

PG&E HEARING EXHIBIT PGE-14

A.20-04-023

PG&E'S SECURITIZATION 2020

Chapter 5 ...Stress Test Methodology - Rebuttal (David Thomason; Joe Sauvage)
Exhibit 5.9 Moody's Rating Update
Exhibit 5.10 S&P Rating Update

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 5

STRESS TEST METHODOLOGY – REBUTTAL

WITNESSES: DAVID THOMASON; JOE SAUVAGE

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1 **PACIFIC GAS AND ELECTRIC COMPANY**
2 **CHAPTER 5**
3 **STRESS TEST METHODOLOGY – REBUTTAL**
4 **WITNESSES: DAVID THOMASON; JOE SAUVAGE**

5 **A. PG&E’s Access to the Stress Test [Issues 1(a), 1(b)] (D. Thomason)**

6 Parties do not dispute that the Commission has sufficient information to
7 determine the financial status of PG&E.¹

8 Some parties nonetheless claim that PG&E’s application does not satisfy
9 applicable legal requirements, but their positions rest on mistaken factual
10 premises. Agricultural Energy Consumers Association (AECA) claims that
11 PG&E’s application is “inconsistent” with PG&E’s testimony in I.19-09-016 (the
12 POR OII). Similarly, Alliance for Nuclear Responsibility (A4NR) protests that
13 PG&E’s Plan resolved all prepetition wildfire claims.

14 But PG&E repeatedly and clearly stated in the POR OII that it would seek
15 recovery of certain wildfire costs through securitization after satisfying those
16 liabilities through the Plan,² and the Commission acknowledged securitization
17 as a means to achieve de-leveraging in D.20-05-053.³ Alongside those
18 statements, PG&E committed not to recover wildfire costs from ratepayers (other
19 than through a rate-neutral securitization), which commitment PG&E has
20 solidified in this proceeding by formally waiving the right to assert that 2017
21 wildfire costs are just and reasonable.⁴ The instant application is consistent
22 with, and follows directly from, PG&E’s statements prior to emergence from
23 Chapter 11, including in the POR OII.

1 See A4NR-Geesman, p. 8, lines 11-15; AECA-Boccardo, pp. 3-4.

2 See, e.g., POR OII, PG&E’s Prepared Testimony, Chapter 2, p. 2-2, lines 1-14; POR OII, Jason Wells Examination (Feb. 28, 2020), pp. 518-519, 569; POR OII, Robert Kenney Examination (Mar. 3, 2020), pp. 1097-1098, 1140-1141; POR OII, PG&E’s Post-Hearing Opening Brief, pp. 42-43, 49, 65; POR OII, PG&E’s Post-Hearing Reply Brief, pp. 2-4, 7, 12-13, 28-31, 41.

3 See D.20-05-053, pp. 84-85.

4 PG&E’s Prepared Testimony (Updated), pp. 5-5 to 5-6.

1 **B. Path to an Investment-Grade Issuer Credit Rating [Issue 1(c)] (J. Sauvage)**

2 The Stress Test Decision states: “[T]o the extent a utility has a credit rating
3 below investment grade we require an additional showing from that utility of how
4 it will achieve the investment grade rating.”⁵ The Stress Test Methodology
5 further states: “A demonstrated ability to achieve a minimum investment grade
6 credit rating could include, for example, the allowance of wildfire related liabilities
7 for recoveries in rates, equity issuances, asset sales, or other forms of capital
8 infusions. Such a pathway should mitigate ratepayer harm relative to other
9 options available to the utility.”⁶

10 Thus, D.19-06-027 generally contemplates that recovery of Stress Test
11 Costs is part of—but need not be the sole driver of—a utility’s pathway to an
12 investment-grade issuer credit rating. PG&E has demonstrated that it has an
13 ability to achieve a minimum investment-grade issuer credit rating through the
14 foundation of the Plan and emergence from Chapter 11, and subsequent focus
15 on improving its business risk rating and strengthening its financial position. The
16 Securitization supports and accelerates PG&E’s path by providing specific
17 benefits for both quantitative and qualitative elements of credit rating analysis.
18 Many parties explicitly agree that PG&E has the ability to achieve an investment-
19 grade issuer credit rating over time,⁷ and that the Securitization can support that
20 path.⁸

21 **1. PG&E has demonstrated a pathway back to an investment-grade issuer**
22 **credit rating.**

23 As discussed in PG&E’s opening testimony, PG&E sought Chapter 11 relief
24 and emerged in a manner that resolved its substantial prepetition liabilities with a

5 D.19-06-027, p. 43.

6 Stress Test Methodology, p. 13.

7 A4NR’s Response to Data Request PGE_A4NR002, Question 3, dated November 3, 2020 (“A4NR believes that PG&E will be able to obtain an investment-grade issuer credit rating at some point in the future”); AECA’s Response to Data Request PGE_AECA002, Question 11, dated November 2, 2020 (agreeing that “PG&E testimony indicates PG&E would be able to obtain an investment-grade issue[r] rating in the future”); EPUC’s Response to Data Request PGE_EPUC002, Question 27, dated November 6, 2020 (agreeing “it is possible” that PG&E will obtain an investment-grade issuer rating in the future); see *also* CLECA’s Response to Data Request PGE_CLECA002, Question 10, dated November 5, 2020.

8 See *infra* n.14.

1 Plan that was funded by a historic capital raise with a significant amount of new
2 equity. PG&E emerged with investment-grade secured debt, but received a BB-
3 issuer credit rating from S&P (three notches below investment grade) and a Ba2
4 issuer credit rating from Moody's (two notches below investment grade).

5 It is reasonable to expect that PG&E will achieve an investment-grade issuer
6 credit rating in time. Utilities generally receive strong credit ratings because they
7 have stable cash flows generated from their utility franchises.⁹ PG&E's below-
8 investment-grade rating is an outlier among utilities with comparable risk
9 profiles.¹⁰ Both of the other California investor-owned utilities have investment-
10 grade issuer credit ratings and "Strong" business risk profiles. Those
11 comparators suggest that given PG&E's customers, rate base, and service
12 territory (which are comparable to the other California investor-owned utilities),
13 PG&E has the ability to improve its credit ratings and achieve an investment-
14 grade issuer credit rating, as well as to achieve a "Strong" business risk.

15 Having emerged from Chapter 11, PG&E is focused on concrete steps to
16 improve its business risk rating and strengthen its financial position. This effort
17 involves three primary components under the S&P and Moody's methodologies:
18 (a) improved coordination and relationships with key stakeholders such as the
19 Governor, state legislators and the Commission; (b) improved financial and
20 business metrics; and (c) improved operations, safety and governance
21 metrics.¹¹ Improving PG&E's credit rating can be achieved through a
22 combination of the above factors, which could include an improvement in
23 business risk and/or the removal of PG&E's negative modifiers for comparable
24 rating analysis and weak management and governance. Through tangible
25 improvement in the aforementioned areas, PG&E has the ability to improve its
26 credit rating and achieve an investment-grade issuer credit rating.

27 The Commission's recent actions also demonstrate a constructive and
28 improving relationship between PG&E and the Commission. In particular, on
29 October 22, 2020, the Commission approved a PG&E proposal to recover \$447

⁹ See also POR OII, PG&E's Prepared Testimony, Chapter 3, p. 3-2, lines 22–28.

¹⁰ See PG&E's Prepared Testimony (Updated), Chapter 5, pp. 5-39 to 5-41. PG&E's BB- rating from S&P and Ba2 rating from Moody's are lower than the ratings of other utilities with comparable risk profiles. See *id.* Figures 5-10 & 5-11.

¹¹ See PG&E's Prepared Testimony (Updated), Chapter 5, p. 5-25.

1 million for wildfire risk mitigation measures PG&E took in 2018 and 2019, on an
2 interim basis and subject to refund.¹² Additionally, on October 23, 2020, an
3 administrative law judge issued a proposed decision in PG&E’s General Rate
4 Case, adopting provisions of a settlement agreement and granting a combined
5 gas and electric base rate increase of \$585 million.¹³

6 **2. Securitization will support and accelerate PG&E’s path to an**
7 **investment-grade issuer credit rating.**

8 The Securitization is a cost-efficient, rate-neutral, and customer-beneficial
9 mechanism to finance wildfire claims costs. The Securitization will provide
10 significant benefits—both qualitative and quantitative—with respect to PG&E’s
11 credit rating. The quantitative strengthening, combined with an improved
12 qualitative assessment of the California regulatory environment and ongoing
13 operational improvements by PG&E, are critical steps towards an investment-
14 grade issuer credit rating. Numerous parties recognize that the Securitization
15 can support and accelerate PG&E’s path to an investment-grade issuer credit
16 rating through improvements in quantitative and/or qualitative credit factors.¹⁴

12 D.20-10-026.

13 A.18-12-009, Proposed Decision, dated October 23, 2020.

14 See CUE-Earle, p. 1, line 5 (“The proposed securitization provides a path to achieve [investment-grade credit rating] status sooner”); Cal Advocates, p. 13, lines 6-19 (agreeing that Securitization “will accelerate PG&E’s path to achieve an investment-grade credit rating”); CCSF’s Response to Data Request PGE_CCSF002, Question 17, dated October 30, 2020 (“All else equal, under S&P’s methodology securitization would give PG&E the *opportunity* to achieve an investment grade issuer credit rating ‘earlier’ than without securitization”) (emphasis in original); EPUC’s Response to Data Request PGE_EPUC002, Question 18, dated November 6, 2020 (implementation of Stress Test Methodology should improve PG&E’s business profile); see also AECA’s Response to Data Request PGE_AECA002, Questions 8 & 12, dated November 2, 2020 (declining to rebut PG&E’s testimony that “[t]he proposed Securitization may provide PG&E with the ‘opportunity’ to achieve an investment-grade credit rating potentially two years before it otherwise would without the Securitization”); cf. also CLECA’s Response to Data Request PGE_CLECA002, Question 11, dated November 5, 2020 (describing Securitization as a “relatively small factor” in rating agency analysis). CCSF also specifically recognizes how the Securitization will improve both quantitative and qualitative credit rating factors. See CCSF’s Response to Data Request PGE_CCSF002, Question 4, dated November 6, 2020 (“All else equal, the proposed Securitization would increase certain quantitative metrics that S&P uses to assess PG&E’s Financial Risk Profile...”); CCSF’s Response to Data Request PGE_CCSF002, Question 20, dated October 30, 2020 (“The Commission’s approval of Securitization would be one signal of PG&E’s ability to manage regulatory risk”).

1 Qualitatively, the Commission’s decision on the Securitization will provide an
2 important benchmark for the rating agencies to assess PG&E’s relationship with
3 the Commission, especially given the importance of the Securitization to PG&E’s
4 post-emergence financial plan and the statement of support by the Governor’s
5 Office. The Securitization fulfills a core component of the agreement between
6 PG&E and the Governor’s Office. If the Securitization is approved, PG&E will be
7 able to demonstrate its ability to coordinate with the Commission and to achieve
8 results that benefit both ratepayers and PG&E’s long-term financial profile.
9 PG&E has already committed to improving its operations, safety and
10 governance in its Plan; and the Commission proceeding approving that Plan and
11 the agreement with the Governor’s Office further support that goal. But the
12 Securitization remains a key component of PG&E’s post-emergence plan and its
13 approval will signal a more constructive regulatory relationship.

14 Commission approval of the Securitization would further support PG&E’s
15 quantitative credit metrics. Based on PG&E’s closest peers, Southern California
16 Edison (SCE) and San Diego Gas & Electric (SDG&E), PG&E needs to achieve
17 FFO/Debt metrics greater than 20 percent to achieve an investment grade rating
18 under S&P’s methodology.¹⁵ That 20 percent FFO / Debt level could be
19 considered investment grade with an improvement in PG&E’s business risk
20 profile or the removal of two negative modifiers. And as PG&E’s opening
21 testimony describes, PG&E can achieve that 20 percent quantitative threshold
22 by 2023 with the Securitization, whereas without the Securitization, PG&E will
23 not achieve the threshold within the forecast period (through 2024). Accordingly,
24 PG&E has the opportunity through the Securitization to achieve an investment-
25 grade issuer credit rating two or more years earlier than without the
26 Securitization.

27 The City and County of San Francisco (CCSF) protests that PG&E’s
28 improvement in quantitative metrics is driven by increasing FFO, not by the
29 Securitization.¹⁶ PG&E’s FFO will improve for multiple reasons, but the
30 Securitization is a critical one. Quantitatively for S&P, the Securitization will
31 reduce the amount of debt considered on-credit, which will significantly increase

¹⁵ See PG&E’s Prepared Testimony (Updated), Chapter 5, pp. 5-28 to 5-29 & Figure 5-5.

¹⁶ CCSF-Meal, p. 19, lines 15-17.

1 the ratio of FFO/Debt. The Securitization also decreases interest expense,
2 which has a positive impact on FFO / Debt.

3 Other parties protest that PG&E's quantitative metrics remain below PG&E's
4 Financial Target metrics even with the Securitization.¹⁷ But as stated above,
5 PG&E's credit metrics are improved with the Securitization in the forecast to a
6 level that could be considered investment grade with an improvement in PG&E's
7 business risk profile or the removal of two negative modifiers. Approval of the
8 Securitization would signal an improving relationship between PG&E and the
9 Commission and would enhance the path to investment grade.

10 A4NR contends that the quantitative analysis under S&P means that PG&E
11 can anticipate a split rating at best. A4NR recognizes that a split rating could
12 lower PG&E's cost of borrowing, as is described in more detail below.¹⁸
13 Moreover, as PG&E has explained, the financial metric improvement under
14 S&P's methodology is only one dimension of the benefits arising from the
15 Securitization, which will also yield qualitative benefits corresponding to PG&E's
16 regulatory environment and business risk.

17 Parties also cite March 2020 rating agency feedback for the assertion that
18 the Securitization will not change or accelerate investment-grade issuer credit
19 ratings, but parties misinterpret that feedback.¹⁹ PG&E acknowledges that the
20 March rating agency feedback included proposed credit ratings for PG&E (upon
21 emergence from Chapter 11 in July 2020) that were the same in the scenarios
22 with or without the Securitization. But that feedback was based only on the
23 immediate impact on PG&E's status at a specific point in time (upon emergence
24 from Bankruptcy), at least six months before the Securitization transaction would
25 happen. It does not undermine the foregoing evidence that the Securitization
26 supports and accelerates PG&E's ability to achieve an investment-grade issuer
27 credit rating over a period of months and years, by contributing to specific

¹⁷ CCSF-Meal, p. 19, lines 4-6; see also CLECA-Yap, pp. 2-6.

¹⁸ A4NR's Response to Data Request PGE_A4NR002, Question 6.b, dated November 3, 2020 ("[A] split rating could have an effect on" PG&E's cost of borrowing).

¹⁹ *E.g.*, TURN-Dowdell, pp. 15-17. On the afternoon of November 10, the day before this testimony was due, TURN served revised testimony and workpapers from Mr. Ellis and errata testimony from Ms. Dowdell. There has not been time to evaluate those changes, or to address them in rebuttal testimony, and PG&E reserves the right to address those changes at a later date.

1 improvements in quantitative and qualitative elements of the rating agencies'
2 analysis. Similarly, the risks described by the rating agencies in August and
3 September 2020 include examples of the various factors that can influence
4 PG&E's credit ratings, but also do not undermine the anticipated positive effects
5 of the Securitization as one such factor of the Company's ultimate ability to
6 achieve an investment-grade issuer credit rating.²⁰

7 Moreover, as with any large financing, particularly one as well telegraphed
8 as this, PG&E would expect the rating agencies to again review PG&E's credit
9 metrics around the time that the Securitization transaction is executed. Any
10 review would also take into account the various events that have occurred post
11 emergence, including the Commission's recent approvals for rate recovery. The
12 benefits arising from the Securitization therefore could be reflected in credit
13 ratings or analysis when the transaction is executed or thereafter.

14 PG&E submits that it satisfies the Stress Test based on the showing that
15 PG&E has the ability to achieve investment-grade issuer credit rating and the
16 Securitization supports that ability, even though the precise timing of when it will
17 achieve investment grade ratings is inherently uncertain. Parties recognize this
18 both explicitly and implicitly: For example, A4NR acknowledges that there is
19 "uncertainty inhibiting either rating agency's willingness to model very far into the
20 future."²¹ Energy Producers and Users Coalition (EPUC), despite misstating
21 the role of Securitization in the ratings analysis, generally notes the potential for
22 a supportive trajectory in PG&E's credit ratings.²²

23 Finally, parties do not appreciate the significance of rejection of the
24 Securitization.²³ The approval of the Securitization, which is PG&E's preferred

20 The updates issued by Moody's and S&P are attached as Exhibits 5.9 and 5.10.

21 A4NR-Geesman, p. 16, lines 5-6.

22 EPUC-Gorman, pp. 18-20.

23 Compare A4NR-Geesman, p. 26, lines 1-2 with PG&E's Prepared Testimony (Updated), Chapter 5, p. 5-29, lines 10-13. *Contra* CLECA-Yap, p. 4, lines 23-26 ("Furthermore, the approval or denial of a single application does not represent a fundamental change in the relationship between PG&E and the Commission"); CCSF-Meal, p. 20, lines 7-9 (similar). See also CCSF's Response to Data Request PGE_CCSF002, Question 6, dated October 30, 2020 ("San Francisco takes no position regarding the impact a rejection of PG&E's application would have on PG&E's credit profile"); EPUC's Response to Data Request PGE_EPUC002, Question 20, dated November 6, 2020 (noting EPUC has not evaluated effect of Commission denying application).

1 path for financing wildfire claims costs in a cost-efficient, rate-neutral, and
2 customer-protective manner, and which has the support of the Governor's
3 Office, would continue to demonstrate an improved regulatory working
4 relationship. Ultimately, approval of the Securitization and other constructive
5 regulatory actions should positively impact business position and/or lead to the
6 ultimate removal of negative modifiers. Conversely, given the importance of the
7 Securitization to reorganized PG&E and to the agreement reached with the
8 Governor's Office, and the statement of support by the Governor's Office, failing
9 to approve the Securitization could itself negatively affect the rating agencies'
10 qualitative assessment of PG&E's relationship with the Commission, a critical
11 element of PG&E's business risk profile.

12 **3. Customers will benefit as PG&E moves along the path back to an**
13 **investment-grade issuer credit rating.**

14 PG&E explained that accelerating the path back to an investment-grade
15 issuer credit rating would allow PG&E to capture \$441 million in customer
16 savings, based on (a) \$423 million (nominal) in savings over the average 18-
17 year life of bonds issued to fund capital expenditures in 2023 and 2024; and (b)
18 \$18 million in savings over two years based on decreased collateral posting
19 obligations associated with short-term debt.²⁴ TURN and CLECA dispute
20 PG&E's estimate of the particular amount that customers will save and the time
21 frame in which PG&E will achieve investment-grade issuer credit ratings.

22 For the reasons described above, PG&E's quantitative and qualitative credit
23 rating factors can improve through the Securitization, and PG&E will have the
24 opportunity to achieve an investment-grade issuer credit rating earlier with the
25 Securitization than without. TURN's assumption that there will be only a one-
26 year acceleration of PG&E's path to investment-grade issuer credit ratings is
27 arbitrary. Based on FFO / Debt metrics, absent other factors, it is more likely
28 that the metrics are consistent with investment-grade at least two years earlier
29 than in a without Securitization scenario.

30 But even taking the two-year time frame and PG&E's savings estimate as
31 illustrative, TURN and other parties generally accept the critical premise: An

²⁴ See PG&E's Prepared Testimony (Updated), Chapter 5, pp. 5-32 to 5-34.

1 investment-grade issuer credit rating *will* benefit customers,²⁵ which is the
2 premise of the Stress Test Decision and accompanying Methodology. Because
3 the Securitization stands to accelerate PG&E’s path back to an investment-
4 grade credit rating, it also stands to deliver those benefits to customers sooner
5 and in greater measure. Moreover, even TURN’s erroneous estimate of the
6 value of the path to investment-grade issuer credit ratings—\$63 million nominal,
7 \$48 million present value—is still substantially greater than the present value of
8 the customer deficit in PG&E’s proposal, underscoring that the proposal is not
9 just ratepayer-neutral but ratepayer-positive.²⁶

10 TURN disputes various elements of PG&E’s calculation. For example,
11 TURN disputes that PG&E’s secured debt rating will improve by the same
12 increment as its unsecured debt rating. But rating agencies, as a matter of
13 policy, have set differentials for their rating of secured debt relative to an issuer’s
14 credit rating. For non-investment grade issuers, S&P provides a three-notch
15 positive differential for secured debt, while Moody’s provides a two-notch
16 positive differential, but can increase that notching in certain circumstances. For
17 investment grade issuers, both S&P and Moody’s provide two-notch positive
18 differentials for secured debt. As a result of these notching policies, if PG&E is
19 upgraded to an investment-grade issuer credit rating, its secured first mortgage
20 bonds will be given a two-notch upgrade from PG&E’s issuer credit rating.

21 TURN contends that PG&E has overestimated the credit spread differential
22 as well. But TURN does not contest that a higher credit rating generally
23 produces a lower cost of debt financing, as evidenced by the difference in yield
24 relative to a U.S. Treasury security with the same maturity. In any event, the 10-
25 year average differential for BBB- vs. BBB+ is 56 bps, while the current 1-year

25 See TURN-Dowdell, pp. 17-18 (offering alternative calculation of customer benefit based on premise that issuer-level investment-grade ratings would reduce cost of debt); CLECA at p. 13, lines 16-17 (accepting that securitization would generate customer savings but insisting those savings would be “small”); see also TURN’s Response to Data Request PGE_TURN002, Question 25, dated October 27, 2020 (agreeing that reducing leverage “is generally in the best interest of ratepayers”); AECA’s Response to Data Request PGE_AECA002, Question 8, dated November 2, 2020 (acknowledging possible impact of de-leveraging on cost of debt); CCSF’s Response to Data Request PGE_CCSF002, Question 3, dated October 30, 2020 (acknowledging potential benefit from de-leveraging).

26 Chapter 6, Customer Credit Mechanism and Investment Returns – Rebuttal, p. 6-2. [Cross-Ref.]

1 average yield differential is 66 bps. The result for interest savings, even
2 assuming a 56 bps yield differential, is \$395 million (nominal).

3 PG&E believes that 60 bps is an appropriate yield differential given the lack
4 of visibility into the future of the market. Indeed, 60 bps is a conservative
5 assumption from which to calculate savings, as PG&E's unsecured credit rating
6 currently is below investment grade and the improvement in yields could be
7 greater than 60 bps.²⁷ As stated in Chapter 5, Stress Test Methodology (D.
8 Thomason; J. Sauvage), that 60 bps savings of \$423 million, plus \$18 million in
9 short-term debt interest savings, results in customer savings of \$441 million.²⁸

10 TURN mistakenly argues that PG&E should not assume it will issue bonds
11 with an average life of 18 years. Companies consider many variables when
12 deciding maturities, including:

- 13 1. Current maturity schedule (companies seek to avoid substantial near-
14 term maturities);
- 15 2. Companies with long-term assets seek to match the life of assets and
16 liabilities on their balance sheet. Rate base investments are long-term in nature
17 (30 – 50 year asset lives) and PG&E's philosophy is to finance those with a mix
18 of long-term debt and equity, which is in line with precedents; and
- 19 3. Overall cost of financing between shorter-dated and longer-dated
20 maturities.

21 As PG&E will be funding investments made to its utility systems, which are
22 long-term assets, PG&E would not likely issue short-term debt only, and instead
23 will seek to finance the assets in a manner that is consistent with historical
24 PG&E and industry practice.

25 It is also important to emphasize that improvements in PG&E's credit profile
26 from Securitization would create concrete benefits for customers along the way
27 back to an investment-grade issuer credit rating. The table below illustrates the
28 range of potential benefits.

²⁷ See PG&E's Prepared Testimony (Updated), Chapter 5, pp. 5-31 to 5-33.

²⁸ PG&E's Prepared Testimony (Updated), Chapter 5, pp. 5-32 to 5-34.

**FIGURE 5-19
CUSTOMER BENEFITS**

Credit Spread (bps)				
Period	Dowdell Rebuttal Testimony*	Citi Analysis**		
		One notch from S&P	One notch from both rating agencies	Two notches from both rating agencies
~1 Year Average (1/1/2019 - 7/20/2020)	40.0	15.0	44.0	60.0
1 Year Average (10/25/19 - 10/23/20)	--	16.5	53.0	66.0
5 Year Average (10/26/15 - 10/23/20)	--	13.3	35.0	53.0
10 Year Average (10/26/10 -10/23/20)	--	14.0	32.0	56.0

Interest Savings (\$mm)				
Period	Dowdell Rebuttal Testimony*	Citi Analysis**		
		One notch from S&P	One notch from both rating agencies	Two notches from both rating agencies
~1 Year Average (1/1/2019 - 7/20/2020)	\$62.6	\$105.7	\$310.0	\$422.7
1 Year Average (10/25/19 - 10/23/20)	--	116.3	373.4	465.0
5 Year Average (10/26/15 - 10/23/20)	--	93.4	246.6	373.4
10 Year Average (10/26/10 -10/23/20)	--	98.6	225.5	394.6

* Assumes one year acceleration in ratings upgrade and an average 8 year bond life
** Assumes two year acceleration in ratings upgrade and an average 18 year bond life

1 As reflected above, in the event of a one notch upgrade by both S&P and
2 Moody's to BB and Ba1 on an issuer basis, which corresponds to BBB and Baa2
3 for PG&E's secured debt, respectively, the yield differential will likely be 32 bps
4 based on 10 years of historical data. Based on the same calculation presented
5 on page 5-33 of PG&E's opening testimony, the resulting interest savings would
6 save a total of approximately \$225 million (nominal) for the benefit of its
7 customers over an average 18-year life of the bonds. In the event of a split
8 rating, where the S&P credit rating receives a one notch upgrade to BB on an
9 issuer basis and BBB for PGE's secured debt, and Moody's credit rating remains
10 at Ba2 on an issuer basis and Baa3 for PG&E's secured debt, the yield
11 differential will likely be 14 bps.²⁹ Based on the same calculation presented on
12 page 5-33 of PG&E's opening testimony, the resulting interest savings would
13 save a total of approximately \$99 million (nominal) for the benefit of PG&E's
14 customers over an average 18-year life of the bonds.

15 Finally, some parties argue that PG&E should guarantee that customers will
16 be repaid or should provide a backstop to the Customer Credit Trust. As PG&E

²⁹ All spreads used in the testimony are estimates based on historical averages. Actual spreads will depend on prevailing market conditions and current trading levels.

1 explained in its opening testimony, that approach would undermine the credit
2 rating improvements and associated customer savings described above. In the
3 event that PG&E were to guarantee the Customer Credit mechanism, S&P
4 would likely treat it as an enforceable contractual commitment and, therefore,
5 the Securitization would be on-credit and the forecasted improvement in
6 financial metrics would not occur. Parties provide no basis to dispute that rating
7 agency treatment and result.³⁰

8 C. Applying the Stress Test

9 1. Maximum Debt Capacity [Issue 1] (*J. Sauvage*)

10 Parties generally did not contest PG&E's debt capacity analysis, which
11 demonstrated Stress Test Costs of well over \$7.5 billion. Specifically, PG&E
12 calculated its overall debt capacity based on Financial Target metrics of 23
13 percent FFO / Debt (S&P) and 19.75 percent CFO Pre-WC / Debt
14 (Moody's). PG&E's analysis demonstrated average Stress Test Costs of
15 \$11.138 billion (based on approximately \$12.8 billion (S&P) and \$9.5 billion
16 (Moody's)).³¹

17 EPUC appears to be the exception: It argues that PG&E's maximum
18 debt should be determined based on an "Excellent" business position
19 ranking. But EPUC also expressly states, in response to a data request,
20 that PG&E's pending application demonstrates \$7.5 billion in Stress Test
21 Costs eligible for securitization.³² In any event, the Stress Test
22 Methodology dictates the use of the company's current business and
23 financial risk profiles,³³ which for PG&E includes "Satisfactory" business risk
24 and "Strong" financial risk. EPUC's use of "Excellent" business risk is not
25 defensible in light of recent ratings reports, and will not yield a usable

30 See, e.g., CCSF's Response to Data Request PGE_CCSF002, Question 28, dated November 6, 2020 (CCSF has not analyzed the impact of a commitment to make up the shortfall on PG&E's credit ratings); AECA's Response to Data Request PGE_AECA002, Question 10, dated November 2, 2020 (accepting PG&E's testimony that a guarantee will be treated by S&P as on-credit).

31 See PG&E's Prepared Testimony (Updated), Chapter 5, Figure 5-15.

32 EPUC's Response to Data Request PGE_EPUC002, Question 23.b & c, dated November 6, 2020; see also EPUC's Response to Data Request PGE_EPUC002, Questions 5.c, 14, dated November 6, 2020 (similar).

33 Stress Test Methodology, pp. 8-9 (specifying "current non-financial factor ratings").

1 measure of the credit metrics PG&E should target to achieve an investment-
2 grade issuer credit rating. The reality is that no California utility presently
3 has an “Excellent” business risk profile.³⁴

4 EPUC also argues that Stress Test maximum debt amounts should
5 depend on whether PG&E prioritizes the repayment of non-traditional utility
6 debt going forward.³⁵ But PG&E is pursuing *this transaction* in order to
7 expeditiously reduce non-traditional utility debt by retiring the \$6 Billion
8 Temporary Utility Debt. That approach and objective was contemplated by
9 PG&E and confirmed by the Commission in I.19-06-016, including in D.20-
10 05-023, which states:

11 Consistent with PG&E’s plan we expect PG&E to expeditiously pay
12 down Temporary Utility debt over the projected five-year period and
13 regain a closer alignment between aggregate utility debt and the amount
14 of recoverable utility debt. PG&E may seek to achieve this through its
15 securitization application, A.20-04-023 filed April 30, 2020,³⁶

16 EPUC’s focus on the need to eliminate non-traditional debt exposes the
17 problematic position of some intervenors who contend that PG&E should
18 leave the \$6 Billion Temporary Utility Debt in place.³⁷ More generally,
19 EPUC’s concern that PG&E will take on additional non-traditional utility debt
20 in order to fund additional wildfire claims costs is mistaken.³⁸ PG&E
21 resolved prepetition wildfire liabilities, including 2017 North Bay Wildfires
22 claims costs, through the Plan.

23 **2. Excess Cash [Issue 1(d)] (D. Thomason)**

24 Most parties do not contest PG&E’s testimony regarding excess
25 cash and non-core asset sales.

26 CCSF argues that the Excess Cash component of the Stress Test
27 Methodology should be determined based on the potential value of

³⁴ See PG&E’s Prepared Testimony (Updated), Chapter 5, pp. 5-39 to 5-40, Figures 5-9 and 5-10 (reflecting “Strong” Business Risk for both Edison International and Sempra Energy).

³⁵ EPUC-Gorman, pp. 12-14, 20-21, 24.

³⁶ D.20-05-023, pp. 84-85.

³⁷ See, e.g., TURN-Dowdell, p. 20, line 6.

³⁸ *Contra* EPUC-Gorman, p. 14, lines 17-20; p. 20, line 23 to p. 21, line 2.

1 asset sales to public entities.³⁹ But the potential sales to public entities
2 are not a timely alternative, would involve core assets, and would still
3 leave PG&E with \$7.5 billion in Stress Test Costs.⁴⁰

4 The purpose of the Excess Cash component is to “ensure[] that any
5 excess cash available to a utility is used to satisfy disallowed wildfire
6 costs.”⁴¹ That is why PG&E’s testimony focused on the amount of cash
7 presently held by the utility, and no party disputed that PG&E does not
8 maintain or hold excess cash beyond that appropriate to operate the
9 business in the normal course.⁴² CCSF’s reference to billions of dollars
10 arising from asset sales to public entities remains hypothetical. No offer
11 of sale has generated or is about to generate cash in hand. Indeed,
12 when CCSF’s indication of interest was made, it was not even possible
13 for PG&E to pursue due to the June 30, 2020 deadline for PG&E to
14 emerge from Chapter 11 in order to participate in the Go-Forward
15 Wildfire Fund.⁴³ At this point, a potential sale could not be developed
16 and negotiated, much less consummated, prior to the creation of the
17 record and decision in this proceeding. Accordingly, CCSF’s January
18 2019 indication of interest does not present a meaningful opportunity to
19 raise cash to reduce ratepayer costs prior to the close of this
20 proceeding.

21 Moreover, the Excess Cash component specifically addresses
22 “prudent alternatives available to the utility to monetize non-core assets
23 as determined to be in the best interest of ratepayers.”⁴⁴ Setting aside
24 the question whether any of the sales posited by CCSF would be
25 “prudent” or “in the best interest of ratepayers,” the sales do not involve
26 “non-core assets.” CCSF asserts that utility assets are “non-core”
27 “because they include removal of PG&E’s retail service obligations to

39 See CCSF-Meal, p. 12.

40 See CUE-Earle, pp. 6-8 (describing flaws in CCSF’s argument).

41 Stress Test Methodology, p. 11.

42 PG&E’s Prepared Testimony (Updated), Chapter 5, pp. 5-48 to 5-51.

43 See PG&E’s Response to Data Request CCSF_002-Q01-05, Question 1, dated September 29, 2020.

44 Stress Test Methodology, p. 11.

1 the customers served by the assets.”⁴⁵ By that definition, all assets
2 would become “non-core” once sold. CCSF does not address or rebut
3 PG&E’s definition of “non-core” as an asset that is not presently
4 necessary to the provision of utility service.⁴⁶

5 Finally, CCSF wrongly calculates Stress Test Costs of \$3.9 billion by
6 starting with the wildfire claims costs attributable to the 2017 wildfires,
7 and subtracting debt capacity, excess cash, and regulatory
8 adjustment.⁴⁷ But CCSF’s premise is incorrect. As described in
9 PG&E’s opening testimony, PG&E’s debt capacity yields \$11.138 billion
10 in Stress Test Costs.⁴⁸ Even accounting for CCSF’s alleged \$3.2 billion
11 in Excess Cash, PG&E would still have Stress Test Costs in excess of
12 \$7.5 billion.⁴⁹

13 **3. Regulatory Adjustment [Issue 1(e)] (D. Thomason)**

14 Using the Regulatory Adjustment to limit the Securitization size, as
15 some parties have suggested, would be inconsistent with the purpose of
16 the Adjustment, which “is to ensure the applicant utility can maintain or
17 reach an investment grade credit rating while minimizing rate impacts as
18 much as possible.”⁵⁰ Those purposes are not served by a downward
19 Regulatory Adjustment under the circumstances of this application.
20 Rate impacts are already neutralized because PG&E is funding a
21 Customer Credit that is expected to equal or exceed the full amount of
22 customer charges from the proposed Recovery Bonds. A downward

⁴⁵ CCSF-Meal, p. 12, lines 8-9.

⁴⁶ PG&E’s Prepared Testimony (Updated), Chapter 5, p. 5-51. See CCSF’s Response to Data Request PGE_CCSF002, Question 8a & b, dated November 6, 2020 (refusing to elaborate the definition of “non-core” assets or provide a workable definition of “core” assets).

⁴⁷ CCSF-Meal, p. 22.

⁴⁸ PG&E’s Prepared Testimony (Updated), Chapter 5, p. 5-47, line 21, Figure 5-15.

⁴⁹ Similarly, PG&E presented testimony that approximately \$11.2 billion of the PG&E wildfire settlements can reasonably be attributed to 2017 wildfires, and PG&E stipulated to the disallowance of all such costs. Even accepting CCSF’s position that wildfire claims costs are the starting point for the Stress Test, *and* accepting CCSF’s counterfactual position that PG&E has \$3.2 billion in Excess Cash, PG&E would again have over \$7.5 billion in Stress Test Costs.

⁵⁰ Stress Test Methodology, p. 12.

1 Regulatory Adjustment would also harm PG&E’s effort to return to an
2 investment-grade issuer credit rating, which is at the core of this
3 proceeding, because it would impede improvement of qualitative credit
4 factors. Further, a downward Regulatory Adjustment also would limit
5 improvement of quantitative credit metrics because (as described in
6 more detail in Part E) PG&E would need to pursue alternative funding
7 for Securitization objectives.

8 AECA states that the Commission should impose additional cost
9 controls over the lifetime of the Securitization, including potentially
10 prohibiting dividend payments by PG&E.⁵¹ While the Regulatory
11 Adjustment requires the utility to account for other opportunities to
12 satisfy disallowed wildfire costs, PG&E has done this and has explained
13 why the Securitization is the optimal means of financing applicable
14 costs. Given the minimal rate impacts and overall customer benefit,
15 there is no basis for requiring additional (unspecified) cost controls for
16 the life of the Securitization.

17 As to dividends in particular, PG&E previously committed that PG&E
18 Corp. will not pay common dividends until it has recognized \$6.2 billion
19 in Non-GAAP Core Earnings, and that amount would be deployed as
20 capital investment or reduction in debt. PG&E made that commitment
21 after consultation with the Governor’s Office, and it was memorialized
22 and formalized in the Bankruptcy Court and in I.19-09-016 (and D.20-
23 05-053).⁵² That dividend policy also reflects a reasonable balance
24 between the need to de-lever, the need to maintain equity market
25 access (including to support the Customer Credit Trust and Fire Victim
26 Trust), and the need for substantial ongoing investment in utility
27 infrastructure. AECA does not justify overhauling that arrangement in
28 this proceeding.

29 A4NR states there is insufficient evidence for the Commission to
30 evaluate PG&E’s reductions in discretionary spending. A4NR does not

51 AECA-Boccardo, pp.11-12. AECA states that these cost control measures are necessary “under the Stress Test,” though it does not specify quantitative implementation through the Regulatory Adjustment.

52 D.20-05-053, p. 85.

1 explain why this is relevant. The purpose of PG&E's efficiency efforts is
2 to benefit customers and to reduce rates. Accordingly, discretionary
3 spending reductions generally already are incorporated in rates (or can
4 be considered in future ratesetting proceedings), and thus are not an
5 available means to increase debt capacity or alter Stress Test Costs. In
6 any event, PG&E has provided qualitative and quantitative descriptions
7 in testimony and data responses of how it selected cost efficiency
8 targets, what those targets are, and their overall impact.⁵³ A4NR's
9 request for PG&E to justify every single item of discretionary spending
10 would make this proceeding impracticably broad and threaten to
11 duplicate or supplant PG&E's General Rate Case.

12 Finally, CCSF contends the Regulatory Adjustment should account
13 for asset sales and suggests a potential Regulatory Adjustment of \$600
14 million (based on 20 percent of the other two components of the Stress
15 Test, specifically 20 percent of \$3 billion of adjusted Excess Cash). But
16 under the Stress Test, asset sales must primarily be considered in
17 Excess Cash.⁵⁴ For the reasons described above, hypothetical future
18 asset sales that cannot be consummated during the pendency of this
19 proceeding should not be considered. Even if the asset sales identified
20 by CCSF were relevant, CCSF cannot justify double-counting in Excess
21 Cash and Regulatory Adjustment components.⁵⁵ Given PG&E's
22 showing of \$11.1 billion in Stress Test Costs, subtracting either \$600
23 million at the Regulatory Adjustment stage *or* \$3.2 billion at the Excess
24 Cash stage would not undermine PG&E's showing of \$7.5 billion in
25 Stress Test Costs.

53 See PG&E's Prepared Testimony (Updated), Chapter 5, p. 5-55, line 23 to p. 5-56, line 6. See PG&E's Updated Response to Data Request A4NR_001-Q01-16, Question 12, dated August 14, 2020; PG&E's Updated Response to Data Request PubAdv_001-Q01-29, Question 24, dated August 13, 2020 and Confidential Attachment 2020Securitization_DR_PubAdv_01-Q24_Atch01CONF.

54 D.19-06-027, p. 32 (“[T]he primary consideration of asset sales will be completed as part of the excess cash calculation”); CUE-Earle, pp. 7-8.

55 Cf. D.19-06-027, p. 39 n.59 (referring to dividend consideration, “[o]ur intent is that there will be no double counting” between Excess Cash and Regulatory Adjustment elements); see *also* Stress Test Methodology, p. 11 (indicating objective to avoid double-counting between Excess Cash and Debt Capacity elements).

1 **D. Securitization Size [Issue 1] (D. Thomason)**

2 PG&E has demonstrated Stress Test Costs that exceed the requested
3 Securitization size of \$7.5 billion. PG&E's proposed \$7.5 billion transaction size is
4 necessary to accomplish the key objectives of the transaction: retiring the \$6 Billion
5 Temporary Utility Debt; funding the remaining \$1.35 billion in obligations to the Fire
6 Victim Trust; and covering \$150 million in transaction and financing costs. Retiring
7 the \$6 Billion Temporary Utility Debt is a critical component of PG&E's de-leveraging
8 plan. Funding the \$1.35 billion deferred payments to the Fire Victim Trust and
9 accelerating the \$700 million final payment to the Fire Victim Trust expeditiously and
10 fairly compensates wildfire victims. And the remaining \$150 million of proceeds will
11 be directed to issuance costs and accrued interest.

12 Cal Advocates recommends that the Commission find that only \$6.0 billion of
13 2017 catastrophic wildfire costs may be financed through the issuance of recovery
14 bonds.⁵⁶ That limit has no basis in the Stress Test Methodology or otherwise. The
15 Stress Test Methodology supports PG&E's proposed securitization level of \$7.5
16 billion; indeed, PG&E has demonstrated Stress Test Costs in excess of \$7.5 billion,
17 based on allocation of 2017 wildfire costs and analysis of the Stress Test
18 components (Maximum Debt Capacity, Excess Cash, and Regulatory Adjustment).
19 Because the objective of the Stress Test Methodology is to determine the maximum
20 amount of debt the utility can incur without harming customers, preventing PG&E
21 from recovering \$7.5 billion through the Securitization would, by definition, harm
22 customers.

23 Practically, a smaller securitization would not satisfy the financial objectives of
24 the proposed transaction. The reduced size would force PG&E to finance the
25 remainder at a suboptimal time, shortly after emergence from Chapter 11 which
26 included a historic capital raise. Alternative means of raising the additional \$1.5
27 billion in capital would not benefit the utility or customers. Issuing additional debt
28 would run counter to PG&E's de-levering objective and commitment in I.19-06-
29 016.⁵⁷ As to equity, the Stress Test Decision recognizes the detriment of raising
30 additional equity to fund wildfire claims in excess of a utility's debt capacity. In
31 particular, the Stress Test Decision states that in these circumstances, "looking to

⁵⁶ Cal Advocates, p. 1.

⁵⁷ D.20-05-053, p. 85.

1 equity causes more ratepayer harm than benefit” because it “can impact credit
2 ratings and returns on equity” and “dilute individual shareholder ownership and
3 reduce their returns.”⁵⁸ “[W]hen a utility is already in a stressed situation, the cost of
4 equity is more costly given the uncertainty of economic and ownership dilution.”⁵⁹
5 By contrast, PG&E has evaluated options for financing the objectives of the
6 Securitization and is proposing the Securitization as a less expensive, more efficient,
7 and more credit positive means of raising funds.

8 A smaller securitization also would limit the improvements to credit ratings that
9 are a key benefit of the proposed transaction—which Cal Advocates acknowledges.
10 It would reduce the quantitative improvement in credit metrics, and could adversely
11 affect the anticipated improvement in qualitative credit factors. That also could
12 reduce the benefits of lower borrowing costs going forward.

13 Finally, the proposed reduction does not reduce the likelihood of a shortfall in the
14 reserve but instead limits other benefits. Cal Advocates proposes a proportional
15 reduction in shareholder contributions, noting that increasing or maintaining the
16 shareholder contribution while decreasing the transaction size could undermine
17 PG&E’s accelerated path to stronger credit ratings.⁶⁰ Accordingly, the risk of
18 shortfall and probability of surplus would remain constant. But the expected value
19 and expected surplus is decreased, which would be detrimental to customers.

20 Cal Advocates asserts that the lower securitization level will provide
21 shareholders an incentive to ensure prudent management by maintaining some non-
22 recoverable debt on PG&E’s balance sheet. But prudent management is already
23 incentivized by general ratemaking mechanisms and standards. Shareholders face
24 disallowances for imprudent conduct, regardless of whether non-recoverable debt
25 remains on their balance sheet. In any case, PG&E will continue to carry non-
26 recoverable debt associated with shareholder contributions to the Wildfire Fund. Cal
27 Advocates does not address shareholders’ incentive to reduce leverage, which
28 benefits both customers and shareholders. This application reflects that incentive,
29 and it would run contrary to customer interests to deny PG&E a portion of the
30 resulting benefits that shareholders were incentivized to create. In sum, decreasing

58 D.19-06-027, p. 40.

59 *Id.*

60 Cal Advocates, p. 12, lines 15-20.

1 the securitization amount is neither necessary nor appropriate as an incentive to
2 avoid imprudence.

3 Cal Advocates argues the lower securitization level will avoid undermining
4 ratepayers' interest in ensuring the enforcement of disallowances. This tension is
5 inherent in ratemaking. The Commission, as representative of customers, is
6 capable of imposing disallowances when warranted, recognizing that overly harsh
7 actions can erode utility stability and financial health, which ultimately harms
8 customers. Just as the Stress Test itself balances these considerations, so too can
9 the Commission going forward. In addition, Cal Advocates' recommendation would
10 not erase this tension, as ratepayers would still have an "incentive" to avoid
11 "eroding" the Utility's taxable income.

12 Cal Advocates contends the lower securitization level will avoid a "negative
13 precedent" that would suggest a utility can manipulate Chapter 11 protections.
14 PG&E emerged from Chapter 11 after eighteen months of extensive work with a
15 broad range of stakeholders (including the Governor) to develop a plan of
16 reorganization, which was extensively reviewed and approved by the Bankruptcy
17 Court and Commission. Cal Advocates' suggestion that PG&E could and should
18 have raised additional equity to fund the Plan is without merit, and was rejected by
19 the Commission in its decision approving the Plan.⁶¹ In any case, Cal Advocates'
20 interpretation of these events does not support its recommendation to reduce the
21 size of the securitization issuance. The Securitization is an independent transaction,
22 designed to improve credit metrics and lower costs, which PG&E is pursuing after
23 having paid wildfire claim liabilities satisfied through the Plan. There is no basis to
24 conclude that the \$7.5 billion Securitization would "incentivize" a future utility to file
25 under Chapter 11, or that reducing the Securitization amount to \$6.0 billion would
26 erase that supposed incentive.

27 Finally, Cal Advocates justifies the lower securitization level based on other
28 ratepayer contributions (the Wildfire Fund non-bypassable charge and future
29 securitizations for fire risk mitigation capital expenditures). But the Legislature
30 authorized the non-bypassable Wildfire Fund charge (matched by shareholder
31 contributions), as well as securitizations for fire risk mitigation capital expenditures
32 and for Stress Test Costs (expenditures on which shareholders cannot earn an

⁶¹ D.20-05-053, p. 102.

1 equity return). There is no basis for Cal Advocates' implication that these provisions
2 are mutually exclusive in practice. Nor do these arguments support the \$6.0 billion
3 amount Cal Advocates recommends.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 5
EXHIBIT 5.9
MOODY'S RATINGS UPDATE

ISSUER IN-DEPTH

19 August 2020



RATINGS

PG&E Corporation

Corporate family rating	Ba2
Outlook	Stable

Pacific Gas & Electric Company

First mortgage bonds	Baa3
Preferred stock	B1
Outlook	Stable

Analyst Contacts

Jeffrey F. Cassella +1.212.553.1665
 VP-Sr Credit Officer
 jeffrey.cassella@moodys.com

Dexter East +1.212.553.3260
 Associate Analyst
 dexter.east@moodys.com

Michael G. Haggarty +1.212.553.7172
 Associate Managing Director
 michael.haggarty@moodys.com

Jim Hempstead +1.212.553.4318
 MD-Utilities
 james.hempstead@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

PG&E Corporation

FAQ on what's next after emergence from bankruptcy

- » **Ability to mitigate wildfire risk to be key determinant of credit quality.** [PG&E Corporation's](#) (Ba2 stable) ability to improve its credit quality will depend heavily on whether it can mitigate the risk of wildfires in its service territory. This will require substantial financing through the issuance of new debt. If the company is not able to recover future costs and investments related to wildfire mitigation in a timely manner, its financial performance will deteriorate. While climate models are subject to change as mitigating efforts alter projected trajectories, they currently suggest that California faces rising wildfire risk over the next three decades, regardless of greenhouse gas mitigation efforts.
- » **Credit quality would deteriorate if equipment failures were to trigger another string of catastrophic wildfires in its service territory.** Although the wildfire fund established by California Assembly Bill 1054 (AB 1054) was set up to mitigate the financial impact a major wildfire can have on a utility, catastrophic wildfires over a multi-year period could potentially exhaust the fund. Moreover, the liability cap in place would lapse upon the fund's depletion, which would make AB 1054 less credit supportive for California utilities. However, a single catastrophic fire this year would unlikely have an immediate material financial impact on PG&E, given the current full availability of the wildfire fund and the time it takes to determine both the cause of a fire and the amount of damages that the utility must pay.
- » **PG&E will have ample opportunity to strengthen key credit metrics if it does not incur wildfire-related liabilities.** Rate base growth through the significant infrastructure investments required will improve cash flow generation. At the same time, we expect PG&E to be able to use any residual cash flow remaining after capital investments to pay down holding company debt, given that the company is prohibited from distributing dividends to shareholders until at least 2023. PG&E's \$2.75 billion term loan maturing in 2025 provides increased financial flexibility to reduce leverage by paying off this debt either partially or in full ahead of maturity.
- » **Proposed securitization financing to be credit neutral.** We typically view a utility's use of securitization bonds as a credit positive financing tool. But PG&E is proposing to establish a customer credit trust that will be used to provide customers with bill credits to offset the securitization bond principal and interest charges annually. PG&E expects to fund the customer credit trust largely through cash flow generated from tax benefits created by paying past wildfire-related claims.

Ability to mitigate wildfire risk to be key determinant of credit quality

On 1 July 2020, PG&E Corporation and its principal utility subsidiary, [Pacific Gas & Electric Company](#) (PG&E, Baa3 first mortgage bonds stable) exited from bankruptcy. Upon plan confirmation and the fulfillment of AB 1054 requirements, PG&E will be able to participate in California's wildfire fund and benefit from other credit supportive provisions incorporated in the law.

PG&E's ability to improve its credit quality will depend heavily on whether it can mitigate the risk of wildfires in its service territory. The company plans to make significant investments in its infrastructure in the years ahead, particularly around wildfire mitigation. This will require substantial financing through the issuance of new debt. If PG&E is not able to recover future costs and investments related to wildfire mitigation in a timely manner, the company's financial performance will deteriorate.

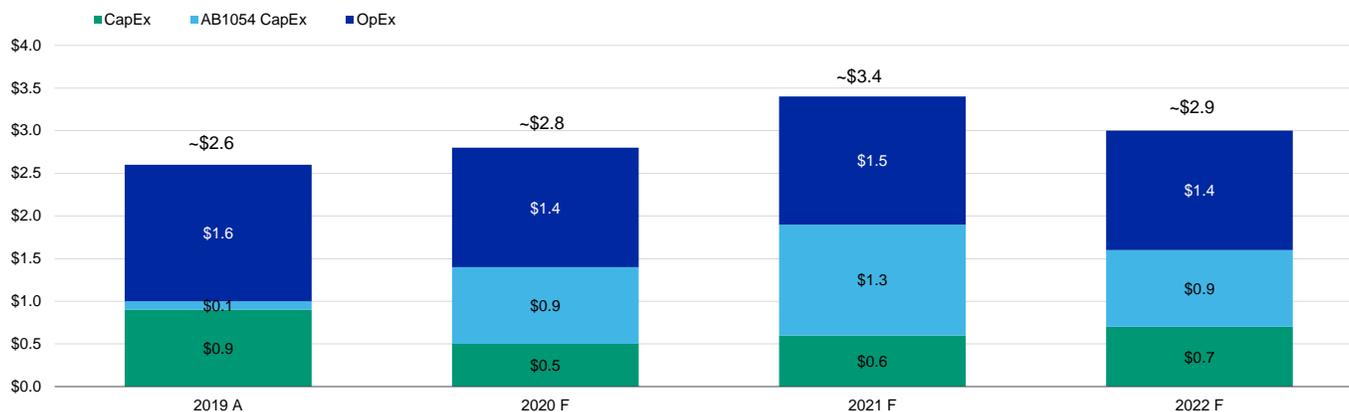
Can PG&E reduce the risk of wildfires in its service territory?

Only time will tell. PG&E continues to invest significantly on wildfire mitigation, including system hardening, enhanced inspections and vegetation management, and has a plan to regionalize its operations to increase its focus on local communities. The company is endeavoring to develop an effective wildfire mitigation program through the establishment of a fire hardened electric system that is rigorously inspected and maintained. With these efforts, PG&E is striving to emulate [San Diego Gas & Electric Company](#) (SDG&E, Baa1 positive), which has had a relatively long and successful track record of wildfire mitigation, albeit in a considerably smaller service territory with different topography.

PG&E continues to invest in monitoring equipment to improve situational awareness of its network to anticipate, prepare for and react to extreme weather conditions. As part of the company's approximately \$6.2 billion in wildfire mitigation investments being made during 2020-2021, PG&E plans to install an additional 400 weather stations and 200 high-definition cameras by the end of the year and a total of 1,300 weather stations and 600 HD cameras by the end of 2021. SDG&E has used these and other technologies to substantially reduce wildfire risk in its service territory since it last contended with major wildfires in 2007.

Exhibit 1

PG&E's wildfire mitigation plan includes significant annual investments (\$ in billions)



Source: PG&E Corporation

In June, PG&E filed a regional restructuring plan application with the California Public Utilities Commission (CPUC) to provide greater accountability at the local level. This regionalization model is aimed at improving safety and responsiveness to customers and local communities, such as by replacing faulty equipment more quickly and reducing outage response times, particularly when utilizing public safety power shutoffs.

Over the long term, climate change is likely to increase the risk of wildfires in California. Cal-Adapt, a state-funded climate data tool maintained by the University of California at Berkeley, models a 10.6% increase in the number of square miles at risk in PG&E's service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

5-Exh5.9-2

territory over the next 30 years, compared to the previous 13 years. Exhibit 2 illustrates the outcomes of Cal-Adapt's model, [which uses representative concentration pathways \(RCPs\)](#), as adopted by the United Nations' Intergovernmental Panel on Climate Change. Cal-Adapt's model does not include the impact of high winds in certain parts of the state.

While climate models are subject to change as mitigating efforts alter projected trajectories, they continue to point to a statewide increase in wildfire risk over the next three decades. Physical climate risks, like rising temperatures and declining or variable precipitation, which can create hotter and drier conditions, are largely locked in globally until 2050 (see "[ESG – Global: Climate scenarios vital to assess credit impact of carbon transition, physical risks](#)"). Hence, We expect wildfire risks to intensify regardless of greenhouse gas mitigation efforts. Beyond 2050, carbon mitigation might be able to reduce the risk of climate hazards that contribute to wildfires.

Exhibit 2

Cal-Adapt projects an increase in square miles at risk of wildfires over the next 30 years

Cal-Adapt data using RCP 8.5 as base case	California (State of)	PG&E (utility)
Issuer rating	Aa2	NA
Senior Secured	NA	Baa3
Outlook	Stable	Stable
Service area size in square miles	163,695	70,000
Annual mean square miles at risk per Cal-Adapt		
1950-2005	664	379
2006-19	767	416
2020-50	817	461
2050-99 (RCP 8.5)**	1,094	651
2050-99 (RCP 4.5)**	920	535
Risk over last 13 years compared to prior 55 years	15.6%	9.9%
Future risk in next 30 years compared to last 13 years	6.5%	10.6%
Long-term risk 2050-99 compared to 2006-19 with no GHG mitigation efforts	42.7%	56.4%
Long-term risk 2050-99 compared to 2006-19 with GHG mitigation efforts; GHG emissions peak in 2040 before declining thereafter	20.0%	28.5%
% of service territory at risk per Cal-Adapt		
1950-2005	0.41%	0.54%
2006-19	0.47%	0.59%
2020-50	0.50%	0.66%
2050-99 (RCP 8.5)**	0.67%	0.93%
2050-99 (RCP 4.5)**	0.56%	0.76%

We assume the service territory at risk equals the variable square miles projected to be burned over the constant total service area. Lack of clarity in Cal-Adapt public site.

** We assume RCP 8.5 (high emissions scenario) as Moody's global scenario up to 2050 due to "locked in" effects of climate change. After 2050, one can differentiate between RCP 8.5 (high emissions scenario) vs RCP 4.5 (a scenario with GHG emissions mitigation).

Note: Exhibit includes partial data from exhibit initially published in "[Public Power Electric Utilities – California: Rising wildfire risks manageable for CA publicly owned electric utilities, except in extreme scenarios.](#)"

Source: Cal-Adapt

What factors could erode PG&E's credit quality?

PG&E's credit quality would deteriorate if equipment problems were to trigger another string of catastrophic wildfires in its service territory, akin to what the utility experienced from 2015 through 2018. During 2017 and 2018, faulty PG&E equipment was linked to at least 17 major wildfires, causing more than \$30 billion in damages. Although the wildfire fund established by AB 1054 was set up to mitigate the financial impact a major wildfire can have on a utility, catastrophic wildfires over a multiyear period could potentially exhaust the fund. Moreover, the liability cap in place would lapse upon the fund's depletion, which would make AB 1054 less credit supportive for California utilities (see "[Regulated electric and gas utilities – US: California's wildfire fund is sufficiently capitalized to pay out claims](#)").

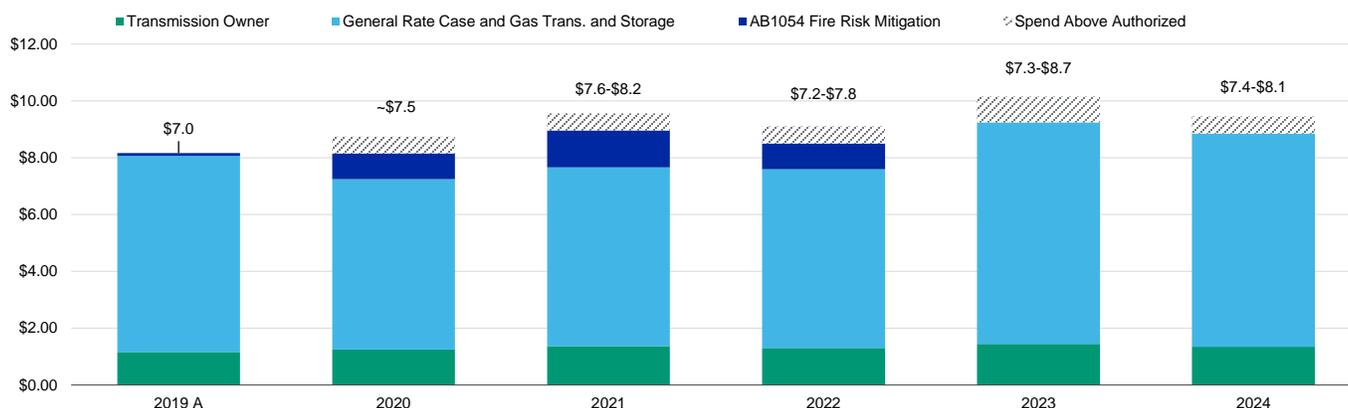
5-Exh5.9-3

AB 1054 remains untested. If there is an unexpected failure by state regulators to effectively implement the law's credit supportive mechanisms, such as a revised prudency standard, the credit quality of PG&E and California's other investor-owned utilities would deteriorate. In the event of a wildfire, the utility is presumed to have acted prudently unless intervenors create a serious doubt as to the reasonableness of the utility's conduct. Furthermore, the CPUC can also consider factors that are beyond the utility's control, such as weather conditions like humidity, temperature and wind. The revised prudency standard appears to be more consistent with that of the Federal Energy Regulatory Commission (FERC), which we view as more constructive.

Poor operational performance or less than timely recovery of costs and investments would also impair PG&E's credit quality. In addition to its wildfire mitigation investments, the utility will undertake substantial capital investment projects to construct, replace, and improve its electricity and natural gas facilities. The investments are being financed with a mix of about half equity and half debt. Over the 2020-2022 period included in its recent general rate case settlement, PG&E plans to invest an average of \$4.6 billion a year in electric and natural gas distribution, as well as generation infrastructure. The settlement agreement, which is awaiting CPUC final approval, includes revenue requirement increases of \$454 million in 2021 and \$486 million in 2022 for PG&E's gas and electric distribution service. PG&E's electric transmission and natural gas transmission and storage investments are recovered through separate FERC regulatory proceedings. Besides the approved wildfire mitigation investments that the company will not earn an equity return on pursuant to AB 1054, recovery of additional capital investments above authorized levels will be addressed in future rate case proceedings. A delay or inability to earn a return on and of investments would weaken the company's financial profile during this period.

Exhibit 3

PG&E's increasing capital investment plans will require substantial new debt issuance (\$ in billions)



Source: PG&E Corporation

Would a catastrophic wildfire in PG&E's service territory this year hurt its credit quality?

Yes, but a new wildfire would likely increase social and reputational risk more than financial risk. Because of PG&E's history of safety problems, the company already faces greater social risk than most of its regulated electric and gas utility peers. PG&E needs to regain the trust of California regulators, state policymakers and, most importantly, its customers. The company's involvement in another catastrophic wildfire would also signal that its wildfire mitigation efforts continue to severely lag those of its peers, which would be credit negative. However, a catastrophic fire this year would be less likely to have an immediate material financial impact on the company.

First, it can take many months to determine how a wildfire was ignited. For example, the California Department of Forestry and Fire Protection (Cal Fire), the agency that investigates fires in the state and determines the cause of ignition, announced on 16 July that it had determined – about eight months after the fact – that faulty electrical transmission lines owned and operated by PG&E had sparked the 2019 Kincadee fire in Sonoma County (see "[CAL FIRE's determination that PG&E equipment caused the 2019 Kincadee fire has no material financial impact](#)"). In the case of the 2017 Tubbs fire, one of the largest wildfires that year, it took Cal Fire about 16 months to conclude its investigation.

5-Exh5.9-4

Second, it can take even longer for most claims to be filed in the wake of a major wildfire to calculate a reasonable estimate of the impact on an investor-owned utility's financial profile. Finally, and most important, AB 1054's credit supportive provisions, including its wildfire insurance fund, are intended to help mitigate the financial burden a wildfire event could have on credit quality. The wildfire insurance fund provides a utility with immediate access to a substantial liquidity resource to cover potential damages caused by a future catastrophic wildfire ignited by its equipment, when the damages exceed the greater of \$1 billion or the utility's insurance coverage.

Finally, AB 1054 includes other important provisions including a liability cap calculated as 20% of the utility's equity portion of its transmission and distribution (T&D) rate base over any three-year period. The state's utilities should also benefit from a more favorable prudency standard and a more expedient subrogation claims settlement process. If the wildfire insurance fund's claims paying capability is ultimately exhausted, the disallowance cap will no longer be available, but the more favorable prudency standard will remain. We note that, although AB 1054 includes these credit supportive mechanisms, it has yet to be tested in its application in response to a wildfire event (see the "[Regulated electric utilities – US: FAQ on the credit implications of California's new wildfire law](#)").

What could improve PG&E's credit?

PG&E's credit quality will improve with each passing year as long as operational improvements and mitigation investments prevent the outbreak of catastrophic wildfires in its service territory. While there are many variables involved in the ignition and spread of wildfires, PG&E will likely have to get through at least three years without a catastrophic wild fire in order to adequately demonstrate that it has substantially reduced its exposure to wildfire risk. Improved pre-incident planning and coordination with local authorities to help contain the spread of fires before they exact a significant toll on customers and property would go a long way toward restoring confidence in the utility's mitigation efforts.

The company also has to address near-term governance risks. PG&E's senior management and financial policies are in a period of transition following the company's 1 July emergence from bankruptcy protection for the second time in two decades. Eleven of the 14 members on PG&E's board of directors were appointed in June. The company asserts that the new board members bring expertise in key areas, such as utility operations and management, safety and environment, risk management, customer engagement and corporate governance.

The revamped board has been tasked with the search for a new chief executive for both the parent company and the operating subsidiary following the 30 June retirement of PG&E Corporation CEO and president William D. "Bill" Johnson and the 30 July departure of PG&E CEO Andy Vesey (see "[PG&E Corporation: Utility subsidiary's CEO departure adds to heightened governance risk](#)"). While the opportunity to run such a large investor-owned utility would normally draw strong interest from a deep pool of experienced candidates, PG&E's checkered recent history and its myriad operational and regulatory issues may pose challenges for the search.

Can PG&E improve its financial profile over the next 12 to 18 months?

We think the company will have substantial opportunity to strengthen its key credit metrics if it does not incur material liabilities arising from a catastrophic wildfire. Rate base growth through significant infrastructure investments will improve cash flow generation. At the same time, we expect PG&E to be able to use any residual cash flow remaining after capital investments to pay down holding company debt, given that the company is prohibited from distributing dividends to shareholders until at least 2023. Strengthening the company's financial profile is an important credit consideration, but it is less of a priority than mitigating wildfire risk and improving stakeholder relationships.

As part of the plan of reorganization, the bankruptcy court approved a motion [filed by PG&E](#) to restrict shareholder dividends. PG&E is precluded from paying common dividends to equity holders until the company has recognized \$6.2 billion in non-GAAP core earnings, or GAAP earnings adjusted for certain non-core items identified in a [separate disclosure statement](#). As such, we do not expect the dividend restriction to be lifted until sometime in 2023. While the ability to pay shareholder dividends is a common practice of investment-grade utility holding companies, the dividend restriction will enable PG&E to retain cash and use residual funds available after capital investments to pay down debt, which is credit positive.

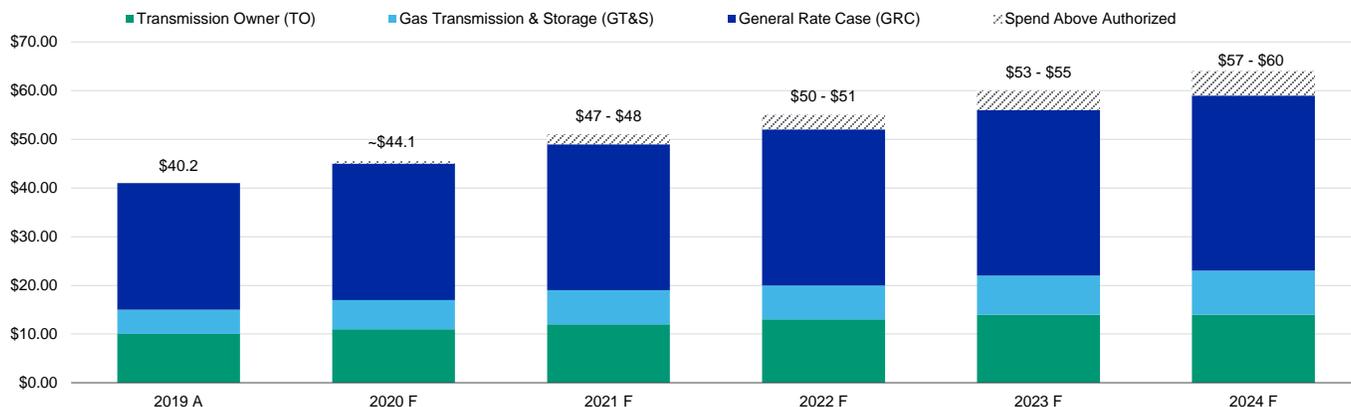
As part of the company's exit financing, PG&E Corporation entered into a \$2.75 billion term loan maturing in 2025 as well as issuing \$2 billion in notes, half of which mature in 2028 and 2030. The term loan offers the company increased financial flexibility to reduce leverage by paying off this debt either partially or in full ahead of maturity. Upon exit, we estimate parent debt to represent about

5-Exh5.9-5

12% of consolidated debt. However, we expect parent debt to gradually decline over the next few years as the company has [disclosed](#) that it expects to pay down about \$2.5 billion of holding company debt by 2023. Through increased cash flow generation and debt reduction, particularly at the parent level, we expect the companies' financial profiles to gradually strengthen, such that we project PG&E Corporation's ratio of cash flow from operations pre-working capital changes (CFO pre-W/C) to debt to increase from about 12% in 2021 to 15% in 2023. Similarly, we project the operating company's ratio of (CFO pre-W/C) to debt to increase from about 14% to 16% over the same period.

Exhibit 4

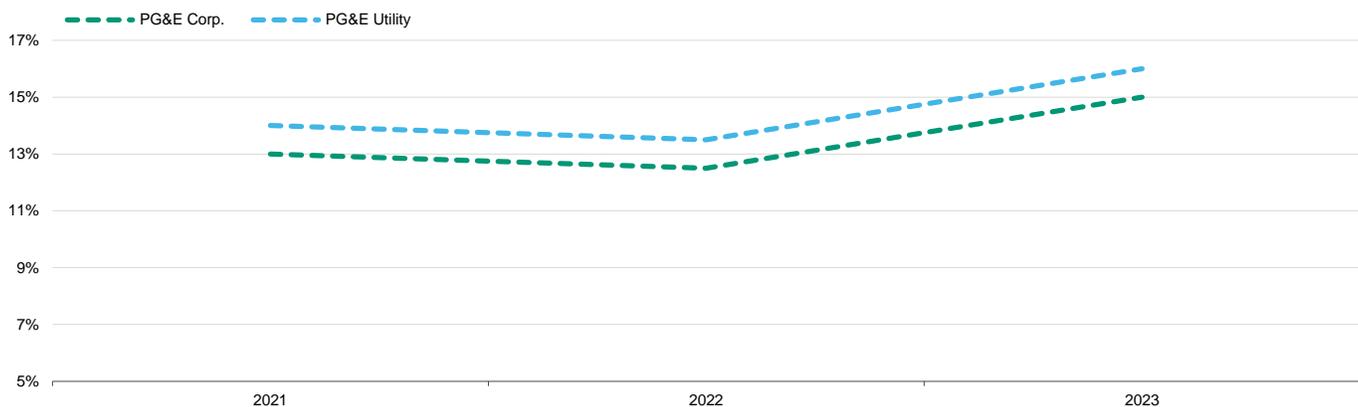
PG&E's weighted average rate base forecast should drive increased cash flow generation
(\$ in billions)



Source: PG&E Corporation

Exhibit 5

Moody's projected ratio of CFO pre-WC/debt for PG&E Corp. and PG&E during the 2021-2023 period



Source: Moody's Investors Service

What are the credit implications of PG&E's proposed \$7.5 billion securitization financing?

PG&E is seeking CPUC approval to issue \$7.5 billion in rate-neutral securitization bonds to be issued in the first half of 2021. If the CPUC approves the plan, the proceeds from the securitization bonds would be used to pay down \$6 billion of temporary debt and the CPUC would not consider it as a permanent debt component within the utility's regulated capital structure.

We typically view securitization bonds as a credit positive financing tool (see "[Regulated utilities – US; Utility cost recovery through securitization is credit positive](#)"). However, unlike traditional utility securitization structures in which the customer is the ultimate payor of the principal and interest on the bonds, PG&E is proposing this securitization structure to be rate-neutral to customers. Although specific details on the structure have yet to be finalized or approved, PG&E is proposing to establish a customer credit trust that will

be used to provide customers with bill credits to offset the securitization bond principal and interest charges annually. PG&E expects to fund the customer credit trust largely through cash flows generated from tax benefits created by paying past wildfire-related claims. The credit offset back to customers will reduce PG&E's revenues and cash flows while the securitization bonds would be considered as on-credit debt and reflected in our key credit metrics. Credit metrics will, however, benefit from the amortizing nature of the bonds.

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Moody's related publications

Credit Opinion

- » [PG&E Corporation: Update to credit profile upon exit from bankruptcy](#), 16 June 2020

Issuer Comment

- » [PGE& Corporation: Utility subsidiary's CEO departure adds to heightened governance risk](#), 30 July 2020
- » [PG&E Corporation: CAL FIRE's determination that PG&E equipment caused the 2019 Kincadee fire has no material financial impact](#), 17 July 2020

Sector Comments

- » [Regulated electric utilities – North America: Bill proposing fines for power shutoffs is credit negative for California utilities](#), 31 January 2020
- » [Regulated electric and gas utilities – US: California's wildfire fund is sufficiently capitalized to pay out claims](#), 20 November 2019
- » [Regulated electric utilities – California: Customer bill credits after power shutoffs signal weakening political support](#), 31 October 2019
- » [ESG - California: Public safety power shutoffs highlight links between environmental and social risks](#), 28 October 2019
- » [Regulated electric utilities – US: Proposed California wildfire risk legislation is credit positive but questions remain](#), 10 July 2019
- » [Electric utilities – US: Limiting utility liabilities looms large after release of SB 901 Commission draft report](#), 4 June 2019
- » [Regulated electric utilities – US: California wildfire strike force report is credit positive, but details are still pending](#), 15 April 2019

Sector In-Depth

- » [Public Power Electric Utilities – California: Rising wildfire risks manageable for CA publicly owned electric utilities, except in extreme scenarios](#), 27 May 2020
- » [Regulated electric utilities – US: FAQ on the credit implications of California's new wildfire law](#), 6 August 2019
- » [Electric and Gas Utilities - US: California utilities struggle with inverse condemnation exposure](#), 15 April 2019
- » [Electric Utilities - US: Potential remedies to reduce California fire risk face competing interests](#), 3 April 2019

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REPORT NUMBER 1239753

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 5

EXHIBIT 5.10

S&P RATING UPDATE

Research Update:

PG&E Corp. And Subsidiary Outlooks Revised To Negative On Adverse Wildfire Conditions; 'BB-' Ratings Affirmed

September 16, 2020

Rating Action Overview

- Unprecedented wildfire activity throughout California at just the beginning of this wildfire season, in our view, could be indicative of a worsening environment that is more susceptible to frequent and more severe wildfires. This could increase the probability that a California investor-owned electric utility causes a catastrophic wildfire at a more regular occurrence than our prior base-case assumptions. These deteriorating conditions may also adversely affect the utility's ability to effectively manage regulatory risk.
- As such, we are revising our outlook on PG&E Corp. and subsidiary Pacific Gas & Electric Co. (Pac Gas) to negative from stable.
- We are affirming our ratings on PG&E and Pac Gas including our 'BB-' issuer credit ratings, the 'BB-' rating on PG&E's senior notes, and the 'BBB-' rating on Pac Gas' senior secured debt.
- The negative outlook reflects the accelerated rate of wildfire activity as demonstrated by the record-setting pace of California's wildfires, which is still in the early stages of the 2020 wildfire season. In our view, the lack of sufficient rainfall, the dry environment, and the ease that relatively routine wildfires can develop into catastrophic wildfires increases the likelihood that a California investor-owned electric utility could potentially be the cause of a catastrophic wildfire.

PRIMARY CREDIT ANALYST

Gabe Grosberg
New York
(1) 212-438-6043
gabe.grosberg@spglobal.com

SECONDARY CONTACT

Obioma Ugboaja
New York
+ 1 (212) 438 7406
obioma.ugboaja@spglobal.com

Rating Action Rationale

The negative outlook reflects the evidence of accelerated catastrophic wildfires. Although AB 1054 establishes a wildfire fund that reduces much of the credit risk exposure associated with California's interpretation of the legal doctrine of inverse condemnation—whereby a California utility can be financially responsible for a wildfire if its facilities were a contributing cause of a wildfire, regardless of its negligence—the fund does not automatically replenish. Every catastrophic wildfire caused by a California investor-owned electric utility reduces the relative

size of the fund, weakening credit quality. The evidence of wildfire acceleration in just the beginning of this wildfire season could, in our view, increase the probability of a California investor-owned electric utility causing a catastrophic wildfire, depleting the wildfire fund sooner than expected.

The pace of wildfires at just the beginning of this season has been unprecedented and could eventually strain available resources. To date, California has experienced more than 7,700 wildfires that have burned more than 3 million acres, damaged more than 5,300 structures and has led to more than 20 fatalities. This contrasts to 2019 when California experienced for the entire wildfire season about 7,900 wildfires, less than 260,000 acres burned, less than 750 structures destroyed, and 3 fatalities. We believe the acceleration of adverse wildfire conditions is partially affected by the 2020 below-average rainfall, which we believe could potentially signal a longer and more devastating wildfire season. While California's state agencies including the California Department of Forestry and Fire Protection have performed remarkably given the extraordinary difficult conditions, these conditions have contributed to a very difficult regulatory and political environment.

Managing regulatory risk could become more challenging. Many of California's electric customers have already faced rolling blackouts in 2020 due to the extraordinary hot weather and we expect the pace of public safety power shut-offs to accelerate, reflecting California's utilities proactively reducing the risk of causing a catastrophic wildfire. Should the frequency of these blackouts and shut-offs increase, frustrated customers and politicians could negatively affect California's investor-owned electric utilities ability to consistently manage regulatory risk.

Financial measures remain in line with expectations. We assess the company's financial risk profile using our medial volatility table, consistent with its regulated utility business. We expect 2020 funds from operations (FFO) to debt at about 15%, consistent with the lower end of the range for its financial risk profile category. Given the company's robust capital spending program of about \$8 billion annually, we expect that PG&E will continue to have negative discretionary cash flow.

Environmental, social, and governance (ESG) credit factors for this credit rating change.

- Natural conditions

Outlook

The negative outlooks on PG&E and Pac Gas reflect the increased probability for a downgrade incorporating the accelerated rate of adverse wildfire activity as demonstrated by the record-setting pace of California's wildfires, which is still in the early stages of the wildfire season. In our view, the lack of sufficient rainfall, the dry environment, and the apparent ease that relatively routine wildfires can develop into a catastrophic wildfire, increases the likelihood that a California investor-owned electric utility could potentially be the cause of a catastrophic wildfire.

Downside scenario

We could downgrade PG&E and Pac Gas over the next 6 to 12 months if risks increase, such as any of California's investor-owned electric utilities are found to be the cause of a catastrophic wildfire, thereby increasing the probability that the wildfire fund could deplete sooner than expected. We

could also lower ratings if PG&E's consolidated FFO to debt weakens to below 13%.

Upside scenario

We could affirm the ratings and revise the outlook to stable over the next 6 to 12 months if PG&E's consolidated FFO to debt is consistently above 13%, California's investor-owned electric utilities are not found to be the cause of a catastrophic wildfire, and Pac Gas consistently demonstrates effective management of regulatory risk.

Company Description

PG&E Corp. is a San Francisco-based utility holding company. Its wholly owned utility subsidiary is Pac Gas, which operates in northern and central California. Pac Gas generates revenues through the sale and delivery of electricity and natural gas to 5.5 million electric and 4.5 million gas customers and has about 7,700 MW of generation capacity. The utility is regulated by the CPUC, the Federal Energy Regulatory Commission, and the Nuclear Regulatory Commission.

Liquidity

We assess PGE's liquidity as adequate to cover its needs over the next 12 months. We expect the company's liquidity sources will exceed its uses by 1.1x, and that the company will meet our other criteria for such a designation. PG&E benefits from the preponderance of regulated utility operations that provide for stable cash flow generation. Moreover, we expect liquidity should benefit from the company's well-established and solid relationships with banks, and its likely ability to absorb high-impact, low-probability events without the need for refinancing, as evidenced by the company's ability to access the wildfire fund.

Principal Liquidity Sources

- Available cash of about \$1 billion;
- Credit facility availability of \$3.7 billion; and
- Cash FFO of about \$2.5 billion.

Principal Liquidity Uses

- Debt maturities of about \$1.5 billion over the next 12 months; and
- Maintenance capital spending of about \$4 billion over the next 12 months.

Covenants

PG&E's revolver contains a debt to capital limit of 70% and Pac Gas' revolver has a debt to capital limit of 65%. We expect the companies to consistently be in compliance with these covenants and have at least 15% financial covenant headroom.

Issue Ratings - Subordination Risk Analysis

Capital structure

PG&E has about \$38 billion of debt. About \$5 billion consists of senior notes at PG&E and approximately \$33 billion of senior secured debt at Pac Gas that are backed by first-mortgage bonds (FMB). The secured notes will all be collateralized, backed by FMBs, and will be rated in-line with Pac Gas' senior secured issue rating.

Issue Ratings - Recovery Analysis

Key analytical factors

- Our recovery rating on Pac Gas's first-mortgage bonds and its secured revolving credit facility reflects the substantial value of the company's regulated utility assets that is sufficiently larger than the company's secured debt, limited priority claims, and other liabilities at the utility at this time. For our recovery analysis we treat the accounts-receivable securitization as a priority claim due to its senior claim to the value of the company's account receivables and the structural protections of this financing structure.
- Pac Gas' secured debt has a '1+' recovery rating, indicating our highest expectation for a full recovery, and resulting in an issue rating three notches above the issuer credit rating. The recovery rating reflects collateral coverage in excess of 150%, consistent with our criteria for recovery ratings on debt issued by regulated utilities that is secured by the key utility assets.
- We view the secured debt at PG&E as effectively unsecured because it is unguaranteed by Pac Gas and is essentially the junior-most debt liability in PG&E's consolidated capital structure, behind unsecured liabilities and preferred equity interests at Pac Gas. As such, we cap the recovery rating on this debt at '3', consistent with our approach to rating unsecured debt issued by companies with an issuer credit rating of 'BB-' or higher.
- The '3' recovery rating cap recognizes that 'BB' category entities are more likely to significantly increase debt before default and that recovery prospects for unsecured debt are most likely to be impaired by additional debt. Further, claims of PG&E's debt would be structurally junior to potential non-debt liabilities at Pac Gas, including future potential wildfire liabilities. Notwithstanding the cap, based on PG&E's current capital structure, the recovery rate on PG&E's debt could be higher than the 50%-70% indicated by our '3' recovery rating.
- A default scenario could stem from sudden liquidity pressure from an unpredictable weather, cost, or market event outside of the company's control, consistent with past utility defaults. Further it could reflect significant future litigation exposure at Pac Gas, consistent with PG&E's prior default.
- We expect Pac Gas to continue to operate and reorganize after default given the essential nature of its services. We also assume the value of the utility's assets will be preserved and we use the net value of its regulated fixed assets as a proxy for the company's enterprise value. The company's regulated asset value is currently roughly \$66 billion.

Simulated default assumptions

- Simulated year of default: 2024
- Gross enterprise value--discrete asset valuation (DAV) approach: \$66 billion
- Valuation split—PG&E/Pac Gas: 0%/100%

Simplified waterfall

- Net recovery value after administrative costs (5%): \$62 billion
- Pac Gas value: \$62 billion
- Priority claims at Pac Gas (A/R securitization): \$1 billion
- Secured debt claims at Pac Gas (FMBs and bank debt): \$37 billion
- Recovery estimate: 100%
- Residual value available to Pac Gas equity: \$24 billion
- Pac Gas Preferred Stock claims: \$250 million
- Residual value available to Parent creditors: \$24 billion
- Debt claims at Parent (effectively unsecured): \$5.3 billion
- --Recovery range: Capped at 50%-70%; rounded estimate: 65%

Notes: Debt amounts include six months of accrued interest that we assume will be owed at default. We assume the cash flow revolvers at Pac Gas (\$3.5 billion) and PG&E (\$500 million) at 85% utilized at default and that the \$1 billion accounts receivable securitization is fully utilized. We assume any debt maturing before default is refinanced on similar terms before maturity.

Ratings Score Snapshot

Issuer Credit Rating: BB-/Negative/--

Business risk: Satisfactory

- Country risk: Very low
- Industry risk: Very low
- Competitive position: Fair

Financial risk: Significant

- Cash flow/Leverage: Significant

Anchor: bb+

Modifiers

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)

- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Weak (-1 notch)
- Comparable rating analysis: Negative (-1 notch)

Stand-alone credit profile: bb-

- Group credit profile: bb-

Related Criteria

- General Criteria: Group Rating Methodology, July 1, 2019
- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings List

Ratings Affirmed/Outlook Action

	To	From
PG&E Corp.		
Pacific Gas & Electric Co.		
Issuer Credit Rating	BB-/Negative/NR	BB-/Stable/NR

Ratings Affirmed/Outlook Action (cont.)

Ratings Affirmed; Recovery Rating Unchanged

PG&E Corp.

Senior Secured	BB-
Recovery Rating	3(65%)

Pacific Gas & Electric Co.

Senior Secured	BBB-
Recovery Rating	1+

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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