

Company: San Diego Gas & Electric Company (U 902-E)
Proceeding: 2020/2021 Tree Trimming Balancing Account
Application: A.22-12-XXX
Exhibit: SDG&E-xx

SAN DIEGO GAS & ELECTRIC COMPANY
PREPARED DIRECT TESTIMONY OF
DON AKAU
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



December 9, 2022

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1 **PREPARED DIRECT TESTIMONY OF DON AKAU**
2 **ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

3 **I. INTRODUCTION AND SUMMARY**

4 My name is Don Akau. I am the Vegetation and Pole Integrity Manager at San Diego Gas
5 & Electric Company (“SDG&E”). My qualifications are attached to this testimony as Section V
6 of this testimony. My business address is 8315 Century Park, San Diego, CA 92123.

7 As the Vegetation and Pole Integrity Manager, I am responsible for developing,
8 implementing, and managing SDG&E’s Vegetation Management Program (“Program”). As the
9 Program Manager and an International Society of Arboriculture (“ISA”) Certified Arborist, I
10 strive to ensure public safety, compliance with all rules and regulations, and to preserve the
11 health and safety of our urban and rural forests. Trees and vegetation are critical to the balance of
12 the ecosystem, and I am proud to be an arborist in a position to find positive solutions where
13 trees and utilities can safely and sustainably co-exist.

14 The purpose of my testimony is: (1) to describe SDG&E’s Vegetation Management
15 Program; (2); explain the reasons why SDG&E’s 2020 and 2021 expenditures recorded to
16 SDG&E’s Tree Trimming Balancing Account (“TTBA”) exceeded the amount authorized in
17 SDG&E’s 2019 General Rate Case (“GRC”); and (3) address why SDG&E’s incremental TTBA
18 costs were reasonable and prudent. In sum, SDG&E has experienced significant cost increases
19 associated with vegetation management due to statutorily mandated labor increases and
20 incremental vegetation management initiatives to mitigate the threat of wildfires. While these
21 costs were not anticipated in SDG&E’s Test Year 2019 GRC forecasts, they are nonetheless the
22 result of prudent cost management and targeted, risk-based practices to promote the safety and
23 well-being of SDG&E’s service territory, customers, and employees, as well as efforts to comply
24 with all applicable laws and regulations. For this reason, the Commission should grant recovery

1 of the incremental TTBA balances described in the prepared direct testimony of Jason
2 Kupfersmid.

3 **II. SDG&E’S VEGETATION MANAGEMENT PROGRAM**

4 **A. SDG&E’s Vegetation Management Program is a Comprehensive Approach** 5 **to Promote Safety, Reliability, and Regulatory Compliance**

6 Vegetation management is integral to both reliability as well as wildfire prevention and
7 mitigation efforts. SDG&E strives to be a leader in sustainable vegetation management. SDG&E
8 has been recognized by the National Arbor Day Foundation as a “Tree Line USA” utility
9 company for twenty (20) consecutive years in recognition of “best practices” combining worker
10 education and training, public outreach, quality tree care, and system reliability. SDG&E’s
11 vegetation management program has received numerous recognitions over the years from a
12 variety of agencies, cities, schools, and international organizations. The Program strives to
13 engage all stakeholders in raising the bar to promote public and employee safety. SDG&E is
14 also focused on sustainability by leveraging its “Right Tree Right Place” program to improve the
15 rural and urban landscape, and by leveraging opportunities to repurpose biomass and reduce the
16 environmental footprint of vegetation management practices where possible.

17 SDG&E is responsible for compliance with applicable rules and regulations, including
18 General Order (“GO”) 95, Rule 35; Public Resources Code Sections 4292 and 4293; and NERC
19 FAC003-4. These rules and regulations mandate a minimum clearance between vegetation and
20 SDG&E facilities at all times. SDG&E’s Vegetation Management Department sets the
21 standards, guidelines, and processes for the overall Program to comply with all applicable rules,
22 laws and regulations. Additionally, the Department oversees compliance with SDG&E’s
23 Wildfire Mitigation Plans as approved by the Office of Energy Infrastructure Safety (“Energy
24 Safety”) and this Commission. The Vegetation Management Department includes a staff of

1 Managers, Team Leads, Area Foresters, Contract Administrators, Patrollers, Quality Assurance
2 Forester, Business Advisor, Technical Support, and Customer Service Administration Staff. The
3 Program also coordinates all vegetation management and tree trimming activities primarily
4 performed by third-party contractors.

5 SDG&E’s Vegetation Management Program includes the inspection and maintenance of
6 an inventory of approximately 485,000 trees that have the potential to encroach within the
7 minimum required clearance between vegetation and overhead power lines. SDG&E’s tree
8 inventory database and work management system are collectively managed through the
9 PowerWorkz system, a web-based application and database. SDG&E uses its work management
10 system and tree inventory database to record and update vegetation management activities
11 including inspections, tree trimming, pole brushing and auditing. For inventory trees, the data
12 recorded includes among others, tree genus,¹ clearance at time of inspection/trim, growth rates,
13 tree health, and activity history. Generally, tree trimming operations include pruning healthy
14 trees encroaching overhead power lines as well as the pruning or removal of “hazard trees,”
15 which are generally identified as dead, dying, diseased, or structurally unsound trees with the
16 potential to fall into overhead electrical lines.

17 SDG&E’s tree-trimming activities are covered by a two-way balancing account as
18 approved by the Commission in SDG&E’s Test Year 2019 GRC Decision (D.)19-09-051. D.19-
19 09-051 authorized SDG&E to collect an annual revenue requirement based on a forecast derived
20 by averaging four years of historical costs from 2015-2018. To promote accountability, the
21 Commission directed SDG&E to file an application for recovery of TTBA undercollections

¹ SDG&E continues to develop the capability to record both genus and species as required by applicable regulations and guidance from Energy Safety.

1 exceeding 35% of the authorized revenue requirement. In establishing two-way balancing
2 treatment, the Commission specifically recognized that SDG&E required additional flexibility to
3 respond to the increasing statewide threat of catastrophic wildfire.² This flexibility became
4 particularly necessary as SDG&E implemented its first Wildfire Mitigation Plan (“WMP”) in
5 2019 in response to Senate Bill (SB) 901. SDG&E’s WMP initiatives for 2020 and 2021 include
6 a number of vegetation management activities that were not included in SDG&E’s TY 2019
7 GRC forecasts, which are further discussed below.

8 1. Inspection and Tree Trimming Activities

9 Generally, two types of work drive tree trimming program costs: (1) scheduled, routine
10 work and, (2) unscheduled, off cycle work. The routine pre-inspection activity identifies trees to
11 be pruned and removed within the annual cycle. A majority of the tree trimming activities are
12 managed under a unit price structure. Costs are associated on an individual tree unit basis using
13 a contractual, fixed price for trimming and removal. Work that deviates from the standard unit
14 structure may be performed on an hourly, Time & Equipment (“T&E”) basis (e.g., additional
15 work scope, crew type, work duration, etc.). T&E rates are typically higher, and can be
16 significantly higher, than work completed on “unit price.” Relative unit cost increases in 2020
17 and 2021 are described in detail below under Labor and Equipment.

18 During the pre-inspection activity, trees in proximity to power lines are evaluated,
19 updated, and or added within the tree inventory database. Each inventory tree is inspected at least
20 once per annual cycle. Trees that will not remain compliant or that have the potential to impact
21 power lines within the annual pruning cycle are assigned to the tree contractor to work.

22 Generally, SDG&E strives to prune trees throughout its service territory to a clearance of

² D.19-09-051 at 267.

1 at least ten (10) feet to remain compliant with all regulatory requirements. More specifically,
2 SDG&E instructs its tree contractors to achieve a time-of-trim clearance that will maintain
3 compliance for at least one annual cycle. Time-of-trim clearances are determined by factors
4 such as species, tree growth, wind sway, hazard abatement, proper pruning practices, and tree
5 health. Fast growing species require greater clearances to ensure safety and to remain compliant
6 with minimum requirements for the annual cycle. SDG&E endeavors to establish even greater
7 time-of-trim clearances within the High Fire Threat District (“HFTD”).

8 A primary responsibility of Vegetation Management operations is the mitigation of
9 hazard trees that pose a risk to the overhead electrical infrastructure. SDG&E’s detailed pre-
10 inspection activities within the HFTD and non-HFTD are critical to ensuring safe, compliant and
11 reliable service, and to reduce the risk of wildfire. SDG&E uses the term “reliability”
12 synonymously with “hazard.” Reliability trees are typically larger, more mature trees that pose a
13 potential threat to the power lines based on a condition of dead, dying, diseased, or structural
14 defect. The work associated with reliability trimming is generally greater in scope compared to
15 routine trimming. Similar to routine trimming, reliability trimming has a fixed, unit rate. Unit
16 cost rates for reliability work are greater than routine trim rates. Routine, fixed unit rate work
17 (trim or removal) may be converted to hourly T&E if the job requires more work based on an
18 assessment of safety requirements, site-specific conditions, specialized equipment, and other
19 applicable considerations. Tree operations within the HFTD may also at times require the
20 presence of on-site contracted fire resources during elevated fire conditions to perform fire
21 observation and suppression.

22 Within the HFTD, SDG&E performs two hazard tree inspections annually. These
23 activities are performed by ISA Certified Arborists and includes a “Level-2” hazard tree

1 inspection of every tree within the “utility strike zone” of the conductors. A Level-2 inspection is
2 a detailed, 360-degree assessment of the tree from ground to upper-canopy to identify any
3 hazardous conditions that could pose a threat to the power lines. The “utility strike zone” is
4 defined as the area adjacent to power lines both inside and outside of the right-of-way where
5 trees are tall enough to potentially strike the overhead facilities either by branch or trunk failure.

6 2. Quality Assurance

7 SDG&E has a quality assurance/quality control (auditing) program to verify work is
8 completed in accordance with applicable laws and regulations and meets contractual
9 requirements. Auditing is performed on a random sample population of all completed work
10 activities to ensure conformance with contract specifications, quality, and compliance. The post-
11 prune audit activity also includes a patrol of spans of overhead power lines to ensure compliance
12 until the next scheduled pre-inspection activity. As part of its wildfire mitigation efforts, SDG&E
13 also audits all completed tree work resulting from off-cycle HFTD inspections.

14 SDG&E’s corporate parent, Sempra Energy, also performs routine audits to verify that
15 Vegetation Management work activities and accounting processes are in compliance with
16 regulatory and internal company requirements and identify possible areas for process
17 improvements where applicable.

18 3. Sustainability

19 For safety and reliability, and as part of its sustainability goals, SDG&E supports and
20 follows the “Right Tree-Right Place” concept to replace incompatible trees with those that are
21 appropriate to grow near power lines. This program supports tree health, enhances the
22 environment, prevents outages and ignitions, and minimizes impact to customers as a result of
23 frequent pruning. SDG&E’s sustainability initiative also includes the effort to divert green waste

1 associated with vegetation activities from landfills to recycling in the effort to reduce the carbon
2 footprint. In 2020 and 2021 SDG&E diverted approximately 32% and 48% respectively of total
3 green waste associated with tree operations to 100% recycling. In late 2020, SDG&E initiated a
4 new service agreement with a second recycling vendor to perform this function.

5 **B. SDG&E’s Vegetation Management Program Has Evolved to Respond to the**
6 **Increasing Threat of Catastrophic Wildfires**

7 California continues to experience historic and extraordinary climactic conditions.
8 Ongoing drought, extreme wind events, and tree mortality combine to make the state susceptible
9 to extreme wildfire conditions. Many of the most destructive, historic wildfires in the state have
10 occurred within the last five-years. And some of the most significant utility-related wildfires in
11 the state have been a result of vegetation contacts with electrical infrastructure. These fires have
12 resulted not only in billions of dollars in damage, but also the tragic loss of lives and personal
13 property. Safety, including wildfire safety, is one of SDG&E’s top priorities, and SDG&E’s
14 vegetation management program endeavors to promote both the safe and reliable operation of its
15 electrical system.

16 The last large wildfire attributed to SDG&E infrastructure contact with vegetation was
17 the Rice Canyon Fire in 2007. After that tragic incident, SDG&E began instituting wildfire
18 mitigation efforts in its service territory to reduce the likelihood of ignitions resulting in
19 catastrophic wildfire. And over the subsequent decade, SDG&E has developed a comprehensive,
20 industry-leading approach to wildfire mitigation. SDG&E’s wildfire mitigation measures—
21 including its approach to vegetation management—have played a significant role in reducing the
22 risk of ignition caused by electrical facilities.

23 SDG&E’s Vegetation Management WMP initiatives include several enhanced activities
24 aimed at reducing wildfire risk and promoting reliability. These include additional inspections of

1 all inventory trees in the HFTD; hazard tree assessments by Certified Arborists during post-trim
2 audits; increased audits—including a 100% audit of all tree trimming and removal work
3 associated with the off-cycle, secondary inspections in the HFTD; and community outreach to
4 promote awareness and a community-wide approach to vegetation management. Many of these
5 enhanced activities were implemented in 2019, when SDG&E was required to develop and
6 submit its first WMP.

7 SDG&E’s WMP also introduced SDG&E’s Enhanced Vegetation Management Program,
8 which focuses on applying expanded post trim clearances to higher risk species, in excess of 12
9 feet and up to 25 feet, where deemed necessary and feasible. The Enhanced Vegetation
10 Management Program is integrated into SDG&E’s overall inspection, trimming, and audit
11 activities. The Program facilitates targeted inspections of five primary “at risk” species—palm,
12 eucalyptus, sycamore, pine, and oak—selected because they exhibit criteria that make them more
13 vulnerable to failure or ignition, such as fast growth patterns, branch structures known for
14 propensity to failure, or a history of high outage frequency relative to SDG&E’s total inventory
15 tree population.³

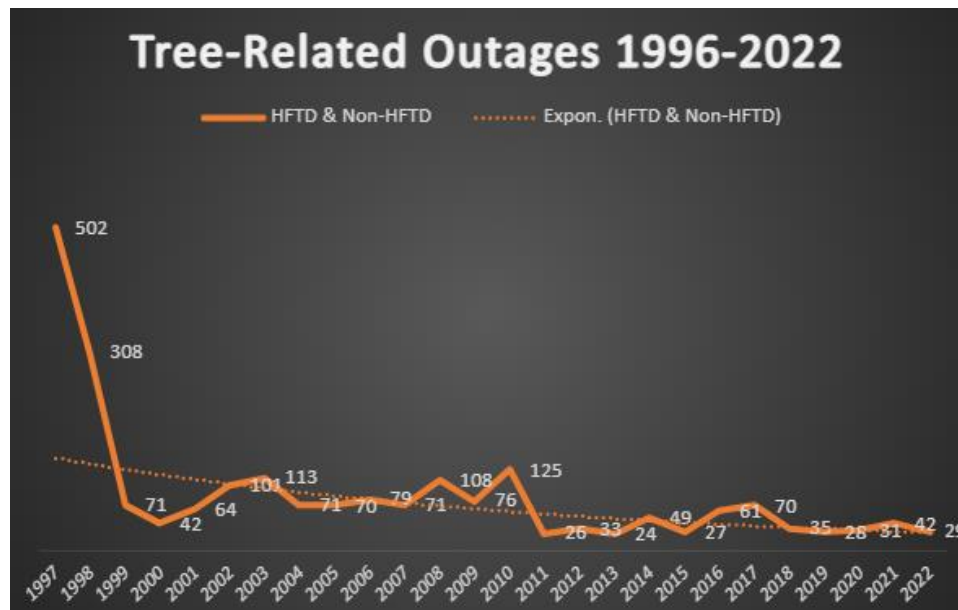
16 It is important to note that, while SDG&E targets certain high-risk species for enhanced
17 inspections, there is no blanket requirement that all high-risk species be trimmed to enhanced
18 clearances, nor is there a one-size-fits-all clearance requirement for the program. SDG&E
19 considers a tree to be trimmed to an enhanced clearance if it is trimmed in excess of the 12-foot
20 recommendation of GO 95. SDG&E tree trimming contractors make the final determination of
21 the appropriate post trim clearance to promote safety, maintain compliance for the annual cycle,

³ SDG&E also has separate programs to address the risks associated with the fast-growing century plant as well as bamboo across its service territory.

1 and to abate any structural hazards in the tree. The methodology and effectiveness of SDG&E's
2 Enhanced Vegetation Management Program are further discussed in Mr. Gahagan's testimony.

3 Not only have SDG&E's WMP vegetation management initiatives reduced the risk of
4 wildfire, these activities have greatly reduced the number of tree-related outages over the years.
5 In the early 1990's, prior to industry regulation, SDG&E encountered an average of 400-500 tree
6 caused outages annually. After establishing the overarching Vegetation Management Program,
7 SDG&E experienced a dramatic reduction in tree-related outages. SDG&E conducts a root-cause
8 investigation of all tree-related outages and maintains an investigation database to track and
9 record events and address any applicable lessons learned. The information aids in preventing
10 future occurrences and refining the Program. Table 1 provides the number of historical tree-
11 related outages from 1996-2022 (YTD). Further, the graph supports an additional reduction of
12 tree-related outages after SDG&E began implementing its WMP initiatives in 2019.

13 **TABLE 1**



14
15 Many of the vegetation management efforts implemented as part of SDG&E's WMP
16 were not anticipated in its TY-2019 GRC request or the decision approving SDG&E's revenue

1 requirement related to tree trimming activities. But SDG&E’s 2019 GRC Decision—approved
2 after the catastrophic 2017 and 2018 fire seasons—anticipated that SDG&E might identify
3 additional vegetation management initiatives to support wildfire mitigation.⁴ In part for this
4 reason, the Commission authorized two-way balancing to support SDG&E’s ability to meet its
5 regulatory vegetation management requirements and to “act more quickly in case further
6 activities to mitigate wildfire risk become necessary.”⁵

7 **III. SDG&E’S 2020 AND 2021 VEGETATION MANAGEMENT EXPENDITURES**

8 The 2019 GRC Decision established an authorized 2019 revenue requirement based on a
9 four-year average of historical vegetation management costs.⁶ The Commission also approved
10 SDG&E’s request for two way balancing of vegetation management costs because “SDG&E
11 may find it necessary to conduct enhanced and additional risk mitigation activities which are
12 difficult to predict at this time.”⁷ To promote accountability and allow SDG&E to return any
13 unspent costs to ratepayers, D.19-09-051 also required SDG&E to file a Tier-3 advice letter for
14 recovery of under-collections of tree-trimming costs up to thirty-five percent and to file an
15 application for under-collections in excess of 35% of the authorized revenue requirement.

16 For 2020, the authorized revenue requirement was approximately \$24.8 million. The
17 ending undercollected activity for 2020 for the TTBA was approximately \$43.5 million, which is
18 approximately 175% of the revenue requirement. For 2021, the authorized revenue requirement
19 was approximately \$25.4 million. The ending undercollected activity for 2021 for the TTBA was

⁴ D.19-09-051 at 266-267.

⁵ D.19-09-051 at 267.

⁶ Notably, the TY 2019 forecasts submitted to support the authorized revenue requirement excluded a year with what was then characterized as abnormally high costs. *See* D.19-09-051 at 266-267.

⁷ D.19-09-051 at 267.

1 approximately \$26.7 million, which is approximately 105% of the revenue requirement. SDG&E
2 seeks recovery of the cumulative undercollected \$70.2 million balance in the TTBA for 2020-
3 2021, as each year exceeded 35% of the 2019 GRC authorized revenue requirement. Activities
4 where SDG&E experienced material incremental cost increases over historical averages or
5 incurred new activity to address wildfire mitigation efforts are discussed in turn.

6 Overall, SDG&E's 2020 and 2021 TTBA expenditures have exceeded the GRC
7 authorized amounts as a result of significant industry labor cost increases that went into effect in
8 January 2020; enhanced vegetation management activities related to wildfire mitigation,
9 including the identification and removal of additional hazard trees through enhanced inspections
10 and the pursuit of clearances in excess of regulatory requirements; and increased inspection and
11 audits in the HFTD.

12 The tables below and in Appendix A provide additional detail regarding areas where
13 vegetation management costs have exceeded the four-year average that formed the basis of
14 SDG&E's TY 2019 GRC forecasts. For consistency with SDG&E's prior TTBA application and
15 to comply with the Commission requirements in Ordering Paragraph 2 of D.22-03-009, SDG&E
16 also indicates areas where costs were in excess of 35% of the four-year average for the activity.
17 SDG&E notes that its practice remains to record all tree trimming activities as "tree trimming,"
18 which reflects the Vegetation Management Program's holistic and comprehensive approach to
19 tree trimming operations.

1

TABLE 2 – 2020 TTBA COSTS

**SAN DIEGO GAS & ELECTRIC
TREE TRIMMING BALANCING ACCOUNT (TTBA) - O&M BY CATEGORY
2020 VS 4 YEAR AVERAGE**

	(A)	(B)	(C) = (B) - (A)	(D) = (C) / (A)	
	Average of 2015 - 2018	2020	Difference between 2020 and avg of 2015 - 2018	Percentage Difference Between 2020 and Avg of 2015 - 2018	At or above 35%
Admin	102,633	61,840	(40,792)	-40%	N
Cash Discounts	(30,630)	(84,191)	(53,562)	175%	Y
Catering	3,928	203	(3,725)	-95%	N
Consulting	45,424	326,794	281,370	619%	Y
Employee Recognition	54	-	(54)	-100%	N
Employee Travel	10,222	-	(10,222)	-100%	N
Field Hardware and Software Support	166,676	210,056	43,381	26%	N
Labor	1,091,868	1,067,258	(24,610)	-2%	N
Meals & Entertainment	923	-	(923)	-100%	N
Office Supplies/Office Equipment	18,510	2,108	(16,402)	-89%	N
Tree Trimming	22,336,541	66,441,496	44,104,954	197%	Y
Vacation & Sick Overheads	182,337	138,891	(43,445)	-24%	N
	23,928,484	68,164,455	44,235,971	185%	

2

3

TABLE 3 – 2021 TTBA COSTS

**SAN DIEGO GAS & ELECTRIC
TREE TRIMMING BALANCING ACCOUNT (TTBA) - O&M BY CATEGORY
2021 VS 2015-2018 (4 YEAR AVERAGE)**

	(A)	(B)	(C) = (B) - (A)	(D) = (C) / (A)	
	Average of 2015 - 2018	2021	Difference between 2021 and avg of 2015 - 2018	Percentage Difference Between 2021 and Avg of 2015 - 2018	At or above 35%
Admin	102,633	180,419	77,786	76%	Y
Cash Discounts	(30,630)	(60,170)	(29,540)	96%	Y
Catering	3,928		(3,928)	-100%	N
Consulting	45,424	185,774	140,350	309%	Y
Employee Recognition	54	640	586	1088%	Y
Employee Travel	10,222	495	(9,727)	-95%	N
Field Hardware and Software Support	166,676	265,327	98,651	59%	Y
Labor	1,091,868	1,492,080	400,212	37%	Y
Meals & Entertainment	923	373	(550)	-60%	N
Office Supplies/Office Equipment	18,510	21,352	2,842	15%	N
Tree Trimming	22,336,541	49,884,924	27,548,383	123%	Y
Vacation & Sick Overheads	182,337	196,210	13,873	8%	N
	23,928,484	52,167,424	28,238,940	118%	

4

5

Appendix A provides additional detail on SDG&E's costs associated with various categories of

1 tree-trimming activities compared with 2019 expenditures.⁸ As seen from the charts, SDG&E’s field
 2 memo and T&E billed work increased substantially over 2019 (which was in turn an increase over
 3 SDG&E’s GRC forecasts as well). Additionally, the impact of SB 247 mandated labor rate increases can
 4 be seen in all areas, and most specifically from the activities where the activity count decreased from
 5 2019 but the corresponding cost increased. Specific cost drivers for the undercollection are further
 6 addressed below.

7 **A. Enhanced Vegetation Management Inspections**

8 As previously described, SDG&E’s Enhanced Vegetation Management Program includes
 9 additional inspection activities within the HFTD to identify and target trees that pose an ignition
 10 risk to infrastructure. Consistent with its 2020 WMP and 2021 WMP Update, SDG&E
 11 continued these off-cycle and additional patrols in the HFTD. SDG&E also continued its practice
 12 of targeted inspections of high-risk species that can grow exceptionally fast, such as Century
 13 plant and bamboo, across the service territory. The increased inspection hours are reflected in
 14 the chart below.

Tree Trimming Activity (units)	4-year Average (2015-2018)	2019	2020	2021
Pre-inspection (hours/services)	82,914	96,124	97,883	99,424

15
 16 SDG&E utilizes ISA Certified Arborists to perform inspections within the HFTD. These
 17 individuals receive annual hazard tree inspection training to maintain and enhance their
 18 education and skills. Hours associated with inspections are generally captured in the “Pre-

⁸ The figures in Tables 4 and 5 reflect direct invoice data from SDG&E’s supply management system and may not directly correspond with SDG&E’s SAP Accounting system, which aggregates all tree trimming activity costs at the “tree trimming” level. SDG&E continues to refine its technical capabilities to better track costs at a more granular level to identify expenditures associated with specific tree-trimming activities, however those capabilities are not yet in place.

1 Inspection” costs described in Appendix A.

2 **B. Hazard Tree Inspections, Trimming & Removals**

3 Overall, hazard tree evaluation, trimming, and removals is a critical component of
4 SDG&E’s Vegetation Management Program in the effort to reduce tree-related outages and
5 prevent fire ignitions. SDG&E’s historical outage data shows that the majority of tree-caused
6 outages and ignitions involving tree/line contact were the result of branch shedding, tree/root
7 failure and detached palm fronds during adverse weather conditions. SDG&E actively pursues
8 the removal of trees non-compatible with power lines.

9 As in 2019, SDG&E experienced an increase in hazard tree abatement in 2020. This
10 increase can generally be attributed to the increased inspections described above, which aid in
11 better identifying trees that pose a risk to electrical infrastructure. While SDG&E has an
12 established contractual rate for hazard tree remediation, T&E rates may be applied if
13 circumstances warrant, as previously addressed. Thus, costs associated with hazard tree
14 identification, remediation, and removal are reflected in both the “hazard tree” and “T&E”
15 columns in the tables in Appendix A.

Tree Trimming Activity (units)	4-year Average (2015-2018)	2019	2020	2021
Hazard Tree (trees)	4,737	8,406	8,620	5,259

16
17 **C. Enhanced Vegetation Management Pruning and Removal**

18 SDG&E continued to pursue enhanced clearances (12 feet and greater) in 2020 and 2021,
19 consistent with its approved WMPs. Because the Enhanced Vegetation Management Program
20 was implemented in 2019, it was not a component of SDG&E’s original GRC forecasts and all
21 costs associated with the program are incremental. That said, SDG&E records costs associated

1 with Enhanced Vegetation Management consistent with its comprehensive tree trimming efforts
2 across the service territory. Thus, tree trimming that results in enhanced clearances may be
3 performed under unit price for routine trim, unit price for reliability trim, or T&E rates, and costs
4 associated with the program are reflected as such in the tables above. As previously stated,
5 SDG&E currently does not have the ability to isolate cost for trimming and removals performed
6 under T&E at the specific tree level or based solely on clearance. SDG&E is currently in the
7 process of modifying its data capture capability to record T&E hours at the tree level for both
8 trims and removals.

9 The table below shows the total number of trees trimmed to a clearance of 12 feet and
10 greater as a part of SDG&E’s Enhanced Vegetation Management Program in 2019-2021.

Tree Trimming Activity (units)	2019	2020	2021
Enhanced Vegetation Management (trees trimmed to enhanced clearance)	8,310	17,075	12,578

11
12 Per its Wildfire Mitigation Plan, SDG&E defines “enhanced” clearances as greater than
13 12 feet, which is the recommended post-trim clearances for high-risk areas referenced within GO
14 95, Rule 35, Appendix E. SDG&E maintains clearances greater than 12 feet on fast-growing
15 species, and to mitigate hazardous tree conditions. SDG&E also performs enhanced clearances
16 on targeted species with a known propensity for structural failure, and for palms whose detached
17 fronds can travel great distances.

18 Greater post-trim clearances can result in a reduction in tree-related outages, damage
19 claims, and ignitions. SDG&E records the post-trim clearance each time a tree is trimmed.
20 SDG&E analysis indicates a reduction in outage frequency as trim clearances have increased
21 over time. SDG&E is currently collaborating with a third-party vendor and with the San Diego
22 Supercomputing Center, a research unit of University of California, San Diego, to further

1 analyze this data and develop predictive modeling capabilities. The efficacy and estimated
2 ignition reduction resulting from SDG&E's Enhanced Vegetation Management Program is
3 further discussed in Mr. Gahagan's testimony.

4 **D. Enhanced Audit Activities**

5 In late 2019 SDG&E revised and increased the scope of its post-trim audit activity to
6 include a Level-2 hazard tree patrol within the HFTD. Level-2 inspections are defined above. In
7 2020 SDG&E also increased its auditing scope to include all completed tree pruning and
8 completed hazard and removal work resulting from the off-cycle HFTD patrols. The increase in
9 auditing hours over SDG&E's forecasted four-year average is summarized as follows:

Tree Trimming Activity (units)	4-year Average (2015-2018)	2019	2020	2021
Auditing (hours)	31,796	36,458	44,129	36,774

10
11 The estimated additional cost of the off-cycle Level 2 inspections in 2020 was approximately
12 \$310,000. These enhanced audit/hazard inspections resulted in the trimming and/or removal of
13 an additional 1,767 trees, of which 475 were identified as hazard trees.

14 In 2021 the off-cycle HFTD inspections were performed by the audit contractor and the
15 pre-inspection contractor. The estimated additional cost of the off-cycle Level 2 inspections
16 performed by the audit and pre-inspection contractor in 2021 was approximately \$267,000.
17 Additionally, in 2021, SDG&E created four new internal SDG&E pre-inspector (Patroller)
18 positions. The SDG&E Patrollers are utilized to help augment the off-cycle HFTD inspections
19 and assist in customer refusal resolution.

20 **E. Time & Equipment Activities**

21 As discussed above, trees that fall outside of specified contractual fixed-unit cost rates are
22 billed at T&E hourly rates. Work may be converted to T&E if the scope is beyond unit cost

1 specifications as contractually defined. T&E work rates are dependent upon crew make-up and
 2 equipment and can be applied to any of the vegetation management activities that exceed the
 3 scope of the fixed unit category. Thus, general tree trimming, hazard tree work, enhanced
 4 vegetation management, and removals may be included in SDG&E's T&E costs. T&E work may
 5 also include additional cost drivers that support vegetation management operations and promote
 6 safety, such as traffic control, overtime, fire resources, and mutual aid.

7 Due to the increased inspections, additional hazard tree activities, and to promote safety,
 8 reliability and wildfire mitigation goals, SDG&E continued to experience significant increases in
 9 T&E billed work over the four-year GRC forecasts. These practices often necessitate the use of
 10 additional contractor crews due to increased workloads and they frequently require specialized
 11 equipment and other safety measures.

Tree Trimming Activity (units)	4-year Average (2015-2018)	2019	2020	2021
T&E (hours)	40,798	67,812	144,386	94,882

12 **F. Labor and Equipment**

13 While, consistent with 2019, SDG&E experienced an increased work volume largely
 14 associated with its wildfire mitigation activities and a statewide emphasis on additional tree
 15 trimming, Additionally, a separate major cost driver for all tree trimming activities in 2020 and
 16 2021 was the passage of SB 247, which went into effect on January 1, 2020. This legislation was
 17 spurred within the industry to achieve greater parity in wages and benefits with other electrical
 18 workers and resulted in a significant increase in annual contractual rates. While, as with 2019,
 19 SDG&E's tree trimming costs would have increased due to the wildfire mitigation and enhanced
 20 reliability work described above, SB 247 had a simultaneous effect of increasing the costs to
 21 perform the increased workload.

1 SB 247 also requires that all line clearance tree trimmers performing work associated
 2 with a utility’s wildfire mitigation plan to be Qualified Line Clearance Arborists, or Trainees
 3 under the direct supervision and instruction of a Qualified Line Clearance Arborist. Another
 4 substantial change resulting from SB 247 was the modification of overtime rates and the
 5 requirement for daily per diem. All overtime was reclassified from time-and-a-half to double-
 6 time, and all workers are now required to receive a daily per diem stipend. As seen in the chart
 7 below, SB 247 and increased demand has resulted in a substantial increase in labor costs related
 8 to tree trimming and removal.⁹

9 **Pre-SB 247 IBEW hourly labor rates**

IBEW Local 465 Union Labor Agreement		
ARTICLE VIII - Wages		
Job Classification	9/2/2018	9/1/2019
Laborer - 1st Year	\$15.82	\$16.30
Laborer - 2nd Year	\$17.09	\$17.60
Apprentice Climber 0-6 months	\$17.21	\$17.73
Apprentice Climber 7-18 months	\$19.43	\$20.01
Climber - 1st Year	\$21.50	\$22.14
Climber - 2nd Year	\$24.93	\$25.67
Climber - Thereafter	\$27.89	\$28.72
Foreman - 1st Year	\$29.49	\$30.37
Foreman - 2nd Year	\$29.99	\$30.89
Foreman - Thereafter	\$30.96	\$31.89

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 11
 9 ⁹ Additionally in the 2020 and 2021 Union Agreement, Article V, section 5:2, “A flat rate of fifty dollars (\$50.00) per day shall be paid for each day worked. Ground persons and VC Tech I and II will be eligible for twenty-five dollars (\$25.00) per day. An employee must work four (4) hours, or until noon whichever is later, or more to be entitled to subsistence for the day.”

APPENDIX A
[REDACTED] and IBEW Local 465 – San Diego Gas and Electric

The wages to be paid employees of the Company covered by this Agreement shall be as follows:

JOB CLASSIFICATIONS	% Of JT	Effective 1/1/2020		Effective 5/31/2020		Effective 5/30/2021		Eff. 1/1/2022
		Wage Rate	NEAP	Wage Rate	NEAP	Wage Rate	NEAP	NEAP
Foreperson with CDL	112%	\$39.66	\$7.84	\$40.37	\$8.82	\$41.09	\$9.79	\$10.56
Foreperson without CDL	107%	\$37.89	\$7.84	\$38.57	\$8.82	\$39.26	\$9.79	\$10.56
Journeyman Tree Trimmer	100%	\$35.41	\$7.84	\$36.05	\$8.82	\$36.69	\$9.79	\$10.56
Trimmer Trainees								
After 12 Months	90%	\$31.87	\$6.91	\$32.44	\$7.75	\$33.02	\$8.66	\$9.43
6 to 12 Months	80%	\$28.33	\$5.98	\$28.84	\$6.76	\$29.35	\$7.53	\$8.30
Start	70%	\$24.79	\$5.05	\$25.23	\$5.73	\$25.68	\$6.40	\$7.17
Ground person after 6 Months	65%	\$23.02	\$.87	\$23.43	\$1.10	\$23.85	\$1.32	\$2.09
Ground person Start	60%	\$21.25	\$.50	\$21.63	\$.50	\$22.01	\$.50	\$.50
Specialized Tree Equipment Operator (Journeyman Tree Trimmer)	107%	\$37.89	\$7.84	\$38.57	\$8.82	\$39.26	\$9.79	\$10.56
Specialized Tree Equipment Operator (Not a Journeyman Tree Trimmer)	90%	\$31.87	\$6.91	\$32.44	\$7.79	\$33.02	\$8.66	\$9.43
Brush Crew Foreperson	70%	\$24.79	\$5.05	\$25.23	\$5.73	\$25.68	\$6.40	\$7.17
VC Tech 1	60%	\$21.25	\$.50	\$21.63	\$.50	\$23.85	\$.50	\$.50
VC Tech 2	65%	\$23.02	\$.87	\$23.43	\$1.10	\$23.85	\$1.32	\$2.09
VC Tech 3	70%	\$24.79	\$3.19	\$25.23	\$3.67	\$25.68	\$4.14	\$4.91
VC Tech 4 (Grandfathered)	75%	\$26.56	\$3.19	\$27.04	\$3.67	\$27.52	\$4.19	\$4.91

1
2
3 On average, SDG&E’s tree trim and removal fixed rates increased by approximately 55%
4 and hourly labor rates increased by approximately 70% due to SB 247. The table below shows
5 the total overtime, double-time, and per diem in years 2019-2021. The overtime recorded in
6 2020 was associated with non-unionized costs. All per diem costs in 2021 are integrated within
7 the regular and hourly rate structure and, therefore, not reflected in this table as a separate,
8 trackable cost.

Year	Overtime	Double-time	Per Diem
2019	\$187,401	\$16,964	\$53,395
2020	\$13,640	\$4,600,372	\$1,490,750
2021	\$0.00	\$1,752,169	\$0.00

9 The increases in labor rates, double-time and per diem were major cost drivers in the
10 TTBA spend in years 2020 and 2021 compared to prior years. As these rate increases were
11 unforeseen in 2019, they were not incorporated into SDG&E’s previous GRC forecasts. Given
12 that these increases were the result of statutory mandates, SDG&E was obligated to comply with
13 the requirements and thus the labor rate increases are reasonable.

1 **IV. CONCLUSION**

2 In compliance with D.19-09-051, which requires SDG&E to request cost recovery
3 through an Application for TTBA under collections above 35% of the revenue requirement,
4 SDG&E respectfully requests that the Commission authorize recovery of the 2020 and 2021
5 undercollected TTBA balances.

6 This concludes my prepared direct testimony

1 **V. WITNESS QUALIFICATIONS**

2 My name is Don Akau. I am the Vegetation Management Compliance Manager for San
3 Diego Gas and Electric Company. I am responsible for developing, implementing and managing
4 SDG&E's Vegetation Management Program, overseeing pre-inspection, tree trimming, pole
5 brushing, wood pole inspection and quality assurance (audits), to ensure compliance with the
6 various responsible regulatory agencies, SDG&E internal requirements, and applicable law. I
7 have held this position since May 2007.

8 I have been a Certified Arborist and Utility Specialist since 1995. I joined SDG&E's
9 Vegetation Management department in 1999 as a Forester, and then became Vegetation Program
10 Manager since 2007. Prior to joining SDG&E, I was employed by Davey Tree for
11 approximately 10 years, and my last position there was as general foreman.

12 I have previously prepared testimony submitted to the California Public Utilities
13 Commission.

Appendix A

TABLE 4 – 2020 Tree Trimming Activities

Activities - units of measure	4-year Average (2015-2018)	2019 Cost	2019 Counts	2020 Cost	2020 Counts	Cost Difference	Count Difference
Routine trimming - (units)	\$8,633,561	\$10,432,746	147,957	\$13,019,932	126,686	25%	-14%
Field Memo - (units)	\$614,508	\$653,964	3,768	\$1,024,378	6,380	57%	69%
T&E - (hourly and direct cost)	\$4,952,298	\$11,088,576	67,812	\$37,890,857	144,386	242%	113%
Hazard Tree - (unit)	\$1,899,831	\$4,450,118	8,406	\$4,023,695	5,569	-10%	-34%
Removals - (unit)	\$1,385,224	\$2,028,558	6,331	\$3,130,225	7,214	54%	14%
Pre-inspection -(hourly)	\$3,497,806	\$4,747,525	96,124	\$5,372,096	97,883	13%	2%
Auditing - (hourly)	\$1,393,472	\$1,811,281	36,458	\$2,950,807	44,129	63%	21%

TABLE 5 – 2021 Tree Trimming Activities

Activities - units of measure	4-year Average (2015-2018)	2019 Cost	2019 Counts	2021 Cost	2021 Counts	Cost Difference	Count Difference
Routine trimming -(units)	\$8,633,561	\$10,432,746	147,957	\$15,902,313	146,148	52.43%	-1.22%
Field Memo - (units)	\$614,508	\$653,964	3,768	\$1,233,297	7,404	88.59%	96.50%
T&E - (hourly and direct cost)	\$4,952,298	\$11,088,576	67,812	\$23,720,345	94,882	113.92%	39.92%
Hazard Tree - (unit)	\$1,899,831	\$4,450,118	8,406	\$2,795,221	3,632	-37.19%	-56.79%
Removals - (unit)	\$1,385,224	\$2,028,558	6,331	\$3,261,444	5,987	60.78%	-5.43%
Pre-inspection -(hourly)	\$3,497,806	\$4,747,525	96,124	\$5,533,762	99,424	16.56%	3.43%
Auditing - (hourly)	\$1,393,472	\$1,811,281	36,458	\$2,522,023	36,774	39.24%	0.87%