

Company: San Diego Gas & Electric Company (U 902 M)  
Proceeding: 2024 General Rate Case  
Application: A.22-05-015/-016 (cons.)  
Exhibit: SDG&E-236-E

**REBUTTAL TESTIMONY  
OF DANE A. WATSON  
(DEPRECIATION)**

ERRATA

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



June 2023

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## APPENDIX A – GLOSSARY OF TERMS

**ERRATA REBUTTAL TESTIMONY OF  
DANE A. WATSON  
(DEPRECIATION)**

**I. SUMMARY OF DIFFERENCES**

**Table DAW-1**

**Summary of Differences - Electric Depreciation<sup>1</sup>**

<b>ELECTIC DEPRECIATION EXPENSE - Constant 2021 (\$000)</b>			
	<b>Base Year 2021</b>	<b>Test Year 2024</b>	<b>Difference</b>
SDG&E	474,801 <sup>2</sup>	604,568 <sup>3</sup>	129,767
CAL ADVOCATES	474,801 <sup>4</sup>	591,192 <sup>5</sup>	116,391
TURN <sup>6</sup>	458,935	Not provided	
EDF <sup>7</sup>	NA	NA	NA

<sup>1</sup> This table includes an allocation of common expense; it also reflects the most recently submitted RO model from the January 17, 2023 Updated Results of Operations Filing which included the impact of Wildfire Mitigation supplemental testimony that SDG&E filed leave to submit on October 28, 2022 and was approved by a January 24, 2023 ALJ Ruling.

<sup>2</sup> RO Model, rbSDGETotals file, EExpExhibit tab.

<sup>3</sup> RO model rbSDGETotals file, EExpExhibit tab.

<sup>4</sup> RO model CalPA submitted rbSDGETotals file, EExpExhibit tab.

<sup>5</sup> RO model CalPA submitted rbSDGETotals file, EExpExhibit tab.

<sup>6</sup> TURN Workpapers –Garret Workpapers; used Common allocation factors found in the RO model (rbSDGEDataInput, Common&ElectricAllocation% tab) to apply TURN’s Common proposal to Electric and Gas categories. TURN’s proposals are not comparable to SDG&E’s and Cal Advocates, since SDG&E and Cal Advocates used the RO model for its calculations, while TURN used the Appendix from Exhibit SDG&E-36R, which does not exclude balanced projects and out-of- scope projects, etc. TURN also included changes to electric and common in their proposal.

<sup>7</sup> The Environmental Defense Fund did not provide depreciation rates or calculation depreciation expense.

1 **Table DAW-2**

2 **Summary of Differences - Gas Depreciation<sup>8</sup>**

<b>GAS DEPRECIATION EXPENSE - Constant 2021 (\$000)</b>			
	<b>Base Year 2021</b>	<b>Test Year 2024</b>	<b>Difference</b>
SDG&E	107,821 <sup>9</sup>	154,083 <sup>10</sup>	46,262
CAL ADVOCATES	107,821 <sup>11</sup>	140,413 <sup>12</sup>	32,592
TURN <sup>13</sup>	91,269	Not provided	
EDF <sup>14</sup>	NA	NA	NA

3 **II. INTRODUCTION**

4 This rebuttal testimony regarding San Diego Gas & Electric Company’s (SDG&E or  
5 Company) request for Depreciation addresses the following testimony:

- 6 • The Public Advocates Office of the California Public Utilities  
7 Commission (Cal Advocates) as submitted by Witness Bernard Ayanruoh  
8 (Ex. CA-17 (Ayanruoh)), dated March 2023.
- 9 • The Utility Reform Network (TURN), as submitted by David J. Garrett  
10 (Ex. TURN-12 (Garrett)), dated March 2023.
- 11 • Environmental Defense Fund (EDF), as submitted by Witness Michael  
12 Colvin, Richard McCann, Ph.D., Joon Hun Seong (Ex. EDF-01  
13 (McCann/Seong)), dated March 2023.

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<sup>8</sup> This table includes an allocation of common expense; it also reflects the most recently submitted RO model from the January 17, 2023 Updated Results of Operations Filing which included the impact of Wildfire Mitigation supplemental testimony that SDG&E filed leave to submit on October 28, 2022 and was approved by a January 24, 2023 ALJ Ruling.

<sup>9</sup> RO model rbSDGETotals file, GExpExhibit tab.

<sup>10</sup> RO model rbSDGETotals file, GExpExhibit tab.

<sup>11</sup> RO model CalPA submitted rbSDGETotals file, GExpExhibit tab.

<sup>12</sup> RO model CalPA submitted rbSDGETotals file, GExpExhibit tab.

<sup>13</sup> TURN Workpapers –Garret Workpapers; used Common allocation factors found in the RO model (rbSDGEDataInput, Common&ElectricAllocation% tab) to apply TURN’s Common proposal to Electric and Gas categories. TURN’s proposals are not comparable to SDG&E’s and Cal Advocates, since SDG&E and Cal Advocates used the RO model for its calculations, while TURN used the Appendix from Exhibit SDG&E-36R, which does not exclude balanced projects and out-of- scope projects, etc.

<sup>14</sup> The Environmental Defense Fund did not provide depreciation rates or calculation depreciation expense.

1 As a reminder, I undertook a depreciation study for the proper service lives and net  
2 salvage levels for all of SDG&E's assets, and sponsor SDG&E's gas plant depreciation  
3 proposals. Bruce Folkmann (Exhibit SDG&E-01) sponsors SDG&E's common and electric plant  
4 proposals. Depreciation and amortization expense resembles a thermostat in a building. It resets  
5 capital recovery as facts and circumstances change.

6 California utilities can only reset depreciation rates every four years when they file their  
7 General Rate Case (GRC). In its 2019 GRC, SDG&E was ordered to retain the depreciation  
8 rates approved in its 2016 GRC. The current depreciation rates have been in place for eight  
9 years and are overdue for a reset. SDG&E's depreciation rate freeze has exacerbated the gap  
10 between the Company's actual life and net salvage experience and the amount authorized by the  
11 California Public Utilities Commission (Commission or CPUC). Because of this, the Company  
12 is behind in the recovery of the removal cost for its investment in property, plant, and equipment.

13 Many factors have changed since SDG&E's depreciation rates were last adjusted. New  
14 programs have been implemented, new regulations have been put in place that have impacted  
15 removal cost and required removal activities, and labor costs have changed. SDG&E has been  
16 focused on a series of Integrity Management Programs (IMP) in recent years that impact various  
17 functional groups: Facilities, Transmission, and Distribution. These IMP programs are ongoing  
18 and will impact the life of various asset groups now and going forward, as briefly described  
19 below.

20 **Transmission Integrity Management Program (TIMP):** The transmission function  
21 assets in accounts 365 through 371 have been impacted by TIMP, which began around 2004.  
22 TIMP is driven by Pipeline and Hazardous Materials Safety Administration (PHMSA)  
23 regulations. Although some may be on a 5-year cycle, there is generally a 7-year cycle for  
24 inspection, evaluation, and the like for most assets. There was a comprehensive retrofitting of  
25 the system to be able to pig lines and a larger number of replacements in the Program's early  
26 years. The assets will either get reconditioned (e.g., repaired and recoated) or replaced, with  
27 replacements varying from a few feet to miles.

28 **Distribution Integrity Management Program (DIMP):** In natural gas operations,  
29 SDG&E is focused on its Distribution Integrity Management Program (DIMP), which began  
30 around 2011-2012. There is an active pipeline replacement program for medium pressure (<60  
31 psig), which is replacing around 120 miles (30% steel and 70% plastic). The DIMP is targeting

1 plastic pipe prior to 1986 and steel prior to 1971. Including both mains and services, the  
2 Company has roughly 42,000 miles of “modern” plastic and 24,000 miles of vintage plastic.

3 Additionally, the cost of removing natural gas assets from service has increased over  
4 time. Factors such as gas main abandonment procedures increase removal cost. While gas  
5 mains for distribution are usually abandoned in place, the following removal costs are incurred  
6 per 49 Code of Federal Regulations Section 192.727 (entitled “Abandonment or deactivation of  
7 facilities”).<sup>15</sup>

8 The cost of deactivation, abandon in place, or removal of gas assets has increased over  
9 time due to several general factors, including:

- 10 • **Time Value of Money:** Many gas main assets have a life cycle of 60  
11 years or more. Some of the assets being removed were installed nearly 60  
12 years ago when materials, labor, and cost of goods were lower cost.
- 13 • **Urban Areas:** The majority of the construction and reconstruction  
14 projects are in urban areas. Many cities require permits. These permits  
15 may impose fees and certain limitations, such as the closure of roads  
16 during high traffic times. These permits may also require construction to  
17 occur in the evening or on weekends, which requires overtime of crews  
18 and additional equipment. Some municipalities are increasingly requiring  
19 companies to repave more of the road than just the paving disturbed by  
20 excavation activity.
- 21 • **Contract Labor:** In the last decade, investment in utility gas main  
22 renewal projects has increased substantially across the country. Because

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<sup>15</sup> 49 Code Federal Regulations Section 192.727 provides that: (a) Each operator shall conduct abandonment or deactivation of pipelines in accordance with the requirements of this section.

(b) Each pipeline abandoned in place must be disconnected from all sources and supplies of gas; purged of gas; in the case of offshore pipelines, filled with water or inert materials; and sealed at the ends. However, the pipeline need not be purged when the volume of gas is so small that there is no potential hazard.

(c) Except for service lines, each inactive pipeline that is not being maintained under this part must be disconnected from all sources and supplies of gas; purged of gas; in the case of offshore pipelines, filled with water or inert materials; and sealed at the ends. However, the pipeline need not be purged when the volume of gas is so small that there is no potential hazard.

1 the same skills and resources are needed in the larger oil and gas industry,  
2 this has created a high demand for the limited number of qualified  
3 personnel available to construct the work. Therefore, the cost of external  
4 contracts has increased due to supply and demand factors.

- 5 • **Safety Requirements:** The industry, and specifically SDG&E, strives to  
6 provide a very high level of safe working practices. The equipment and  
7 provisions required today have increased substantially from 50 years ago.  
8 SDG&E uses work safety practices that align with modern industry  
9 practice. These policies have increased the cost of doing business but are  
10 an important part of the strong safety principles at SDG&E.

11 In my depreciation study, I have incorporated factors such as those described above, my  
12 credentials as a professional engineer and a certified depreciation professional, and 38 years of  
13 experience. Depreciation requires an ability to examine the facts behind the numbers and apply  
14 professional judgment. It is more than a mathematical exercise to run life and net salvage  
15 analyses.

16 As described in the direct and rebuttal testimony of Mr. Folkmann,<sup>16</sup> SDG&E has  
17 proposed a one-time, non-precedential maintenance of its common and electric plant  
18 depreciation levels—despite the fact that SDG&E it may further exacerbate the gaps between  
19 actual service lives and net salvage experience. Cal Advocates adopts SDG&E’s common and  
20 electric plant depreciation proposal.<sup>17</sup> Otherwise, the intervening parties in this case have all  
21 unreasonably focused on a **reduction** of depreciation expense, regardless of if that reduction is  
22 supported by depreciation analyses or other evidence.

- 23 • Cal Advocates rejects the possibility of an increase in depreciation expense out-  
24 of-hand. Cal Advocates adopts SDG&E’s common and electric proposal, while  
25 making a gas proposal to adopt longer lives and freeze net salvage at levels  
26 approved in SDG&E’s 2016 GRC. Cal Advocates proposal is not based upon any  
27 depreciation analysis but instead upon Cal Advocates’ policy goal of lowering  
28 rates;
- 29 • TURN relies on mathematical fitting to lengthen lives of the Company’s largest  
30 gas accounts, often cherry-picks my electric and common plant study  
31 recommendations to use my proposals that would lengthen lives while not

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<sup>16</sup> Ex. SDG&E-01-R (Folkmann) at BAF-18; Ex. SDG&E-201 (Folkmann) at BAF-3.

<sup>17</sup> Ex. CA-17 (Ayanruoh) at 15.

1 adopting my recommendations where shorter lives would be appropriate, and  
2 misapplies the Commission's longstanding precedent on net salvage gradualism;<sup>18</sup>

- 3 • As addressed further in Mr. Folkmann's testimony (Exhibit SDG&E-201, Policy  
4 Overview), EDF proposes a policy change and shift to accelerate the depreciation  
5 of natural gas assets that is not compatible with current Commission precedent  
6 and better addressed in other proceedings.

7 My depreciation study is a balanced review of the Company's life and net salvage  
8 characteristics and is the only source in the record that accurately reflects the Company's current  
9 facts and circumstances. In the next parts of my testimony, I discuss the recommendations of  
10 each party and analyze the flaws in the intervenors' recommendations for both life and net  
11 salvage.

12 As an example of how far an account can become out of synch with its needed capital  
13 recovery if depreciation rates are not set properly and periodically updated, consider the  
14 circumstances for Account G376, Transmission Mains. This is SDGE's largest account.

<b>Current Life</b>	<b>Proposed life</b>	<b>Current Net Salvage %</b>	<b>Proposed Net Salvage %</b>
69 R3	69 R3	-55%	-80%

15 The Company has retained the same life parameter and net salvage parameter over two  
16 GRC cycles. The three-year, five year, and 10 year moving averages show negative 345,  
17 negative 324, and negative 242 percent, respectively. Based on judgment and Company  
18 experience, this study recommends moving to negative 80 percent net salvage, consistent with  
19 the CPUC's gradualism precedent.

20 To illustrate how far this account is from having funds to recover its cost of removal  
21 obligations, the plant balance as of December 31, 2021, is \$1.5 billion and accumulated  
22 depreciation is \$465 million. The Company has not recovered the retirement of plant or the  
23 ongoing cost of removal. One benchmark that depreciation analysts use to measure how close an  
24 account's accumulated depreciation is to where it should be is if the proposed life and net  
25 salvage parameters used is the theoretical depreciation reserve.

26 Using the Company's proposed life and net salvage proposals the theoretical reserve for  
27 this account is \$491 million. For this account, the reserve ratio (Accumulated depreciation  
28 reserve/ Plant balance) is 30.9%. The ratio using the theoretical reserve and proposed

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<sup>18</sup> Ex. Cal-12 (Garrett) at 10.



1 depreciation parameters is 32.6%. That differential is \$25.5 million that the reserve should  
2 contain to mirror the Company’s proposed depreciation parameters. This account shows that  
3 capital recovery can become out of alignment in a short period of time when depreciation rates  
4 are not set properly and periodically updated. This situation applies for most of SDG&E’s large  
5 asset classes—the depreciation parameters are out of alignment. On an account-by-account  
6 basis, the Company requests that the Commission reset the gas depreciation thermostat to  
7 incorporate that reality.

8 **A. Cal Advocates**

9 As noted, for common and electric accounts, Cal Advocates adopts SDG&E’s one-time,  
10 non-precedential proposal to leave current depreciation levels in place.<sup>19</sup> For gas, Cal Advocates  
11 recommends that:<sup>20</sup>

- 12 • Longer service life parameters be adopted;
- 13 • Any proposal to shorten a service life be denied and the current service  
14 life be retained;
- 15 • Any increase in negative net salvage parameters should be rejected; and  
16 that
- 17 • If the Commission increases any depreciation parameters, that the costs be  
18 prorated over various cycles.<sup>21</sup>

19 I disagree with Cal Advocates’ gas positions and recommendations. Cal Advocates fails  
20 to provide any actuarial analysis that shows how actuarial company data compares to their  
21 competing proposals. Instead, Cal Advocates position relies solely on its argument that “rates  
22 are currently high and increasing,”<sup>22</sup> and that the “country is again facing economic uncertainty,  
23 inflation and high energy costs.”<sup>23</sup> By ignoring all depreciation analysis, Cal Advocates does not  
24 follow the basic depreciation principle of allowing the recovering of the cost of the assets (and

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<sup>19</sup> Ex. CA-17 (Ayanruoh) at 15.

<sup>20</sup> *Id.* at 12-14.

<sup>21</sup> *Id.* at 1.

<sup>22</sup> *Id.* at 14.

<sup>23</sup> *Id.* at 29.

1 their removal cost) over the life of the assets. In fact, in some accounts where life has declined,  
2 Cal Advocates ignores that fact.

3 Worse, Cal Advocates does not simply maintain the current gas depreciation parameters  
4 that were approved in the 2016 GRC. Instead, Cal Advocates cherry picks, wanting to hold rates  
5 constant where I recommend an increase, but adopting my recommended reductions.

6 In so doing, Mr. Ayanruoh has abandoned the Commission's stated goal of gradualism.  
7 Specifically, in recent proceedings, the Commission has applied a principle of gradualism to  
8 depreciation rates in response to concerns about growing cost burdens associated with increasing  
9 cost trends for negative net salvage.<sup>24</sup> The Commission explained that:

10 [t]he principle of gradualism applies where there is a recognized  
11 need to revise estimated parameters, but where the change is  
12 allowed to occur incrementally over time rather than all at once.  
13 Applying gradualism thus limits the approved increase that would  
14 otherwise be warranted, all else being equal and mitigates the  
15 short-term impact of large changes in depreciation parameters.  
16 Also, it is advisable to be cautious in making large changes in  
17 estimates of service lives and net salvage for property that will be  
18 in service for many decades, as future experience may show the  
19 current estimates to be incorrect.<sup>25</sup>  
20

21 Yet instead of gradualism being applied, in its 2019 GRC, SDG&E was ordered to retain  
22 all depreciation rates and parameters from the 2016 GRC.<sup>26</sup> Because of this, the Company is  
23 behind in the recovery of the removal cost for its investment in property, plant, and equipment.  
24 The gradualism principle only exacerbates this issue.

25 Cal Advocates' proposed rates would take a one-sided approach to move life out—  
26 extending the life for numerous larger accounts—(which has the effect of decreasing  
27 depreciation expense) but freezing cost of removal at levels that have been in place for eight  
28 years. The lack of any movement applied to net salvage is creating a shortfall in capital recovery  
29 for some accounts. The reality is that the Company is incurring much more negative net salvage  
30 than currently authorized and, in some cases, the lives experienced by the Company are  
31 decreasing.

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<sup>24</sup> Decision (D.) 14-08-032 at 598.

<sup>25</sup> *Id.*

<sup>26</sup> D.19-09-051 at 623.

1           Moreover, in Cal Advocates' RO model accrual rate computations, there are multiple  
2 errors. Recommended life increases for accounts G381, G394.1, and G394.2 were discussed in  
3 testimony but the recommended average remaining lives were not incorporated in the model  
4 depreciation calculations.

5           **B.     TURN**

6           As Mr. Folkmann describes, TURN is seemingly confused regarding SDG&E's proposal  
7 to maintain current and electric depreciation rates.<sup>27</sup> TURN recommends:<sup>28</sup>

- 8           •     A longer life than my study proposes for Accounts E365, G367, G368,  
9                 G376, and G380.
- 10          •     An increase in negative net salvage that is lower than what my study  
11                 shows is warranted for accounts: G366, G367, G368, G375, G376, G380,  
12                 G387.12, E361, E362, E363, E365, E366, E367, E368, E369.1, E369.2,  
13                 E371, E371.1, E373.2, E397.6 and C398.10 based on two different flawed  
14                 methods of computed net salvage.<sup>29</sup>

15           There are multiple flaws in Mr. Garrett's recommendations. Although his approach at  
16 times is not clear, for electric and common plant accounts he seems to have cherry-picked my  
17 study—suggesting further depreciation reductions where I recommended longer common and  
18 electric plant service lives for SDG&E's assets compared to current levels, while accepting  
19 keeping lives current for common and electric plant accounts when my study recommended  
20 shortening those lives.<sup>30</sup> On the gas life analysis side, he ignored a basic principle of actuarial  
21 analysis by only using one placement and experience band (the full band), thereby failing to  
22 analyze any changes in life that would naturally occur over time.

23           He discarded relevant data in analyzing his single band by using a novel (non-industry  
24 standard or adopted) approach that he has created, without any peer review, that cut off and  
25 ignored Company-specific experience. He ignored both Company-specific operational  
26 information and reasonable engineering expectations for the life of assets. And relied heavily on

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<sup>27</sup> Ex. SDG&E-201 (Folkmann) at BAF-4.

<sup>28</sup> Ex. TURN-12 (Garrett) at 3.

<sup>29</sup> While TURN presented two versions of net salvage proposals, my testimony rebuts their traditional net salvage proposal, which is more commonly used in CPUC proceedings.

<sup>30</sup> See Ex. TURN-12 (Garrett) at 10; Ex. SDG&E-236 (Watson)

1 mathematical fitting seeking to minimize the sum of squares difference between the Company's  
2 data the proposed curve and life.

3 Visual matching is my preference in fitting historical data, because it allows the analyst  
4 to see the underlying data that is used to create the single numerical statistic and better describes  
5 how the "fit" is at various points in the life of the curve. I have used this methodology  
6 consistently in performing depreciation studies throughout my career. Over my decades of  
7 performing depreciation studies, I believe that visual fitting is a superior approach.

8 Mr. Garrett's recommendations are overly reliant on mathematical curve-fitting, which  
9 results in unreasonable recommendations for certain accounts, especially when considering the  
10 variety of assets in an account and how they are operated by the Company. In real-world  
11 applications, theoretical statistical models are not always accurate due to the interrelationship of  
12 the data in various *years* (e.g., storms would trigger common causes of retirement between  
13 vintages, inflation would change the unit price from year to year, etc.). Visual matching does not  
14 have this issue.

15 One of the most quoted treatises, *Depreciation Systems* cautions that "blind acceptance of  
16 mechanical fitting processes will occasionally but consistently result in poor choices"<sup>31</sup> and that  
17 "... the results of mathematical fitting should be checked visually and the final determination of  
18 best fit made by the analyst."<sup>32</sup> Sound depreciation practice and authoritative guidance advise  
19 that a recommended life curve needs to drop to take into account at least 50% of the life cycle  
20 (*i.e.*, 50% of the historical experience) of the assets in the account to offer a fully predictive  
21 analysis.<sup>33</sup>

22 Sound depreciation practice and authoritative publications also advise that the analyst  
23 focus on retirement experience within the middle section of the life curve (*i.e.*, 80% to 20%  
24 surviving) because this portion of the experience is more reflective of the retirement  
25 characteristics of the assets in the account:<sup>34</sup>

26 The weight placed on those points will depend on the size of the  
27 exposures. Often the middle section of the curve (that section

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<sup>31</sup> *Depreciation Systems*, Drs. F.K. Wolf and W.C. Fitch, Iowa State Press, 1994, p. 47.

<sup>32</sup> *Id.* at 48.

<sup>33</sup> *Public Utility Depreciation Practices*, p 120 ("It is generally desirable to have the stub curve drop below 50%.").

<sup>34</sup> F.K. Wolf and W. C. Fitch, *Depreciation Systems*, 46-47 (1994) (Emphasis added).

1 ranging from approximately 80% to 20% surviving) is given more  
2 weight than the first and last sections. This middle section is  
3 relatively straight and is the portion of the curve that often best  
4 characterizes the survivor curve.

5 Mr. Garrett seems to rely solely on overall placement and experience bands, rather than  
6 looking at the best fit from a number of bands.<sup>35</sup> This is important because by looking at the  
7 combination of retirement history over different periods of time, the analyst can discern patterns  
8 that may influence his recommendation. The authoritative publications provide guidance as  
9 follows:<sup>36</sup>

10 The ultimate combination of bands is the overall band, which  
11 combines all individual placement and experience bands into a  
12 single, overall band. The major attribute of the survivor curve  
13 obtained from this band is that it uses every available exposure and  
14 retirement. On the other hand, this grand average obscures the  
15 dynamic characteristics of the life characteristics of the property.  
16 ... ***It is difficult to figure out the exact meaning of the overall***  
17 ***band, and, in spite of the fact it does contain all the data points, it***  
18 ***should be given limited significance.***

19 Mr. Garrett also fails to incorporate any information from Company experts related to the  
20 actual operations of the assets in their life recommendations. Information provided by Company  
21 subject matter experts on the specific plant and equipment being studied is of critical importance  
22 in the depreciation study process. Understanding activity in the field is important for an analyst  
23 to obtain a better understanding of the assets that are being studied and an understanding of the  
24 work effort “behind” the accounting information being analyzed. In *Public Utility Depreciation*  
25 *Practices*, NARUC advises against strict reliance on historical data and fitting, stating:

26 Depreciation analysts should avoid becoming ensnared in the  
27 historical life study and relying solely on mathematical solutions.  
28 The reason for making an historic life analysis is to develop a  
29 sufficient understanding of history in order to evaluate whether it is  
30 a reasonable predictor of the future. The importance of being  
31 aware of circumstances having direct bearing on the reason for  
32 making an historical life analysis cannot be understated. The  
33 analyst should become familiar with the physical plant under study

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<sup>35</sup> Ex. TURN-12-Atch1 (Garrett) at Exhibit DJG-6, Exhibit DJG-7, Exhibit DJG-8, and Exhibit DJG-9.

<sup>36</sup> F.K. Wolf and W. C. Fitch, *Depreciation Systems* at 46-47 (1994) (emphasis added).

1 and its operating environment, including talking with the field  
2 people who use the equipment being studied.<sup>37</sup>

3 Mr. Garrett suggests that I was “pry to pertinent information shared by Company  
4 personnel that was not made available to TURN, it would suggest the Company withheld such  
5 information in discovery.”<sup>38</sup> This is not true. I mentioned several critical factors for each  
6 account in Exhibit SDG&E-36-R, my direct testimony, and provided my interview notes in  
7 workpapers. Understanding activity in the field is important for an analyst to obtain a better  
8 understanding of the assets that are being studied and an understanding of the work effort  
9 “behind” the accounting information being analyzed.

10 Finally, Mr. Garrett’s net salvage proposals reflect that he “generally agree[s] with Mr.  
11 Watson that the negative net salvage rates for the accounts at issue should increase (i.e., become  
12 more negative); the technical analysis and data generally support such an increase.”<sup>39</sup> Yet he  
13 misconstrues the Commission’s longstanding gradualism precedent in an attempt to effectively  
14 limit an increase in negative net salvage to a six percent change if the applicant’s proposal is  
15 already applying that gradualism directive by claiming that it limits adjustments to 25% of the  
16 utility’s requested increase.<sup>40</sup> But the Commission’s direction on gradualism (and the application  
17 by other California utilities of the gradualism concept) was to move net salvage factors by no  
18 more than **25 basis points from the applicant’s current net salvage levels**—not to limit the net  
19 salvage change **25% of the change** recommended by the Company.

20 Specifically, the Commission in D.14-08-032, instructed to “adopt no more than 25% of  
21 the estimated net increase from *current* [net salvage] rates.”<sup>41</sup> Appendix C, Table 12 of Decision  
22 14-08-032 further underscores that the Commission’s gradualism doctrine means a change of 25  
23 basis points in net salvage. For example, for Account 364, Poles Towers and Fixtures in D.14-  
24 08-032, after PG&E proposed a -150% net salvage rate, the Commission approved net salvage of  
25 -105% from a previously set -80%, or a change of 25 basis points change (-25% is the difference  
26 between -105% and -80%).

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<sup>37</sup> NARUC, *Public Utility Depreciation Practices*, at 126 (1996) (emphasis added).

<sup>38</sup> Ex. TURN-12 (Garrett) at 21.

<sup>39</sup> Ex. TURN-12 (Garrett) at 52.

<sup>40</sup> *Id.*

<sup>41</sup> D.14-08-032 at 600.

1 In other words, if the negative net salvage rate was negative 75 percent, the Commission  
2 would, under its gradualism concept, only allow a movement to a negative 100 percent net  
3 salvage, or 25 basis points. Yet Mr. Garrett argues that gradualism limit a change in net salvage  
4 to 25% of the change requested by the applicant. Nowhere does the Commission in D.14-08-032  
5 state that its gradualism principle means limiting a change in net salvage to 25% of the  
6 applicant's recommendation.

7 The reality is that my study recommendations are already applying the concept of  
8 gradualism and for Mr. Garrett to apply his novel approach would double count the concept. For  
9 example, the Company's actual incurred net salvage over a 10-year average for Account G376 –  
10 Mains is a negative 265 percent net salvage.<sup>42</sup> If the Company recommended the actual incurred  
11 net salvage, the 25% cap on the change may be a reasonable approach. In that case, Mr.  
12 Garrett's 25 percent change gradualism approach would recommend the Company move to a  
13 negative 102 percent net salvage<sup>43</sup> instead of the negative 80 percent that was my actual  
14 recommendation.

15 But my study already applied gradualism to this and every other account, and so  
16 recommended less than 25 percent of the movement to the incurred net salvage. Yet Mr. Garrett  
17 is only recommending 25 percent of my study's recommendation that already included the  
18 concept of gradualism. In other words, Mr. Garrett's proposal would mean that there could only  
19 be, at most, a six percent change in net salvage at any one time—25% of 25% if the Company is  
20 seeking to abide by the Commission's gradualism precedent in its recommendations—  
21 undermining the Commission's gradualism precedent. Yet ironically, by taking 25% of my  
22 study's recommended increase in negative net salvage, TURN is often proposing to increase  
23 electric and common plant negative net salvage rates relative to SDG&E's proposal to maintain  
24 current electric and common plant levels.

25 Also of note, the tables presented in TURN's testimony contain errors and inaccurate  
26 information. In Exhibit TURN-12: Table 2: SDG&E - Depreciation Rate and Accrual  
27 Comparison, the columns for SDG&E and TURN's proposed accruals appear to be partially  
28 transposed. The SDG&E Gas Storage, Gas Transmission, Gas Distribution, and Gas General

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<sup>42</sup> Ex. SDGE-36-R (Watson), Appendix D, Account 376.

<sup>43</sup>  $243-55 \times 25\% = 47$  (10 year average – current net salvage parameter)  $\times 25\%$  Proposed net salvage =  
current net salvage + 25% of change =  $55 + 47 = 102$

1 accruals are in the column for TURN and vice versa, so the totals are not valid. Also, the totals  
2 are labelled as “Total Plant”, but should be labelled “Total Depreciation.” And the table does not  
3 match the same table in the workpapers. The tables included in TURN’s testimony are thus not  
4 accurate and should not be relied upon.

5 **C. ENVIRONMENTAL DEFENSE FUND**

6 EDF addresses only gas assets for its recommendations, does not quantify or explain  
7 implementation of its depreciation proposals but makes the following recommendations:<sup>44</sup>

- 8 • The use of sum of the year digits (SOYD) depreciation to compute  
9 depreciation rates, or alternatively,
- 10 • The use of units of production methods that were proposed by Pacific Gas  
11 & Electric Company (PG&E) in its 2023 GRC application.

12 I disagree with EDF’s recommendations for depreciation. EDF recommends alternative  
13 rate making approaches which do not follow the Commission’s precedents for the use of straight-  
14 line, average life group, remaining life depreciation system. This novel proposal does not  
15 identify any specific depreciation rates, lives, and parameters to support EDF’s  
16 recommendations. Hence, adoption of their recommendations is not possible based on the  
17 limited information provided in EDF’s testimony.

18 Further, the CPUC has identified accelerated and alternative depreciation methods within  
19 the scope of Rulemaking (R.) 20-01-007, Order Instituting Rulemaking to Establish Policies,  
20 Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and perform Long-  
21 Term Gas System Planning.<sup>45</sup> SDG&E’s position on accelerated and alternative depreciation  
22 proposals is discussed in Mr. Folkmann’s testimony (Exhibit SDG&E-201).

23 **III. REBUTTAL TO PARTIES’ PROPOSALS REGARDING LIFE FOR VARIOUS**  
24 **NATURAL GAS ACCOUNTS**

25 In this section I reiterate the factors supporting my recommendation for each natural gas  
26 account disputed by TURN and/or Cal Advocates and rebut the proposals put forth by the  
27 intervening parties. My recommendation for all accounts can be found in my direct testimony,  
28 Exhibit SDG&E-36-R.

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<sup>44</sup> Ex. EDF-01 (McCann/Seong) at 54-60.

<sup>45</sup> See R.20-01-007, Assigned Commissioner’s Amended Scoping Memo and Ruling (January 5, 2022).

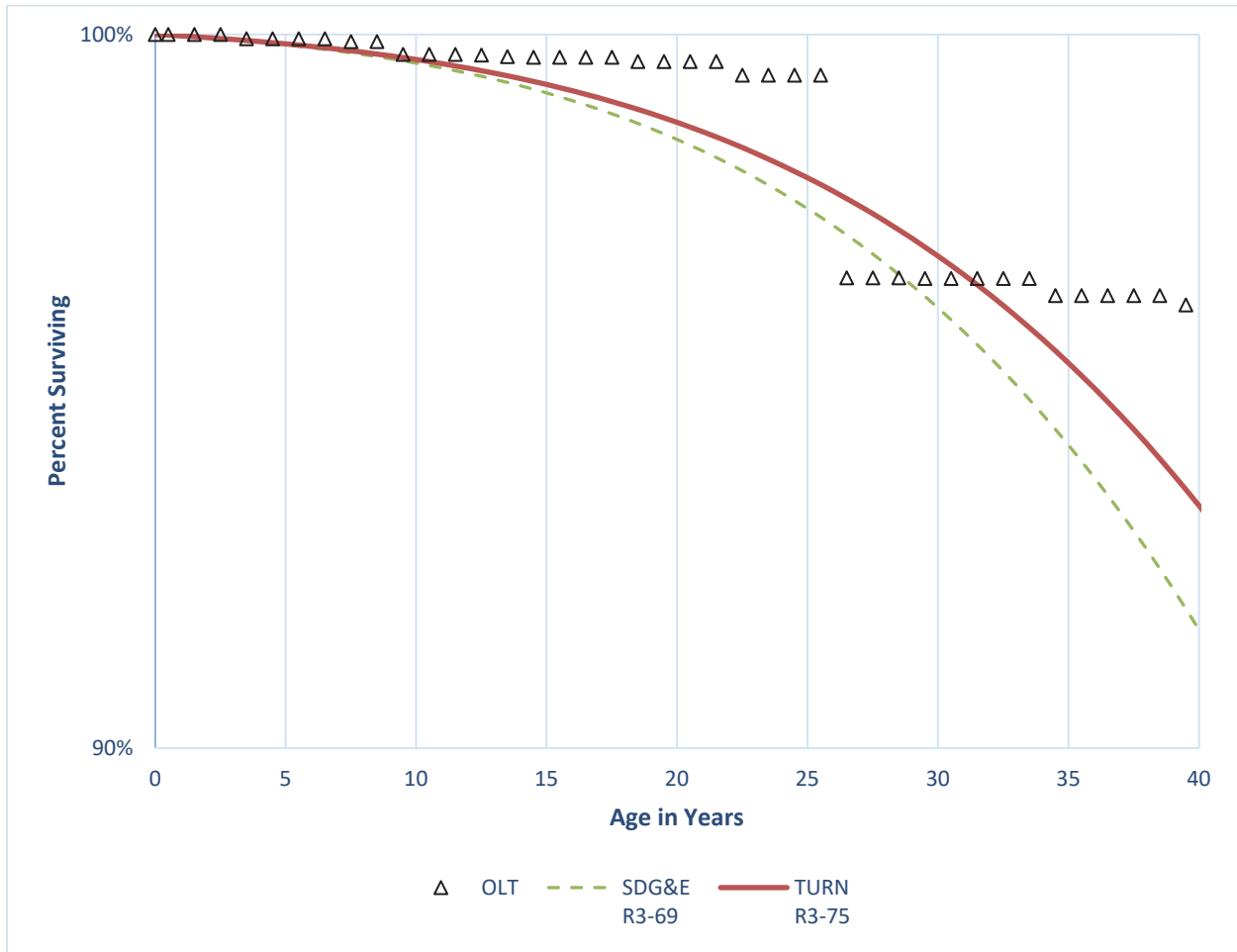






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**Figure DAW-1**  
**Account 367 - Placement Band 1949-2020 Experience Band 1999-2020**



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This graph is derived from Mr. Garrett’s workpapers with the scales more narrow to show how close the observed data follows either proposed curve. In my opinion, the Company’s proposal is a better match than TURN’s and should be adopted.

**B. Life Account G368 Compressor Station Equipment**

This account includes the cost of compressor station equipment used in connection with transmission operations. The average age of survivors in this account is 19.58 years. The Company relies heavily on turbine compressors. Company personnel report that the Company has a modernization program driven by emissions compliance and decarbonization initiatives. Higher risk regulating stations are being targeted for replacement.

The requirements for stations have changed more than the regulations for mains and services. As a result, the Company has upgraded stations. Actuarial analysis is inconclusive.

1 Given the focus on the stations, the reliance on turbine compressors, and the characteristics of  
2 the various assets in this account, my study recommends a slight increase in life to 40 years and  
3 retaining the S3 dispersion.

4 A summary table of the different life recommendations is shown below in Table DAW-4.

5 **Table DAW-4**  
6 **Account G368 Compressor Equipment**

<b>Party</b>	<b>Company Current</b>	<b>Company Proposed</b>	<b>Cal Advocates</b>	<b>TURN</b>	<b>EDF</b>
Curve/ Life	35 S3	40 S3	40 S3	46 S3	NA

7  
8 Cal Advocates recommends the same life for this account as the Company proposes.<sup>48</sup>

9 TURN takes issue with the life for this account, noting that even though the amount of  
10 retirements are limited, data is still relevant. Mr. Garrett presents a visual representation of the  
11 two curves in his Figure 9. TURN examines only one band, the full placement band and  
12 experience band of 1999-2020.<sup>49</sup>

13 Mr. Garrett's curve shows the curves are indistinguishable until age 25. The plant  
14 balance after age 25 uses data from vintage years from 1918 to year 1995 which makes up 18  
15 percent of the current plant. Given that the average age of survivors is 19.58 years, basing the  
16 recommendation for life in this account on a single band that ends at 64% is not typical for all  
17 investment in this account.

18 The stub curve ends at 64% surviving for Mr. Garrett's proposal. But sound depreciation  
19 practice and authoritative guidance advise that a recommended life curve needs to drop to take  
20 into account at least 50% of the life cycle (*i.e.*, 50% of the historical experience) of the assets in  
21 the account to offer a fully predictive analysis,<sup>50</sup> which Mr. Garrett does not do for this account..

22 Mr. Garrett's proposal would increase the current life 31.4 percent, based simply on one  
23 band and mathematical fitting. My proposed 40 years moves in the direct of change with a 14.3  
24 percent increase in life better conforming the facts and circumstances in this account. More  
25 narrow placement bands do not have sufficient data to distinguish between these proposals.

<sup>48</sup> Ex. CA-17 (Ayanruoh) at 17.

<sup>49</sup> Ex. TURN-12 (Garrett) at 43.

<sup>50</sup> *Public Utility Depreciation Practices*, p 120 ("It is generally desirable to have the stub curve drop below 50%.").

1 Mr. Garrett also fails to factor in key information related to SMEs on recent and future  
 2 changes in operations. In sum, Mr. Garrett ignores important input from Company personnel  
 3 related to the assets in this account, relies on one band, and is overly dependent on mathematical  
 4 fitting. His recommendation should be rejected.

5 **C. Life Account G376 Distribution Mains**

6 This account includes the cost of mains used in connection with distribution operations.  
 7 The average age of survivors in this account is 13.58 years. Company operations personnel  
 8 report that SDG&E’s Integrity Program is targeting replacing plastic prior to 1986 for both mains  
 9 and services. There is around 1,600 miles of Aldyl-A that remain in the system.

10 There are three separate steel programs (pre-34, 34-65 and 65 and over) that are not part  
 11 of DIMP. There are only 150 miles left in the system of pre-34 pipe. Most of the SDG&E  
 12 system is from later than the 1950s, with most pipe having been added in the “boom” in the  
 13 1970s and 1980s. The steel programs did not kick off until late 2019. It then ramped up in 2020,  
 14 making the accelerated replacements not visible in the analysis. Some of the older steel pipe that  
 15 is cathodically protected is being focused on but is not part of DIMP. This is in addition to  
 16 normal replacements. The effect of these higher levels of retirements would be to shorten the  
 17 life.

18 The planned replacement programs that are ranked by risk would signal that the pipe will  
 19 be replaced sooner than it was in the past. Company experts feel from an operations perspective  
 20 that life should decrease (at least in the short-term) with the level of retirements that are  
 21 occurring. Given the uncertain future with California’s continued use of natural gas and input  
 22 from operations personnel, my study recommends retaining the 69-year life and the R3  
 23 dispersion. A summary table of the different life recommendations is shown below in Table  
 24 DAW-5.

25 **Figure DAW-5**  
 26 **Account G376 Distribution Mains**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Curve/ Life	69 R3	69 R3	69 R3	75 R3	NA

27  
 28 Cal Advocates uses Company’s proposed life in making their depreciation accrual rate  
 29 recommendations.

1           TURN takes issue with the life for this account, stating “Mr. Watson does not give  
2 enough statistical credit to data between 40-60 years.”<sup>51</sup> Mr. Garrett presents a visual  
3 representation of the two curves in his Figure 10, where he examines only one band, the full  
4 placement band and experience band of 1991-2020.<sup>52</sup>

5           Mr. Garrett discusses the relevance of points from ages 40.5 to 60. Data from ages 40-60  
6 consists of 5.6% of the plant in service. Data from ages 40.5-107 consists of 7.0% of the total  
7 plant in this account. Given that the average age of survivors is 13.58 years, basing the  
8 recommendation for life in this account on a single band encompassing experience as far back as  
9 1915 is atypical for all investment in this account.

10           When examining Figure 10, I changed to y-axis to cover from 90% to 100% and the x  
11 axis stops at age 40. Those results are shown in the graph below in Figure DAW-2.  
12

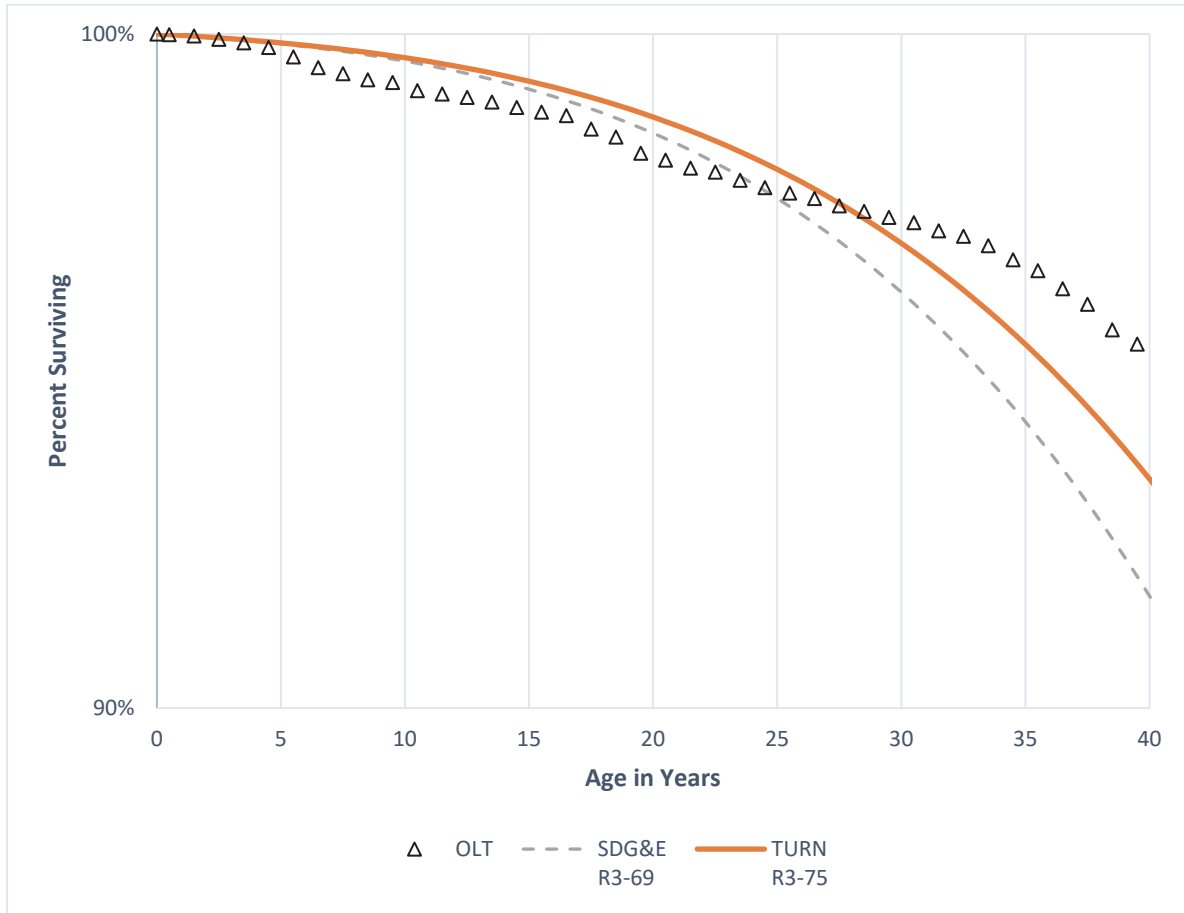
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<sup>51</sup> Ex. TURN-12 (Garrett) at 46.

<sup>52</sup> *Id.* at 45.

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**Figure DAW-2**  
**Account 376 - Placement Band 1915-2020 Experience Band 1991-2020**



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This graph is derived from Mr. Garrett’s workpapers with the scales more narrow to show how close the observed data follows either proposed curve. In my opinion, the Company’s proposal is a better match than TURN’s and would not warrant an additional six year life increase.

Mr. Garrett ignores important input from Company personnel and the effect of the program just beginning, relies on one band, and is overly dependent on mathematical fitting and his proposal should be rejected.

**D. Life Account G380 Distribution Services**

This account consists of services used in gas distribution operations. The average age of survivors in this account is 19.04 years. The service rises above the ground for a portion of its

1 length. According to Company experts, the above ground portion is vulnerable, including weed  
2 eaters, fertilizer, dig-ins by customers, and the abandonment of houses.

3 It is more likely that the Company would replace services than mains. If the main is  
4 Aldyl-A, the Company would normally replace the service as well. If there is a cut, Company  
5 personnel report that they generally repair the service. If a service has had a leak in the past,  
6 they would likely replace the asset. If a steel main is replaced with plastic, the service would  
7 normally be replaced. Company operations personnel feel that the life of services should have a  
8 slightly shorter life than mains, since there are many factors that would retire a service earlier.  
9 The higher focus on not stranding steel services would also be a factor in shortening the life of  
10 services.

11 In some of the actuarial analysis, the average life is in the 90 plus year range. Company  
12 experts state that services have a life closer to 50-60 years from an operations perspective.  
13 Operationally, a life of 90 years does not seem consistent with Company or industry  
14 expectations. Given the uncertain future with regulation and input from operations personnel,  
15 my study recommends retaining the existing 65-year life with an R2.5 dispersion for this  
16 account. Although the visual match is not as representative, input from Company personnel and  
17 industry norms support this proposal.

18 A summary table of the different life recommendations is shown below in Table DAW-6.

19 **Table DAW-6**

20 **Account G380 Distribution Services**

<b>Party</b>	<b>Company Current</b>	<b>Company Proposed</b>	<b>Cal Advocates</b>	<b>TURN</b>	<b>EDF</b>
Curve/ Life	65 R2.5	65 R2.5	65 R2.5	72 R2.5	NA

21  
22 Cal Advocates uses Company's proposed life in making their depreciation accrual rate  
23 recommendations.

24 TURN takes issue with the life for this account, stating "I believe that Mr. Watson's  
25 proposed curve downplays too much of the relevant data, and that my proposed curve more  
26 appropriately balances the service life indicated by the OLT curve with issues raised in the



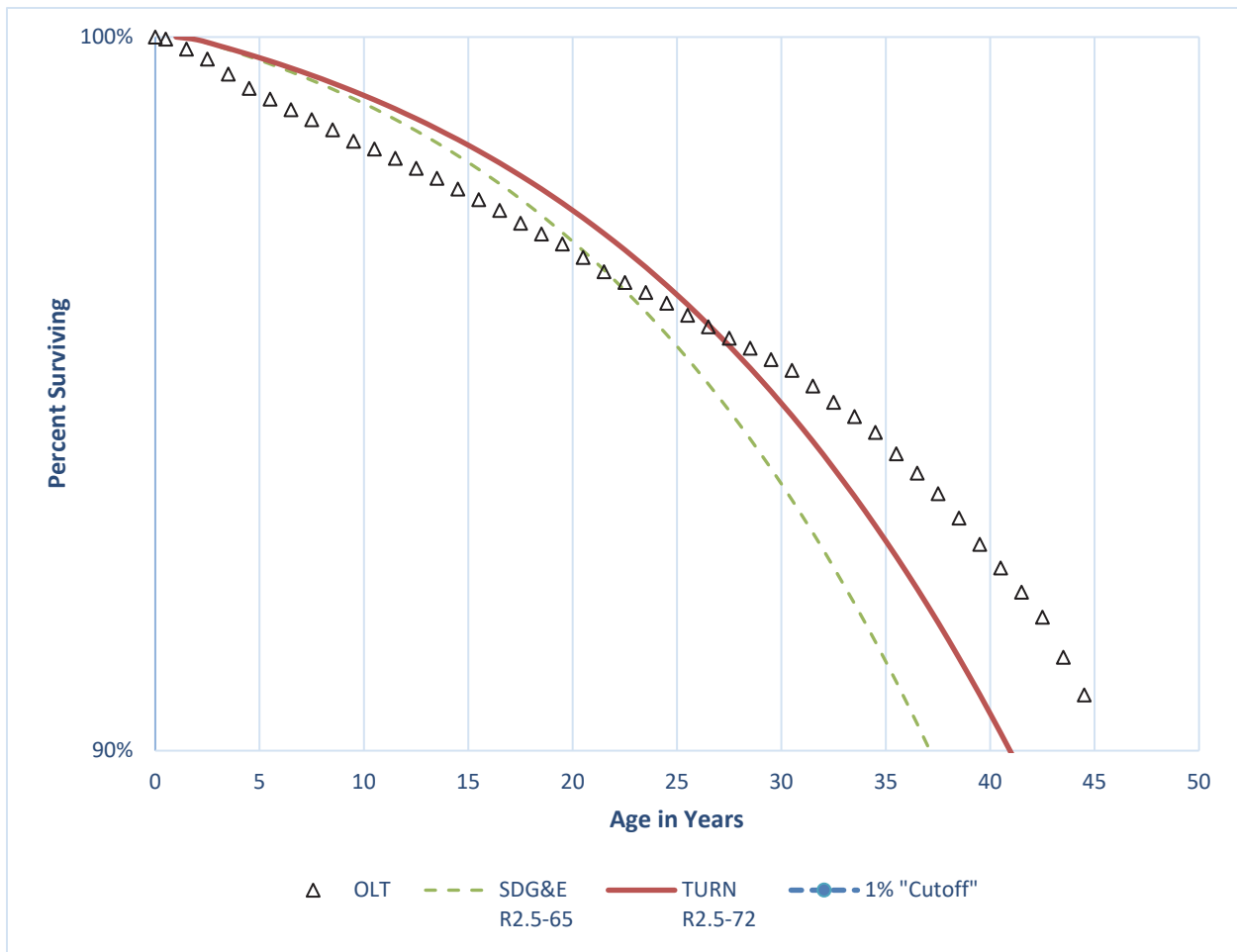
1 SDG&E depreciation study.”<sup>53</sup> Mr. Garrett presents a visual representation of the two curves in  
2 his Figure 11.

3 In Figure 11, TURN examines only one band, the 1915-2020 placement band and the  
4 1961-2020 experience band.<sup>54</sup> Given that the average age of survivors is 19.04 years, basing the  
5 recommendation for life in this account on a single band encompassing experience as far back as  
6 1915 is atypical for all investment in this account.

7 When examining Figure 11, I changed to y-axis to cover from 90% to 100% and the x  
8 axis stops at age 40. Those results are shown in the graph below in Figure DAW-3.

9 **Figure DAW-3**

10 **Account 380 - Placement Band 1915-2020 Experience Band 1991-2020**



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<sup>53</sup> Ex. TURN-12 (Garrett) at 48.

<sup>54</sup> *Id.* at 47.

1 Although neither curve matches well, I believe my 65 year recommendation is a better  
 2 match and better conforms to the facts and circumstances in this account. Mr. Garrett ignores  
 3 important input from Company personnel, relies on one band, and is overly dependent on  
 4 mathematical fitting.

5 **E. Life Account G381 Distribution Meters**

6 This account includes the cost of meters and regulators used in measuring gas to  
 7 residential customers. The average age of survivors in this account is 18.55 years.

8 Meters have traditionally lasted longer than they do now according to Company  
 9 operations personnel. Meter costs have escalated, as there are now only two-meter  
 10 manufacturers in US. Company operations personnel report that they still repair meters, but now  
 11 expense the repair.

12 From an operations perspective, a small decrease in life may be expected. Based on the  
 13 visual matching and input from operations personnel, my study recommends moving to 35 years  
 14 while retaining the L1.5 dispersion curve for this account. An observed life table is graphed with  
 15 the proposed life and dispersion curve. This account includes gross salvage and cost of removal  
 16 associated with the cost of meters and regulators used in measuring gas to residential customers.

17 A summary table of the different life recommendations is shown below.

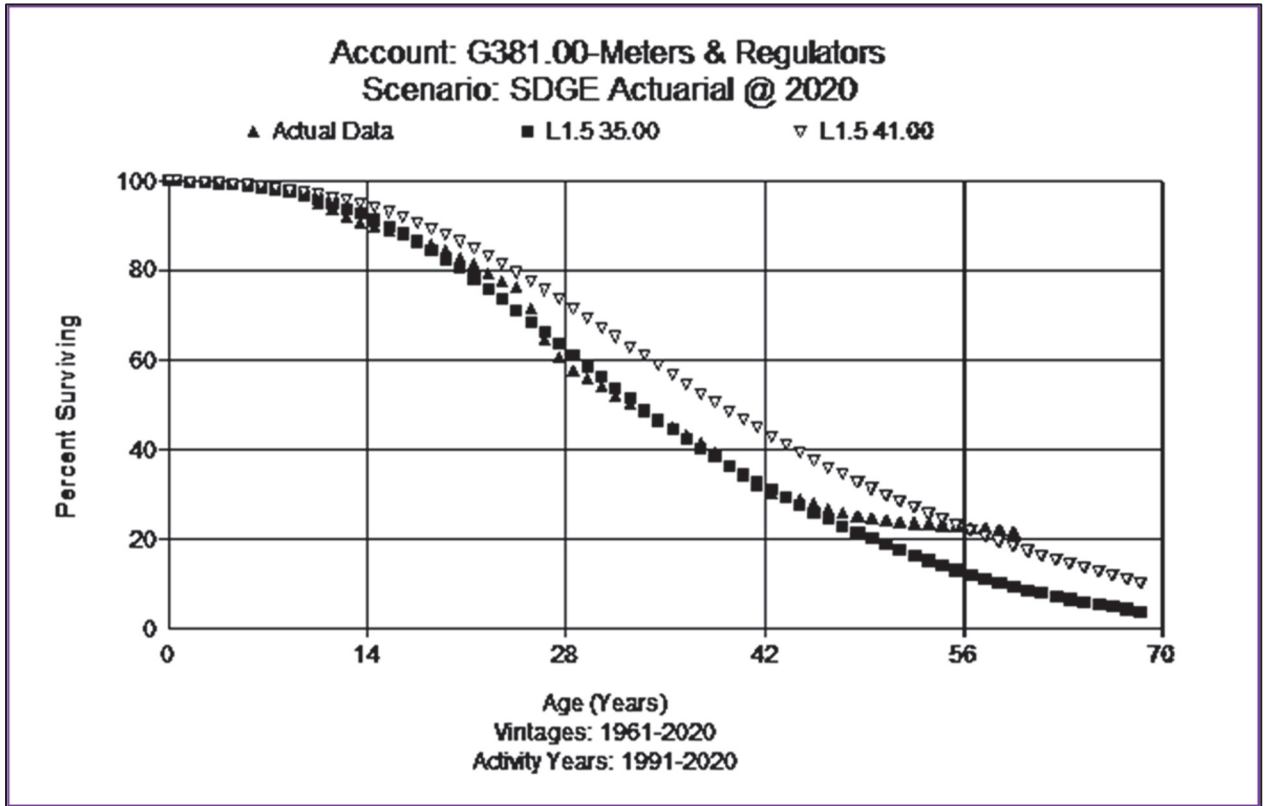
18 **Table DAW-7**  
 19 **Account G381 Distribution Meters**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Curve/ Life	41 L1.5	35 L1.5	41 L1.5	35 L1.5	NA

20  
 21 TURN uses the Company’s proposed life in making their depreciation accrual rate  
 22 recommendations for Account G381. Although Cal Advocates rejected the Company’s proposed  
 23 life parameter for this account as shown in Table 17-10, Cal Advocates has performed no  
 24 actuarial analysis, curve comparison, or even provide a basic explanation to support their  
 25 contention to retain the existing life. The graph below in Figure DAW-4 shows a comparison  
 26 between the Company’s proposed life and the life recommended by Cal Advocates. The squares  
 27 represent the Company’s proposal the triangles represent Cal Advocates’ proposal. Clearly  
 28 circumstances have changed since SDG&E depreciation rates were set in the 2016 GRC, and a  
 29 shorter life is now appropriate.

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**Figure DAW-4**  
**Account G381 – Meters**



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**F. Life Account G394.1 Portable Tools**

This account consists of various items or portable tools used in shop and garages such as air compressors, grinders, and mixers. Since the Company plans to continue using vintage group accounting for its common and electric general accounts, the same is proposed for the Company’s natural gas general plant. My study recommends moving to a 10-year life with an SQ dispersion for this account, consistent with Common and Electric function assets and the characteristic of assets that are in the account.

A summary table of the different life recommendations is shown below in table DAW-7.

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14

**Table DAW-7**  
**Account G394.1 - Portable Tools Life**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Curve/ Life	24 L5	10 SQ	24 L5	10 SQ	NA

15

TURN uses the same life parameter as the Company proposes in computing their depreciation accrual rate recommendations for Account G394.1. Cal Advocates takes issue with the life parameter for Account G394.1 Portable Tools that the Company proposes. Yet Cal Advocates has performed no actuarial analysis or curve comparison to support their contention to retain the existing life. There is no reason that the Company's gas assets in this account would have a life that was 14 years longer than the similar assets in other Electric and Common Assets. Cal Advocates one-sided approach to depreciation (extend life, hold net salvage at current levels based solely on its beliefs regarding rates) ignores the matching principle that regulators strive for and should be rejected.

**G. Life Account G394.20 Shop Equipment**

This account consists of large items or tools used in shop and garages such as hoists and cranes. Since the Company plans to continue using vintage group accounting for its common and electric general accounts, the same is proposed for the Company's natural gas general plant based on the similar characteristics of the assets in the accounts.

A summary table of the different life recommendations is shown below in Table DAW-8.

**Table DAW-8**

**Account - G394.2 Shop Equipment Life**

<b>Party</b>	<b>Company Current</b>	<b>Company Proposed</b>	<b>Cal Advocates</b>	<b>TURN</b>	<b>EDF</b>
Curve/ Life	24 L1	10 SQ	24 L1	10 SQ	NA

TURN uses the same life parameter as the Company proposes in computing their depreciation accrual rate recommendations for Account G394. Cal Advocates takes issue with the life salvage parameter for Account 394.2 Shop Equipment that the Company proposes. In Table 17-11,<sup>55</sup> Cal Advocates shows a life proposed life of 24 years for the account.

Cal Advocates has performed no actuarial analysis or curve comparison to support their contention to retain the existing life. There is no reason that the Company's gas assets in this account would have a life that was nine years longer than similar assets in the other Electric and Common Assets. Cal Advocates one-sided approach to depreciation (extend life, hold net

<sup>55</sup> Ex. CA-17 (Ayanruoh) at 21.

1 salvage at current levels based on its beliefs regarding rates) ignores the matching principle that  
2 regulators are stive for and should be rejected.

#### 3 **IV. REBUTTAL TO PARTIES' PROPOSALS REGARDING NET SALVAGE FOR** 4 **VARIOUS NATURAL GAS ACCOUNTS**

5 Since PG&E's 2014 GRC proceeding, the Commission has applied a principle of  
6 gradualism to depreciation rates in response to concerns about growing cost burdens associated  
7 with increasing cost trends for negative net salvage, only allowing a maximum change of 25  
8 basis points from the existing net salvage parameter for an account.<sup>56</sup> In other words, if the  
9 negative net salvage rate was negative 75 percent, the Commission would, under its gradualism  
10 concept, only allow a movement to a negative 100 percent net salvage. For example, for  
11 Account 364, Poles Towers and Fixtures in D.14-08-032, the Commission approved net salvage  
12 of -105% from a previously set -80%. That 25 basis point change is the difference between the  
13 adopted and approved net salvage for this account(25%) = (105%) – (80%).

14 For the past two GRC cycles, SDG&E has been ordered to retain its existing net salvage  
15 rates. I have followed Commission policy in recommending a maximum change of negative 25  
16 percent for any account in this depreciation study. The Company's recommendations thus  
17 already incorporate the Commission's gradualism policy.

18 TURN and Cal Advocates recommend positions would leave the Company in an  
19 untenable position in terms of capital recovery. Mr. Garrett's net salvage proposals greatly  
20 misconstrue the Commission's gradualism precedent. The Company here only proposes, at most,  
21 a 25% change in net salvage for any account to comply with the Commission's gradualism  
22 policy.

23 But Mr. Garrett argues that the Commission should limit a net salvage change to 25% of  
24 an applicant's 25% (or less) proposal that is already following the Commission's gradualism  
25 concept—meaning that, under Mr. Garrett's application, the maximum change for any account is  
26 **six percent** of the Company's current net salvage if the Company's proposals are abiding by the  
27 Commission's gradualism precedent (25% of 25%).<sup>57</sup> For example, the Company's actual

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<sup>56</sup> D.14-08-032 at 597, and 600 (instructing to “adopt no more than 25% of the estimated net increase from *current* [net salvage] rates.”).

<sup>57</sup> 25% x .25%= 6.25%

1 incurred net salvage over a 10-year average for Account G376 – Transmission Mains is a  
2 negative 243 percent net salvage.<sup>58</sup>

3 If the Company recommended the actual incurred net salvage, the 25% cap on the change  
4 may be a reasonable approach. In that case, Mr. Garrett’s 25 percent change gradualism  
5 approach would recommend the Company move to a negative 102 percent net salvage,<sup>59</sup> instead  
6 of the negative 80 percent that was the Company’s actual recommendation.

7 But consistent with Commission directives, the Company already recommended less than  
8 25 percent of the movement to the incurred net salvage. Yet Mr. Garrett is only recommending  
9 25 percent of Company’s recommendation that already included the concept of gradualism. Mr.  
10 Garrett’s proposal thus would significantly alter the Commission’s gradualism requirement—  
11 essentially **limiting a change in net salvage to six percent** in any proceeding if an applicant is  
12 complying with the gradualism precedent in its recommendations. If Mr. Garrett’s  
13 recommendations were followed, it would have the perverse effect of incentivizing applicants to  
14 recommend a full change in net salvage even if it is not consistent with the Commission’s  
15 gradualism precedent.

16 Cal Advocates’ proposal has flaws as well. They recommend a one-sided approach to  
17 move life out (which has the effect of decreasing depreciation expense) but freeze cost of  
18 removal at levels that were approved two GRCs ago based solely on Cal Advocates’ policy  
19 argument that rates are too high. Yet Cal Advocates itself recently recognized the need to change  
20 net salvage in Southern California Edison Company’s (SCE) 2021 GRC, where Cal Advocates  
21 itself recommended net salvage changes.

22 Yet here, for SDG&E, they recommend no movement.<sup>60</sup> Despite that, the Commission  
23 has continued to recognize the need to change net salvage rates, consistent with its gradualism  
24 policy. Specifically in D.21-08-036, in SCE’s 2021 GRC, the Commission applied its gradualism  
25 policy to increase net salvage up to 25 percent to balance equities between current and future  
26 ratepayers.

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<sup>58</sup> Ex. SDG&E-36-R (Watson), Appendix D, Account 376.

<sup>59</sup>  $243 - 55 \times 25\% = 47$  (10 year average – current net salvage parameter)  $\times 25\%$  Proposed net salvage =  
current net salvage + 25% of change =  $55 + 47 = 102$

<sup>60</sup> D.21-08-036 at 510 Accounts 354, 356, and 373 (Cal Advocates recommended increases in negative  
net salvage for various accounts by as much as 20 percent).

1 To balance the customers’ respective cost burned between current  
2 and subsequent GRC cycle, the Commission found it reasonable in  
3 PGE’s 2014 to ‘adopt no more than 25 percent of the estimated  
4 increase for current [net salvage] rates.’ ... We continue to endorse  
5 the concepts of gradualism with respect to net salvage rates for this  
6 rate case cycle.<sup>61</sup>

7 SDG&E faces the same situation that SCE faced in its GRC. The reality is that the  
8 Company is incurring much more negative net salvage in removing assets from service than  
9 currently authorized, and in some cases, the lives experienced by the Company are decreasing.  
10 As an example, Account G376 Mains, where the plant balance for Account G376 as of  
11 December 31, 2021, is \$1.5 billion and accumulated depreciation is \$465 million. Using the  
12 Company’s proposed life and net salvage proposals the theoretical reserve for this account is  
13 \$491 million, a differential of \$25.5 million. The Company has not recovered that or the cost of  
14 removal that accompanies removal of gas mains. Such situations could occur in other accounts if  
15 the current depreciation rates and parameters remain at the same level as the 2016 GRC.

16 Moreover, Cal Advocates makes an additional statement that further demonstrates that  
17 the Company is underfunded in its cost of removal. For Accounts G376 and G380, Cal  
18 Advocates compares actual removal cost spending through removal cost collected in the  
19 depreciation accrual over a four year period. For Account G376, Cal Advocates states “SDG&E  
20 spend less than authorized cost of removal by \$14.726 million.<sup>62</sup> For Account G380, “SDG&E  
21 incurred exactly the same amount that was authorized by the Commission:” They argue that the  
22 amount collected in rates is higher than the Company’s actual expenditures, hence no change in  
23 net salvage rates is justified.<sup>63</sup>

24 This conclusion is incorrect, because the plant is in the early phases of its life cycle.  
25 Based on the current proposed lives, some assets in these accounts will live up to 120 years. The  
26 average age of survivors in those accounts is 13.58 years and 19.04 years, respectively. The  
27 Company has to fund removal cost for all assets over the current average age, going out some  
28 120 years. The reality is that cost recovery between these components is not a one-for one  
29 relationship.

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<sup>61</sup> D.21-08-036 at 511-512 (citation omitted).

<sup>62</sup> Ex. CA-17 (Ayanruoh) at 20.

<sup>63</sup> *Id.*

1 I have thus followed the Commission’s policy guidance for gradual changes to net  
 2 salvage of not more than a25 percent change for any account. The Commission should apply  
 3 that policy, balancing between current and future ratepayers, while rejecting Cal Advocates  
 4 position of retaining current net salvage rates, and TURN’s flawed interpretation that would  
 5 restrict the Company to a maximum increase in negative net salvage of six percent. The  
 6 recommendations by Cal Advocates and TURN would exacerbate the Company’s underfunding  
 7 of net salvage in its depreciation accrual rates.

8 Below, I reiterate the factors supporting my recommendation for each account disputed  
 9 by TURN and/or Cal Advocates. As noted, for every account, Cal Advocates holds the position  
 10 of retaining current net salvage rates, and TURN uses a flawed interpretation of the CPUC’s  
 11 guidance on net salvage to restrict the Company to a maximum increase of six percent in  
 12 negative net salvage. Both Cal Advocates and TURN’s positions should be rejected.

13 My recommendation for all accounts can be found in my direct testimony, Exhibit  
 14 SDG&E-36-R.

15 **A. Account G366 Structures and Improvements Net Salvage**

16 This account includes the cost of structures and improvements such as buildings, gas  
 17 pumping and regulating stations, and other items used in connection with distribution operations.  
 18 A summary of various net salvage proposals for this account is shown below in Table DAW-9.

19 **Table DAW-9**

20 **Account G366 - Structures and Improvements**

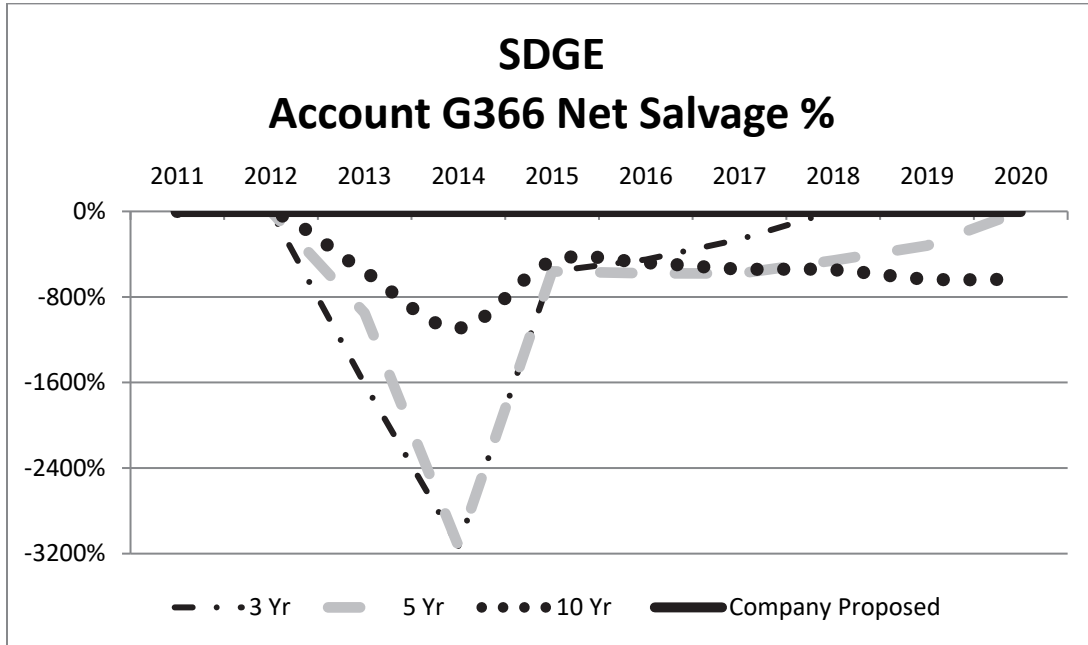
Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	0%	-5%	0%	-1%	NA

21 There have been no retirements since 2016 but removal cost has continued from 2016-  
 22 2020. Based on judgment, my study recommends a slight change by moving to negative 5  
 23 percent net salvage for this account to recognize that removal cost will be incurred in the future  
 24 for this account. A chart showing moving averages from 2011-2020 for this account is shown  
 25 below in Figure DAW-5.



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**Figure DAW-5**  
**Account G366 – Structures and Improvements**



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**B. Account G368 Compressor Equipment Net Salvage**

This account includes the cost of compressor station equipment used in connection with transmission operations. A summary of various net salvage proposals for this account is shown below in Table DAW-10.

**Table DAW-10**  
**Account G368 - Compressor Equipment**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	-10%	-14%	-10%	-11%	NA

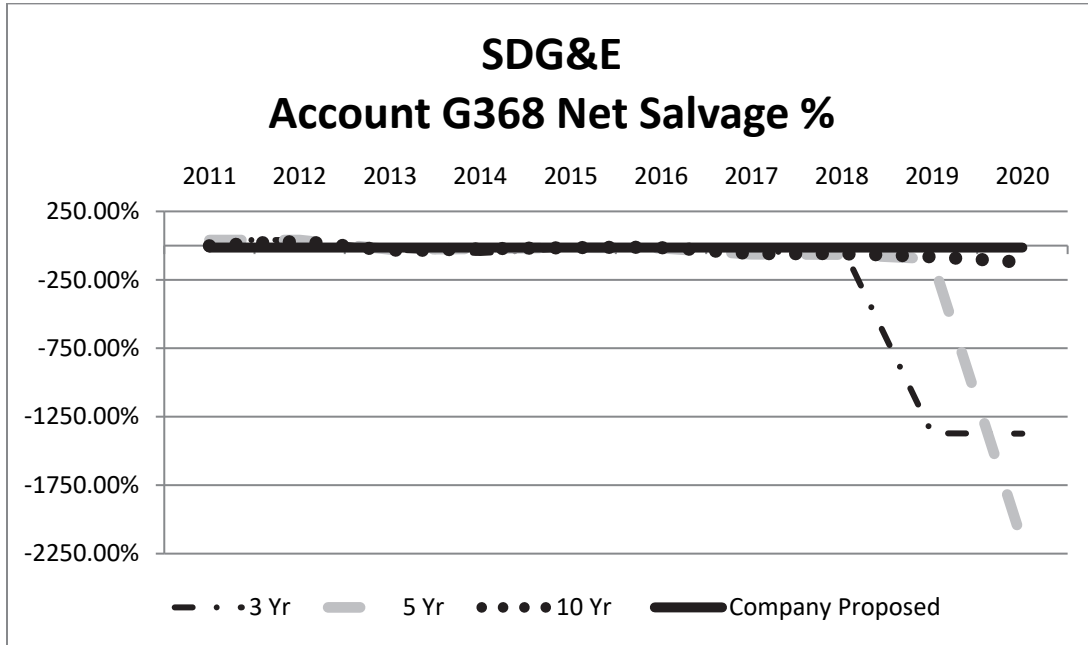
The five 10 year moving average shows negative 121 percent. Since retirements in 2016 have been much smaller than removal cost from 2016-2020, I recommend only a slight movement in net salvage. Based on judgment and Company history, my study recommends moving to negative 14 percent net salvage for this account, which reflect the Company’s experience during a period with higher levels of retirements.

A chart showing moving averages from 2011-2020 for this account is shown below.

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**Figure DAW-6**  
**Account G368 – Compressor Equipment**



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**C. G375 Structures and Improvements Net Salvage Parameter**

This account includes the cost of structures and improvements used in connection with gas distribution operations. A summary of various net salvage proposals for this account is shown below in Table DAW-11.

**Table DAW-11**  
**Account G375 - Structures and Improvements**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	0%	-5%	0%	-1%	NA

There have been no retirements over the period from 2002-2020, with a small amount of removal cost. There is expected to be a small amount of removal cost when the assets in this account are retired. Based on judgment, my study recommends moving to negative 5 percent net salvage.

15

**D. Account G376 Distribution Mains Net Salvage**

This account includes the cost of mains used in connection with distribution operations. A summary of various net salvage proposals for this account is shown below in Table DAW-12.

**Table DAW-12**

**Account G376 – Distribution Mains**

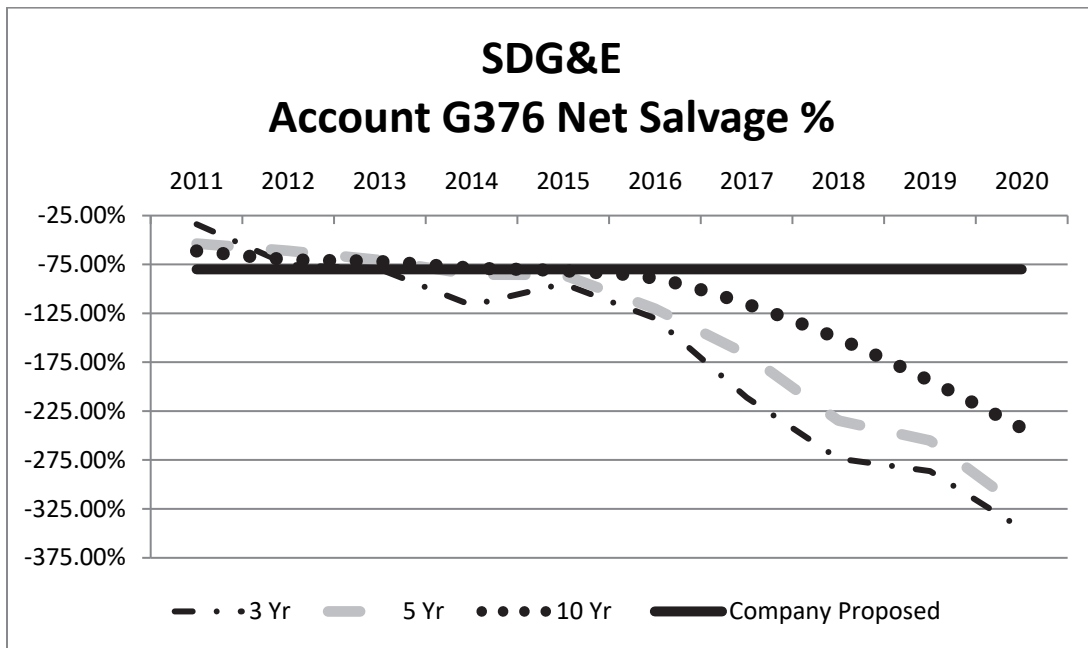
Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	-55%	-80%	-55%	-61%	NA

The three-year, five year, and 10 year moving averages show negative 345, negative 324, and negative 242 percent, respectively. To move in the direction of this trend, a higher (more negative) net salvage is recommended. Based on judgment and Company experience, my study recommends moving to negative 80 percent net salvage, which would remain consistent with the Commission’s gradualism precedent.

A chart showing moving averages from 2011-2020 for this account is shown below in Figure DAW-7.

**Figure DAW-7**

**Account G376 – Distribution Mains**

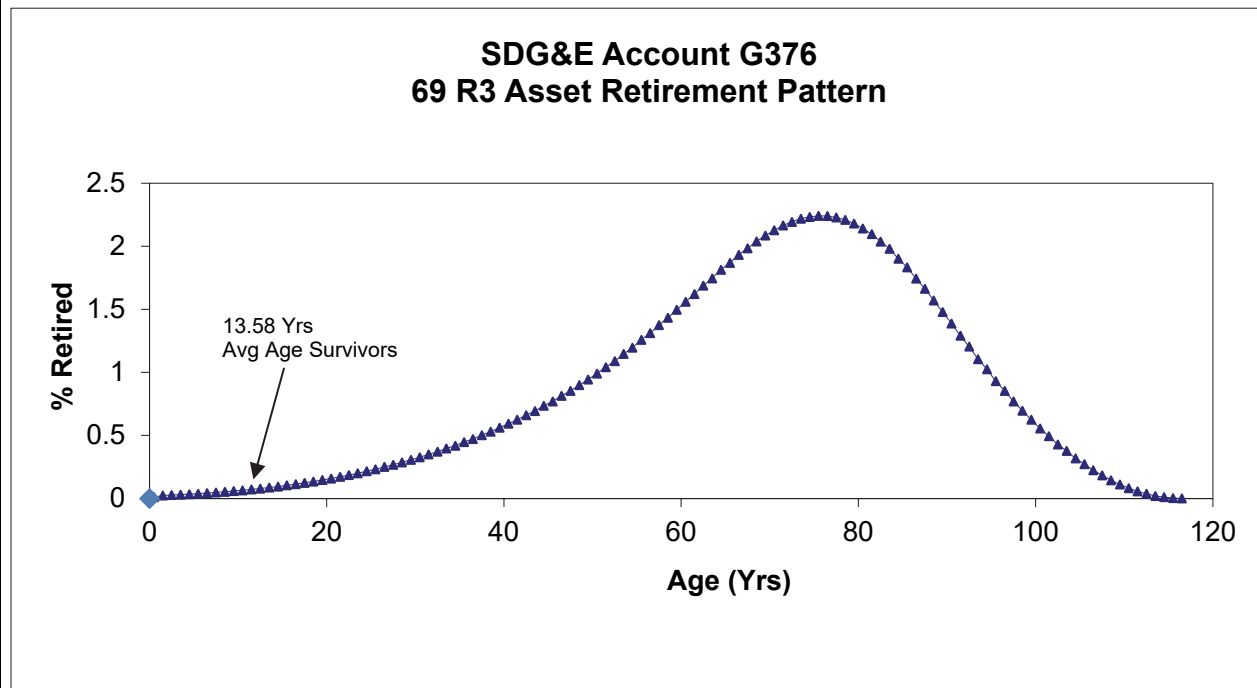


In holding its position throughout to retain current net salvage rates, Cal Advocates for this account confuses cost of removal expenditures and authorized cost of removal collected

1 from customer in the statement “[f]rom 2018 through 2021, SDG&E spent less than authorized  
2 cost of removal by approximately \$14.726 million.”<sup>64</sup>

3 The fact of the matter is that the life cycle of this account is up to 120 years, and the  
4 average age of the plant is 13.58 years. Under accrual accounting, it should be expected that the  
5 accrual would be larger than the amount used for removal in the early ages of an account. The  
6 Company has to fund removal cost for all assets over the current average age, going out some  
7 120 years. The asset retirement pattern for this account is shown in the graph below in Figure  
8 DAW-8.

9 **Figure DAW-8**  
10 **Account G376 – Distribution Mains**  
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12 Accrual for cost of removal is not a one-for-one with cost of removal expenditure that is  
13 booked through the accumulated depreciation reserve. Holding cost of removal for this account  
14 as the same level as the past two GRC will not allow the Company to recover its prudently  
15 expended capital.  
16

<sup>64</sup> Ex. CA-17 (Ayanruoh) at 19-20.

**E. Account G380 Services Net Salvage**

This account consists of services used in gas distribution operations. A summary of various net salvage proposals for this account is shown below in Table DAW-13.

**Table DAW-13**

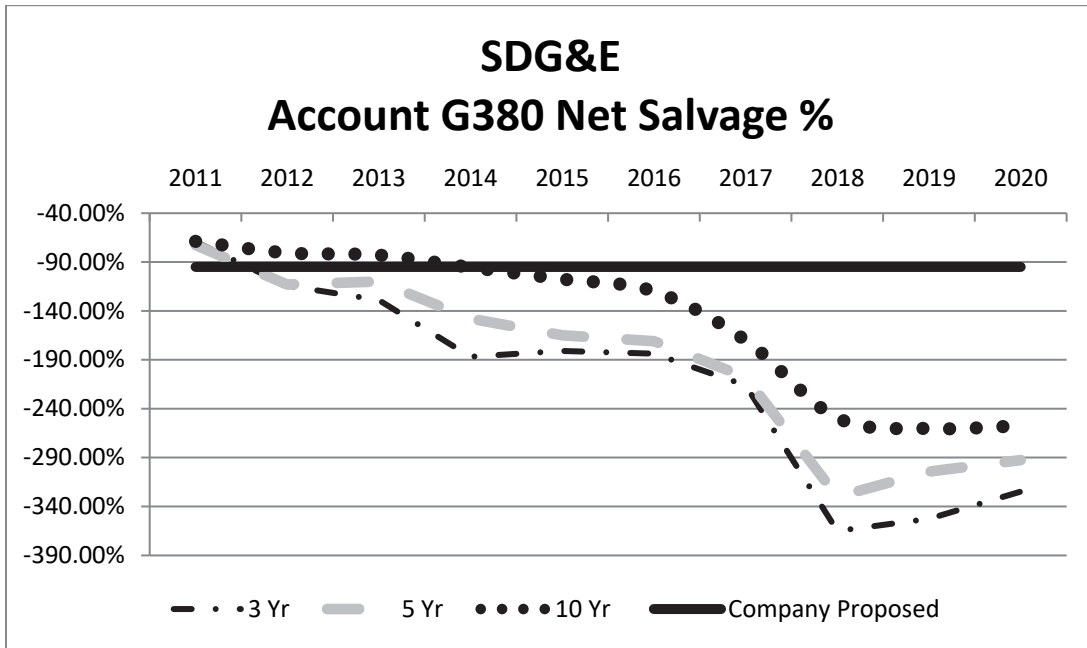
**Account G380 - Distribution Services**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	-70%	-95%	-70%	-76%	NA

The three-year, five year, and 10 year moving averages shows negative 324, negative 293, and negative 260 percent, respectively. Based on judgment and Company experience, my study recommends moving to negative 95 percent net salvage for this account, which remains consistent with the Commission’s gradualism precedent. A chart showing moving averages from 2011-2020 for this account is shown below in Figure DAW-9.

**Figure DAW-9**

**Account G380 – Distribution Services**

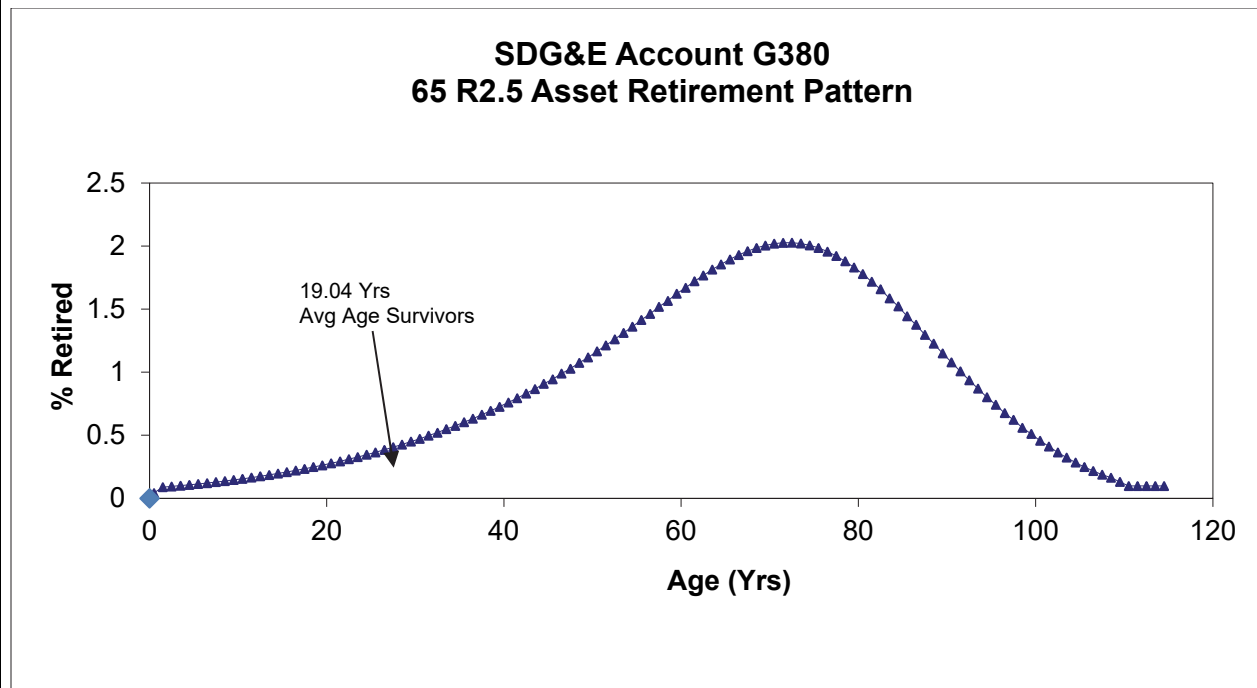


In holding its position throughout to retain current net salvage rates, Cal Advocates for this account, Cal Advocates confuses cost of removal expenditures and authorized cost of

1 removal collected from customer in the statement “[f]rom 2018 through 2021, SDG&E incurred  
2 exactly the same amount that was authorized by the Commission.”<sup>65</sup>

3 The fact of the matter is that the life cycle of this account is up to 120 years, and the  
4 average age of the plant is 19.04 years. Under accrual accounting, it should be expected that the  
5 accrual would be larger than the amount used for removal in the early ages of an account. The  
6 Company must fund removal cost for all assets over the current average age, going out some 120  
7 years. The asset retirement pattern for this account is shown in the graph below in Figure DAW-  
8 10.

9 **Figure DAW-10**  
10 **Account G380 – Distribution Services**



11 Accrual for cost of removal is not a one-for-one with cost of removal expenditure that is  
12 booked through the accumulated depreciation reserve. Holding cost of removal for this account  
13 as the same level as the past two GRCs will not allow the Company to recover its prudently  
14 expended capital.  
15

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<sup>65</sup> *Id.*

1 **F. Account G387 CNG Net Salvage**

2 This account includes the cost of natural gas vehicle charging station and related  
3 equipment. A summary of various net salvage proposals for this account is shown below in  
4 Table DAW-13.

5 **Table DAW-13**  
6 **Account G387.12 - CNG Equipment**

Party	Company Current	Company Proposed	Cal Advocates	TURN	EDF
Net Salvage %	0%	-5%	0%	-1%	NA

7 There has been no retirement or net salvage received over the available history. It is  
8 estimated there will be a small amount of removal cost associated with these facilities as they are  
9 used. To incorporate a small amount of removal cost for these assets, my study recommends  
10 moving to negative 5 percent net salvage for this account. My proposed net salvage parameter  
11 is the best estimate going forward.

12 **V. REBUTTAL TO PARTIES' PROPOSALS FOR LIFE AND NET SALVAGE**  
13 **REGARDING SDG&E'S ELECTRIC AND COMMON ACCOUNTS' PROPOSAL**

14 As noted, as sponsored in the direct testimony of Mr. Bruce Folkmann (SDG&E-01-R),  
15 "SDG&E proposes a one-time, non-precedential proposal to hold the Company's electric and  
16 common depreciation rates constant."<sup>66</sup>—even in instances where my depreciation study  
17 demonstrates the need to increase the depreciation expense to ensure adequate recovery.<sup>67</sup> Cal  
18 Advocates takes no issue "with SDG&E's proposals to maintain depreciation rates for electric  
19 and Common plant at current levels"<sup>68</sup> and accepts SDG&E's proposal. Although TURN is  
20 seemingly confused by SDG&E's proposal, TURN seems to cherry-pick from my study  
21 regarding service lives to further reduce depreciation rates. That is, TURN seemingly often  
22 adopts my study results to lengthen common and electric lives compared to current levels when  
23 my study suggested a longer life, while maintaining current lives when my study recommending  
24 shortening account lives. TURN also incorrectly disagreed with a recommendation from my  
25 study, as I describe below.

<sup>66</sup> Ex. SDG&E-01-R (Folkmann) at BAF-18.

<sup>67</sup> Ex. SDG&E-201 (Folkmann) at BAF-3.

<sup>68</sup> Ex. CA-17 (Ayanruoh) at 15.

1 **A. Life Account E365 Overhead Conductors and Devices**

2 This account consists of overhead (OH) conductor of various thickness, as well as various  
3 switches and reclosers. From an operations perspective, Company experts expect that overhead  
4 wire would have a longer life than poles. The Company has an active reconductoring program  
5 and will, in some cases, replace conductor when hardening the system. Specifically, the  
6 Company is replacing single strand with multistrand steel conductor.

7 With the 10-year plan, SDG&E is expecting over 800 miles of covered conductor to be  
8 installed, of which about 40% could be rework. There will be some early retirements with the  
9 rework. The Company has no current plans to replace conductor with covered conductor outside  
10 of High Fire Threat Districts.

11 Covered conductor is a newer technology for the company. Based on engineering  
12 analysis and history from other companies, Company experts expect the covered conductor to  
13 last as long as the bare wire. There will be areas where, although the steel poles will not be  
14 replaced, the conductor has been hardened but will now be replaced with covered conductor.

15 Based on the actuarial analysis, Company input, the type of assets, and judgment, my  
16 study recommends retaining the current 55-year life with an R0.5 dispersion. As noted, SDG&E  
17 proposes maintaining its depreciation rates for all electric and common plant at current levels,  
18 which Cal Advocates supports.

19 **Table DAW-14**

20 **Account E365 - Overhead Conductors and Devices**

Party	Company Current/Proposal	Study Result	Cal Advocates	TURN	EDF
Curve/ Life	45 S4	55 R0.5	45 S4	60 R0.5	NA

21  
22 TURN takes issue with the life for this account, relying on one band and mathematical  
23 fitting. Mr. Garrett presents a visual representation of the two curves in his Figure 5. In Figure  
24 5, TURN examines only one band, the 1915-2020 placement band and experience band of 1961-  
25 2020.<sup>69</sup> Given that the average age of survivors is 10.97 years, basing the recommendation for  
26 life in this account on a single band encompassing experience as far back as 1915 is atypical for  
27 all investment in this account.

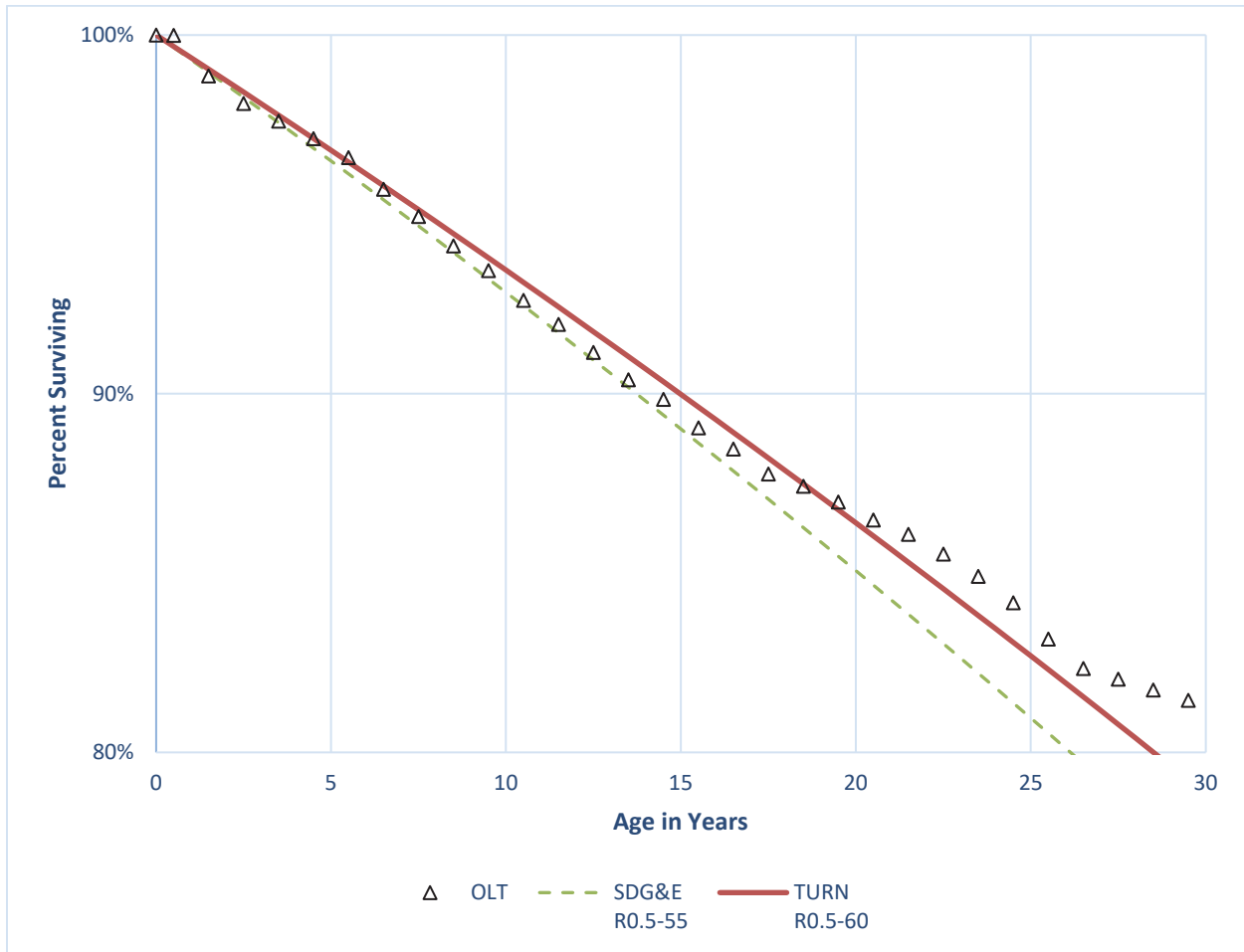
<sup>69</sup> Ex. TURN-12 (Garrett) at 33.



1 When examining Figure 5, I changed to y -axis to cover from 80% to 100% and the x  
2 axis stops at age 30. Those results are shown in the graph below in Figure DAW-11.

3 **Figure DAW-11**

4 **Account E365 Placement Band 1915-2020 Experience Band 1991-2020**



5  
6  
7 Examining the graph with a different scale makes Mr. Garrett's proposal less attractive  
8 from a visual matching perspective. His proposal would increase the current life 33.3 percent,  
9 based simply on one band and mathematical fitting. My proposed 55 years moves in the  
10 direction of change with a 22.2 percent increase in life better conforming the facts and  
11 circumstances in this account. Mr. Garrett ignores important input from Company personnel,  
12 relies on one band, and is overly dependent on mathematical fitting.

1           **B.       Rebuttal to Parties Regarding Net Salvage for SDG&E Electric and**  
2           **Common Plant Accounts**

3           As noted, SDG&E likewise proposes maintaining current common and electric  
4 depreciation levels for net salvage,<sup>70</sup> with Cal Advocates supporting this approach.<sup>71</sup> Only TURN  
5 proposes changing common and electric net salvage recommendations for SDG&E, with Mr.  
6 Garrett net salvage proposals reflecting him taking 25% of any net salvage change that I  
7 recommended in my study.

8           In other words, as noted Mr. Garrett would incorrectly limit net salvage to a maximum  
9 six percent change (25% of 25%) if I proposed a 25% change in my study to be consistent with  
10 the Commission’s longstanding gradualism precedent. Yet Mr. Garret’s proposals in this  
11 instance would generally increase SDG&E’s net salvage beyond the current levels supported by  
12 SDG&E. Notably, Mr. Garrett “generally agree[s] with Mr. Watson that the negative net salvage  
13 for the accounts at issue should increase (i.e., become more negative).”<sup>72</sup>

14           **VI.       CONCLUSION**

15           The determination of the life and net salvage parameters of assets is not simply done by  
16 evaluating history. Recent history may not be fully reflected in the statistics and the past may  
17 not always be the same as the future. The goal of determining the life and net salvage for an  
18 account is to project as accurately as possible the future life and net salvage (*i.e.*, the life and net  
19 salvage characteristics the assets will exhibit over their remaining lives), not simply the historical  
20 activity. With that said, care must be given to ensure that the projection of recent and future  
21 changes do not cross the line into speculation. In my depreciation study, I only used known  
22 activities and facts to guide my recommendations, and I did not speculate on improbable future  
23 outcomes to set depreciation rates. Intervenors Cal Advocates and TURN present proposals that  
24 recommend a reduction in the Company’s proposed depreciation expense. Intervenor EDF does  
25 not provide any quantifiable depreciation rates and parameters. Given that two GRC cycles have  
26 held the Company’s rates constant a change, or reset, is in order in this GRC.

27           This concludes my prepared rebuttal testimony.

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<sup>70</sup> Ex. SDG&E-01 (Folkmann) at BAF-18 – BAF-19.

<sup>71</sup> Ex. CA-17 (Ayanruoh) at 15.

<sup>72</sup> Ex. TURN-12 (Garrett) at 52.

**APPENDIX A**  
**GLOSSARY OF TERMS**

<b>ACRONYM</b>	<b>DEFINITION</b>
AR15	FERC Accounting Release 15
Cal Advocates	Public Advocates Office of the California Public Utilities Commission
Commission	California Public Utilities Commission
Company	San Diego Gas & Electric Company
CPUC	California Public Utilities Commission
D.	Decision
DIMP	Distribution Integrity Management Program
EDF	Environmental Defense Fund
EV	Electric Vehicle
IMP	Integrity Management Programs
OH	Overhead
PG&E	Pacific Gas & Electric Company
PHMSA	Pipeline and Hazardous Materials Safety Administration
SCE	Southern California Edison
SCADA	Supervisory Control and Data Acquisition
SDG&E	San Diego Gas & Electric Company
SMEs	Subject Matter Experts
SOYD	Sum of the Years Digits
SRPL	Sunrise Power Link
TIMP	Transmission Integrity Management Program
TURN	The Utility Reform Network