

PG&E HEARING EXHIBIT PGE-06

A.20-04-023

PG&E'S SECURITIZATION 2020

Chapter 6 Customer Credit Mechanism & Investment Returns
(David Thomason; Greg Allen)
Exhibit 6.1 Term Sheet Customer Credit Trust

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 6

CUSTOMER CREDIT MECHANISM

AND INVESTMENT RETURNS

WITNESSES: D. THOMASON; G. ALLEN

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
CUSTOMER CREDIT MECHANISM
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TABLE OF CONTENTS

A. Introduction.....	6-1
B. Customer Credit Mechanism (D. Thomason)	6-1
1. Overview of the Customer Credit	6-1
2. Customer Credit Trust.....	6-2
3. The Customer Credit is Designed to Provide Rate Neutrality	6-14
4. Structure of the Customer Credit	6-15
5. Tracking and Presenting the Customer Credit	6-17
6. Preservation of Trust Assets for Customer Credit.....	6-17
7. Benefits to Customers.....	6-18
8. Payment of the Customer Credit.....	6-20
9. Conclusion	6-20
C. Investment Returns (G. Allen)	6-20
1. Professional Background	6-20
2. Summary of Analysis on Expected Value and Rate of Return	6-21
3. Monte Carlo Simulation.....	6-22
4. Quantitative Assumptions	6-23
a. Cash Flows.....	6-23
b. Investment Guidelines	6-24
c. Capital Market Assumptions	6-26
d. Taxes.....	6-27
5. Results	6-28
6. Historical Context.....	6-30
7. Effect of COVID-19 On Underlying Analytical Assumptions.....	6-34

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
CUSTOMER CREDIT MECHANISM
AND INVESTMENT RETURNS

TABLE OF CONTENTS
(CONTINUED)

8. Conclusion 6-35
Exhibit 6.1 Term Sheet for Customer Credit Trust.....6-Exh6.1-1

1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **CHAPTER 6**
3 **CUSTOMER CREDIT MECHANISM**
4 **AND INVESTMENT RETURNS**
5 **WITNESSES: D. THOMASON; G. ALLEN**

6 **A. Introduction**

7 This chapter proceeds in two parts. The first, sponsored by David
8 Thomason, describes the manner in which Pacific Gas and Electric Company
9 (PG&E) proposes to provide a credit to customers (the Customer Credit) that is
10 projected to equal the Fixed Recovery Charges (FRC) associated with the
11 Recovery Bonds if the Securitization proposal is approved by the California
12 Public Utilities Commission (CPUC or Commission). The second, sponsored by
13 Greg Allen, analyzes the proposed investment portfolio and concludes that it is
14 reasonable to expect that, based on the distribution of potential outcomes, the
15 Customer Credit Trust will fully reimburse customers for the FRCs over the
16 course of the 30-year investment horizon, and will end with a positive balance.

17 **B. Customer Credit Mechanism (D. Thomason)**

18 **1. Overview of the Customer Credit**

19 Under the Securitization transaction, customers who pay the FRCs
20 would receive an equal amount of Customer Credits. PG&E would fund the
21 Customer Credit with distributions from an account held by a grantor trust
22 (the Customer Credit Trust or Trust) managed by a majority-independent
23 committee.

24 PG&E proposes to fund the Customer Credit Trust starting in 2021 with
25 an initial contribution of \$1.8 billion (the Initial Shareholder Contribution). In
26 later years, PG&E would fund additional contributions (the Additional
27 Shareholder Contributions) to the Customer Credit Trust of up to
28 \$7.59 billion (the Cap) based on a formula to calculate the incremental cash
29 generated from reducing PG&E's taxes through applying shareholder-owned
30 tax deductions or net operating losses (Shareholder Tax Benefits). The
31 Shareholder Tax Benefits primarily arise from payments made by PG&E's
32 shareholders related to wildfire claim settlements and contributions to the
33 Go-Forward Wildfire Fund described later in this chapter. The Customer

1 Credit Trust's assets will also be invested and the investment returns net of
2 fees, expenses, and computed tax liability or benefit (Customer Credit Trust
3 Returns) shall be held in the Customer Credit Trust. Other than with respect
4 to the Initial Shareholder Contribution, the Additional Shareholder
5 Contribution, and the Customer Credit Trust Returns, PG&E will not be
6 obligated to make any contributions to the Customer Credit Trust.

7 PG&E forecasts and expects that the Initial Shareholder Contribution,
8 the Additional Shareholder Contributions, and the Customer Credit Trust
9 Returns will be sufficient for the Customer Credit Trust to fund Customer
10 Credits that equal the FRCs, such that the net cost to customers each year
11 and over the life of the Recovery Bonds will be zero. If assets in the
12 Customer Credit Trust are insufficient to fund a Customer Credit equal to the
13 FRCs for a period of time, the future Customer Credit Trust balance will first
14 be used to make up any previous shortfalls in Customer Credits. In addition,
15 once the Recovery Bonds are repaid in full and the FRCs cease, the
16 Customer Credit Trust will be terminated and the assets liquidated.
17 Customers will receive 25 percent of any funds remaining in the Customer
18 Credit Trust after payment of Trust expenses, including computed taxes.

19 As discussed in part 7 below, customers will obtain several benefits from
20 the proposed transaction. These benefits include PG&E's waiver of the right
21 to seek recovery of certain just and reasonable wildfire claims costs;
22 PG&E's waiver of the right to seek recovery of other wildfire costs in excess
23 of the customer harm threshold without providing any Customer Credit; an
24 acceleration of PG&E's path to an investment-grade issuer credit rating and
25 associated reduction in its cost of debt; and a sharing of any surplus in the
26 Customer Credit Trust.

27 **2. Customer Credit Trust**

28 A term sheet for the proposed Customer Credit Trust is attached to this
29 testimony as Exhibit 6.1. As reflected in the term sheet, PG&E would
30 establish the Customer Credit Trust in the form of a grantor trust under a
31 trust agreement (the Trust Agreement). The key elements of the proposed
32 Customer Credit Trust can be summarized as follows.

33 First, the Customer Credit Trust will have a limited purpose, namely, to
34 hold and preserve the Trust's assets (the Trust Corpus), and manage the

1 investment thereof and of the Customer Credit Trust Returns, all in order to
2 fund the Customer Credit. The Customer Credit Trust thus will not function
3 as a “business trust” with authority to carry out general business activities.
4 PG&E expects that, as a consequence, the Customer Credit Trust will not
5 be eligible to file for bankruptcy protection.

6 Second, and consistent with its limited purpose, the Customer Credit
7 Trust will be authorized to make interim distributions to PG&E only as
8 specified in the Trust Agreement. Specifically, interim distributions may be
9 made only to reimburse PG&E for: (i) the Customer Credits; (ii) computed
10 tax liabilities with respect to Customer Credit Trust Returns as calculated in
11 accordance with the terms set forth in the Trust term sheet in Exhibit 6.1;
12 and (iii) administrative expenses of the Customer Credit Trust (estimated to
13 be \$500,000 per year plus investment advisor fees deducted from
14 investment returns). PG&E cannot look to the Trust Corpus for any other
15 purposes under the proposed Trust Agreement, including to satisfy the
16 claims of PG&E’s creditors.

17 Third, the Customer Credit Trust will be managed by a committee (the
18 Committee) with five members, at least three of whom will be independent of
19 PG&E. Members of the Committee would be nominated by PG&E
20 management and confirmed by PG&E’s board of directors. No more than
21 two of the members may be employees, officers, agents or otherwise
22 affiliated with PG&E except with respect to their service as members on the
23 Committee. The nominations of independent members will be confirmed by
24 the Commission as well as PG&E’s board of directors. This governance
25 structure is similar to that of nuclear de-commissioning trusts (NDTs) that
26 have successfully operated under Commission oversight for several
27 decades.

28 The Committee will have authority to amend the Trust Agreement by
29 majority vote with the exception of amendments to “Fundamental
30 Provisions.” Any proposed amendments to Fundamental Provisions must
31 first be approved by a super-majority of four members that must include all
32 three independent members. Upon securing such approval, PG&E will
33 submit the proposed amendment to the Commission for review and

1 approval. The Commission must approve any amendment to the
2 Fundamental Provisions for that amendment to become effective.

3 Fundamental Provisions include those provisions of the Trust
4 Agreement that set forth: the purpose of the Customer Credit Trust;
5 Committee size and composition; Committee action by majority decision;
6 interim distributions; amendments of the Trust Agreement (including the
7 scope of the Fundamental Provisions); termination of the Trust; customer
8 allocation of distributions upon termination of the Trust; and transferability of
9 PG&E's interest in the Trust. Finally, PG&E anticipates that the Customer
10 Credit Trust will be treated as a grantor trust for purposes of
11 Sections 671-679 of the Internal Revenue Code of 1986, as amended, and
12 therefore disregarded as an entity separate from PG&E for federal income
13 tax and California franchise and income tax purposes. Contributions to, and
14 withdrawals from, the Customer Credit Trust are expected to be non-taxable
15 events for both the Customer Credit Trust and PG&E. However, the Trust
16 will make quarterly distributions, or receive quarterly contributions in an
17 amount equal to the estimated computed tax liability or tax benefit,
18 respectively, in respect of taxable income or loss generated by the
19 investment of Trust assets relating to that quarter, calculated using the
20 highest combined federal and California state tax rate applicable to
21 "sub-chapter C" corporations.

22 PG&E will seek Commission approval for the proposed structure of the
23 Customer Credit Trust as part of its application for the Financing Order.
24 Hence, as part of its application, PG&E will seek Commission approval of
25 the: (1) Trust Agreement; (2) initial three independent members of the
26 Committee; (3) proposed compensation of Committee members; and
27 (4) investment policies and procedures. PG&E will request that the
28 Commission-approved Financing Order expressly incorporate the limitations
29 on the use of and access to the funds in the Customer Credit Trust. As
30 noted in the Application, PG&E currently anticipates submitting this filing
31 120 days before the anticipated Commission decision.

32 Shareholder Tax Benefits and the Cap

33 PG&E will fund the Customer Credit Trust with the Initial Shareholder
34 Contribution of \$1.8 billion in 2021. In later years, as PG&E generates

1 taxable income, PG&E will use cash that becomes available by reason of
2 Shareholder Tax Benefits to make Additional Shareholder Contributions.

3 PG&E agrees to make Additional Shareholder Contributions to the
4 Customer Credit Trust up to the Cap by applying an amount of estimated
5 total Shareholder Tax Benefits derived primarily from certain wildfire-related
6 payments. PG&E prepared this estimate in February 2020 in connection
7 with the CPUC proceeding considering PG&E's Plan of Reorganization
8 (Investigation (I.) 19-09-016).¹ This estimate is set out in Table 6-1,
9 lines 1-13.

¹ PG&E provided the estimate on a confidential basis to parties in the Commission proceeding to review PG&E's Plan (I.19-09-016). See PG&E's Second Omnibus Supplemental Data Response, Attachment PlanOfReorganizationOII-2019_DR_MISC_Atch01CPUC financial package 2.18.20_Updated_Confidential.xlsx, Tab 12 (served Feb. 19, 2020 in I.19-09-016).

TABLE 6-1
ESTIMATE OF SHAREHOLDER TAX BENEFITS AND RATEPAYER NOLS
AS OF FEBRUARY 18, 2020
(MILLIONS OF DOLLARS)

Line No.	Estimate of Total Shareholder Tax Benefits	2020E Federal	2020E State	Total
1				
2	Wildfire Claims Settlements	(\$25,500)	(\$25,500)	
3	Less: Initial Wildfire Fund Contribution ¹	(\$320)	(\$4,800)	
4	Less: Ongoing Wildfire Fund Contribution	(\$192)	(\$192)	
5	Plus: Insurance Proceeds	\$2,200	\$2,200	
6	Total Wildfire Related Tax Deductions Created	(\$23,812)	(\$28,292)	
7				
8	Existing Shareholder Deductions	\$423	\$0	
9	Plus: Wildfire Related Deductions Created	\$23,812	\$28,292	
10	Total Shareholder Deductions	\$24,235	\$28,292	
11				
12	(x) Applicable Tax Rate	21.00%	8.84%	
13	Customer Credit Trust CAP	\$5,089	\$2,501	\$7,590
14				
15				
16	Estimate of Ratepayer NOLs			
17		Pre-2020 Federal	Pre-2020 State	Total
18	NOL carryforward at emergence, through 2018	\$3,557	\$0	
19	NOL carryforward at emergence, 2019	\$1,904	\$1,911	
20	Total Ratepayer NOLs	\$5,462	\$1,911	
21				
22	(x) Applicable Tax Rate	21.00%	8.84%	
23	Total Tax Deductions Savings	\$1,147	\$169	\$1,316

¹The \$4.8B deduction for the state contribution to the AB1054 Wildfire Fund is assumed to occur in 2020. The full value of the deduction is counted towards the cap regardless of whether the deduction is taken immediately or amortized.

1 The cash for these Additional Shareholder Contributions would come
2 from the application of deductions or net operating loss (NOL) carryforwards
3 that reduce federal and state taxable income, and therefore federal income
4 tax and state franchise tax payments PG&E is required to make in future
5 taxable years. Under standard rate setting practices, customers pay a tax
6 gross-up in rates to compensate electrical corporations for the tax liabilities
7 associated with providing their utility service. When PG&E applies
8 shareholder-owned tax deductions and NOLs to reduce its taxable income,
9 PG&E is able to retain incremental cash.

10 Table 6-1 above sets forth the maximum amount of cash that may be
11 contributed from these Shareholder Tax Benefits at \$7.59 billion, i.e., the
12 Cap (see Table 6-1, line 13). The Cap is equal to the total cash tax savings
13 estimated as of February 18, 2020 resulting from the application of

1 (i) \$23.812 billion in federal deductions or NOLs, and \$28.292 billion in state
2 deductions or NOLs, for wildfire-related payments (lines 2-4) as reduced by
3 insurance proceeds (line 5) plus (ii) \$423 million in pre-existing shareholder
4 federal NOLs unrelated to the wildfire settlements or costs that are being
5 contributed by the shareholders to help fund the Customer Credit Trust (line
6 8) (together with the deductions in line 6, the Shareholder Deductions). The
7 total of these federal and state Shareholder Deductions was estimated to be
8 worth \$7.59 billion in cash (line 13) using a 21 percent federal and
9 8.84 percent state tax rate.²

10 A component of the Cap is the tax benefits arising from the Wildfire
11 Claims Settlements set forth on line 2 of Table 6-1 in the amount of
12 \$25.5 billion. Included in that amount is the value of the common stock of
13 reorganized PG&E Corporation contributed to the Fire Victim Trust, which at
14 Fire Victim Equity Value (as defined in the Plan) is \$6.75 billion. On July 1,
15 2020, in connection with consummating the Plan, PG&E contributed
16 22.19 percent of the common stock of PG&E Corporation to the Fire Victim
17 Trust. The ultimate amount of that portion of the deduction in line 2 will be
18 the fair market value of the stock either as of the date of emergence (July 1,
19 2020) or as of the date or dates of disposition by the Fire Victim Trust.
20 PG&E has until April of 2021 to elect whether to treat the contribution of
21 common stock to the Fire Victim Trust as a qualified settlement trust (QSF)
22 for tax purposes and value the deduction as of emergence on July 1, 2020,
23 or as a grantor trust for tax purposes and value the deduction as of the
24 subsequent date(s) of disposition by the Fire Victim Trust (which will result in
25 a larger or smaller deduction when compared to a QSF election depending
26 on whether the stock price is higher or lower in the future as compared to
27 the price on July 1, 2020).³ There is therefore uncertainty as to the amount

2 The impact of the state deduction for federal tax purposes is ignored for this calculation—this calculation is purely formulaic in nature.

3 The deduction for the contribution of the stock to the Fire Victim Trust using a grantor trust election will not exceed \$6.75 billion for purposes of calculating Shareholder Deductions, Shareholder Tax Benefits, and Additional Shareholder Contributions. A deduction less than the value of the stock at July 1, 2020 is unlikely since PG&E can limit the downside by treating the Trust as a QSF if the stock price decreases below the price on July 1, 2020.

1 of that portion of the deduction shown on line 2 of Table 6-1. PG&E has
2 decided to address this uncertainty by including additional deductions under
3 line 3 of Table 6-1 to provide sufficient available deductions such that
4 assuming sufficient taxable income and assuming the tax rates in line 12 of
5 Table 6-1, the deductions (or NOLS) would generate \$7.59 billion in
6 Additional Shareholder Contributions. This change only reduces the risk of
7 insufficient deductions (or NOLs). It does not change any other factor that
8 impacts whether the actual amount of Additional Shareholder Deductions
9 will be \$7.59 billion.

10 In the event PG&E does not realize the full \$6.75 billion of deduction for
11 the common stock contributed to the Fire Victim Trust included on line 2 of
12 Table 6-1, PG&E would add additional amounts in line 3 under the Federal
13 column in Table 6-1 which would come from deductions resulting from the
14 \$4.8 billion Initial Wildfire Fund Contribution for federal taxes. The initial
15 contribution of \$4.8 billion will be amortized over fifteen years, meaning that
16 PG&E will deduct \$320 million each year from 2020 through 2034 from its
17 federal taxes. The first of the 15 annual deductions of \$320 million in 2020
18 is shown in line 3 of Table 6-1. Additional deductions in years 2021 through
19 2034 would be included as necessary to make up for any reduction in
20 deductions in line 2 of Table 6-1 related to the stock contributed to the Fire
21 Victim Trust.

22 In order to make Additional Shareholder Contributions, the application of
23 the Shareholder Deductions set forth in Table 6-1 must generate
24 incremental after-tax cash to PG&E. Although PG&E had estimated these
25 Shareholder Deductions occurring in 2020, they will not generate
26 incremental cash (i.e., Shareholder Tax Benefits) that can fund Additional
27 Shareholder Contributions until later years. That is because, before
28 agreeing to make the wildfire-related payments, PG&E's business plan
29 projected that taxable income for 2020 would be zero as a result of the
30 application of certain preexisting NOLs—set forth on lines 18 and 19 in
31 Table 6-1—from deductions in prior years that were carried forward as

1 NOLs (Ratepayer NOLs).⁴ In its business plan, PG&E thus assumed that
2 any potential wildfire-related payments would not generate any incremental
3 after-tax cash to PG&E.

4 Under applicable tax rules, however, PG&E must apply the current year
5 portion of Shareholder Deductions on its current-year tax returns before
6 applying any Ratepayer NOL carryforwards. In the proposed methodology
7 described below, PG&E will begin applying the Ratepayer NOLs first and
8 expects those NOLs to eliminate all of its taxable income until 2024, when
9 the first Additional Shareholder Contribution is projected to be made. To
10 fund the Customer Credit Trust in the period before Additional Shareholder
11 Contributions are made, PG&E will make the \$1.8 billion Initial Shareholder
12 Contribution in 2021.

13 Formula For Calculating Additional Shareholder Contributions

14 Under the proposed transaction, PG&E would apply a multi-step formula
15 to calculate Additional Shareholder Contributions to the Customer Credit
16 Trust in any given year. To apply the formula, PG&E will assume that
17 Ratepayer NOLs (Table 6-1, line 20) are applied to reduce taxable income
18 before any Shareholder Deductions. When Ratepayer NOLs have been
19 exhausted, PG&E will calculate the amount by which the application of the
20 Shareholder Deductions reduces taxable income.⁵

21 PG&E will make this calculation of Additional Shareholder Contributions
22 by first keeping track of the amount of Shareholder Deductions identified in
23 lines 2-4 (adjusted for insurance proceeds on line 5) and line 8 of Table 6-1
24 that are actually taken on PG&E's tax returns in the aggregate, up to the
25 amount of Shareholder Deductions needed to generate \$7.59 billion in
26 Additional Shareholder Contributions using the tax rates in line 12 of Table
27 6-1. In a tax year with positive taxable income, and upon exhausting all
28 Ratepayer NOLs, PG&E will determine the amount by which taxable income

4 The amount of Ratepayer NOLs has changed since the testimony served on April 30, 2020 as a result of finalizing the 2019 tax returns. The expected tax benefit (using the rate on line 22) is \$1.316 billion (see Total Table 6-1, line 23), as compared to \$1.283 billion.

5 This proposed methodology is only for the purpose of calculating the Additional Shareholder Contribution for any year, and does not impact PG&E's actual tax returns or the income or franchise taxes for establishing revenue requirements.

1 that year is reduced by those Shareholder Deductions and multiply that
2 amount by the then-applicable tax rate for the year to determine the amount
3 of the Additional Shareholder Contribution. PG&E then will deduct the
4 amount of Shareholder Deductions applied in the formula from the balance
5 of Shareholder Deductions available in future years. As long as the
6 Recovery Bonds remain outstanding, this calculation will be repeated each
7 year until either the balance of Shareholder Deductions available is zero or
8 the sum of all Additional Shareholder Contributions equals the Cap of
9 \$7.59 billion (projected to occur in 2035).

10 The projection of taxable income, the application of the Ratepayer
11 NOLs, and the application of the Shareholder Deductions and the
12 corresponding Additional Shareholder Contributions to the Customer Credit
13 Trust is set forth in Table 6-2.⁶

⁶ The forecast in Table 6-2 incorporates the CARES Act enacted in March of 2020, which eliminated the 80 percent Cap on carryforward NOLs for federal income tax purposes for tax years beginning before January 1, 2021. Other tax legislation may change the amount and timing of various revenues and deductions on federal tax returns, and may therefore impact the amount and timing of taxable income.

TABLE 6-2
FORECAST UTILIZATION OF SHAREHOLDER TAX BENEFITS
(MILLIONS OF DOLLARS)

Line No.		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1												
2	Federal											
3	Consolidated Forecast Taxable Income	\$ (20,599)	\$ (1,325)	\$ (166)	\$ 1,588	\$ 1,936	\$ 2,109	\$ 2,355	\$ 2,623	\$ 2,913	\$ 3,221	\$ 3,562
4	Ratepayer NOL, Beginning of Year (BOY)	\$ 5,462	\$ 5,462	\$ 5,462	\$ 5,462	\$ 3,874	\$ 1,938	\$ 217	\$ -	\$ -	\$ -	\$ -
5	less: Ratepayer NOLs applied	\$ -	\$ -	\$ -	\$ (1,588)	\$ (1,936)	\$ (1,721)	\$ (217)	\$ -	\$ -	\$ -	\$ -
6	Ratepayer NOL, End of Year (EOY)	\$ 5,462	\$ 5,462	\$ 5,462	\$ 3,874	\$ 1,938	\$ 217	\$ -	\$ -	\$ -	\$ -	\$ -
7	Shareholder Deductions BOY	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 22,568	\$ 20,469	\$ 18,138	\$ 15,562
8	less: Shareholder Deductions Applied	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,667)	\$ (2,098)	\$ (2,331)	\$ (2,577)	\$ (2,849)
9	Shareholder Deductions EOY	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 24,235	\$ 22,568	\$ 20,469	\$ 18,138	\$ 15,562	\$ 12,712
10												
11	State											
12	Consolidated Forecast Taxable Income	\$ (25,868)	\$ (1,679)	\$ (524)	\$ 1,024	\$ 1,357	\$ 1,496	\$ 1,704	\$ 1,933	\$ 2,184	\$ 2,452	\$ 2,909
13	Ratepayer NOL, BOY	\$ 1,911	\$ 1,911	\$ 1,911	\$ 1,911	\$ 887	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14	less: Ratepayer NOLs applied	\$ -	\$ -	\$ -	\$ (1,024)	\$ (887)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15	Ratepayer NOL, EOY	\$ 1,911	\$ 1,911	\$ 1,911	\$ 887	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16	Shareholder Deductions BOY	\$ 28,292	\$ 28,292	\$ 28,292	\$ 28,292	\$ 28,292	\$ 27,822	\$ 26,326	\$ 24,622	\$ 22,688	\$ 20,504	\$ 18,052
17	less: Shareholder Deductions Applied	\$ -	\$ -	\$ -	\$ -	\$ (470)	\$ (1,496)	\$ (1,704)	\$ (1,933)	\$ (2,184)	\$ (2,452)	\$ (2,909)
18	Shareholder Deductions EOY	\$ 28,292	\$ 28,292	\$ 28,292	\$ 28,292	\$ 27,822	\$ 26,326	\$ 24,622	\$ 22,688	\$ 20,504	\$ 18,052	\$ 15,143
19												
20	Additional Contributions to Trust	\$ -	\$ -	\$ -	\$ -	\$ 42	\$ 132	\$ 501	\$ 612	\$ 683	\$ 758	\$ 855
1												
2	Federal											
3	Consolidated Forecast Taxable Income	\$ 3,797	\$ 4,058	\$ 4,335	\$ 4,627	\$ 5,452	\$ 5,754	\$ 6,052	\$ 6,362	\$ 6,687	\$ 7,029	
4	Ratepayer NOL, Beginning of Year (BOY)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
5	less: Ratepayer NOLs applied	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
6	Ratepayer NOL, End of Year (EOY)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7	Shareholder Deductions BOY	\$ 12,712	\$ 9,675	\$ 6,429	\$ 2,961	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	less: Shareholder Deductions Applied	\$ (3,037)	\$ (3,247)	\$ (3,468)	\$ (2,961)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9	Shareholder Deductions EOY	\$ 9,675	\$ 6,429	\$ 2,961	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
10												
11	State											
12	Consolidated Forecast Taxable Income	\$ 3,085	\$ 3,286	\$ 3,498	\$ 3,722	\$ 3,956	\$ 4,184	\$ 4,403	\$ 4,630	\$ 4,869	\$ 5,120	
13	Ratepayer NOL, BOY	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
14	less: Ratepayer NOLs applied	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
15	Ratepayer NOL, EOY	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
16	Shareholder Deductions BOY	\$ 15,143	\$ 12,057	\$ 8,772	\$ 5,274	\$ 1,552	\$ -	\$ -	\$ -	\$ -	\$ -	
17	less: Shareholder Deductions Applied	\$ (3,085)	\$ (3,286)	\$ (3,498)	\$ (3,722)	\$ (1,552)	\$ -	\$ -	\$ -	\$ -	\$ -	
18	Shareholder Deductions EOY	\$ 12,057	\$ 8,772	\$ 5,274	\$ 1,552	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
19												
20	Additional Contributions to Trust	\$ 911	\$ 972	\$ 1,037	\$ 951	\$ 137	\$ -	\$ -	\$ -	\$ -	\$ -	

Shareholder Deductions are forecast to be exhausted by 2035, thus the forecast horizon for this schedule is 2020 - 2040
Forecast deductions may not occur as shown on this schedule due to potential changes in taxable income, tax rates and tax law

1 Lines 3 and 12 show projected federal and state taxable income after
2 the application of any current-year losses. Taxable income is projected to
3 be negative from 2020 through 2022. Beginning in 2023, line 5 shows the
4 application of the Ratepayer NOLs to reduce federal taxable income and line
5 14 shows the application of the Ratepayer NOLs to reduce state taxable
6 income. In 2024, the Ratepayer NOLs are projected to be exhausted for
7 state taxable income, which results in the first application of Shareholder
8 Deductions in line 17 that generates the first Additional Shareholder
9 Contribution in line 20. Similarly, in 2026, the Ratepayer NOLs are
10 exhausted for federal taxable income and, as reflected in line 8, the
11 Shareholder Deductions are then applied to reduce federal taxable income
12 and generate Shareholder Tax Benefits that fund the Additional Shareholder
13 Contribution for 2026. Table 6-2 reflects PG&E's current forecast following

1 emergence from Chapter 11 on July 1, 2020. Table 6-2 also reflects the
2 effect of Assembly Bill (AB) 85, which defers certain state NOLs for 2020,
3 2021, and 2022. Because PG&E forecasts a state taxable loss for 2020-
4 2022, the deferral required by AB 85 does not affect the application of the
5 Ratepayer NOLs in 2020-2022 or subsequent Shareholder Deductions in
6 Table 6-2.

7 Table 6-2 reflects PG&E's forecast of taxable loss or income. It
8 assumes the same tax rates as used to calculate the Cap. PG&E's actual
9 taxable income may vary from the forecast. PG&E will use actual taxable
10 income, not the projections in Table 6-2, in the formula and use the actual
11 tax rate applicable at the time of the formula calculation to determine
12 Additional Shareholder Contributions. If the applicable tax rate in the year of
13 the formula calculation is greater or lesser than the amount that was used in
14 Table 6-2 and to set the Cap in Table 6-1, the Additional Shareholder
15 Contributions for any particular tax year will be larger or smaller than the
16 projections and the Cap may not be reached at all, or it may be reached
17 sooner or later than projected in Table 6-2.

18 The formula for calculating Additional Shareholder Contributions can be
19 summarized by the following steps:

- 20 • Step 1: Taxable income – Ratepayer NOL balance = A. If A > 0,
21 proceed to Step 2.
- 22 • Step 2: B = lesser of A or remaining balance of Shareholder
23 Deductions.
- 24 • Step 3: C = B × applicable state or federal tax rate.
- 25 • Step 4: Additional Shareholder Contribution = C until aggregate Cap
26 reached (or the Recovery Bonds have been repaid).

27 Applying this formula, PG&E would continue making contributions to the
28 Customer Credit Trust until the earliest to occur of: (1) Additional
29 Shareholder Contributions reach \$7.59 billion; (2) Shareholder Deductions
30 have been fully applied; or (3) the Recovery Bonds have been repaid in full
31 and the FRCs have ceased.

32 Timing of Additional Shareholder Contributions to the Customer Credit Trust

33 PG&E can determine its actual taxable income for a given year only
34 after it prepares its federal and state tax returns for that year. In general,

1 PG&E’s federal and California tax returns must be filed in the fourth quarter
 2 of the year that follows the tax year in question. For purposes of applying
 3 the formula, rather than delaying Additional Shareholder Contributions until
 4 after the tax returns are completed, PG&E will estimate its taxable income
 5 for any tax year by April 15th of that tax year. If the formula calculates an
 6 Additional Shareholder Contribution based on the estimated taxable income,
 7 PG&E will make the Additional Shareholder Contribution in four equal
 8 installments. The first quarter contribution will be made at the end of April.
 9 The remaining three contributions will be made at the end of the second,
 10 third, and fourth quarters.

11 This methodology is illustrated in the following example, where “Y1”
 12 indicates a hypothetical year in which Additional Shareholder Contributions
 13 are payable based on estimated taxable income for Y1:

April 15 Y1	Apply formula based on estimated taxable income in Y1. Formula indicates Additional Shareholder Contributions of \$400 million.
End of April Y1	\$100M Additional Shareholder Contribution to Customer Credit Trust
Q2Y1	\$100M Additional Shareholder Contribution to Customer Credit Trust
Q3Y1	\$100M Additional Shareholder Contribution to Customer Credit Trust
Q4Y1	\$100M Additional Shareholder Contribution to Customer Credit Trust

14 When PG&E finalizes its federal and state tax returns the following year,
 15 it will determine its actual taxable income for the prior year and use the
 16 formula to calculate the Additional Shareholder Contribution for that prior
 17 year using actual taxable income. If PG&E over-contributed funds to the
 18 Customer Credit Trust (because, for example, actual taxable income was
 19 lower than estimated), no adjustment will be made and the prior-year
 20 Additional Shareholder Contribution will be counted in determining whether
 21 PG&E has reached the Cap. If PG&E under-contributed to the Customer
 22 Credit Trust in the prior year (because for example, actual taxable income
 23 was higher than forecast), PG&E will contribute the supplemental Additional
 24 Shareholder Contribution to the Customer Credit Trust in the fourth quarter

1 of the year that it files its original tax returns or in quarterly installments the
2 following year (i.e., the year after the original tax returns are filed).

3 **3. The Customer Credit is Designed to Provide Rate Neutrality**

4 PG&E forecasts that the combination of the Initial Shareholder
5 Contribution, the Additional Shareholder Contributions and the Customer
6 Credit Trust Returns will be sufficient to equal or exceed the FRCs over the
7 period the Recovery Bonds are outstanding, thereby providing rate neutrality
8 for customers.

9 This is illustrated by Table 6-3. The annual FRCs reflected in the table
10 are based on a principal amount of securitized Recovery Bonds of
11 \$7.5 billion at an average interest rate of 2.9 percent as described in
12 Chapter 3. The actual interest rate on the Recovery Bonds will be set at the
13 time of pricing and may be less or more than a 2.9 percent average.
14 Table 6-3 shows the balance at the end of the 30-year period going to zero,
15 and shows that under the assumptions underlying Table 6-3 the FRCs in
16 each period are exactly equal to the Customer Credit.

17 Table 6-3 assumes that funds in the Customer Credit Trust generate a
18 constant annual rate of return on investment for simplicity of presentation.⁷
19 The Initial Shareholder Contribution is sufficient to fund the first 5 years of
20 Customer Credits without including any investment returns. As
21 demonstrated by the testimony of Mr. Greg Allen herein, it is reasonable to
22 expect that the rate of return the Trust will earn in the future will equal or
23 exceed the amount needed for the Customer Credit Trust to have sufficient
24 assets to fully fund the Customer Credit throughout the 30-year period.

⁷ As described herein by Greg Allen, the break-even geometric annualized rate of return (accounting for the volatility of returns each year) is 4.04 percent before taxes, which equates to the 2.79 percent arithmetic average annualized after-tax return used in Table 6-3.

**TABLE 6-3
ILLUSTRATIVE SECURITIZATION FIXED RECOVERY CHARGE
AND CUSTOMER CREDIT SCHEDULE
(MILLIONS OF DOLLARS)**

Line No.		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
1	Fixed Recovery Charge (FRC)															
2	Annual Debt Service	\$ 186.4	\$ 299.6	\$ 299.6	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1
3	Servicing & Administrative Fees (PG&E)	\$ 2.9	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8
4	Rating Agency Fees	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2
5	Ongoing Financing Costs ^{1,2}	\$ 0.2	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3
6	Subtotal	\$ 189.7	\$ 303.9	\$ 303.9	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4
7	Collection Lag Gross Up ³	\$ 63.2														
8	Uncollectibles	\$ 0.8	\$ 1.0	\$ 1.0	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3
9	Annual FRC RRQ	\$ 253.7	\$ 304.9	\$ 304.9	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7
10																
11	PG&E Customer Credit															
12	Annual Customer Credit RRQ ⁴	\$ (253.7)	\$ (304.9)	\$ (304.9)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)
13	Servicing & Administrative Fee from SPE	\$ (2.9)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)
14	Uncollectibles	\$ (0.8)	\$ (1.0)	\$ (1.0)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)
15	Trust Funded	\$ (186.8)	\$ (300.1)	\$ (300.1)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)
16	Cash Lag ⁵	\$ (63.2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17																
18	Customer Credit Trust															
19	Customer Credit Trust, BOY	\$ 1,800.0	\$ 1,649.3	\$ 1,391.6	\$ 1,126.5	\$ 805.4	\$ 567.1	\$ 695.9	\$ 940.6	\$ 1,264.3	\$ 1,673.5	\$ 2,193.2	\$ 2,783.4	\$ 3,452.9	\$ 4,207.4	\$ 4,895.3
20	Initial Shareholder Contribution	\$ 1,800.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Additional Contributions	\$ -	\$ -	\$ -	\$ 41.6	\$ 132.2	\$ 500.8	\$ 611.6	\$ 682.6	\$ 757.9	\$ 855.5	\$ 910.6	\$ 972.3	\$ 1,037.5	\$ 950.7	\$ 137.2
22	Customer Credit	\$ (186.8)	\$ (300.1)	\$ (300.1)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)
23	Customer Credit Trust Return ⁶	\$ 36.1	\$ 42.3	\$ 35.1	\$ 26.9	\$ 19.1	\$ 17.6	\$ 22.8	\$ 30.7	\$ 40.9	\$ 53.8	\$ 69.3	\$ 86.8	\$ 106.6	\$ 126.7	\$ 134.7
24	Customer Credit Trust, EOY	\$ 1,649.3	\$ 1,391.6	\$ 1,126.5	\$ 805.4	\$ 567.1	\$ 695.9	\$ 940.6	\$ 1,264.3	\$ 1,673.5	\$ 2,193.2	\$ 2,783.4	\$ 3,452.9	\$ 4,207.4	\$ 4,895.3	\$ 4,777.5
25																
26	Customer Net Bill Impact	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Line No.		2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
1	Fixed Recovery Charge (FRC)															
2	Annual Debt Service	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1	\$ 389.1
3	Servicing & Administrative Fees (PG&E)	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8	\$ 3.8
4	Rating Agency Fees	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2	\$ 0.2
5	Ongoing Financing Costs ^{1,2}	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3
6	Subtotal	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4	\$ 393.4
7	Collection Lag Gross Up ³	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (63.2)
8	Uncollectibles	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.1
9	Annual FRC RRQ	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 394.7	\$ 331.3
10																
11	PG&E Customer Credit															
12	Annual Customer Credit RRQ ⁴	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (394.7)	\$ (331.3)
13	Servicing & Administrative Fee from SPE	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)	\$ (3.8)
14	Uncollectibles	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.1)
15	Trust Funded	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)
16	Cash Lag ⁵	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63.2
17																
18	Customer Credit Trust															
19	Customer Credit Trust, BOY	\$ 4,777.5	\$ 4,517.3	\$ 4,249.7	\$ 3,974.6	\$ 3,691.8	\$ 3,400.9	\$ 3,101.8	\$ 2,794.3	\$ 2,478.1	\$ 2,153.0	\$ 1,818.6	\$ 1,474.9	\$ 1,121.4	\$ 758.0	\$ 384.3
20	Initial Shareholder Contribution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21	Additional Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
22	Customer Credit	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)	\$ (389.6)
23	Customer Credit Trust Return ⁶	\$ 129.4	\$ 122.1	\$ 114.5	\$ 106.7	\$ 98.7	\$ 90.5	\$ 82.1	\$ 73.4	\$ 64.5	\$ 55.3	\$ 45.9	\$ 36.1	\$ 26.2	\$ 15.9	\$ 5.3
24	Customer Credit Trust, EOY	\$ 4,517.3	\$ 4,249.7	\$ 3,974.6	\$ 3,691.8	\$ 3,400.9	\$ 3,101.8	\$ 2,794.3	\$ 2,478.1	\$ 2,153.0	\$ 1,818.6	\$ 1,474.9	\$ 1,121.4	\$ 758.0	\$ 384.3	\$ 0.0
25																
26	Customer Net Bill Impact	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Assumes \$7.5B securitization starts on 4/1/2021, ~17 yr WAL, 2.9%, 0.051% servicing fees, 0.003% rating agency fees, and 0.33% uncollectibles, 8.84% State Tax Rate, 21% Federal Tax Rate
Assumes average after-tax annualized Customer Credit Trust Return is 2.79%

¹Accountant's, Legal, Trustee/Trustee's Counsel, Independent Managers', Printing/Edgarizing and Miscellaneous Fees

²RRQ assumes issuance fees are paid by PG&E. Indicative pricing for upfront fees ranges from \$36M - \$57M

³Collection lag gross up assumes a 45 day accounts receivables lag that must be pre-collected to ensure the SPE can service the debt in 2021, with a corresponding reversal in 2050

⁴The Customer Credit is funded by the Trust plus uncollectibles plus the servicing and administrative fee, which is collected from customers, remitted to the SPE, then paid to PG&E by the SPE, and credited to customers

⁵Assumes the Trust provides a credit equal to the amount PG&E remits to the SPE for the bond debt service plus rating agency and ongoing financing fees, leading to a cash lag analogous to the collection lag, reversed in 2050

⁶This is an average after-tax rate of return less investment advisor fees and an estimated \$500,000 each year in administrative expenses, calculated to result in a zero balance at the end of thirty years

4. Structure of the Customer Credit

The FRC and the Customer Credit will appear on each customer's monthly bill. PG&E will make monthly withdrawals from the Customer Credit Trust to reimburse itself for the Customer Credit.

When PG&E files annual Routine True-Up Mechanism Advice Letters to adjust the FRCs, as discussed in Chapter 3, Transaction Overview (M. Becker), PG&E will also file Tier 1 Advice Letters to adjust the Customer Credit to equal the adjusted FRCs. PG&E will file annual Tier 1 Advice

1 Letters at least 15 days before the last day of February until all principal,
2 interest, and other recovery costs have been paid in full and the FRCs
3 cease. Because these Tier 1 Advice Letters should be ministerial, PG&E
4 proposes that the revised Customer Credits in the annual Tier 1 Advice
5 Letters (assuming timely filing by PG&E with the Commission) go into effect
6 automatically on the following March 1st.

7 If PG&E files an interim Routine True-Up Mechanism Advice Letter to
8 adjust the FRCs, as discussed in Chapter 3, Transaction Overview
9 (M. Becker), PG&E will also file a Tier 1 Advice Letter to adjust the
10 Customer Credit to equal the adjusted FRC. In the case of a semi-annual
11 interim Routine True-Up Mechanism Advice Letter, PG&E will file an interim
12 Tier 1 Advice Letter at least 15 days before August 31st to adjust the
13 Customer Credit, and the revised Customer Credit would go into effect
14 automatically on the following September 1st. In the case of any other
15 interim Routine True-Up Mechanism Advice Letter, PG&E will file an interim
16 Tier 1 Advice Letter at least 15 days before the end of a calendar month,
17 and the revised Customer Credit would be effective automatically on the
18 1st day of the following calendar month. The interim Routine True-Up
19 Mechanism advice letter should be ministerial allowing for the revised
20 Customer Credit to be effective automatically on the dates described herein.

21 As discussed in Chapter 3, Transaction Overview (M. Becker), PG&E
22 may submit Non-Routine True-Up Mechanism Advice Letters to propose
23 revisions to the logic, structure, and components of the cash flow model
24 described in Attachment 1 to the Financing Order. If PG&E does so, it will
25 also file a Tier 1 Advice Letter to adjust the Customer Credit. A non-routine
26 Tier 1 Advice Letter will be filed at least 90 days before the date when the
27 proposed changes will become effective, with the resulting changes effective
28 on the effective date identified in the Tier 1 Advice Letter. PG&E proposes
29 that the Energy Division prepare for the Commission's consideration a
30 resolution that adopts, modifies, or rejects the proposed revisions to the
31 cash flow model. Absent a Commission resolution, PG&E may implement
32 Customer Credit adjustments proposed in a non-routine Tier 1 Advice Letter
33 on the effective date identified in the letter.

1 Finally, each year, PG&E will project the balance of the Customer Credit
2 Trust for the upcoming year. If the projected balance is less than the annual
3 projected FRC charges for the year, after accounting for any credit to
4 customers for the servicing fee or the administration fee paid to PG&E by
5 the Recovery Bond Special Purpose Entity, PG&E would file a Tier 1 Advice
6 Letter to reduce the Customer Credit such that the projected Customer
7 Credit for the following 12 months will equal the projected balance of the
8 Customer Credit Trust at the end of the year. PG&E will seek to file this Tier
9 1 Advice Letter at least 15 days before the end of February, such that the
10 revised Customer Credit will be effective automatically on the first day of the
11 following calendar month.

12 **5. Tracking and Presenting the Customer Credit**

13 As described further in Chapter 8, Ratemaking (B. Smith), PG&E would
14 establish a Fixed Recovery Charge and Credit Balancing Account to record
15 the FRC collected from customers and the Customer Credit provided to
16 customers.

17 PG&E proposes to show the Customer Credit provided to each
18 customer on its bills. Bill presentation for both the FRC and the Customer
19 Credit is addressed in Chapter 9, Rate Proposal (D. Pease).

20 **6. Preservation of Trust Assets for Customer Credit**

21 PG&E believes that the proposed transaction will protect the funds
22 needed to pay the Customer Credit from claims of PG&E's creditors. As
23 explained above, and as set forth in Exhibit 6.1, the Trust Agreement will
24 limit the distribution of amounts held by the Customer Credit Trust to fund
25 the Customer Credit and related expenses of trust administration and
26 computed taxes on Customer Credit Trust Returns. PG&E cannot withdraw
27 funds from the Customer Credit Trust for any other purpose. Further,
28 because the Customer Credit Trust would be established as a grantor trust
29 with a limited purpose, as long as it does not conduct business, it should not
30 be eligible to file for bankruptcy.

31 PG&E further understands that, in the event of another PG&E
32 bankruptcy, the Commission would continue to possess the authority to
33 ensure that PG&E can continue to satisfy its obligations to fund the

1 Customer Credit. For example, it would still be necessary in a bankruptcy to
2 secure Commission approval for any proposed transaction outside the
3 ordinary course of business. The Commission could condition any such
4 approval on ensuring continuing funding of the Customer Credit. Similarly, a
5 bankruptcy plan that proposed any changes to PG&E rates—including its
6 commitment to fund the Customer Credit—would require Commission
7 approval. Additionally, incorporating approval of the Customer Credit Trust
8 and limits on use of the Trust Corpus into the Financing Order issued by the
9 Commission provides an additional measure of protection of the Trust
10 Corpus from PG&E’s creditors or shareholders.

11 In short, customers can have reasonable assurance that PG&E will
12 continue to meet its obligations to fund the Customer Credit even if there is
13 another bankruptcy.

14 **7. Benefits to Customers**

15 Ratepayers will receive several benefits from the proposed
16 Securitization.

17 First, in submitting this Application PG&E has agreed to waive any right
18 to recover any amounts paid in satisfaction of the Fire Claims as defined in
19 PG&E’s Chapter 11 Plan⁸ even if the Commission does not authorize the
20 proposed Securitization pursuant to SB 901. PG&E further stipulates that,
21 for purposes of this proceeding, all costs arising from the Fire Claims should
22 be deemed “disallowed” and reviewed for cost recovery and eligibility for
23 securitization solely pursuant to the Stress Test Methodology adopted by the
24 Commission to implement Section 451.2(b).⁹ PG&E respectfully submits
25 that these concessions confer significant value on ratepayers because
26 PG&E incurred substantial wildfire costs that, absent the waiver, likely would
27 have been recoverable from ratepayers.

28 Second, in addition to waiving any right to recover amounts paid for Fire
29 Claims, PG&E is waiving its right to recover other wildfire costs and

⁸ Debtors’ and Shareholder Proponents’ Joint Chapter 11 Plan of Reorganization Dated June 19, 2020 (PG&E’s Plan), *In re PG&E Corporation*, No. 19-30088 (Bankr. N.D. Cal. June 19, 2020), ECF No. 8048, at §§ 1.78, 1.86, and Exhibit A (defining and describing Fire Claims) and 1.6, 1.172, 4.25(a) (describing settlement amounts).

⁹ Pub. Util. Code § 451.1(b).

1 expenses that are in excess of the customer harm threshold (CHT). By this
2 Application, for example, PG&E seeks to establish that it has incurred at
3 least \$7.5 billion of 2017 wildfire costs and expenses that exceed the CHT.
4 Under Section 451.2(b) of the Public Utilities Code, PG&E would be entitled
5 to recover all of these costs from ratepayers without a credit. PG&E will
6 forego this recovery and thereby confer additional value on ratepayers
7 beyond what is required by law.

8 Third, as described in the Chapter 5, Stress Test Methodology
9 (J. Sauvage), the proposed Securitization provides ratepayers with the
10 benefit of PG&E accelerating its path back to an investment-grade issuer
11 credit rating for its unsecured debt. The transaction will improve PG&E's
12 borrowing capacity, reduce its borrowing costs, and improve its cash flow.
13 Ratepayers benefit from these improvements in PG&E's financial health and
14 rating through lower future debt costs that are recovered in rates. Following
15 the release of credit ratings and PG&E's issuance of debt in connection with
16 its emergence from Chapter 11, Citigroup Global Markets has quantified the
17 monetary value of these benefits as described in Chapter 5, Section F.3.

18 Finally, as explained in Chapter 1, Introduction (D. Thomason), PG&E
19 proposes to share 25 percent of any amount remaining in the Customer
20 Credit Trust at its termination and after paying Trust expenses, including
21 taxes, once the Recovery Bonds have been repaid in full and the FRCs
22 have ceased.¹⁰ This aligns the interests of shareholders and ratepayers in
23 maximizing the Customer Credit Trust earnings and value. PG&E's
24 agreement to share the Customer Credit Trust surplus with ratepayers is, in
25 substance, an agreement to compensate ratepayers with shareholder
26 assets. That is because the Customer Credit Trust will be funded entirely
27 with shareholder contributions, as described above. PG&E's agreement to
28 share the Customer Credit Trust surplus with ratepayers thus represents an
29 additional way in which ratepayers will be compensated for assuming some
30 risk associated with the FRCs.

¹⁰ If an adequate surplus exists in the Customer Credit Trust prior to termination that ensures full funding of the Customer Credit, the Commission could order an earlier distribution.

1 **8. Payment of the Customer Credit**

2 As described above, funding for the Customer Credit would come from
3 the Customer Credit Trust. PG&E’s failure to provide the Customer Credit
4 would not:

- 5 • Change the obligations of consumers to pay FRCs; or
- 6 • Allow the CPUC to (i) adjust, amend or modify the FRCs, recovery
7 costs, recovery property or the Recovery Bonds authorized by the
8 Financing Order; (ii) rescind, alter or amend the Financing Order;
9 (iii) revalue or revise for ratemaking purposes the recovery costs or the
10 costs of recovering, financing, or refinancing the recovery costs; or
11 (iv) in any way reduce or impair the value of recovery property either
12 directly or indirectly by taking FRCs into account when setting other
13 rates for PG&E.

14 **9. Conclusion**

15 PG&E requests that the CPUC adopt PG&E’s proposed mechanism to
16 implement the Customer Credit.

17 **C. Investment Returns (G. Allen)**

18 **1. Professional Background**

19 My name is Gregory C. Allen. I am the Chief Executive Officer and
20 Chief Research Officer (CRO) at the investment consulting firm Callan LLC,
21 where I have worked since 1988. In my current capacity, I oversee all areas
22 of the firm’s research and management, including investment research and
23 capital markets research. Callan LLC is one of the largest independently
24 owned investment consulting firms in the United States. Headquartered in
25 San Francisco, with offices across the country, Callan provides research,
26 education, decision support, and investment advice to over 400 institutional
27 investors, responsible for \$2.5 trillion in total assets. I have specialized
28 throughout my career in working with NDTs including those operated by the
29 California utilities, and have provided testimony as an expert witness before
30 the CPUC on this subject on multiple occasions. In two prior assignments I
31 opined before the Commission on: (1) the feasibility and appropriateness of
32 allowing the use of new asset classes; and (2) the potential impacts (reward
33 and risk) of increasing the allowable public equity exposure for certain

1 qualified trusts. Both cases resulted in the Commission expanding the
2 allowable investments for California NDTs. Additional information regarding
3 my background and qualifications are contained in Appendix A to the
4 Application.

5 **2. Summary of Analysis on Expected Value and Rate of Return**

6 Using a Monte Carlo simulation model and reasonable assumptions, I
7 estimated the full range of potential financial outcomes for the Customer
8 Credit Trust. I used this range of potential outcomes to calculate an
9 “expected value” for the Customer Credit Trust at the conclusion of the
10 30-year Bond term. Expected value is a term used in finance to describe
11 the most likely value of an investment when there is uncertainty regarding its
12 outcome (usually used to determine its price). Given the assumptions used
13 in the analysis, the expected value of the Customer Credit Trust at the
14 conclusion of the Bond term was roughly \$4.414 billion in nominal (2050)
15 dollars. In Net Present Value (NPV) terms (using PG&E’s proposed
16 authorized return on rate base of 7.34 percent as the discount rate),¹¹ the
17 expected value at termination was roughly \$535 million. Across the full
18 range of 2,000 simulations generated by the model, the Customer Credit
19 Trust had a positive terminal balance in roughly 84 percent of the outcomes.
20 In the outcomes where the Customer Credit Trust was exhausted before the
21 end of the 30-year Bond term, it happened only in the later years with the
22 Customer Credit Trust maintaining adequate funding to provide the
23 Customer Credit through at least 2047 in 95 percent of the cases.

24 The threshold breakeven pre-tax 30-year annualized geometric return
25 for the Customer Credit Trust across the range of simulations was
26 approximately 4.04 percent. An analysis using historical returns going back
27 to 1926 (discussed below) revealed that there was not a single 30-year
28 period since 1926 where the investment portfolio assumed for the Customer
29 Credit Trust in the analysis would have generated an annualized return

¹¹ PG&E recently submitted a Tier 2 Advice Letter as directed by the Commission in Decision (D.) 20-05-053 to update its cost of debt from 5.16 percent to 4.17 percent, thereby implementing the interest cost savings resulting from the Plan. See D.20-05-053 at 122 (Ordering Paragraph 6); Advice Letter 4275-G/5887-E (July 22, 2020).

1 below 7.49 percent—well above the 4.04 percent threshold. Based on these
2 and other metrics, the specifics of which are discussed further in the
3 following testimony, I believe it is reasonable to expect that the funds in the
4 Customer Credit Trust can earn a sufficient return on investment in most
5 cases such that the balance of the Customer Credit Trust will be equal to or
6 greater than the FRCs in each year and over the life of the FRCs.

7 **3. Monte Carlo Simulation**

8 Monte Carlo is a computational technique that, in this case, does
9 iterative simulations that track the behavior of an investment portfolio over
10 time in a distribution of hypothetical markets. Quantifying the expected
11 value of the Customer Credit Trust is well suited to Monte Carlo simulations.
12 It is particularly appropriate when the investment horizon is long, such as the
13 30-year expected life of the FRCs and the Customer Credit Trust. Variants
14 of this model have been used over the last three decades with a wide range
15 of institutional investors—including pension funds, foundations,
16 endowments, and target date funds—with the goal of helping their
17 stakeholders understand the expected value of their portfolios and make
18 investment strategy decisions to meet future funding obligations. The
19 Commission has previously relied on this type of analysis conducted by
20 Callan in the context of reevaluating the asset allocation guidelines for
21 NDTs.¹²

22 The rate of return for investments in the Customer Credit Trust, and
23 hence its ability to meet its obligations, will depend on its investment policy
24 as well as the inflows and outflows of cash over time combined with the
25 behavior of the capital markets over the life of the Customer Credit Trust.
26 The Monte Carlo analysis I employed generates 2,000 different trials. Each
27 trial simulates a potential market outcome (e.g., rates of return for particular
28 asset classes over time) based on the possible behavior of inflation, interest
29 rates, equity market returns, currency movements, and other capital market

¹² See D.13-01-039 at 11–21.

1 and economic variables over a 30-year investment period.¹³ Together, the
2 2,000 trials represent a conservative estimate of the full range of potential
3 capital market outcomes for the anticipated investment portfolio of the
4 Customer Credit Trust. I then used those trials to calculate the expected
5 value of the ending balance of the Customer Credit Trust. “Expected value”
6 is a term used in finance to describe the most likely value of an investment
7 when there is uncertainty regarding its outcome (usually used to determine
8 its price).

9 Finally, I designed the Monte Carlo model used in this analysis to handle
10 taxable trusts and thus to track total return, interest income, dividend
11 income, turnover, cost basis, and market value for each asset class. This
12 level of granularity allows the model to simulate after-tax returns that take
13 into account the real world impacts of deferring taxes in low turnover
14 strategies (for example, index funds), and paying computed taxes when
15 assets have to be liquidated to make distributions.

16 **4. Quantitative Assumptions**

17 **a. Cash Flows**

18 As described by David Thomason earlier in this chapter, the
19 Customer Credit Trust will be funded initially with \$1.8 billion, followed
20 by a projected \$7.59 billion in Additional Shareholder Contributions from
21 2024 through 2035.¹⁴

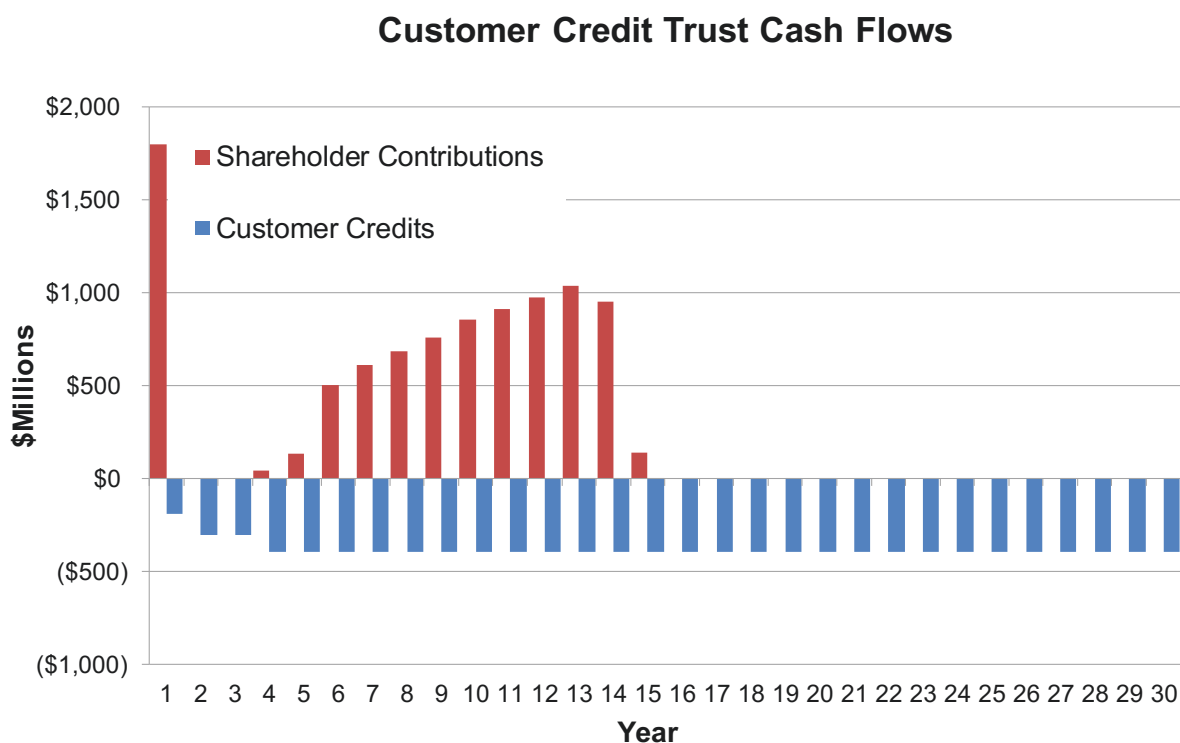
22 My analysis assumes that the Additional Shareholder Contributions
23 to the Customer Credit Trust are made as described in Table 6-2 above
24 and that the FRCs will be in the amounts shown in Table 6-3. The cash
25 flows for the Customer Credit Trust were the same across all 2,000 trials
26 in the Monte Carlo simulation. The analysis assumed low cost passive
27 index implementation with a weighted average annual expense ratio of

13 For example, simulated equity returns in a Monte Carlo model can be specified such that 90 percent of the time the return on U.S. stocks for any given year will fall between 33.8 percent and –20.6 percent, with a midpoint of 7.9 percent. A similar distribution is specified for each of the random variables (e.g., bond return, inflation, etc.).

14 For convenience, the analysis assumed a starting date of January 1, 2021 and an ending date of December 31, 2050. The analysis could have started in April of 2021 and gone through March of 2051. As long as the time period remains 30 years, the specific starting date and ending date of the analysis is immaterial.

1 0.05 percent. Those advisor fees, as well as computed tax liabilities or
 2 tax benefits for investment returns or losses are reflected in the model in
 3 calculating after-tax returns. I also included \$500,000 per year in
 4 administrative expenses of the Customer Credit Trust, which was an
 5 estimate provided by PG&E. Figure 6-1 is a graphical representation of
 6 the inflows and outflows for the Customer Credit Trust used in the
 7 analysis.

**FIGURE 6-1
 CUSTOMER CREDIT TRUST CASH FLOWS**



8 **b. Investment Guidelines**

9 The following are the asset allocation guidelines approved by the
 10 Commission for the operation of the NDTs:

- 11 • Equities may comprise up to 80 percent of the total portfolio value,
 12 with no more than 30 percent of total equity value placed in
 13 non-U.S. equities;

- Fixed income securities below investment grade are allowed so long as the overall combined fixed income portfolio remains at a minimum credit quality of “A”; and
- Up to 50 percent of NDTs assets may be under active management.¹⁵

I understand that PG&E will ask the Commission to approve the same guidelines for the Customer Credit Trust.¹⁶ My analysis therefore applies those guidelines, and uses three asset classes: U.S. Equities; Non-U.S. Equities; and U.S. Fixed-Income. The analysis assumed that each asset class was implemented using a low-cost passive indexed approach.¹⁷ This investment strategy is consistent with the standard approach employed by PG&E and other California utilities in the NDTs described above. The asset allocation for the Trust was assumed to be held constant over the entire life of the Customer Credit Trust, and was rebalanced quarterly to get back to target. In general, for portfolios with 20-year plus investment horizons, higher equity exposure results in better investment outcomes and reduces the risk of any shortfall. In this case, the Customer Credit Trust has a 30-year investment horizon. The Customer Credit Trust also has the advantage that cash outflows are known with relative certainty in advance. This virtually eliminates the risk on the liability side compared with an NDT where liability uncertainty is a significant component of the total risk faced by those trusts. As a result, I used an asset allocation of 80 percent equities and 20 percent

¹⁵ D.13-01-039 at 50-51.

¹⁶ Many large institutional investors (e.g., CalPERS, CalSTRS, etc.) employ alternative asset classes such as private commercial real estate and private equity in their portfolios. The inclusion of these asset classes can improve return and/or reduce risk relative to the simple portfolio assumed in this analysis. It will be up to the Commission to decide whether to allow these types of investments in the Customer Credit Trust, and up to the Investment Committee for the Trust to decide whether to employ them.

¹⁷ Passive indexed investing (used in the management of index funds) is a mechanical approach where the portfolio is built using all of the securities within a certain market segment. Typically the weight of each security is based on its total market value. In equity indices, for example, larger companies have more weight in the index than smaller companies. Indexed investing is generally considered to be very efficient, it is low cost, and it has low annual turnover (making it tax-efficient).

1 fixed income. Non-U.S. Equities comprised 30 percent of the total
2 equities within the asset mix (consistent with the NDT guidelines).

3 **c. Capital Market Assumptions**

4 Tables 6-4 and 6-5 show the capital market assumptions that were
5 used in the analysis. These assumptions represent Callan's standard
6 long-term (30-year) projections. They are developed by Callan's Capital
7 Market Research Group each year and are used in the strategic
8 planning work Callan undertakes with all of its institutional clients. They
9 are long-term, forward-looking projections that take into account current
10 market conditions, but are also strongly grounded in observed history.
11 Because these projections are used with hundreds of different
12 institutional investors representing trillions of dollars in assets, they
13 undergo a robust process of internal and external scrutiny every year.
14 Callan's peer review process challenges every number to ensure that it
15 is individually reasonable and defensible, and that all of the numbers
16 work together coherently as a set to support reasonable long-term
17 investment decisions. As a final check to ensure reasonability, the
18 numbers are compared with projections from a broad range of other
19 market participants including economists, central banks, consulting
20 firms, investment banks and asset managers.

21 The annualized geometric returns shown in Table 6-4 represent the
22 mid-point of the range of potential 30-year return outcomes for each
23 asset class. (In the simulations, 50 percent of the trials will have returns
24 above this level and 50 percent will have returns below this level.) The
25 projected standard deviation describes the range of potential return
26 outcomes in any given year for each asset class. (Two-thirds of the
27 years in any given trial will have returns within one standard deviation of
28 the expected annualized geometric return.) The projected correlation
29 describes the relationship between the returns for each asset class.
30 Numbers close to 1.0 mean that the asset classes are highly correlated,
31 and their return patterns will be similar over time. Generally, the lower
32 the correlation between two asset classes, the better they diversify each
33 other when held together.

**TABLE 6-4
CALLAN LONG-TERM CAPITAL MARKET PROJECTIONS
RETURN AND STANDARD DEVIATION**

Line No.	Asset Class	Proxy Index	30-year Geometric Return	Standard Deviation
1	Broad US Equity	Russell 3000	7.15%	18.10%
2	Non-US Equity	MSCI ACWI ex-US	7.15%	20.50%
3	US Fixed Income	Bloomberg Aggregate	3.60%	3.75%

**TABLE 6-5
CALLAN LONG TERM CAPITAL MARKET PROJECTIONS
CORRELATION**

Line No.	Asset Class	Broad US Equity	Non-US Equity	US Fixed Income
1	Broad US Equity	1.000	0.808	-0.107
2	Non-US Equity	0.808	1.000	-0.120
3	US Fixed Income	-0.107	-0.120	1.000

d. Taxes

The analysis assumed that the Customer Credit Trust was fully taxable at the current highest federal corporate income tax rate of 21 percent and the California franchise tax rate of 8.84 percent. These assumptions result in an assumed combined tax rate of 27.984 percent. I also assumed that the Customer Credit Trust distributes or receives these amounts for the computed tax liability or benefit of the Trust investment gains or losses in the year in which they were incurred. The model tracks bond interest income, dividend income, and realized capital gains and losses associated with sales related to portfolio turnover, rebalancing, and liquidation. This allows the model to simulate after-tax returns that take into account the real world impacts of deferring taxes in low turnover strategies (e.g., index funds), and paying taxes when assets have to be liquidated to make distributions. In years where Additional Shareholder Contributions were made, I assumed that they were netted against required distributions to avoid unnecessary turnover in the Customer Credit Trust. Importantly, the combination of

1 netting distributions against contributions and the use of low turnover
 2 index strategies allows the Customer Credit Trust to achieve significant
 3 deferral of gain realization over time. This results in after-tax returns
 4 that are higher than what would be expected by simply applying the
 5 assumed tax rate to the pre-tax returns.

6 **5. Results**

7 The objective of this analysis is to determine the expected value of the
 8 Customer Credit Trust balance at the end of its 30-year investment horizon.
 9 To the extent that the Customer Credit Trust is exhausted before the end of
 10 the 30-year period, the analysis tracks the total cumulative shortfall or deficit
 11 amount that would not be credited to customers. Importantly, the calculation
 12 of a deficit includes the “grossed-up” tax liability that is created by the
 13 principal component of any shortfall.¹⁸

14 The analysis assumes that the portfolio for the Customer Credit Trust
 15 employs the 80/20 asset allocation shown in Table 6-6.

**TABLE 6-6
 ASSET ALLOCATION MIX**

Line No.	Mix	80/20
1	US Equity	56%
2	Non-US Equity	24%
3	Fixed Income	20%
4	Median Projected Geometric Pre-Tax Return	6.93%
5	Median Projected Geometric After-Tax Return	5.91%
6	Median Projected Standard Deviation	14.16%

16 Out of the 2,000 trials, the median case—i.e. the one that has as many
 17 outcomes that are better and worse—results in a median after-tax geometric
 18 return of 5.91 percent and a surplus balance in the Customer Credit Trust
 19 after 30 years of approximately \$3.276 billion. The median case, however,
 20 does not equate to the expected value of the potential investment. To

¹⁸ During a period in which the Customer Credit is less than the FRC, any portion of the FRC that exceeds the Customer Credit and is in excess of tax deductions related to interest payments on the securitized Bonds (i.e., principal) is taxable income. Thus it is assumed that customers will reimburse PG&E for any computed tax liability created by the principal component of shortfalls. The grossed-up tax rate used on the principal component of shortfalls in the analysis was 38.9 percent.

determine the expected value, each of the 2,000 cases is summed, positive and negative, on a risk-weighted or probability-adjusted basis.¹⁹

Table 6-7 shows the range of simulation results of the balance of the Customer Credit Trust in nominal and NPV terms at the end of its projected 30-year life. The NPV column is calculated using PG&E's proposed, post-emergence, authorized return on rate base of 7.34 percent as the discount rate.

**TABLE 6-7
RANGE OF SURPLUS OUTCOMES AND YEAR OF FIRST SHORTFALL
(MILLIONS OF DOLLARS)**

Line No.	Range of Surplus (Deficit) Including Principal Tax Gross-Up			
	Percentiles	Nominal Surplus (Deficit)	NPV Surplus (Deficit)	First Shortfall Year
1	5%	\$16,639	\$2,023	NA
2	10%	\$12,642	\$1,537	NA
3	15%	\$9,874	\$1,200	NA
4	20%	\$8,176	\$994	NA
5	25%	\$7,005	\$852	NA
6	30%	\$6,034	\$734	NA
7	35%	\$5,180	\$630	NA
8	40%	\$4,468	\$543	NA
9	45%	\$3,860	\$469	NA
10	50%	\$3,276	\$398	NA
11	55%	\$2,785	\$339	NA
12	60%	\$2,292	\$279	NA
13	65%	\$1,809	\$220	NA
14	70%	\$1,372	\$167	NA
15	75%	\$914	\$111	NA
16	80%	\$421	\$51	NA
17	85%	(\$106)	(\$13)	2050
18	90%	(\$851)	(\$109)	2049
19	95%	(\$1,928)	(\$265)	2047
20	Expected Value (EV):	\$4,414	\$535	
21	EV Positive Outcomes:	\$4,566	\$555	
22	EV Negative Outcomes:	(\$152)	(\$20)	
23	Breakeven Pre-Tax Return:	4.04%	4.04%	
24	Probability of Surplus:	84%	84%	

¹⁹ This calculation equally weights all of the outcomes from 95th percentile (best case) to 5th percentile (worst-case) to come up with a weighted-average value or expected value for the Customer Credit Trust.

1 As Table 6-7 illustrates, the majority of the outcomes (84 percent of the
2 simulations) result in a surplus for the Customer Credit Trust at the end of
3 30 years. The median surplus is projected to have a nominal value of
4 \$3.276 billion and a NPV of \$398 million. In the shortfall cases, the last
5 column shows that they only occur in the last few years of the life of the
6 Customer Credit Trust. For example, the earliest instance of a shortfall in
7 the 95th percentile worst-case simulation was in the year 2047. The
8 expected value, shown in the first line below the table, is the most likely
9 value of the investment given the range of potential outcomes. The
10 Customer Credit Trust has an expected value of \$4.414 billion in nominal
11 terms with a NPV of \$535 million.

12 Overall, the high expected value for the Customer Credit Trust indicates
13 that it is reasonable to expect the Customer Credit Trust to fully reimburse
14 customers for the FRCs over the course of its 30-year investment horizon,
15 and to end up with a positive balance. This high expected value of the
16 Customer Credit Trust exists because there is a substantially greater
17 probability of a surplus than of a deficit, and the surplus outcomes are larger
18 in absolute value terms.

19 **6. Historical Context**

20 It is often helpful to put the projected return outcomes from a Monte
21 Carlo simulation model into historical context. This comparison allows
22 decision makers to do a “reality check” to ensure that the output from the
23 model is reasonable from an historical perspective. To provide that
24 perspective here, Table 6-8 shows the range of 30-year annualized returns
25 for an investor employing a simple 80/20 U.S. stock/U.S. bond mix over all
26 of the 30-year periods since January 1, 1926 (and up to March 31, 2020).²⁰
27 These ranges are compared to the range of outcomes from the simulation
28 model used in this analysis (shown in the last column of the table). The
29 underlying historical data for the stock and bond indices was compiled by
30 Ibbotson Associates, and is released annually in “*Stocks, Bonds, Bills, and*

²⁰ March 31, 2020 was used as an endpoint in order to account for the equity market losses associated with the COVID-19 pandemic. The annualized return for the 80/20 mix over the period ended March 31, 2020 was 8.81 percent.

1 *Inflation Yearbook*,” a resource that has been used by the virtually the entire
 2 investment industry for over 30 years.

TABLE 6-8
COMPARISON OF HISTORICAL AND SIMULATED RETURNS

Historical versus Simulated Pre-Tax Returns
 (80/20 Mix)
 (Historical Period 01/01/1926–03/31/2020)

Line No	Percentiles	Historical 30-Year Annualized Return	Simulated 30-Year Annualized Return
1	5%	12.28%	11.63%
2	10%	11.95%	10.56%
3	15%	11.65%	9.79%
4	20%	11.35%	9.21%
5	25%	11.04%	8.71%
6	30%	10.79%	8.35%
7	35%	10.71%	8.01%
8	40%	10.53%	7.60%
9	45%	10.33%	7.28%
10	50%	10.17%	6.93%
11	55%	10.00%	6.54%
12	60%	9.88%	6.17%
13	65%	9.77%	5.76%
14	70%	9.64%	5.42%
15	75%	9.51%	5.03%
16	80%	9.39%	4.54%
17	85%	9.20%	3.91%
18	90%	8.97%	3.00%
19	95%	8.57%	1.82%

3 Perhaps the most striking thing about the historical data is that there has
 4 never been a 30-year period since 1926 where an 80/20 stock/bond portfolio
 5 has delivered an annualized return below 7.49 percent.²¹ The 95th
 6 percentile worst-case period had a return of over 8.57 percent. Significantly,
 7 the annualized return in every 30-year period is well above the break-even
 8 pre-tax return of 4.04 percent²² needed to assure a positive balance in the
 9 Customer Credit Trust after 30-years. Included in these historical 30-year
 10 periods are the Great Depression, World War II, the Asian Flu pandemic of

21 The absolute minimum observed historical 30-year return of 7.49 percent was the period ended September 30, 1959 which started with the Great Depression, included World War II, and ended with the Asian Flu pandemic.

22 This corresponds to an average after-tax return of 2.79 percent assuming a constant return rate.

1 1957-58, the oil crisis of the 1970's, the dot.com bubble of the late 1990's,
2 the Global Financial Crisis in 2008, and the latest COVID-19 crisis. The last
3 30-year period in the dataset (ending March 31, 2020) includes
4 three financial collapses (dot.com, GFC, and COVID-19), and still has a
5 relatively healthy annualized return of 8.8 percent, again well above the
6 4.04 percent threshold needed for the Customer Credit Trust to have a
7 surplus.

8 As a final check on the robustness of the Customer Credit Trust, I built a
9 model of the Customer Credit Trust that employed actual observed historical
10 returns rather than future simulated returns. I then added all of the 30-year
11 periods since 1926 (the distribution shown in Table 6-9) into the model and
12 tracked the behavior of the cash flows from the Customer Credit Trust in
13 response to each one.²³ In this way the model was able to test how the
14 Customer Credit Trust investments performed with the volatility associated
15 with each of these periods. Table 6-9 shows the distribution of outcomes for
16 the ending nominal surplus of the Customer Credit Trust.

23 Each 30-year period contained the 30 individual annual returns experienced by the assumed 80/20 stock bond portfolio during that period. This allowed the model to capture the year-to-year volatility of each period. The periods were rolled forward on a quarterly basis such that the dataset includes 256 different 30-year periods starting at the beginning of every quarter since January 1, 1926. The last 30-year period in the dataset started on April 1, 1990 and ended on March 31, 2020.

TABLE 6-9
RANGE OF SURPLUS USING HISTORICAL RETURNS
(MILLIONS OF DOLLARS)

Line No.	Percentile	Surplus
1	5%	\$21,141
2	10%	\$17,920
3	15%	\$16,396
4	20%	\$15,015
5	25%	\$14,245
6	30%	\$13,484
7	35%	\$12,564
8	40%	\$11,807
9	45%	\$10,932
10	50%	\$10,650
11	55%	\$10,243
12	60%	\$8,607
13	65%	\$7,456
14	70%	\$7,073
15	75%	\$6,675
16	80%	\$6,238
17	85%	\$5,918
18	90%	\$5,385
19	95%	\$4,683

1 As the table indicates, the Customer Credit Trust would have fully
2 reimbursed customers and generated a surplus in over 95 percent of the
3 observed 30-year periods since 1926 assuming an asset allocation of
4 80 percent stocks and 20 percent bonds. The 95th percentile worst-case
5 nominal surplus across the dataset was \$4.68 billion, and the median
6 nominal surplus was \$10.65 billion.

7 The returns used in the Monte Carlo simulation model for this exercise
8 were substantially more conservative than those realized over the last
9 95 years. The median simulated 30-year return for the 80/20 mix used in
10 the analysis was 6.93 percent, roughly 3.25 percent lower than the median
11 return for an 80/20 portfolio observed historically. There are a number of
12 reasons the forward-looking analysis performed in this work uses more
13 conservative assumptions than historical data would, by itself, dictate.
14 Some of these include: the potential impact of technology, regulation, and
15 the democratization of the capital markets on the equity risk premium;
16 potentially lower projected growth rates for population, GDP, inflation, and
17 productivity; and a potentially lower interest rate environment due to
18 increased intervention by central banking authorities.

1 Additionally, due to the inherent uncertainty in making long-term
2 predictive estimates of asset returns, institutional investors and similarly
3 situated entities (e.g., NDTs) generally try to err on the side of conservatism.

4 **7. Effect of COVID-19 On Underlying Analytical Assumptions**

5 Callan does not need to change its long-term capital market
6 assumptions in response to short-term events affecting the markets. The
7 assumptions are designed to describe a complete range of potential
8 outcomes over the long term and thus explicitly include periods of extreme
9 economic and market dislocation. While the COVID-19 pandemic has had
10 both short- and intermediate-term impacts on the markets and the global
11 economy, these impacts are well within the range of outcomes contemplated
12 by Callan's long-term assumptions.

13 The results of the analyses I performed in connection with this testimony
14 bear out the fact that the COVID-19 pandemic is well within the expected
15 range of outcomes. The assumptions used in the Monte Carlo modelling
16 exercise for the Customer Credit Trust resulted in a wide range of
17 investment outcomes for the 80/20 (stock/bond) portfolio assumed in the
18 analysis. The 95th percentile (1 in 20) worst-case simulated outcome for the
19 portfolio over the 30-year period resulted in an annualized pre-tax return of
20 1.80 percent. A secondary analysis (included in the testimony) examined
21 the actual historical performance of an 80/20 portfolio over all of the 30-year
22 periods since 1926. Those historical 30-year periods included: The Great
23 Depression; World War II; The Korean War; The Vietnam War; The Asian
24 Flu Crisis of 1957, The Oil Crisis in the 1970's, the bursting of the dot.com
25 Bubble in 2000, The Global Financial Crisis in 2008, and the COVID-19
26 outbreak in the first quarter of 2020. In spite of all of these crises, the
27 absolute worst-case observed annualized 30-year return for an 80/20
28 portfolio over all of the 30-year periods since 1926 was 7.49 percent.

29 The secondary historical analysis included in the testimony was
30 designed to show that the assumptions used in the simulation analysis were
31 conservative relative to history. It also serves to reinforce the point that a
32 30-year planning horizon is insensitive to short-term market dislocations
33 (which seem extreme in the moment) that tend to be offset by periods of
34 relative calm and prosperity. In order to generate an annualized return of

1 1.80 percent (with a probability of 5 percent), the assumptions used in the
2 analysis had to include scenarios that were significantly worse than anything
3 that we have observed over the last 95 years. Thus we are comfortable that
4 they reasonably describe the full range of potential risks facing the
5 Customer Credit Trust over the coming 30 years.

6 In conclusion, the short-term market dislocation and the longer-term
7 economic disruption being caused by the COVID-19 pandemic are both well
8 within the range of outcomes described by Callan's long-term capital market
9 assumptions. We do not plan on changing those assumptions for this
10 exercise or any of the other long-term strategic planning exercises that are
11 underway for the large financial institutions that represent Callan's client
12 base.

13 **8. Conclusion**

14 Based on the assumed asset allocation and the results of the simulation
15 analysis described above, the expected value of the Customer Credit Trust
16 at the end of 30 years is substantially positive, and the probability of a
17 surplus is over five times higher than the probability of a deficit. This means
18 that it is reasonable to expect that, based on the distribution of potential
19 outcomes, the Customer Credit Trust will fully reimburse customers for the
20 FRCs over the course of the 30-year investment horizon, and will end with a
21 positive balance.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 6
EXHIBIT 6.1
TERM SHEET FOR CUSTOMER CREDIT TRUST

SUMMARY OF TERMS
OF
CUSTOMER CREDIT TRUST¹

Trust Formation: PG&E (the Company) will form a grantor trust (the Trust) pursuant to a trust agreement (the Trust Agreement).

Purpose: The exclusive purpose of the Trust will be to hold and invest its assets in order to distribute funds to the Company for purposes of reimbursing it for the Customer Credit (as defined and described in Chapter 6, Customer Credit Mechanism and Investment Returns (D. Thomason; G. Allen)).

Management: The Trust will be managed by a committee (the Committee) of five (5) members nominated by management of the Company and confirmed by its Board of Directors, of which no more than two (2) shall be employees, officers, or directors of the Company, or otherwise be agents of the Company in any capacity except as members of the Committee. The three (3) members who are not affiliated with the Company also shall be confirmed by the CPUC.²

The unaffiliated members of the Committee shall be entitled to reasonable compensation from the Trust for their services, which compensation shall be subject to the approval of the CPUC (Committee Compensation).

The Committee may retain the services of such advisors and counsel as it deems necessary to carry out its responsibilities, the reasonable fees and/or compensation of which shall be regarded as appropriate Trust administration expenses (Advisor Fees).

Committee Action and Quorum: Each member of the Committee shall have one (1) vote, and, other than as set forth below, any action by the Committee shall be by majority decision. At least four (4) members must be present to constitute a quorum necessary for the Committee to act.

Notwithstanding the foregoing, any amendment of a Fundamental Provision (see “Amendments” below) will require both (1) the super-majority approval of at least four (4) members of the Committee, which super-majority must include the approval of all three (3) unaffiliated members of the Committee and (2) CPUC approval (see “CPUC Approval” below) (the Fundamental Approval).

¹ Capitalized terms used but not defined herein shall have the meanings assigned to such terms in Chapter 6, Customer Credit Mechanism and Investment Returns (D. Thomason; G. Allen).

² Any unaffiliated Committee member nominated by the Company who currently serves on the management committee of any of the Company’s nuclear decommissioning trusts shall be deemed approved by the CPUC.

Trustee:

A reputable institutional trustee will be named as trustee of the trust (the Trustee), which will act in accordance with the directions provided by the Committee in accordance with the terms of the Trust Agreement. The Trustee will act as a fiduciary of the Trust and the beneficiaries thereof and shall be authorized to, *e.g.*:

1. Pay fees and expenses of the Trust (see “Fees” below);
2. Renew or extend any obligation payable to or by the Trust and to settle claims or demands in favor of or against the Trust;
3. Hold securities and other Trust property;
4. Sell Trust investments to make permitted distributions (see “Interim Distributions” below) or pay fees (see “Fees” below); and
5. Orderly liquidate the Trust upon its termination (see “Termination” below) and make distributions to the Company therefrom (see “Distribution upon Termination” below).

The Committee shall have the right to remove Trustee and name a successor trustee following any such removal or the resignation of the Trustee.

The Trustee shall be entitled to compensation from the Trust (Trustee Fees).

Sources of Funding:

The corpus of the Trust shall be established by the Initial Shareholder Contribution and will be supplemented, from time to time, by the Additional Shareholder Contributions, and Customer Credit Trust Returns.

The Company shall have the right to substitute non-Trust assets for Trust assets at any time, so long as the substituted property has equivalent value to the Trust assets being replaced (and the Company shall submit information regarding the assets’ relative values the CPUC for its concurrence as to the assets’ equivalent value).

Investment:

The Trust corpus shall be invested in accordance with the investment policies and procedures developed by the Committee, which policies and procedures shall be subject to CPUC approval (see “CPUC Approval” below).

The Committee may appoint one or more investment managers to direct the investment of all or part of the Trust corpus.

Interim Distributions:

The Trust will make distributions to the Company as follows:

1. Periodic distributions in an amount equal to the Customer Credits for the applicable period;

2. Distributions from time to time to fund a make-whole for any shortfall in Customer Credits intended to be granted in a prior period, but instead granted in the applicable period; and
3. Quarterly distributions in an amount equal to the estimated taxes in respect of taxable income generated by the Trust assets relating to that quarter, calculated using the highest combined federal and California state tax rate applicable to “sub-chapter C” corporations.

Additionally, the Trustee will be permitted to receive distributions from the Trust from time to time in order to pay the fees and expenses of the Trust (see “Fees” below).

Fees: The Trust assets shall be used to pay all ordinary and necessary expenses and other incidental costs incurred by the Trustee in connection with the Trust including, without limitation, Committee Compensation, Advisor Fees, and Trustee Fees.

Reporting: The Trustee shall provide the CPUC with an annual report setting forth (1) the balance of the Trust’s account(s) holding the Trust assets; (2) the Trust’s distributions to the Company for the prior twelve (12) month period in respect of the Customer Credits; and (3) an itemized accounting of the Trust’s administration expenses and the basis therefor.

Amendments: The Committee shall be able to amend with majority approval any provision of the Trust Agreement, other than Fundamental Provisions. Amendment of any Fundamental Provision shall require Fundamental Approval. The Committee shall file a proposed amendment of any Fundamental Provision with the CPUC for its approval within thirty (30) days after such filing.

No amendment of the Trust Agreement that affects the specific rights, duties, responsibilities, or liabilities of the Trustee shall be made without the Trustee’s consent.

Fundamental Provisions shall mean such provisions of the Trust Agreement that set forth: the purpose of the Trust; Committee size and composition; Committee action by majority decision; interim distributions; amendments of the Trust Agreement (including the definition of “Fundamental Provisions”); termination of the Trust; customer allocation of distributions upon termination of the Trust; and transferability of the Company’s residual interest in the Trust.

CPUC Approval: For items or actions requiring CPUC approval or concurrence, such approval or concurrence would be solicited as follows:

1. The Financing Order will seek CPUC (a) confirmation of the initial unaffiliated members of the Committee;³ (b) approval of the amount

³ See footnote 2.

of Committee Compensation and (c) approval of the initial investment policies and procedures.

2. CPUC approval to be provided through a Tier 2 advice letter process for:
 - a. Confirmation of nominees to replace any unaffiliated member;
 - b. Approval of any increases to the Committee Compensation;
 - c. Concurrence regarding the equivalent value of any non-Trust assets proposed to be substituted for Trust assets;
 - d. Approval of any proposed amendment of a Fundamental Provision; and
 - e. Approval of any material amendment of the investment policies and procedures;
 - f. Approval of any termination of the Trust prior to the occurrence of the Termination Triggers (see “Termination” below).

Termination: The Trust will be terminated and its assets orderly liquidated and distributed at such time as the securitization bonds are repaid in full and the FRCs cease (the Termination Triggers). Any earlier termination shall be subject to CPUC approval.

Distribution upon Termination: Upon the termination of the Trust, its assets, if any, remaining after payment of expenses, including computed taxes, will be orderly liquidated, and the proceeds thereof distributed to the Company, twenty-five percent (25%) of which proceeds will be shared by the Company with its customers. The Company shall retain the right to designate other beneficiaries, so long as the customer share is not reduced by any such designation.

Non-transferrable Interest: The Trust Agreement shall provide that (1) the residual interest of the Company in the Trust is not transferable by the Company, whether voluntarily or involuntarily, nor subject to the claims of creditors of the Company and (2) the assets of the Trust are not subject to the claims of creditors of the Company.

No Authority to Conduct Business: The purpose of the Trust shall be limited to the matters set forth as the “Purpose” above, specifically, and there is no objective to carry on any business unrelated to the Trust purpose or divide the gains therefrom. The Trust is not intended to be a business trust.

Tax Treatment: It is expected that the Trust will be (1) considered a grantor trust, and (2) an entity disregarded as separate from the Company, in each case, for income and franchise tax purposes.

Contributions to, and distributions from, the Trust are expected to be non-taxable events to the Trust. Distributions by the Trust to the Company are not expected to be taxable to the Company. Contributions by the Company to the Trust are not expected to be deductible by the Company.

Gains and income from investments are generally expected to be taxable to the Company.

**Resolution of
Disagreements:**

If any disagreement arises between the Company, the Committee, and/or the CPUC staff regarding the Trust, the disagreement shall be submitted to the CPUC for resolution by issuance of a CPUC order after notice and an opportunity to be heard, as provided in the California Public Utilities Code, has been given to the Company, the Committee, the CPUC staff, the Trustee, and any other interested parties.