

# PG&E HEARING EXHIBIT PGE-17

A.20-04-023

## PG&E'S SECURITIZATION 2020

Chapter 10 ..... Expert Rebuttal Regarding Customer Benefit (Bradford Cornell)

**PACIFIC GAS AND ELECTRIC COMPANY**

**CHAPTER 10**

**EXPERT REBUTTAL REGARDING CUSTOMER BENEFIT**

**WITNESS: BRADFORD CORNELL**

PACIFIC GAS AND ELECTRIC COMPANY  
CHAPTER 10  
EXPERT REBUTTAL REGARDING CUSTOMER BENEFIT

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1                                   **PACIFIC GAS AND ELECTRIC COMPANY**  
2   **CHAPTER 10**  
3                                   **EXPERT REBUTTAL REGARDING CUSTOMER BENEFIT**  
4   **WITNESS: BRADFORD CORNELL<sup>1</sup>**

5   **A. The Proposed Securitization Is Beneficial for Customers. [Issues 3, 4, 6]**

6       **1. Intervenor Critiques Regarding the Value of Individual Elements of the**  
7       **Securitization Are Misplaced.**

8                   Intervenors seek to break apart the value of the proposed Securitization  
9                   and calculate the costs, benefits and/or risks of various subparts thereof, to  
10                  customers and/or shareholders. These critiques miss the forest for the  
11                  trees. A proper economic analysis of the proposed Securitization analyzes  
12                  the expected value of the transaction as a whole to ratepayers. Under such  
13                  an analysis, as explained below, it is clear that the Securitization has a  
14                  substantial net positive value to PG&E's customers. In other words,  
15                  customers are economically better off when PG&E enters into the  
16                  Securitization than they are in its absence.

17       **2. Summary of Benefits to Customers**

18           **a. Reduced Cost of Debt**

19                   As described further in Chapter 5 of PG&E's prepared and rebuttal  
20                   testimony, the Securitization will reduce the cost of debt to PG&E's  
21                   customers. In his testimony, Mr. Sauvage opines that the Securitization  
22                   likely will accelerate by two years the time when PG&E can reach an  
23                   investment-grade issuer credit rating, by both improving PG&E's credit  
24                   metrics and qualitatively improving PG&E's business risk profile and/or  
25                   negative modifiers. Mr. Sauvage conservatively estimates that this will

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<sup>1</sup> On the afternoon of November 10, 2020, the day before this testimony was due, TURN served revised testimony and workpapers from Mr. Ellis and errata testimony from Ms. Dowdell. There was not time to evaluate those changes, or to address them in rebuttal testimony before service on November 11, 2020. PG&E has revised this Chapter 10 only to the limited extent of adjusting number and quotation references where the numbers or language changed in TURN's new testimony. I do *not* undertake herein to further address the flaws in the revised Ellis or Dowdell testimony that are apparent from review of the workpapers and accompanying data request responses served on November 10.

1 result in roughly a \$423 million reduction in long-term debt costs. When  
2 added to the estimated \$18 million in short-term debt costs savings, this  
3 yields a total of roughly \$441 million (nominal) in customer savings  
4 through lower debt costs.<sup>2</sup>

5 In his rebuttal testimony, Mr. Sauvage notes that even if one  
6 pessimistically assumed that PG&E would achieve only a one-notch  
7 upgrade from Standard & Poor's and Moody's, that still would result in a  
8 32 to 53 basis points improvement in PG&E's debt costs, translating to  
9 customer interest cost savings in the range of about \$225-\$373 million  
10 (nominal) over an 18-year average life of the bonds.

11 **b. Deleveraging**

12 The Securitization, as a cost-effective way to pay off the \$6 Billion  
13 Temporary Utility Debt immediately, will help PG&E deleverage its  
14 balance sheet. The Commission made clear in its Decision in the POR  
15 OII that it was important for PG&E to move expeditiously towards  
16 reducing its leverage and identified securitization as a way for PG&E to  
17 seek to achieve that goal.<sup>3</sup> Customers will benefit over time from a  
18 delevered PG&E, under the circumstances of the proposed  
19 Securitization, through its reduced costs of capital and greater flexibility  
20 to raise capital.

21 **c. Waiver of Wildfire Claims Costs Recovery**

22 No party to this proceeding has disputed that PG&E's 2017 wildfire  
23 claims costs exceed \$7.5 billion. PG&E agreed with the Governor that  
24 PG&E would not seek to recover any of those costs from customers  
25 other than through a rate-neutral Securitization.

26 Absent that agreement, PG&E could have sought recovery for the  
27 just and reasonable costs incurred to resolve those claims. I understand  
28 that with respect to several 2017 fires (including the Tubbs Fire), the  
29 cause has not been alleged to be a result of any violations of  
30 Commission rules, and PG&E was not precluded from pursuing those  
31 claims costs as reasonably incurred and eligible for rate recovery. The

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2 PG&E Prepared Testimony (Updated), Chapter 5, pp. 5-30 to 5-34.

3 D.20-05-053, p. 84-85.

1 agreement to instead seek this Securitization benefited customers in  
2 that they are not subject to a potential obligation to pay those claims  
3 costs. That PG&E has already delivered that benefit, through its  
4 agreement with the Governor, is not license to ignore its existence.

5 **d. Sharing of Customer Credit Trust Surplus**

6 Last, but far from least, there is the benefit to customers that arises  
7 directly under the terms of the proposed Securitization. In particular,  
8 PG&E has proposed to pass on to customers 25 percent of the surplus  
9 remaining in the Customer Credit Trust at the end of the life of the  
10 Customer Credit Trust (or earlier if ordered by the Commission). In a  
11 reasonable base case scenario, this 25 percent share of the surplus is  
12 expected to be approximately \$1.27 billion.<sup>4</sup> The present value of that  
13 benefit to customers, after accounting for customers' deficit scenarios  
14 with respect to the Fixed Recovery Charge (FRC), is \$121 million if  
15 expected cash flows are discounted at PG&E's authorized return on rate  
16 base, 7.34 percent. When one further factors in the benefits to  
17 customers from the expected interest cost savings due to PG&E's  
18 improved credit profile, the Securitization's net present value to  
19 customers rises to about \$334 million using a 7.34 percent discount  
20 rate. Even when one considers these benefits assuming various  
21 possible negative developments hypothesized by intervenors come to  
22 pass, the net present value of the projected Securitization is a net  
23 benefit to customers.

24 In the remainder of my testimony below I respond to various  
25 erroneous assertions by intervenors that there is no such net benefit, or  
26 that it is too small or risky to support the proposed Securitization.

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4 The approach I use to calculate expected values differs from that used by Greg Allen: whereas I consider the results of all 2,000 trials, Mr. Allen considers the results at 5 percent increments from 5 percent to 95 percent. As such, Mr. Allen presents an approximation of the more detailed results that I analyze. While I view my approach to be more consistent with the academic literature, Mr. Allen's approach is reasonable, practical, and conservative, and our results are similar.

1 **B. Intervenors Improperly Segment, and Separately Discount, Elements of the**  
2 **Securitization. [Issues 3, 4, 6]**

3 The economic substance of the Securitization’s terms is properly analyzed,  
4 like any commercial transaction, by projecting the future net cash flow arising  
5 from the transaction, and discounting that net cash flow to present value using  
6 an appropriate discount rate.

7 This approach is widely recognized in the academic literature. Some  
8 examples of that recognition include the following:

9  
10 *“The enterprise DCF [discounted cash flow] model is a favorite of*  
11 *academics and practitioners because it relies solely on how cash flows in*  
12 *and out of the company. Complex accounting can be replaced with a*  
13 *simple question: Does cash change hands?”<sup>5</sup>*

14  
15 *“Net present value depends on future cash flows. Cash flow is the simplest*  
16 *possible concept; it is just the difference between cash received and cash*  
17 *paid out.”<sup>6</sup>*

18  
19 *“The DCF model measures the value of an asset as the sum of the*  
20 *expected cash flows the asset generates after adjusting each expected*  
21 *cash flow for its timing and risk.”<sup>7</sup>*

22  
23 *“There are three inputs that are required to value any asset in this model –*  
24 *expected cash flow, the timing of the cash flow, and the discount rate.”<sup>8</sup>*

25  
26 For example, a business valuation is performed using free cash flows, which  
27 represent the net cash flows to the business taking into account revenues,

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5 Tim Koller, Marc Goedhart and David Wessels, 2020, Valuation, 7th ed., McKinsey & Company, Wiley Finance (a leading practitioner valuation book), p. 191.

6 Brealey, Richard A., Stewart C. Myers and Franklin Allen, 2011, Principles of Corporate Finance, 19th ed, McGraw-Hill. (leading MBA finance text), p. 10.

7 Robert W. Holthausen and Mark E. Zmijewski, 2020, Corporate Valuation, Cambridge Business Publishers (leading MBA Valuation text), p. 10.

8 Damodaran, Aswath, 2006, Damodaran on Valuation, Wiley Finance (best-selling Valuation book), p. 13.

1 operating expenses, taxes, capital expenditures, etc. Capital expenditures,  
2 although typically necessary to operate a business, are not discounted  
3 independently; they are included in the calculation of free cash flow. The same  
4 methodology is used to value any instrument or investment. I have employed  
5 this methodology numerous times in the past, and I employ it here for the  
6 analysis set forth below.<sup>9</sup>

7 **1. The Fundamental Nature of the Transaction from the Customers’**  
8 **Perspective.**

9 Under the Securitization, ratepayers pay the FRC only in the event the  
10 Customer Credit is less than the amount of the FRC at some time in the  
11 future. The risk to customers is functionally like a guarantee or an insurance  
12 policy. The proper way to quantify the expected value to customers, arising  
13 directly from the Securitization’s cash flows, for bearing that risk, is as  
14 follows: You take the probability of the Customer Credit being less than the  
15 FRC, and the extent of such expected shortfall, to determine the customers’  
16 expected net cash flow in each of the time periods of the proposed  
17 Securitization, including the potential final surplus sharing, discounted to  
18 present value.

19 **2. This Transaction Is Appropriately Valued Through a Single Discount**  
20 **Rate, Not Multiple Discount Rates.**

21 Certain intervenor witnesses analyze the Securitization using different  
22 discount rates for different elements of the transaction. This is erroneous.

23 The bottom line risk that PG&E customers take in the Securitization is  
24 the risk of a payment of the FRC. This properly should be evaluated as a  
25 single cash flow stream – the amount actually paid by customers (net of  
26 credits) over time.

27 This single cash flow stream should be valued using a *single discount*  
28 *rate*, not multiple discount rates. Using multiple discount rates obscures  
29 rather than enhances the analysis, and it fails to address directly the cash  
30 flow that is at issue. For example, one would not value a corporation by

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<sup>9</sup> See Cornell, Bradford, 1992, Corporate Valuation, Business One Irwin, p. 102 (“The value of a business can be estimated by forecasting future cash flows and discounting them to present value”).



1 applying separate discount rates to each element of its projected revenue  
2 and expenses.

3 The likelihood of the various elements whose sums could lead to a cash  
4 outflow by customers is appropriately addressed not by different discount  
5 rates, but by developing appropriate forecasts for those elements and/or  
6 Monte Carlo simulations of the potential ranges of outcomes. That is what  
7 PG&E has done.

8 The conceptual flaw in the separate discounting of the FRC and  
9 Customer Credit Trust cash flows at different rates is illustrated by a simple  
10 example. No intervenor asserts that there is any possibility of a Customer  
11 Credit Trust shortfall in the first three years of the Securitization. It is  
12 undisputed that the Customer Credit Trust credits to the ratepayers will  
13 equal the FRC payments by the ratepayers in those years. Yet The Utility  
14 Reform Network (TURN) witness Dowdell's calculations show negative  
15 present values to ratepayers for cash flows in years 1, 2, and 3 of,  
16 respectively, \$10.2 million, \$23.3 million, and \$33.8 million, using a 7.34  
17 percent discount rate. In other words, for those three years, she implicitly  
18 finds that customers are harmed in an aggregate of \$67.3 million, despite  
19 there being no dispute whatsoever that they in fact will suffer no harm at all  
20 with respect to Securitization cash flows in those years. The net negative  
21 present value for years 1, 2, and 3 increases to negative \$106.6 million  
22 under Dowdell's approach if the Customer Credit Trust cash flows are  
23 discounted at PG&E's cost of equity, TURN's preferred discount rate here.  
24 This obviously erroneous calculation stems entirely from the erroneous  
25 application of two separate discount rates to two equal cash flows, as  
26 opposed to properly discounting simply the expected *net* cash flow to/from  
27 customers.

### 28 **3. Quantification of Ratepayer Benefit.**

29 I applied the above principles to the single expected net cash flow to  
30 and from customers directly through the Securitization structure.<sup>10</sup> As

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<sup>10</sup> In the following table, and all of the other tables in this testimony other than Tables 10-7 and 10-8, the results are generated using the Monte Carlo simulation model developed by Callan and described by Greg Allen in PG&E's Prepared Testimony (Updated), Chapter 6; Tables 10-7 and 10-8 are generated using Mark Ellis' Monte Carlo results.

1 shown in Table 10-1 below, this yields the following calculations of net  
2 present values to customers under alternative discount rates used by  
3 Dowdell.

**TABLE 10-1**  
**CUSTOMER PRESENT VALUE: SECURITIZATION CASH, EXCLUSIVE OF INTEREST SAVINGS**  
(\$ MILLIONS)

<b>Period</b>	<b>Expected Shortfalls with GU</b>	<b>Expected Repayment with GU</b>	<b>Expected Rate Payer Surplus @ 25%</b>	<b>Expected Net Rate Payer Cash Flow</b>	<b>Net Present Value @ 6.00%</b>	<b>Net Present Value @ 7.34%</b>	<b>Net Present Value @ 10.25%</b>
Year 1	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 4	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 5	(\$0.11)	\$0.00		(\$0.11)	(\$0.08)	(\$0.08)	(\$0.07)
Year 6	\$0.00	\$0.11		\$0.11	\$0.08	\$0.07	\$0.06
Year 7	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 8	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 9	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 10	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 11	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 12	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 13	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 14	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 15	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 16	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 17	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 18	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 19	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 20	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 21	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 22	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 23	(\$0.94)	\$0.00		(\$0.94)	(\$0.25)	(\$0.19)	(\$0.10)
Year 24	(\$3.18)	\$0.00		(\$3.18)	(\$0.80)	(\$0.60)	(\$0.32)
Year 25	(\$7.34)	\$0.00		(\$7.34)	(\$1.75)	(\$1.28)	(\$0.66)
Year 26	(\$15.29)	\$0.00		(\$15.29)	(\$3.44)	(\$2.49)	(\$1.25)
Year 27	(\$26.26)	\$0.00		(\$26.26)	(\$5.57)	(\$3.98)	(\$1.96)
Year 28	(\$39.07)	\$0.00		(\$39.07)	(\$7.81)	(\$5.52)	(\$2.64)
Year 29	(\$54.76)	\$0.00		(\$54.76)	(\$10.33)	(\$7.21)	(\$3.35)
Year 30	(\$74.61)	\$0.00		(\$74.61)	(\$13.28)	(\$9.15)	(\$4.14)
Surplus			\$1,269.74	\$1,269.74	\$221.07	\$151.66	\$67.98
<b>Total</b>	<b>(\$221.55)</b>	<b>\$0.11</b>	<b>\$1,269.74</b>	<b>\$1,048.30</b>	<b>\$177.84</b>	<b>\$121.22</b>	<b>\$53.54</b>

Note 1: The dollar figures are in millions of dollars.

Note 2: The second column reflects each period's average expected net shortfall to ratepayers after gross up of the principal portion of the shortfall amounts to reflect the tax impact of that shortfall on ratepayers. The interest portion of any shortfall properly is not grossed up, because under standard ratemaking the amount does not result in any change in rates.

Note 3: The shortfall in column 2 is shown as zero whenever the Customer Credit Trust is expected to cover the full FRC. Even if the Customer Credit Trust takes in vastly more in that period than the FRC, the amount reflected here is zero, because that net positive Customer Credit Trust inflow does not translate into a net cash flow to customers in that period.

Note 4: The fourth column represents 25 percent of the expected amount that remains in the Customer Credit Trust at the conclusion of the Securitization, i.e., it is the amount that is distributed to ratepayers at that time.

Note 5: Net present value calculations divide annual expected net rate payer cash flows into equal quarterly amounts which occur at the end of the quarter.

1            Thus, as shown by this calculation, applying a discount rate of 7.34  
2 percent, which is PG&E's authorized return on rate base, to the net  
3 ratepayer cash flows in the Securitization structure yields a net present  
4 value benefit to customers of \$121 million from those Securitization cash  
5 flows. As noted in Section A.2.b above, in addition to the benefits flowing  
6 directly out of the Securitization structure, customers also will benefit from  
7 PG&E's lower interest expense resulting from the improved credit profile  
8 arising from the Securitization. Those expected interest savings are added  
9 to the cash flows, which are then present valued, in the following Table 10-2.

**TABLE 10-2**  
**VALUE TO CUSTOMERS: SECURITIZATION CASH & INTEREST SAVINGS**  
(\$ MILLIONS)

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-Term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Year 1	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$11.75	\$9.00	\$20.75	\$17.81	\$17.23	\$16.07
Year 4	\$0.00	\$0.00		\$23.50	\$9.00	\$32.50	\$26.32	\$25.15	\$22.83
Year 5	(\$0.11)	\$0.00		\$23.50		\$23.39	\$17.87	\$16.86	\$14.90
Year 6	\$0.00	\$0.11		\$23.50		\$23.61	\$17.01	\$15.85	\$13.64
Year 7	\$0.00	\$0.00		\$23.50		\$23.50	\$15.98	\$14.70	\$12.32
Year 8	\$0.00	\$0.00		\$23.50		\$23.50	\$15.07	\$13.70	\$11.17
Year 9	\$0.00	\$0.00		\$23.50		\$23.50	\$14.22	\$12.76	\$10.13
Year 10	\$0.00	\$0.00		\$23.50		\$23.50	\$13.41	\$11.89	\$9.19
Year 11	\$0.00	\$0.00		\$23.50		\$23.50	\$12.65	\$11.07	\$8.34
Year 12	\$0.00	\$0.00		\$23.50		\$23.50	\$11.94	\$10.32	\$7.56
Year 13	\$0.00	\$0.00		\$23.50		\$23.50	\$11.26	\$9.61	\$6.86
Year 14	\$0.00	\$0.00		\$23.50		\$23.50	\$10.63	\$8.95	\$6.22
Year 15	\$0.00	\$0.00		\$23.50		\$23.50	\$10.02	\$8.34	\$5.64
Year 16	\$0.00	\$0.00		\$23.50		\$23.50	\$9.46	\$7.77	\$5.12
Year 17	\$0.00	\$0.00		\$23.50		\$23.50	\$8.92	\$7.24	\$4.64
Year 18	\$0.00	\$0.00		\$23.50		\$23.50	\$8.42	\$6.74	\$4.21
Year 19	\$0.00	\$0.00		\$23.50		\$23.50	\$7.94	\$6.28	\$3.82
Year 20	\$0.00	\$0.00		\$23.50		\$23.50	\$7.49	\$5.85	\$3.46
Year 21	\$0.00	\$0.00		\$11.75		\$11.75	\$3.53	\$2.73	\$1.57
Year 22	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 23	(\$0.94)	\$0.00				(\$0.94)	(\$0.25)	(\$0.19)	(\$0.10)
Year 24	(\$3.18)	\$0.00				(\$3.18)	(\$0.80)	(\$0.60)	(\$0.32)
Year 25	(\$7.34)	\$0.00				(\$7.34)	(\$1.75)	(\$1.28)	(\$0.66)
Year 26	(\$15.29)	\$0.00				(\$15.29)	(\$3.44)	(\$2.49)	(\$1.25)
Year 27	(\$26.26)	\$0.00				(\$26.26)	(\$5.57)	(\$3.98)	(\$1.96)
Year 28	(\$39.07)	\$0.00				(\$39.07)	(\$7.81)	(\$5.52)	(\$2.64)
Year 29	(\$54.76)	\$0.00				(\$54.76)	(\$10.33)	(\$7.21)	(\$3.35)
Year 30	(\$74.61)	\$0.00				(\$74.61)	(\$13.28)	(\$9.15)	(\$4.14)
Surplus			\$1,269.74			\$1,269.74	\$221.07	\$151.66	\$67.98
Total	(\$221.55)	\$0.11	\$1,269.74	\$423.00	\$18.00	\$1,489.30	\$417.80	\$334.29	\$221.23

1           As reflected in the above table, at a 7.34 percent discount rate, the  
2           Securitization provides PG&E’s customers with a net present value  
3           expected benefit of \$334 million through a combination of the expected  
4           Securitization inflows/outflows and the expected interest cost savings on  
5           future debt issuances. Even if one applies a 10.25 percent discount rate  
6           (PG&E’s equity rate of return, which is clearly *not* the relevant discount rate

1 on cash flows to ratepayers), customers still are expected to receive a net  
2 present value benefit of \$221 million.<sup>11</sup>

3 **4. Intervenor discount rates are not appropriate.**

4 Even if one incorrectly values the FRC and Customer Credit elements  
5 separately (as opposed to discounting the customers' net cash flow from the  
6 FRC/Credit combined), the discount rates used by those intervenors that  
7 offer such alternative calculations are wrong. The noteworthy bookends to  
8 these disparate discount rates are:

- 9 • TURN's Ellis Testimony (Revised) asserting that the "Additional  
10 Shareholder Contributions [to the Customer Credit Trust] . . . are  
11 equivalent to equity cash flows, and the appropriate discount rate is  
12 therefore 10.25% to reflect PG&E's authorized return on equity  
13 (ROE)."<sup>12</sup>
- 14 • Conversely, TURN's Dowdell Testimony (Errata) asserts that the FRC  
15 payments should be discounted at 2.9 percent because that is the  
16 interest rate on the securitized bonds.<sup>13</sup>

17 Both of those assertions are conceptually erroneous. The issue  
18 presented is the value of the expected cash flow(s) to *PG&E's customers*.  
19 Whether or not the Additional Shareholder Contributions are "equivalent to  
20 equity" in some sense, is not relevant in the context of determining the value

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11 TURN asserts that the estimate of a 60 bps improvement in interest costs involves an overly optimistic assumption regarding credit rating responses. However, even assuming just a one notch upgrade from each of the rating agencies, the improvement in PG&E's credit profile from Securitization results in a yield differential of 32-53 bps (as opposed to 60 bps). Taking the lowest (most pessimistic) end of that range, this reduces the resulting nominal interest savings on PG&E's long-term debt based on the calculation presented on page 5-9 of Chapter 5 of the PG&E Rebuttal Testimony to approximately \$225 million, translating to a present value of the interest savings on PG&E's long-term debt of approximately \$106 million using a discount rate of 7.34 percent and quarterly cash flows. Even using this pessimistic approach, there is a substantial benefit to customers from the proposed Securitization.

12 Revised TURN-Ellis, p. 4.

13 Errata TURN-Dowdell, p. 11. The Ellis Testimony also asserts a discount rate of 2.1 percent, the asserted after-tax cost of capital on the 2.9 percent interest rate (for what his original testimony characterized as ratepayers' "foregone interest tax shield"). Revised TURN-Ellis, p. 3; Original TURN-Ellis, p. 3. Because there in fact is no such impact on customers, as discussed in Section C below, the potential discount rate is irrelevant.

1 of the Securitization to PG&E's customers. Furthermore, the amount of the  
2 Additional Shareholder Contributions is not equal to the expected cash flows  
3 to shareholders.

4 The pertinent question is how PG&E's customers should value the  
5 expected cash flows to/from them that arise from the Securitization, not how  
6 the expected cash flows to/from shareholders should be valued. For the  
7 same reason, Dowdell's 2.9 percent is conceptually inapt in this context.  
8 The return obtained by bondholders on this Securitization is not what one is  
9 attempting to measure in the context of evaluating whether the  
10 Securitization is "neutral on average," or affirmatively beneficial, to PG&E's  
11 customers.

12 It is noteworthy that in PG&E's POR OII, the same intervenors took  
13 positions completely at odds with the discount rate positions they are taking  
14 now. For example, in prepared testimony sponsored jointly by TURN and  
15 the Energy Producers and Users Coalition and the Indicated Shippers  
16 (EPUC-IS), they stated:

- 17 • "Use of the weighted average cost of capital (WACC), the figure  
18 typically used as a proxy for the discount rate of a ratepayer, would  
19 reduce the present value of the forecasted interest savings ...."<sup>14</sup>
- 20 • "From a customer perspective, the net present value of interest rate  
21 savings is much lower than \$1 billion. PG&E estimates the net  
22 present value based on a debt interest rate calculation alone. From  
23 customers' perspective, the net reduction in present value revenue  
24 requirements would require a discount rate equal to no less than  
25 PG&E's after-tax cost of capital rather than using the discount rate of  
26 the new bond issue."<sup>15</sup>

27 In short, these same parties argued for the use of PG&E's weighted  
28 average cost of capital,<sup>16</sup> not the discount rate of the bond issue or PG&E's

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**14** POR OII, EPUC-IS-TURN-Finkelstein, p. 9, n. 27.

**15** POR OII, EPUC-IS-TURN-Gorman, p. 20.

**16** In the testimony cited above, the Intervenor have used terms interchangeably. For example, although Mr. Finkelstein refers to a weighted average cost of capital, the rate used in the calculation referred to in footnote 27 of his testimony was 7.81 percent, the return on rate base at that time, not the after-tax weighted average cost of capital.

1 ROE, as the proper discount rate to value, from a customer perspective,  
2 projected reduced financing costs. Applying intervenors' prior logic, PG&E's  
3 return on rate base, currently 7.34 percent, is a reasonable discount rate to  
4 value the projected benefits and costs of the Securitization from the  
5 perspective of PG&E's customers.

## 6 **5. Potential Impacts of Catastrophic Adverse Events**

7 Certain intervenors have asserted that PG&E's income projections, and  
8 resulting NOL realization, improperly do not incorporate the potential for  
9 catastrophic negative events, such as a massive wildfire season for which  
10 PG&E is held liable. These intervenors exaggerate the impact of such a  
11 hypothetical event.

12 To illustrate this, I have prepared an alternative version of the ratepayer  
13 present value calculations presented above, that presumes a wildfire liability  
14 that wipes out all PG&E taxable income in 2029, such that there are no  
15 Additional Shareholder Contributions to the Customer Credit Trust in that  
16 year. Those results are shown in Tables 10-3 and 10-4 below. The first,  
17 Table 10-3, reflects a net present value of just the expected net cash flows  
18 to/from ratepayers within the Securitization structure; the second, Table 10-  
19 4, reflects the present value to ratepayers including the expected interest  
20 cost savings resulting from the improved PG&E credit profile arising from the  
21 Securitization.



**TABLE 10-3**  
**VALUE TO CUSTOMERS – CATASTROPHIC FIRE SCENARIO**  
(\$ MILLIONS)

<b>Period</b>	<b>Expected Shortfalls with GU</b>	<b>Expected Repayment with GU</b>	<b>Expected Rate Payer Surplus @ 25%</b>	<b>Expected Net Rate Payer Cash Flow</b>	<b>Net Present Value @ 6.00%</b>	<b>Net Present Value @ 7.34%</b>	<b>Net Present Value @ 10.25%</b>
Year 1	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 4	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 5	(\$0.11)	\$0.00		(\$0.11)	(\$0.08)	(\$0.08)	(\$0.07)
Year 6	\$0.00	\$0.11		\$0.11	\$0.08	\$0.07	\$0.06
Year 7	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 8	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 9	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 10	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 11	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 12	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 13	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 14	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 15	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 16	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 17	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 18	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 19	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 20	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 21	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 22	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 23	(\$0.45)	\$0.00		(\$0.45)	(\$0.12)	(\$0.09)	(\$0.05)
Year 24	(\$2.72)	\$0.00		(\$2.72)	(\$0.69)	(\$0.51)	(\$0.27)
Year 25	(\$7.43)	\$0.00		(\$7.43)	(\$1.77)	(\$1.30)	(\$0.67)
Year 26	(\$16.48)	\$0.00		(\$16.48)	(\$3.70)	(\$2.68)	(\$1.35)
Year 27	(\$27.15)	\$0.00		(\$27.15)	(\$5.75)	(\$4.12)	(\$2.02)
Year 28	(\$43.25)	\$0.00		(\$43.25)	(\$8.65)	(\$6.11)	(\$2.92)
Year 29	(\$62.51)	\$0.00		(\$62.51)	(\$11.79)	(\$8.23)	(\$3.83)
Year 30	(\$84.02)	\$0.00		(\$84.02)	(\$14.95)	(\$10.31)	(\$4.67)
Surplus			\$1,078.94	\$1,078.94	\$187.85	\$128.87	\$57.76
<b>Total</b>	<b>(\$244.11)</b>	<b>\$0.11</b>	<b>\$1,078.94</b>	<b>\$834.94</b>	<b>\$140.42</b>	<b>\$95.51</b>	<b>\$41.97</b>

**TABLE 10-4**  
**VALUE TO CUSTOMERS – CATASTROPHIC FIRE; WITH INTEREST SAVINGS**  
(\$ MILLIONS)

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Year 1	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$11.75	\$9.00	\$20.75	\$17.81	\$17.23	\$16.07
Year 4	\$0.00	\$0.00		\$23.50	\$9.00	\$32.50	\$26.32	\$25.15	\$22.83
Year 5	(\$0.11)	\$0.00		\$23.50		\$23.39	\$17.87	\$16.86	\$14.90
Year 6	\$0.00	\$0.11		\$23.50		\$23.61	\$17.01	\$15.85	\$13.64
Year 7	\$0.00	\$0.00		\$23.50		\$23.50	\$15.98	\$14.70	\$12.32
Year 8	\$0.00	\$0.00		\$23.50		\$23.50	\$15.07	\$13.70	\$11.17
Year 9	\$0.00	\$0.00		\$23.50		\$23.50	\$14.22	\$12.76	\$10.13
Year 10	\$0.00	\$0.00		\$23.50		\$23.50	\$13.41	\$11.89	\$9.19
Year 11	\$0.00	\$0.00		\$23.50		\$23.50	\$12.65	\$11.07	\$8.34
Year 12	\$0.00	\$0.00		\$23.50		\$23.50	\$11.94	\$10.32	\$7.56
Year 13	\$0.00	\$0.00		\$23.50		\$23.50	\$11.26	\$9.61	\$6.86
Year 14	\$0.00	\$0.00		\$23.50		\$23.50	\$10.63	\$8.95	\$6.22
Year 15	\$0.00	\$0.00		\$23.50		\$23.50	\$10.02	\$8.34	\$5.64
Year 16	\$0.00	\$0.00		\$23.50		\$23.50	\$9.46	\$7.77	\$5.12
Year 17	\$0.00	\$0.00		\$23.50		\$23.50	\$8.92	\$7.24	\$4.64
Year 18	\$0.00	\$0.00		\$23.50		\$23.50	\$8.42	\$6.74	\$4.21
Year 19	\$0.00	\$0.00		\$23.50		\$23.50	\$7.94	\$6.28	\$3.82
Year 20	\$0.00	\$0.00		\$23.50		\$23.50	\$7.49	\$5.85	\$3.46
Year 21	\$0.00	\$0.00		\$11.75		\$11.75	\$3.53	\$2.73	\$1.57
Year 22	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 23	(\$0.45)	\$0.00				(\$0.45)	(\$0.12)	(\$0.09)	(\$0.05)
Year 24	(\$2.72)	\$0.00				(\$2.72)	(\$0.69)	(\$0.51)	(\$0.27)
Year 25	(\$7.43)	\$0.00				(\$7.43)	(\$1.77)	(\$1.30)	(\$0.67)
Year 26	(\$16.48)	\$0.00				(\$16.48)	(\$3.70)	(\$2.68)	(\$1.35)
Year 27	(\$27.15)	\$0.00				(\$27.15)	(\$5.75)	(\$4.12)	(\$2.02)
Year 28	(\$43.25)	\$0.00				(\$43.25)	(\$8.65)	(\$6.11)	(\$2.92)
Year 29	(\$62.51)	\$0.00				(\$62.51)	(\$11.79)	(\$8.23)	(\$3.83)
Year 30	(\$84.02)	\$0.00				(\$84.02)	(\$14.95)	(\$10.31)	(\$4.67)
Surplus			\$1,078.94			\$1,078.94	\$187.85	\$128.87	\$57.76
Total	(\$244.11)	\$0.11	\$1,078.94	\$423.00	\$18.00	\$1,275.94	\$380.37	\$308.57	\$209.66

1                   In sum, even assuming such a catastrophic wildfire liability, PG&E's  
2                   customers still receive a positive net present value of \$309 million due to the  
3                   Securitization, using a 7.34 percent discount rate.

4                   Certain intervenors have also asserted more generally that PG&E's  
5                   income projections are too high and that there is a substantial risk that  
6                   PG&E will materially underperform those expectations. Those income  
7                   projection issues are addressed in other chapters of the rebuttal testimony.

1           However, even if one assumes that PG&E's future income is significantly  
2           worse than its projections, that change would not eliminate the expected  
3           benefit to ratepayers from the Securitization. I have illustrated that in the  
4           table below, applying the 20 percent reduction in income scenario  
5           hypothesized by the City and County of San Francisco (CCSF).<sup>17</sup>  
6           Table 10-5 shows the net present value to ratepayers under that hypothesis,  
7           with interest cost savings treated as constant.

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<sup>17</sup> CCSF-Meal, pp. 36-37.

**TABLE 10-5**  
**20% INCOME REDUCTION: PV SECURITIZATION FLOWS & INTEREST SAVINGS**  
(\$ MILLIONS)

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-Term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Year 1	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$11.75	\$9.00	\$20.75	\$17.81	\$17.23	\$16.07
Year 4	\$0.00	\$0.00		\$23.50	\$9.00	\$32.50	\$26.32	\$25.15	\$22.83
Year 5	(\$2.00)	\$0.00		\$23.50		\$21.50	\$16.42	\$15.50	\$13.70
Year 6	(\$36.23)	\$0.00		\$23.50		(\$12.73)	(\$9.17)	(\$8.55)	(\$7.36)
Year 7	(\$9.95)	\$0.00		\$23.50		\$13.55	\$9.21	\$8.48	\$7.10
Year 8	\$0.00	\$4.70		\$23.50		\$28.20	\$18.09	\$16.43	\$13.40
Year 9	\$0.00	\$15.76		\$23.50		\$39.26	\$23.76	\$21.32	\$16.93
Year 10	\$0.00	\$19.00		\$23.50		\$42.50	\$24.26	\$21.50	\$16.62
Year 11	\$0.00	\$7.51		\$23.50		\$31.01	\$16.70	\$14.61	\$11.00
Year 12	\$0.00	\$1.18		\$23.50		\$24.68	\$12.54	\$10.84	\$7.94
Year 13	\$0.00	\$0.02		\$23.50		\$23.52	\$11.27	\$9.62	\$6.87
Year 14	\$0.00	\$0.00		\$23.50		\$23.50	\$10.63	\$8.95	\$6.22
Year 15	\$0.00	\$0.00		\$23.50		\$23.50	\$10.02	\$8.34	\$5.64
Year 16	\$0.00	\$0.00		\$23.50		\$23.50	\$9.46	\$7.77	\$5.12
Year 17	\$0.00	\$0.00		\$23.50		\$23.50	\$8.92	\$7.24	\$4.64
Year 18	\$0.00	\$0.00		\$23.50		\$23.50	\$8.42	\$6.74	\$4.21
Year 19	\$0.00	\$0.00		\$23.50		\$23.50	\$7.94	\$6.28	\$3.82
Year 20	\$0.00	\$0.00		\$23.50		\$23.50	\$7.49	\$5.85	\$3.46
Year 21	\$0.00	\$0.00		\$11.75		\$11.75	\$3.53	\$2.73	\$1.57
Year 22	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 23	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 24	(\$1.55)	\$0.00				(\$1.55)	(\$0.39)	(\$0.29)	(\$0.15)
Year 25	(\$9.30)	\$0.00				(\$9.30)	(\$2.22)	(\$1.63)	(\$0.84)
Year 26	(\$25.96)	\$0.00				(\$25.96)	(\$5.83)	(\$4.23)	(\$2.13)
Year 27	(\$53.80)	\$0.00				(\$53.80)	(\$11.40)	(\$8.16)	(\$4.00)
Year 28	(\$92.40)	\$0.00				(\$92.40)	(\$18.48)	(\$13.06)	(\$6.24)
Year 29	(\$138.07)	\$0.00				(\$138.07)	(\$26.05)	(\$18.18)	(\$8.46)
Year 30	(\$178.77)	\$0.00				(\$178.77)	(\$31.82)	(\$21.93)	(\$9.93)
Surplus			\$462.26			\$462.26	\$80.48	\$55.21	\$24.75
Total	(\$548.04)	\$48.18	\$462.26	\$423.00	\$18.00	\$403.41	\$217.90	\$193.77	\$152.77

1            In short, even if one hypothesizes PG&E's future income is 20 percent  
2 below forecast in every year (an extreme assumption), the Securitization will  
3 provide PG&E's customers with a positive net present value of \$194 million  
4 (at a 7.34 percent discount rate) through the combined expected cash flows  
5 of the Securitization and expected interest cost savings derived from the  
6 Securitization-generated improved credit profile.

1 As a further alternative hypothesis, I have calculated the net present  
 2 value to ratepayers of the Securitization under the alternative TURN forecast  
 3 of the Additional Shareholder Contributions to the Customer Credit Trust,  
 4 based on the Callan Monte Carlo simulation model.<sup>18</sup> The results of that  
 5 simulation are shown in Table 10-6 below.

**TABLE 10-6**  
**TURN CONTRIBUTIONS FORECAST; WITH INTEREST SAVINGS**  
 (\$ MILLIONS)

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-Term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Year 1	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$11.75	\$9.00	\$20.75	\$17.81	\$17.23	\$16.07
Year 4	\$0.00	\$0.00		\$23.50	\$9.00	\$32.50	\$26.32	\$25.15	\$22.83
Year 5	\$0.00	\$0.00		\$23.50		\$23.50	\$17.95	\$16.94	\$14.97
Year 6	(\$0.01)	\$0.00		\$23.50		\$23.49	\$16.93	\$15.78	\$13.57
Year 7	\$0.00	\$0.01		\$23.50		\$23.51	\$15.98	\$14.71	\$12.32
Year 8	\$0.00	\$0.00		\$23.50		\$23.50	\$15.07	\$13.70	\$11.17
Year 9	\$0.00	\$0.00		\$23.50		\$23.50	\$14.22	\$12.76	\$10.13
Year 10	\$0.00	\$0.00		\$23.50		\$23.50	\$13.41	\$11.89	\$9.19
Year 11	\$0.00	\$0.00		\$23.50		\$23.50	\$12.65	\$11.07	\$8.34
Year 12	\$0.00	\$0.00		\$23.50		\$23.50	\$11.94	\$10.32	\$7.56
Year 13	\$0.00	\$0.00		\$23.50		\$23.50	\$11.26	\$9.61	\$6.86
Year 14	\$0.00	\$0.00		\$23.50		\$23.50	\$10.63	\$8.95	\$6.22
Year 15	\$0.00	\$0.00		\$23.50		\$23.50	\$10.02	\$8.34	\$5.64
Year 16	\$0.00	\$0.00		\$23.50		\$23.50	\$9.46	\$7.77	\$5.12
Year 17	\$0.00	\$0.00		\$23.50		\$23.50	\$8.92	\$7.24	\$4.64
Year 18	\$0.00	\$0.00		\$23.50		\$23.50	\$8.42	\$6.74	\$4.21
Year 19	\$0.00	\$0.00		\$23.50		\$23.50	\$7.94	\$6.28	\$3.82
Year 20	\$0.00	\$0.00		\$23.50		\$23.50	\$7.49	\$5.85	\$3.46
Year 21	\$0.00	\$0.00		\$11.75		\$11.75	\$3.53	\$2.73	\$1.57
Year 22	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 23	(\$0.02)	\$0.00				(\$0.02)	(\$0.01)	(\$0.00)	(\$0.00)
Year 24	(\$1.41)	\$0.00				(\$1.41)	(\$0.36)	(\$0.26)	(\$0.14)
Year 25	(\$6.14)	\$0.00				(\$6.14)	(\$1.46)	(\$1.07)	(\$0.56)
Year 26	(\$14.95)	\$0.00				(\$14.95)	(\$3.36)	(\$2.44)	(\$1.23)
Year 27	(\$28.83)	\$0.00				(\$28.83)	(\$6.11)	(\$4.37)	(\$2.15)
Year 28	(\$47.52)	\$0.00				(\$47.52)	(\$9.50)	(\$6.72)	(\$3.21)
Year 29	(\$71.38)	\$0.00				(\$71.38)	(\$13.47)	(\$9.40)	(\$4.37)
Year 30	(\$98.53)	\$0.00				(\$98.53)	(\$17.54)	(\$12.09)	(\$5.47)

<sup>18</sup> See Revised TURN-Ellis, p. 10, Figure 5. The Revised Ellis Testimony includes a new Figure 5 (at p. 10). I have not been able to recreate the numbers corresponding to that Figure, and TURN has not yet provided the numbers corresponding to that figure. In light of that information gap, I am not addressing Ellis Figure 5 or updating my original Table 10-6 at this time.

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-Term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Surplus			\$865.95			\$865.95	\$150.77	\$103.43	\$46.36
Total	(\$268.79)	\$0.01	\$865.95	\$423.00	\$18.00	\$1,038.16	\$338.92	\$280.13	\$196.92

1                    Thus, even under this pessimistic lower-income hypothesis, the  
2                    proposed Securitization has a substantial positive expected value to  
3                    customers, of \$280 million (discounted to present value using a 7.34 percent  
4                    rate). Finally, in response to a data request to TURN, Mr. Ellis has provided  
5                    revised Additional Shareholder Contributions calculations based on Mr. Ellis'  
6                    revision of his model subsequent to his testimony. I have done alternative  
7                    calculations of the net present value to ratepayers, with and without PGE's  
8                    expected interest cost savings, using the new Ellis Additional Shareholder  
9                    Contributions projections.<sup>19</sup> Those results are set forth in Tables 10-7 and  
10                    10-8 below.

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<sup>19</sup> For this analysis, I have used data obtained from tab TURN ASC-t in the Excel file "DR2-Q5 Attachment 1.xlsx" referenced in TURN's Response to PGE\_TURN002, Question 7.b, dated November 4, 2020. Mr. Ellis' model does not include repayment of interim customer shortfalls. There are four trials out of Mr. Ellis' 2000 trials with interim shortfalls that would be repaid when funds from Additional Shareholder Contributions become available. For my calculations, I have adjusted those four trials to reflect repayment of the interim customer shortfalls in the subsequent year. I have also estimated the impact of the repayment on shortfalls in subsequent years for each of these trials.

**TABLE 10-7**  
**VALUE TO CUSTOMERS; WITH TURN'S ADDITIONAL SHAREHOLDER CONTRIBUTIONS**  
(\$ MILLIONS)

<b>Period</b>	<b>Expected Shortfalls with GU</b>	<b>Expected Repayment with GU</b>	<b>Expected Rate Payer Surplus @ 25%</b>	<b>Expected Net Rate Payer Cash Flow</b>	<b>Net Present Value @ 6.00%</b>	<b>Net Present Value @ 7.34%</b>	<b>Net Present Value @ 10.25%</b>
Year 1	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 4	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 5	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 6	(\$0.09)	\$0.00		(\$0.09)	(\$0.06)	(\$0.06)	(\$0.05)
Year 7	\$0.00	\$0.09		\$0.09	\$0.06	\$0.05	\$0.05
Year 8	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 9	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 10	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 11	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 12	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 13	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 14	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 15	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 16	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 17	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 18	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 19	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 20	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 21	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 22	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 23	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 24	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Year 25	(\$1.24)	\$0.00		(\$1.24)	(\$0.30)	(\$0.22)	(\$0.11)
Year 26	(\$7.37)	\$0.00		(\$7.37)	(\$1.66)	(\$1.20)	(\$0.61)
Year 27	(\$26.37)	\$0.00		(\$26.37)	(\$5.59)	(\$4.00)	(\$1.96)
Year 28	(\$51.00)	\$0.00		(\$51.00)	(\$10.20)	(\$7.21)	(\$3.44)
Year 29	(\$86.98)	\$0.00		(\$86.98)	(\$16.41)	(\$11.45)	(\$5.33)
Year 30	(\$116.80)	\$0.00		(\$116.80)	(\$20.79)	(\$14.33)	(\$6.49)
Surplus			\$892.21	\$892.21	\$155.34	\$106.57	\$47.76
<b>Total</b>	<b>(\$289.85)</b>	<b>\$0.09</b>	<b>\$892.21</b>	<b>\$602.45</b>	<b>\$100.40</b>	<b>\$68.15</b>	<b>\$29.92</b>

**TABLE 10-8**  
**VALUE WITH TURN'S ADDITIONAL SHAREHOLDER CONTRIBUTIONS; INTEREST SAVINGS**  
(\$ MILLIONS)

Period	Expected Shortfalls with GU	Expected Repayment with GU	Expected Rate Payer Surplus @ 25%	Expected Long-Term Interest Savings	Expected Short-Term Interest Savings	Expected Net Rate Payer Cash Flow	Net Present Value @ 6.00%	Net Present Value @ 7.34%	Net Present Value @ 10.25%
Year 1	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 2	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 3	\$0.00	\$0.00		\$11.75	\$9.00	\$20.75	\$17.81	\$17.23	\$16.07
Year 4	\$0.00	\$0.00		\$23.50	\$9.00	\$32.50	\$26.32	\$25.15	\$22.83
Year 5	\$0.00	\$0.00		\$23.50		\$23.50	\$17.95	\$16.94	\$14.97
Year 6	(\$0.09)	\$0.00		\$23.50		\$23.41	\$16.87	\$15.72	\$13.53
Year 7	\$0.00	\$0.09		\$23.50		\$23.59	\$16.03	\$14.76	\$12.36
Year 8	\$0.00	\$0.00		\$23.50		\$23.50	\$15.07	\$13.70	\$11.17
Year 9	\$0.00	\$0.00		\$23.50		\$23.50	\$14.22	\$12.76	\$10.13
Year 10	\$0.00	\$0.00		\$23.50		\$23.50	\$13.41	\$11.89	\$9.19
Year 11	\$0.00	\$0.00		\$23.50		\$23.50	\$12.65	\$11.07	\$8.34
Year 12	\$0.00	\$0.00		\$23.50		\$23.50	\$11.94	\$10.32	\$7.56
Year 13	\$0.00	\$0.00		\$23.50		\$23.50	\$11.26	\$9.61	\$6.86
Year 14	\$0.00	\$0.00		\$23.50		\$23.50	\$10.63	\$8.95	\$6.22
Year 15	\$0.00	\$0.00		\$23.50		\$23.50	\$10.02	\$8.34	\$5.64
Year 16	\$0.00	\$0.00		\$23.50		\$23.50	\$9.46	\$7.77	\$5.12
Year 17	\$0.00	\$0.00		\$23.50		\$23.50	\$8.92	\$7.24	\$4.64
Year 18	\$0.00	\$0.00		\$23.50		\$23.50	\$8.42	\$6.74	\$4.21
Year 19	\$0.00	\$0.00		\$23.50		\$23.50	\$7.94	\$6.28	\$3.82
Year 20	\$0.00	\$0.00		\$23.50		\$23.50	\$7.49	\$5.85	\$3.46
Year 21	\$0.00	\$0.00		\$11.75		\$11.75	\$3.53	\$2.73	\$1.57
Year 22	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 23	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 24	\$0.00	\$0.00				\$0.00	\$0.00	\$0.00	\$0.00
Year 25	(\$1.24)	\$0.00				(\$1.24)	(\$0.30)	(\$0.22)	(\$0.11)
Year 26	(\$7.37)	\$0.00				(\$7.37)	(\$1.66)	(\$1.20)	(\$0.61)
Year 27	(\$26.37)	\$0.00				(\$26.37)	(\$5.59)	(\$4.00)	(\$1.96)
Year 28	(\$51.00)	\$0.00				(\$51.00)	(\$10.20)	(\$7.21)	(\$3.44)
Year 29	(\$86.98)	\$0.00				(\$86.98)	(\$16.41)	(\$11.45)	(\$5.33)
Year 30	(\$116.80)	\$0.00				(\$116.80)	(\$20.79)	(\$14.33)	(\$6.49)
Surplus			\$892.21			\$892.21	\$155.34	\$106.57	\$47.76
Total	(\$289.85)	\$0.09	\$892.21	\$423.00	\$18.00	\$1,043.45	\$340.35	\$281.21	\$197.51

1                    In sum, if one assumes Mr. Ellis' projections for Additional Shareholder  
2                    Contributions, the Securitization provides PG&E customers with a positive  
3                    expected value of \$281 million, using a 7.34 percent discount rate.

4



1 **C. Intervenor’s Interest Tax Shield Argument Is Erroneous. [Issues 3, 4, 6]**

2 Mr. Ellis asserts that PG&E fails to account for an interest tax shield that he  
3 claims benefits shareholders but “comes straight out of the pockets of  
4 customers.”<sup>20</sup> Regardless of any benefit to shareholders, the relevant inquiry  
5 for present purposes is whether there is any impact on expected cash flows  
6 to/from customers. In that respect, Mr. Ellis is plainly in error.

7 First, in periods where the Customer Credit Trust is able to fund the  
8 Customer Credit – the vast majority of the observations in the Monte Carlo  
9 simulations – there is no negative impact on cash flow to/from customers  
10 because by definition the net cash flow is zero, as the Customer Credit exactly  
11 equals the FRC charges.

12 In the few Monte Carlo trials where the Customer Credit Trust is not able to  
13 cover the FRC charges, there is still no net impact on customer cash flows. If  
14 the Customer Credit does not cover the FRC in some period, customers receive  
15 the interest tax benefit. The FRC includes a gross-up for taxes on any resulting  
16 net income from the FRC. However, that gross-up does not include interest  
17 costs because PG&E takes an offsetting tax deduction for the interest  
18 payments.<sup>21</sup> The only FRC gross up is for the taxes on the principal amount  
19 paid on the bonds. The interest costs tax benefit is in effect passed through to  
20 ratepayers because the tax gross up on the FRC is smaller, by the amount of  
21 that interest cost/deduction, than it would be if PG&E did not have this “interest  
22 tax shield.”

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<sup>20</sup> Revised TURN-Ellis, p. 3 (“PG&E proposes to deduct the Recovery Bond interest from its corporate taxable income, claiming the interest tax benefit for shareholders without the corresponding interest expense *which is borne by customers* through the Fixed Recovery Charge (FRC). This undeserved benefit, which PG&E would not be able to claim without the Securitization, comes straight out of the pockets of customers in the form of a higher-than-necessary FRC. Discounting the full interest expense (2.92%) at the true, after-tax, cost of capital (2.10%) increases the present-value cost of the Bonds to customers by \$0.85 billion, to \$8.35 billion.” (emphasis added, footnotes omitted)).

<sup>21</sup> See Chapter 3, Transaction Overview – Rebuttal. See also, PG&E’s Prepared Testimony (Updated), Chapter 3 & Ex 3.1, Chapter 6, and Chapter 8.

1 **D. Intervenor’s Charts Showing Ratepayer Deficit and Shareholder Benefits**  
2 **Are Erroneous. [Issues 3, 4, 6]**

3 In this section, I note flaws in the various quantitative charts/tables  
4 presented by certain intervenor witnesses in areas that overlap with the subjects  
5 of my testimony above.

6 Meal Table 3

7 Meal Table 3<sup>22</sup> purports to show that “Ratepayer commitments exceed  
8 PG&E’s commitments.” However, this table fails to account for all attributes  
9 of the Securitization, and it also is only in nominal (rather than present-  
10 valued) dollars and does not properly account for the value/cost to  
11 customers of the Securitization’s expected net cash flows. Although noting  
12 that customers are entitled to 25 percent of any Customer Credit Trust  
13 surplus in 2050, Meal Table 3 does not include any value whatsoever for the  
14 customers’ share of the expected Customer Credit Trust surplus; it thereby  
15 implicitly treats the expected surplus as having zero value in summing the  
16 columns. There is no analysis that would support an attribution of zero  
17 value to the sharing of the surplus. Relatedly, the Meal Testimony  
18 acknowledges that Meal Table 3 does not include the expected value of  
19 investment returns to be earned by the Customer Credit Trust even though  
20 customers share in such returns through the periodic Customer Credit as  
21 well as the Customer Credit Trust surplus.<sup>23</sup>

22 Meal Figure 1

23 The comparison offered in Meal Figure 1<sup>24</sup> avoids looking at the  
24 pertinent issue: The value of the actual expected net cash flows to  
25 customers. Rather, it appears to be an argument that customers should be  
26 deprived of a substantial net benefit (as shown in my tables above) because  
27 shareholders supposedly are expected to benefit as well. This would  
28 constitute very poor decision-making. In addition to this fundamental flaw,  
29 Meal Figure 1 carries over the Meal Table 3 flaws; for example, the first

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22 CCSF-Meal, p. 27.

23 CCSF-Meal, p. 26, n.84.

24 CCSF-Meal, p. 28.

1 rows just compare “nominal” rather than present valued “Obligations” and  
2 both that and the subsequent sections fail to account for all of the expected  
3 customer benefits of the Securitization. (For example, Meal Figure 1  
4 excludes the benefit of expected interest savings to customers resulting  
5 from the Securitization.) Again, a proper analysis involves a single  
6 comprehensive calculation of the present value of all expected cash flows to  
7 and from customers, as I performed above, but which is wholly absent from  
8 Meal Figure 1.

#### 9 Meal Figure 2

10 Meal Figure 2<sup>25</sup> is titled “Ratepayer Risk Exposure Relative to PG&E  
11 Shareholder Funding of Customer Credit Trust, as Projected in PG&E Table  
12 6-3 (\$Millions).” However, Meal Figure 2 fails to provide any meaningful  
13 depiction of ratepayer risk exposure. Meal Figure 2 simply shows the  
14 expected Shareholder Trust Contributions and the outstanding principal  
15 balance of the bonds over time. For example, for 2021, it shows principal  
16 outstanding on the bonds as \$7.5 billion, mistakenly equating the \$7.5 billion  
17 to the ratepayer’s risk exposure. Nobody asserts, or could assert, that there  
18 is any risk that ratepayers would be out of pocket a net \$7.5 billion (i.e., that  
19 there would never be any Customer Credit). Furthermore, the Figure leaves  
20 out altogether the investment returns expected to be achieved in the  
21 Customer Credit Trust. Meal Figure 2 simply is not a depiction, much less a  
22 reflection of any calculation, of risk over time.

#### 23 Ellis Figures 6 & 11

24 Ellis Figures 6 and 11<sup>26</sup> purport to show, and break down by elements,  
25 the “customer net short” under the Securitization. There are a number of  
26 flaws in the individual elements of those Figures, and they also are not the  
27 proper approach for present valuing the Securitization from customers’  
28 perspective for the reasons discussed above. First, the “interest deduction  
29 tax shield” is simply wrong, for the reasons discussed above. In addition,  
30 the Additional Shareholder Contributions shown in the figure are too low for  
31 a combination of reasons. First, the flawed premises regarding income

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25 CCSF-Meal, p. 31.

26 Revised TURN-Ellis, pp. 11, 21.

1 projections are discussed in PG&E's Rebuttal Testimony, Chapters 1 and 6.  
2 Second, the inaccuracy is significantly compounded by the use of a 10.25  
3 percent discount rate for this element, which gives the contributions a much  
4 lower present value than if discounted at PG&E's 7.34 percent approved  
5 return on rate base. Use of the 10.25 percent discount rate for one element  
6 of the net cash flow is wrong for the reasons discussed above. Third, the  
7 flawed estimate of Customer Credit Trust investment returns is addressed in  
8 PG&E's Rebuttal Testimony, Chapter 6. Finally, Figures 6 and 11  
9 incorrectly place zero value on either the customers' sharing in any  
10 Customer Credit Trust surplus, or on the customers' benefits from lower  
11 interest rates due to PG&E's improved credit profile.

### 12 Ellis Figure 12

13 Ellis Figure 12<sup>27</sup> is not conceptually the right approach to evaluating  
14 whether the proposed Securitization is neutral (or better) for ratepayers.  
15 Analysis of that issue requires, as discussed above, a present valuing of the  
16 expected net cash flows to/from ratepayers. Even Mr. Ellis' most extreme  
17 (and erroneous) 43 percent "probability of customer credit shortfall" fails to  
18 shed light on whether the Securitization is neutral to customers. Without  
19 calculating the present value of the various outcomes, one cannot know  
20 whether that 43 percent risk is a net positive or negative – it could be  
21 consistent with a large positive net present value for customers.<sup>28</sup>  
22 Accordingly, Ellis Figure 12, even if it were accurate, would not be  
23 informative as to the core issue of customer benefit.

24 In sum, the charts and figures presented by the intervenors' witnesses are  
25 not accurate or conceptually appropriate, and they obscure rather than shed  
26 light on the issue of whether the proposed Securitization provides a net benefit  
27 to customers.

28

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**27** Revised TURN-Ellis, p. 22.

**28** A simple example will help illustrate this shortcoming: Consider an opportunity where the probability of loss is 50 percent, but any loss is only \$1, and the probability of benefit is also 50 percent, but the benefit is \$100. The expected benefit from this opportunity is \$49.50. Thus, the 50 percent probability of loss is not very informative without additional information (of the sort not contained in Ellis' Figure 12).

1 **E. Conclusion [Issues 3, 4, 6]**

2           Intervenors' calculations of the benefits and costs of the Securitization miss  
3 the mark because they either fail to analyze the present value of the expected  
4 *net* cash flow to/from customers in each period, or they are (in whole or in part)  
5 looking at things that do not involve customer cash flows at all. A proper present  
6 value calculation of the expected net cash flows to/from customers resulting  
7 from the Securitization shows that not only is it neutral to ratepayers, but it  
8 indeed has a significant positive expected value to ratepayers.