture
8 section above, SDG&E intends to reduce our sustainability footprint by Electrifying and
9 converting the Fleet to ZEV as well as accelerate benefits of decarbonization to Disadvantaged
10 Communities through vehicle replacements.

11 In addition to age & mileage replacements, SDG&E must also replace some assets
12 irrespective of useful life, age, mileage, or condition to comply with Federal, State, and local
13 regulations like the CARB's Truck & Bus requirements¹⁹ which require the replacement of 2008
14 and older diesel engine vehicles with newer & cleaner engines; CARB Off-Road-Diesel Program
15 (ORD), which requires off-road diesel assets meet a specific emissions standard through
16 replacement, retirement, and/or use of a credit system;²⁰ Large Spark Ignition (LSI), which
17 requires off-road assets to meet a specific emission standard through replacement or retirement;²¹
18 Portable Equipment Registration Program (PERP), which requires replacement or retirement of
19 50HP and above portable engines on a tiered schedule to meet specific emissions standards;²²

¹⁹ California Code of Regulations (CCR) Title 13. Division 3. Chapter 1. Article 4.5, *available at*
<https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I587C03705F7C11DFBF66AC2936A1B85A&bhcp=1&bhhash=1&transitionType=Default&contextData=%28sc.Default%29#IAD71C3DED7D147A094D6836C6CB107E3>.

²⁰ CCR Title 13. Division 3. Chapter 9. Article 4.8, *available at*
<https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF5BA3790D46911DE8879F88E8B0DAAAE&transitionType=Default&contextData=%28sc.Default%29#ID1C693E02DDD11E197D9B83B68A61150>.

²¹ CCR Title 13. Division 3. Chapter 15. Article 2, *available at*
[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I1725AAE0D46A11DE8879F88E8B0DAAAE&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I1725AAE0D46A11DE8879F88E8B0DAAAE&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

²² CCR Title 13. Division 3. Chapter 9. Article 5, *available at*
[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF73761B0D46911DE8879F88E8B0DAAAE&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF73761B0D46911DE8879F88E8B0DAAAE&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

1 and EPO Act, which requires 90% of light duty-vehicle²³ purchases to be Alternative Fuel Vehicles
2 (AFV)²⁴ and/or invest in AFV infrastructure, and/or use credits, and/or obtain half credits for
3 medium-duty AFV acquisitions, and/or procure bio-diesel fuels and and/or utilize other
4 compliance mechanisms within the regulation.²⁵

5 **Vehicle additions**

6 Vehicle additions includes monthly lease payments and CA use tax for incremental
7 vehicles needed by various operating departments over the three-year forecast period, 2022 –
8 2024 that are net-additions to the Fleet and do not replace an already existing asset. This
9 category of expense will be at its lowest in Base Year + 1 as it represents new lease obligations
10 and will increase over time as more acquisitions are complete and added to the lease portfolio.
11 As an example, a new lease with an effective date of July 1, 2022, will have a partial year of
12 expenses recorded in 2022, with payments for July – December, or 6 payments in 2022, but will
13 have a full-year of payments, or 12 payments, in 2023 and 2024; as a result, this single lease
14 obligation will be one-half of payments (expenses) in 2022 and a full stream of payments
15 (expenses) in 2023, and 2024. Please see the direct testimony of the witnesses listed below in this
16 section for specific justification for these vehicle additions to the Fleet.

17 Vehicle additions witness support:

- 18 • Pat Kinsella; Gas Distribution – Ex. SDG&E-04;

²³ As defined by EPO Act - Light Duty Vehicle means a light duty truck or light duty vehicle, as such terms are defined under section 216(7) of the Clean Air Act ([42 U.S.C. § 7550\(7\)](https://www.ecfr.gov/current/title-10/chapter-II/subchapter-D/part-490)), having a gross vehicle weight rating of 8,500 pounds or less, before any after-market conversion to alternative fuel operation. *See* Code of Federal Regulations, *Part 490 – Alternative Fuel Transportation Program*, available at <https://www.ecfr.gov/current/title-10/chapter-II/subchapter-D/part-490>.

²⁴ As defined by EPO Act – Alternative Fuel means methanol, denatured ethanol, and other alcohols; mixtures containing 85 percent or more by volume of methanol, denatured ethanol, and other alcohols with gasoline or other fuels; natural gas, including liquid fuels domestically produced from natural gas; liquefied petroleum gas; hydrogen; coal-derived liquid fuels; fuels (other than alcohol) derived from biological materials (including neat biodiesel); three P-series fuels (specifically known as Pure Regular, Pure Premium and Pure Cold Weather) as described by United States Patent number 5,697,987, dated December 16, 1997, and containing at least 60 percent non-petroleum energy content derived from methyltetrahydrofuran, which must be manufactured solely from biological materials, and ethanol, which must be manufactured solely from biological materials; and electricity (including electricity from solar energy). *See* Code of Federal Regulations, *Part 490 – Alternative Fuel Transportation Program*, available at <https://www.ecfr.gov/current/title-10/chapter-II/subchapter-D/part-490>.

²⁵ *Id.*

- 1 • Rick Chiapa, Steve Hruby, and Aaron Bell; Gas Transmission Operations and
- 2 Construction – Ex. SDG&E-06;
- 3 • Amy Kitson and Travis Sera; Gas Integrity Management Programs – Ex.
- 4 SDG&E-09;
- 5 • Tyson Swetek; Electric Operations O&M – Ex. SDG&E-12;
- 6 • Jonathan Woldemariam; Wildfire Mitigation and Vegetation Management – Ex.
- 7 SDG&E-13;
- 8 • Daniel Baerman; Electric Generation – Ex. SDG&E-14;
- 9 • Fernando Valero; Clean Energy Innovations – Ex. SDG&E-15;
- 10 • David H. Thai; Customer Service Field Operations – Ex. SDG&E-17; and
- 11 • Kenneth Deremer; Safety, Risk & Asset Management Systems – Ex. SDG&E-31.

12 **Hydrogen Fuel-Cell Vehicles**

13 Hydrogen Fuel-Cell Vehicles includes monthly lease payments and CA use tax for
14 planned hydrogen Fuel-cell vehicle acquisitions and offsetting salvage proceeds from the sale of
15 replaced vehicles.²⁶ This category of expense will be at its lowest in Base Year + 1 as it
16 represents new lease obligations and will increase over time as more acquisitions are complete
17 and added to the lease portfolio. As an example, a new lease with an effective date of July 1,
18 2022, will have a partial year of expenses recorded in 2022, with payments for July – December,
19 or 6 payments in 2022, but will have a full-year of payments, or 12 payments, in 2023 and 2024;
20 as a result, this single lease obligation will be one-half of payments (expenses) in 2022 and a full
21 stream of payments (expenses) in 2023, and 2024.

22 **2. Forecast Method**

23 A zero-based forecast is the most appropriate methodology for this workpaper because
24 SDG&E Fleet Services can provide asset specific expense forecasts for future periods based on
25 executed lease schedules with specific terms and conditions. Leasing costs are forecasted using
26 an internally developed model that takes into consideration purchase price of each asset, actual
27 or estimated financing date, lease term details like the length of the lease and interest rate,
28 estimated salvage proceeds from replaced asset, and CA DMV Vehicles licensing fees; the costs

²⁶ Offsetting salvage proceeds from the sale of replaced vehicles in this category are forecasted to occur in post-test years due to timing of vehicle acquisitions.

1 are then calculated for all current and future periods on a monthly basis for each asset already in
2 the Fleet with an existing lease obligation, committed vehicle acquisitions with a valid purchase
3 order, and planned vehicle replacements and additions.

4 SDG&E has experienced the effects of Global supply chain disruptions that continue to
5 impact vehicle deliveries. SDG&E must rely on delivery date estimates from purchase orders or
6 estimates provided by Fleet vehicle vendors to create our Lease costs forecasts. Wherever
7 possible, SDG&E has taken into consideration the latest delivery date estimate for each vehicle
8 as well as taken into consideration possible delays due to global supply chain shortages.
9 SDG&E anticipates delays in vehicle deliveries into 2023 that will affect 2022 and 2023
10 estimates; however, SDG&E anticipates these issues to be resolved by 2024. As described
11 above, the timing of deliveries affects the number of payments that are captured in each forecast
12 year, thus delivery delays could shift costs from one month to another. Adding to the example
13 utilized above, if instead of a vehicle being added to the lease on July 1, 2022, it was delayed and
14 added on October 1, 2022, this would decrease the number of payments in 2022 from 6 down to
15 3 and subsequently reduce the expenses by half for 2022, however this delay would not reduce
16 the number of payments (expenses) in 2023 or 2024.

17 For this forecast SDG&E provides supplemental workpapers that summarize the detailed
18 individual asset repayment schedules, forecasted on a month-by-month basis, and summarized
19 into annualized figures, including all related terms and conditions required to calculate
20 committed payment amounts.

21 Previously acquired assets under the Citizens Bank agreement are amortized in a straight-
22 line method, have a variable interest rate based on the London Interbank Offered Rate (LIBOR)
23 or Bloomberg Short-Term Bank Yield (BSBY) Index²⁷ plus, a bank margin percentage, include
24 payment of CA use-tax and conclude with a one percent – two percent balloon payment. Assets
25 acquired under the new Banc of America Leasing and Capital LLC agreement have a fixed
26 repayment methodology with guaranteed interest rate through the life of the schedule and include
27 payment of CA use-tax. For the purposes of this forecast, future interest rates for leases not

²⁷ The use of BSBY is new for March 2022 forward and applies to legacy Citizens Bank agreements with a lease schedule renewal in 2022 onward as new LIBOR based contracts are no longer valid under recently issued regulatory expectations. See Federal Deposit Insurance Corporation, *Joint Statement on Managing the LIBOR Transition*, available at https://www.fdic.gov/news/financial-institution-letters/2021/fil21070.html#_ftn1.

1 already active have been locked utilizing January 1, 2022, interest rates for future periods.
2 Included in this cost category is the payment of CA DMV license fees. License fees are paid
3 annually for each over-the-road vehicle SDG&E owns and operates on California roadways and
4 vary depending on several factors like vehicle type, vehicle purchase price or declared value,
5 purchase date, city/county of business, declared gross vehicle weight (GVW) and the number of
6 axles on the vehicle, license plate type, California Highway Patrol (CPH) fees, transportation
7 improvement fees, and county/district fees.²⁸ License fees are difficult to calculate on a vehicle
8 specific basis for future periods as the many factors that make up the license fee cannot be
9 accurately calculated or forecasted. SDG&E instead relies on the ratio of 2021 license fees paid
10 to the CA DMV divided by the principal paid on all lease obligations in 2021 to come up with a
11 license to principal percentage. This percentage is applied to future anticipated principal
12 payment forecasts to estimate the license fees due.

13 In previous Generate Rate Case filings SDG&E has utilized a zero-base forecast for this
14 cost category and non-standard escalation. For TY2024 SDG&E continues to use a zero-base
15 forecast methodology but has opted to use standard escalation. Therefore, vehicle pricing and
16 interest rates in these forecasts are based on committed lease terms for existing obligations or
17 January 1, 2022, lease terms for future leases and utilize 2021 vehicle pricing for non-committed
18 acquisitions.

19 Please see my supplemental workpapers in Fleet Lease and License Cost for details on
20 individual lease obligations, license fee payments, and salvage proceed forecasts at the vehicle
21 level.

22 3. Cost Drivers

23 The cost drivers in these categories are attributable to monthly lease payments, CA use
24 tax, CA DMV license fees and offsetting salvage proceeds from the sale of replaced vehicles.
25 Overall, SDG&E intends to acquire 844 vehicles and/or pieces of equipment during this forecast
26 period; 575 vehicles and/or pieces of equipment, or 68%, of the planned acquisitions are either
27 Electrified, ZEV, or pieces of equipment with no fuel required. As mentioned in the
28 Sustainability, Climate Policy, and Safety Culture section above SDG&E intends to acquire

²⁸ See State of California Department of Motor Vehicles, *Registration Fees*, available at <https://www.dmv.ca.gov/portal/vehicle-registration/registration-fees/>.

1 Electrified and/or ZEVs to advance towards our 2030 and 2035 transportation decarbonization
2 Sustainability goals, which will incur an expense in TY2024 of \$4.233 million,²⁹ or 54%, of the
3 overall incremental Lease & License Costs request for TY2024.

²⁹ The costs for Electrification and ZEV are captured in Replacement Plan and Salvage, Vehicle Additions, and Hydrogen Fuel-Cell Vehicles, they have been combined in this metric for convenience.

SDG&E expects the Fleet composition to exist as shown in Table AA-13 and Table AA-14, below, by the end of TY2024 based on the forecasted vehicle replacements and vehicle additions proposed in this GRC. Table AA-13 and Table AA-14 can be directly compared to Table AA-4 and Table AA-5 showing current Fleet composition by Major Category to the proposed TY2024 Fleet composition.

TABLE AA-13
SDG&E Estimated 2024 Fleet Composition by Major Category & Fuel Type

2024 CATEGORY CODE	BI-FUEL CNG	DED CNG	DIESEL	DIESEL HYBRID	ELECTRIC	E-PTO DIESEL	E-PTO UNLEADED	HYDROGEN FUEL CELL	NO FUEL	NONE	NON-PLUG-IN HYBRID	PLUG-IN HYBRID	UNLEADED	GRAND TOTAL
A. Automobile					37			3			6	11		57
B. Compact Pick-Up											77		27	104
C. Compact Van													4	4
D. Compact SUV					27						14			41
E. Mid-Size SUV											1	104	20	125
F. Full-Size Pick-Up	71	1	38		108		11				192	29	371	821
H. Full-Size & Medium-Duty Van			30	4	11						61		21	127
J. Medium-Duty Pick-Up			183		1	46	9	3				5	102	349
L. Heavy-Duty Truck		3	216		2	10								231
M. Mechanized Trailer			99							5			8	112
N. Non-Mechanized Trailer			1						28	183			6	218
P. Construction Equipment			15											15
Q. Forklift	2		24		27									53
R. Piece of Equipment			8		10								6	24
Grand Total	73	4	614	4	223	56	20	6	28	188	351	149	565	2,281

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Table AA-14
SDG&E Estimated 2024 Fleet Composition by Major Category & Engine Power Type

2024 CATEGORY CODE	ELECTRI FIED	INTERNAL COMBUSTION ENGINE	NO FUEL	ZERO EMISSION VEHICLE	GRAND TOTAL
A. Automobile	6			51	57
B. Compact Pick-Up	77	27			104
C. Compact Van		4			4
D. Compact SUV	14			27	41
E. Mid-Size SUV	1	20		104	125
F. Full-Size Pick-Up	203	481		137	821
H. Full-Size & Medium-Duty Van	65	51		11	127
J. Medium-Duty Pick-Up	55	285		9	349
L. Heavy-Duty Truck	10	219		2	231
M. Mechanized Trailer		107	5		112
N. Non-Mechanized Trailer		7	211		218
P. Construction Equipment		15			15
Q. Forklift		26		27	53
R. Piece of Equipment		14		10	24
Grand Total	431	1,256	216	378	2,281

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1 **Existing Leases and Fees**

2 SDG&E has 917 existing lease obligations at the time of this forecast that will decrease
3 to 785 existing lease obligations by TY2024 that will incur an expense of \$15.841 million in
4 TY2024. These existing lease obligations include previously acquired vehicles to meet
5 Electrification, ZEV, and AFV goals, but are primarily driven by recent acquisitions to comply
6 with mandated replacements under the CARB Truck & Bus regulation. 281, or 36%, of the
7 existing lease obligations expected to continue into TY2024 are for medium- and heavy-duty
8 vehicle replacements required to meet CARB Truck & Bus regulations. These vehicle
9 replacements tend to be some of the most expensive vehicles in the Fleet due to the specialized
10 equipment, cargo carrying capacity, safety equipment like non-conductive paint and materials
11 required for electric work, and high torque and horsepower requirements. These existing CARB
12 Truck & Bus Rule required replacements will incur an expense of \$8.369 million in TY2024, or
13 53% of the Existing Leases and Fees category.

14 **Replacement Plan and Salvage**

15 SDG&E has a total of 743 planned vehicle replacements by TY2024 in this category that
16 will incur an expense of \$7.057 million in TY2024. The vehicle replacements and costs can be
17 further segmented into committed orders and planned orders.

18 SDG&E has committed purchase orders to acquire 147 vehicles during the forecast
19 period, which will incur an expense in TY2024 of \$2.869 million.

20 SDG&E plans to acquire 596 vehicles during the forecast period, which will incur an
21 expense in TY2024 of \$5.167 million.

22 Replacements in this category include mandated replacement of 41 medium- and heavy-
23 duty diesel vehicles to meet Truck & Bus regulations, 25 off-road assets to meet ORD
24 requirements, and 14 assets to meet PERP requirements. Combined, these CARB required
25 replacements will incur an expense in TY2024 of \$1.611 million.³⁰ Currently, SDG&E is unable
26 to find suitable, commercially available electrified or ZEV alternatives to these diesel-powered
27 assets and plans to replace on a like-for-like basis.

28 SDG&E forecasts the collection of \$(0.978) million in TY2024 from salvage proceeds
29 from the sale of 226 replaced assets at auction, approximately six months after an asset has been

³⁰ The cost of CARB mandated replacements is captured in Replacement Plan and Salvage – committed purchase orders and planned orders, they have been combined here for convenience.

1 replaced.³¹ This timeline is estimated and often necessary to allow for a new asset to be in-
2 serviced, tooling, equipment, and technology to be transferred to the newly acquired asset,
3 preparation of the replaced asset for sale, and marketing by auction vendor.

4 **Vehicle Additions**

5 SDG&E plans to add 95 vehicles to the Fleet that will incur a cost of \$0.900 million in
6 TY2024. Please see the direct testimony of the following witnesses for specific justification for
7 the vehicle additions.

- 8 • Pat Kinsella; Gas Distribution – Ex. SDG&E-04.
- 9 • Rick Chiapa, Steve Hruby, and Aaron Bell; Gas Transmission Operations and
10 Construction – Ex. SDG&E-06;
- 11 • Amy Kitson and Travis Sera; Gas Integrity Management Programs – Ex.
12 SDG&E-09;
- 13 • Tyson Swetek; Electric Operations O&M – Ex. SDG&E-12;
- 14 • Jonathan Woldemariam; Wildfire Mitigation and Vegetation Management – Ex.
15 SDG&E-13;
- 16 • Daniel Baerman; Electric Generation – Ex. SDG&E-14;
- 17 • Fernando Valero; Clean Energy Innovations – Ex. SDG&E-15;
- 18 • David H. Thai; Customer Service Field Operations – Ex. SDG&E-17; and
- 19 • Kenneth Deremer; Safety, Risk & Asset Management Systems – Ex. SDG&E-31.

20 **Hydrogen Fuel-Cell Vehicles**

21 To support the Company’s Zero-emissions vehicle goals, SDG&E plans to acquire a total
22 of six (6) hydrogen fuel-cell vehicles during the forecast period, three passenger sedans and three
23 medium-duty work trucks which will incur an expense in TY2024 of \$0.026 million.

24 SDG&E intends to use these vehicles to determine future applicability of hydrogen fuel-
25 cell technology in Fleet vehicles. These vehicles will be co-located at facilities with hydrogen
26 fuel-cell re-fueling capability. This will require the construction of one additional hydrogen fuel-
27 cell re-fueling site at one of SDG&E’s existing base locations, please refer to the testimony of

³¹ Total offsetting salvage proceeds from replaced assets between 2022 – 2024 is forecasted at \$(3.474) million.

witness Dale Tattersall: Real Estate, Land Services & Facilities Operations – (Ex. SDG&E 23),
 for further details on the hydrogen fuel-cell re-fueling site and infrastructure.

B. Maintenance Operations

SDG&E requests \$25,123 million for Maintenance Operations, an increase of \$6,330 million
 above 2021 adjusted-recorded costs, as summarized on Table AA-15 below.

**TABLE AA-15
 Forecast for Maintenance Operations**

FLEET SERVICES (In 2021 \$)			
B. Maintenance Operations	2021 Adjusted- Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
Maintenance Garage Operations	12,141	15,199	3,058
Automotive Fuels	6,652	9,924	3,272
Total	18,793	25,123	6,330

1. Description of Costs and Underlying Activities

This activity consists of the inspection, maintenance and repair activities carried out at 11
 Fleet Services maintenance garages, including satellite facilities throughout the service territory.
 Maintenance Operations includes: (1) safety inspections and routine maintenance of Fleet
 vehicles; (2) repair of vehicle damage and replacement of worn and defective parts; (3)
 compliance with applicable federal, state, and local environmental, safety, and emissions
 regulations (4) procurement and dispensing of automotive fuels.

2. Forecast Method

Maintenance Garage Operations

For TY2024 SDG&E has elected to utilize a five-year historical average to best capture
 the costs in Maintenance Garage Operations as they vary year-to-year due to the variability,
 frequency, and scale of vehicle repairs as well as fluctuations in commodity prices that affect
 replacement parts and fluids. SDG&E added to the five-year historical average anticipated costs
 for incremental FTE’s and increased costs related to Vehicle Additions to the Fleet.

1 **Automotive Fuels**

2 For TY2024 SDG&E has elected to utilize a four-year historical average to forecast
3 Automotive Fuels rather than a five-year historical average primarily because of Senate Bill 1
4 going into effect beginning November 1, 2017, which implemented new gasoline and diesel
5 taxes.³² As such, 2018 – 2021 historical cost represents SDG&E’s Automotive Fuel costs that
6 includes the effects of SB No.1 and therefore represents the best estimate of expenses in this
7 activity. Further, the costs included in Automotive Fuels vary year-to-year due to fluctuations in
8 commodity pricing for gasoline and diesel fuels, with the vast majority of this workpaper
9 representing the commodity costs for gasoline or diesel fuel, therefore the largest historical cost
10 dataset feasible should be used to represent the variability possible in this activity.

11 **3. Cost Drivers**

12 **Maintenance Garage Operations**

13 The cost drivers for this forecast include the maintenance and repair costs associated with
14 the Fleet including union technician labor, technical training, replacement parts, lubricants, and
15 contracted repair services.

16 Included in this forecast is an incremental TY2024 request of \$0.371 million for four
17 incremental Fleet Maintenance Technicians at contracted union rates. Six Fleet Maintenance
18 positions were repurposed in 2020 and 2021 to Fleet Assistants, an entry level position meant to
19 allow new technicians to gain the proper experience and certifications through on the job training
20 and testing to enter the trade; these Fleet assistant positions however, per union rules, require
21 direct oversight by a Fleet Technician or Working Foreman and are to assist on jobs as part of
22 on-the-job training. The incremental four Maintenance Technicians are needed to offset lost
23 productivity due to the on-the-job training as well as take on the added workload as vehicles
24 have become more complex and require more labor hours per vehicle to service. The complexity
25 of vehicles and required labor hours is measured by the Maintenance Repair Unit (MRU) metric,
26 which has increased from 3,190 MRU’s in 2017 to 4,581 MRU’s in 2021, an increase of 44%;
27 during this same time period the number of Fleet Maintenance Technicians FTE has decreased
28 from 71 in 2017 to 64 in 2021 which has moved costs from internal labor to external third party

³² California Legislative Information, *SB-1 Transportation Funding (2017-2018)*, available at https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1.

1 services to compensate for the lack of internal resources to maintain and repair vehicles.
2 Additionally, the upgrade of the Fleet management system, completed in August 2020, is more
3 data intensive for the technicians, and requires they spend more time doing data collection and
4 data entry compared to the previous system, which takes away from productive labor time. The
5 new Fleet management system introduces Sarbanes-Oxley Act (SOX) controls, oversight, and
6 standard operating procedures which were not available in the previous system which was
7 installed pre-SOX in 2002. The Fleet management system is necessary for proper Fleet
8 management including labor tracking; parts charge recording; work order management;
9 assignment of work orders; and compliance records tracking.

10 SDG&E plans to acquire additional vehicles required by various operating groups that
11 will require ongoing maintenance, repair, and compliance inspections that will incur incremental
12 expense in TY2024 of \$2.467 million. SDG&E forecasts the annual maintenance expense for
13 these incremental vehicles utilizing existing work order data for similar vehicles and has
14 included supplemental workpapers in the Maintenance Garage Operations section with details on
15 the incremental expense from these vehicle additions to the Fleet.

16 **Automotive Fuels**

17 The cost drivers for this forecast include a gasoline and diesel fuel price level adjustment
18 to account for the elevated pricing levels experienced in the current market, the transition to a
19 third-party mobile refueling service, incremental costs due to Additional Vehicles required by
20 operating groups, and fuel savings from Electrification and ZEV replacements.

21 SDG&E requests a TY2024 fuel price level adjustment of \$3.920 million to account for
22 pricing level differences not seen in historical averages. SDG&E utilized historical purchase
23 data from 2018 – 2021 for gasoline and diesel fuel to calculate the average required funding level
24 to purchase the same amount of fuel in each of those historical years using gasoline and diesel
25 fuel prices available at the time of this forecast. SDG&E added the differential between this
26 calculated value and the 4-year historical average to account for the elevated price level of fuel in
27 current market conditions. Details of these calculations and the methodology used to calculate
28 the price level adjustment can be found in the Automotive Fuels supplemental workpapers.

29 SDG&E plans to continue the use of a third-party mobile refueling service in TY2024 at
30 an incremental expense of \$0.176 million. SDG&E operated nine mobile refueling tankers that
31 have the capability to dispense diesel and gasoline fuel on a mobile platform. These fuel tankers

1 were typically staged throughout the service territory to dispense fuel to Fleet vehicles overnight
2 and to respond to emergency situations that required fueling at staging yards and/or off-site
3 locations. All nine of these mobile refueling tankers are subject to compliance replacements
4 required under the CARB Truck & Bus regulation. SDG&E conducted a cost benefit analysis in
5 2019 and concluded that it was more cost effective to retire five of the nine mobile refueling
6 tankers and transition to a third-party refueling service. The four remaining tankers would be
7 retrofitted with new CARB Truck & Bus compliance chassis/engines and the refueling
8 equipment would be moved from the old chassis to the new chassis. The cost for the new chassis
9 and retrofit of these 4 remaining mobile refueling tankers can be found in the Lease and License
10 Cost section of my workpapers. Included in this forecast is the incremental service and
11 commodity fees associated with the third-party refueling service. In adding this incremental
12 service, SDG&E avoided incremental Lease and License costs that would have been required for
13 the replacement of five additional mobile refueling tankers. The details of the incremental
14 service fees for the mobile refueling service can be found in the Automotive Fuels supplemental
15 workpapers.

16 SDG&E included incremental fuel requirements and fuel savings from the various
17 vehicle additions as well as the transition from internal combustion engines to Electrified or
18 ZEVs. SDG&E estimates the fuel expense required for each vehicle in the replacement plan and
19 determines if the replacement or incremental vehicle is fuel neutral or will net a fuel savings or
20 incremental fuel expense by using vehicle fuel consumption data. SDG&E calculates the annual
21 fuel expense of each vehicle in the forecast and utilizes the estimated delivery date to arrive at a
22 forecasted fuel savings or incremental fuel expense on a vehicle-by-vehicle basis. As an
23 example, an unleaded vehicle, with an annual fuel expense of \$1,685, that is replaced by an
24 electric vehicle will yield a net fuel savings of \$(1,685) per year since SDG&E Fleet Services
25 does not incur electric vehicle charging expense.³³ If this same vehicle were instead replaced by
26 a plug-in hybrid vehicle, SDG&E estimates a net fuel savings of \$(421) per year as established
27 by a calculation of similar unleaded and plug-in hybrid vehicles annualized fuel expenses.
28 SDG&E forecasts a TY2024 fuel expense reduction of \$(0.419) million from Electrification and

³³ SDG&E files an annual Application for approval of its forecast of the Energy Resource Recovery Account (ERRA) revenue requirement, which includes a forecast of the utility's electric procurement cost revenue requirement and electricity sales for the upcoming year.

conversion to ZEV. SDG&E forecast the need for an additional \$0.247 million in fuel expense for the vehicle additions required by various operating groups. Overall, these two fuel adjustments net a fuel expense reduction of \$(0.170) million in TY2024. The details of the incremental fuel requirements and fuel savings can be found in the Automotive Fuels supplemental workpapers.

C. Fleet Management

SDG&E Fleet Services TY2024 Fleet Management request is \$3.784 million, an increase of \$0.450 million above 2021 adjusted-recorded costs, as summarized on Table AA-16 below. The request is further detailed into Asset Management request of \$1.370 million, Financial and Systems request of \$1.145 million, Maintenance Operations Management request of \$0.658 million, and Telematics Service Fees request of \$0.848 million.

**TABLE AA-16
Forecast for Fleet Management**

FLEET SERVICES (In 2021 \$)			
C. Fleet Management	2021 Adjusted-Recorded (000s)	TY2024 Estimated (000s)	Change (000s)
Asset Management	1,200	1,371	171
Financial & Systems	1,143	1,145	2
Maintenance Operations Management	669	659	(10)
Commutation Fees Credits	(226)	(239)	(13)
Telematics Service Fee	548	848	300
Total	3,334	3,784	450

1. Description of Cost and Underlying Activities

This activity consists of all the SDG&E Fleet Services management staff and non-vehicle specific expenses not covered elsewhere which include Asset Management; Financial & Systems; Maintenance Operations Management & Supervision; and Commutation fee Credits.

Asset Management

Asset Management activity includes a team of Fleet professionals who manage vehicle replacement planning, vehicle design, specification creation, project management, acquisition, quality assurance inspections, and disposal of replaced vehicles. The planning, design, acquisition, inspection, and in-service of each new vehicle can take months to years, primarily

1 driven by vehicle complexity, with smaller, less complex vehicles having shorter lead times and
2 heavier, more complex vehicles having longer lead times.

3 **Financial & Systems**

4 Financial & Systems activity consists of administrative and operational support for
5 financial transactions, SOX controls and testing, DMV license administration, lease
6 administration, metrics reporting, Fleet management system support, project management, fuel
7 system management and support, and compliance training and reporting.

8 Several capacity building initiatives were executed in 2020 and 2021 to improve
9 efficiencies of the Fleet department and include the upgrade of the Fleet Management System,
10 the upgrade of the fuel management system, the Telematics system further described below,
11 web-based forms/applications, and system integrations/process automation. As an example, the
12 upgrade of the Fleet Management system allows SDG&E Fleet services to eliminate paper
13 storage of work orders, invoices, inspection documents as well as the associated labor necessary
14 to organize, manage, and comply with records retention policies of all these documents. The now
15 digitally stored documents are searchable by Fleet staff for easy and quick retrieval without
16 having to physically search through thousands of folders in file-cabinets. Additionally, we have
17 created additional integrations/process automation improvements that eliminate e-mail
18 communication and manual data entry by integrating our Fleet Management system with our
19 accounting and finance system, SAP. These automations allow SDG&E to keep in sync with
20 various contract terms and conditions, without manual data entry, that allow Fleet Services to
21 remain compliant with Purchase Order approved dollar amounts and expiration terms.

22 **Maintenance Operations Management & Supervision**

23 Maintenance Operations Management & Supervision activity consists of the maintenance
24 manager, garage supervisors, and training supervisor. The Fleet maintenance manager and
25 supervisor staff provide oversight and leadership to union represented Fleet working foremen,
26 Fleet maintenance technicians, Fleet assistants, and Fleet parts handlers at eleven garages
27 throughout the service territory. This team is also responsible for reviewing maintenance and
28 repairs performed on Fleet vehicles, reviewing, and processing work orders and associated
29 invoices related to parts and services performed by the garage staff, ensuring a safe work
30 environment and vehicles for SDG&E employees.

1 During the Build a Better Business optimization initiative,³⁴ Fleet Services discovered
2 that approximately 10% of invoices submitted to Fleet Services were being delayed for payment
3 due to miscommunication between our vendors and SDG&E's accounts payable, Supply
4 Management, and fleet services groups. Fleet services processes invoices through our Fleet
5 Management software to ensure correct accounting of vehicle maintenance expenses for each
6 vehicle, however our Supply Management and Accounts Payable departments recently
7 developed and launched a new program for vendors to self-submit and monitor invoices. As a
8 result, communication from Supply Management and Accounts Payable directed Fleet vendors to
9 self-submit invoices through this newly developed self-serve portal, while simultaneously
10 invoices were being processed within Fleet's Management software. This led to invoices being
11 held for payment until the two systems could be reconciled and only a single invoice selected for
12 payment.

13 To ensure timely and efficient processing of invoices, Accounts Payable and Supply
14 Management implemented a Fleet Services vendor exclusion list to avoid requesting Fleet
15 vendors sign-up for this self-service tool.

16 Fleet Services spent approximately \$3,000 in labor to streamline instructions for Fleet
17 vendor invoice processing procedure and to avoid approximately 1,070 labor hours per year in
18 combined effort between Fleet Services and Accounts Payable to research and locate held
19 invoices.

20 **Commutation Fee Credits**

21 The Commutation Fee Credits activity consists of employee commutation fee credits to
22 help offset Fleet vehicle costs for take-home vehicles. Take-home vehicles for management staff
23 incur a fee to the employee to recoup the cost of fuel and wear and tear on vehicles due to
24 employee commute to and from the office/worksite.

25 **Telematics Service Fees**

26 The Telematics Services Fees activity consists of the monthly lines of service fees
27 incurred by Fleet Services for the Telematics program. Each vehicle equipped with a Telematics
28 device and an active line of service incurs a fixed monthly fee for the use of the Telematics cloud

³⁴ Building a Better Business (BBB) is an ongoing business optimization and continuous improvement initiative at SDG&E, undertaken to support our mission to improve lives and communities by building the cleanest, safest and most reliable energy infrastructure company in America.

1 application, cellular data, and application maintenance and support. The data from the
2 Telematics Service is used in a variety of ways to improve safety, sustainability, and operational
3 improvements throughout the organization. SDG&E utilizes safety metrics like speeding and the
4 use of seatbelts to coach employees on company policy and set expectations about our safety
5 culture. As mentioned in the Sustainability, Climate Policy, and Safety Culture section above,
6 SDG&E has leveraged the Telematics data to pin-point emissions in San Diego and DAC's and
7 will look to leverage this tool further to advance climate equity. Further, SDG&E has integrated
8 the telematics data into our Emergency Operations Center (EOC). This data stream provides a
9 real-time GPS location of every Telematics equipped SDG&E Fleet vehicle with pertinent
10 information within our infrastructure mapping tools. This allows our EOC to monitor real-time
11 location of Fleet assets alongside pertinent emergency specific infrastructure like poles,
12 substations, switches, pipes, valves, etc. This integration also allows SDG&E to monitor the
13 proximity of dangers, like wildfire, to our employees and gives the SDG&E EOC the ability to
14 act to evacuate employees in danger.

15 SDG&E is working on additional projects that will look to integrate into other company
16 systems to improve operations. Not included in my forecast is the Capital costs for the
17 procurement of Telematics devices, project management, integration into company applications,
18 and installation of this technology into Fleet vehicles. Additionally, SDG&E plans to further
19 leverage this telematics technology through a variety of Capital integration projects with other
20 company systems like our work order management systems, Safety Management System (SMS),
21 and the build-out of automation tools that allow SDG&E to extract additional benefits from this
22 technology. SDG&E plans to integrate the real-time GPS data capability of the Telematics
23 system with our work order management systems. This will allow SDG&E to automate
24 reporting on field technician arrival times to emergency work orders, and to better understand
25 how to improve response times. SDG&E plans to integrate the Telematics data into the SMS
26 through data integration of safety metrics that will help us centralize leading, lagging, and real-
27 time safety performance indicators so that we focus our attention and efforts on reducing overall
28 risk to employees and the public. Additionally, SDG&E plans to expand the use of the
29 Telematics platform to include an electronic Driver Vehicle Inspection Report (eDVIR) tool to
30 digitize this process. Currently, each driver of a vehicle over 10,000 lbs. is required to complete
31 a Driver Vehicle Inspection Report as part of the commercial driver requirement before and after

1 operating the vehicle to ensure the vehicle is safe to operate for themselves and for the next
2 driver of the vehicle.³⁵ SDG&E must collect and store all the physical inspection reports for at
3 least three months from the date the written report was prepared.³⁶ SDG&E intends to digitize
4 this process by utilizing an electronic version of this report that is synchronized with the
5 Telematics program. Leveraging the two technologies SDG&E believes it can achieve a variety
6 of safety and administrative improvements like eliminating paper forms, storage space, and
7 administration of paper records, as well as improve upon the existing program by monitoring and
8 reporting of Fleet vehicle use without an eDVIR completed, as well as linking a specific operator
9 to a vehicle to improve reporting and target safety messaging that aims to reduce risks to
10 employees and the general public. The capital costs for these RAMP-related projects and related
11 Telematics hardware and installation can be found in the testimony of Ben W. Gordon and
12 William J. Exon; Information Technology, Policy, Chapter 1 and Chapter 2: Information
13 Technology, Capital, and Forecasts – Ex. SDG&E-25, workpapers 00920BG and 00920BI.

14 **2. Forecast Method**

15 **Asset Management, Financial & Systems, Maintenance Operations Management &** 16 **Supervision**

17 A five-year historical average was selected as the basis for our TY 2024 forecast for these
18 three activities as the recorded costs for these activities have fluctuated from year-to-year as
19 resources have moved between workpapers groups, special projects, and temporary assignments.
20 The five-year historical average provides the most accurate baseline as it smooths out the highs
21 and lows in these workpapers utilizing the largest historical cost dataset possible.

22 **Commutation Fee Credits**

23 A four-year historical average was selected as the basis for our TY 2024 forecast for this
24 activity as the fee collected from employees for take-home vehicles increased by about 21% in
25 late 2017. Therefore, 2018 – 2021 historical costs, the four-year historical average, represents
26 the most up-to-date and accurate representation of the fees that SDG&E Fleet Services intends to
27 collect from management employees for the use of a take-home vehicle.

³⁵ Code of Federal Regulations, *Part 396 – Inspection, Repair, and Maintenance*, available at <https://www.ecfr.gov/current/title-49/subtitle-B/chapter-III/subchapter-B/part-396>.

³⁶ *Id.*

1 **Telematics Service Fees**

2 A base-year historical forecast was selected as the basis for our TY2024 forecast for this
3 activity as this activity began with a small pilot program in 2020 and installations were mostly
4 complete in late 2020 and early 2021. Although 2021 does not represent a full year of expenses
5 in this activity, as additional lines of service were added in 2021, it serves as a baseline for
6 incurred costs in a historical year.

7 **3. Cost Drivers**

8 **Asset Management**

9 As SDG&E looks to take advantage of Electrification and ZEV opportunities we
10 anticipate it will require the re-design and significant re-writes of existing vehicle designs and
11 specification documents to accommodate Electrification or ZEV technology (batteries, tanks,
12 charging hardware, etc.) which will affect weight of vehicles and cargo carrying capacity,
13 vehicle weight ratings, axle requirements, tire load capacities/ratings as well as require the re-
14 design of mounted equipment and storage spaces to accommodate the space requirements of the
15 Electrification or ZEV equipment. As a result of this significant upcoming workload, this group
16 will add two Fleet Vehicle Designers to assist the team with the design specifications and project
17 management of replacement vehicles. These two incremental FTEs will incur an incremental
18 TY2024 expense of \$0.220 million.

19 **Finance & Systems**

20 This group will add two positions, a Sr. Business Analyst and a Sr. Data Analyst that will
21 incur a TY2024 incremental expense of \$0.210 million. These two incremental FTEs will be
22 primarily devoted to the curation and analysis of data from our new Fleet Management System
23 installed in August 2020 to look for opportunities to improve maintenance efficiencies. The
24 updated Fleet Management System saw a complete overhaul, upgrading from a system that was
25 last installed in 2002. The new Fleet Management system completely changed the way we
26 capture and visualize data. This has given SDG&E Fleet Services an opportunity to assess
27 vehicle-, job-, work order-, technician-, garage-specific metrics and look for opportunities to
28 improve vehicle up-time and more efficiently utilize resources to maintain and repair vehicles.

29 **Maintenance Management & Supervision**

30 The main cost driver for Maintenance Management & Supervision activity is the labor
31 costs related to Fleet management and supervisory staff that provide oversight and leadership to

1 union represented employees at the maintenance garages. There are no adjustments made to the
2 historical 5-year average for this activity.

3 **Commutation Fee Credits**

4 This activity collects a commutation fee credit from employees that offsets the cost of
5 take-home vehicles for management employees. There are no adjustments made to the historical
6 4-year average for this activity.

7 **Telematics Service Fees**

8 The main cost driver for this activity is the addition of lines of service to fully deploy
9 Telematics technology into every OTR Fleet vehicle and select mechanized trailer assets, the
10 addition of 2,100 licenses for the eDVIR program, and one incremental FTE to administer and
11 provide support for the Telematics technology and data reporting systems. SDG&E estimates it
12 will incur an incremental expense of \$0.300 million above the base year forecast for these
13 incremental activities.

14 **V. CONCLUSION**

15 The Fleet Department acquires, maintains and services Fleet vehicles and equipment to
16 enable work crews to provide electric and natural gas service to SDG&E customers.

17 During this GRC cycle, SDG&E estimates that it will expand Electrification to 54% of
18 the light-duty Fleet by year-end 2024. This moves SDG&E forward in its plan to reach 100%
19 Electrification of its light-duty Fleet by 2030. Additionally, SDG&E estimates conversions to
20 ZEV to encompass 18% of the overall Fleet by year-end 2024. With this, the company is on
21 track to reach the goal to transition 30% of the overall Fleet to ZEV by 2030.

22 My requested O&M TY 2024 forecasts for Fleet Services are essential to the continuation
23 of our efforts and commitment to public and employee safety, as well to support SDG&E's
24 sustainability goals to decarbonize the transportation sector and advance climate equity to low
25 income and disadvantaged communities.

26 This concludes my prepared direct testimony.

1 **VI. WITNESS QUALIFICATIONS**

2 My name is Arthur Alvarez. My business address is 6875 Consolidated Way, San Diego,
3 CA. 92121. I am employed by SDG&E, as the Fleet Financial & Systems Manager. I have been
4 employed by SDG&E or SoCalGas since 2011. While at SDG&E or SoCalGas, I have held
5 various staff and management positions in Supply Management, Advanced Meter, Facilities and
6 Fleet Services.

7 My present responsibilities include providing leadership to a team of Fleet professionals
8 in the areas of Fleet compliance with federal, state, and local regulations; Finance and SOX
9 controls; Vehicle licensing; Vehicle leasing; unleaded and diesel fuel procurement and fuel
10 systems management; Project management and support; Telematics system management; and
11 Data analysis, metrics, and continuous improvement efforts.

12 I earned a Bachelor of Arts degree in Economics from the University of California, San
13 Diego in 2010.

14 I sponsor the TY 2024 GRC Testimony for SDG&E's Fleet Services spending plan. I
15 have not previously testified before the California Public Utilities Commission.

APPENDIX A
Glossary of Terms

Appendix A

Glossary of Terms

Acronym	Definition
AFV	Alternative Fuel Vehicle
BBB	Building a Better Business
BIT	Basic Inspections of Terminals
BY	Base Year
CA	California
CARB	California Air Resources Board
CCR	California Code of Regulations
DACs	Disadvantaged Communities
DMV	Department of Motor Vehicles
FTE	Full-Time Equivalent
GHG	Greenhouse Gas
GVW	Gross Vehicle Weight
LSI	Large Spark Ignition
MRU	Maintenance Repair Unit
O&M	Operations and Maintenance
ORD	Off-Road-Diesel
PERP	Portable Equipment Registration Program
RAMP	Risk Assessment Mitigation Phase
SB	Senate Bill
SDG&E	San Diego Gas & Electric Company
SOX	Sarbanes-Oxley Act
TY	Test Year
ZEV	Zero-Emission Vehicle