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Witness : N. Molla



OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

**The Office of Ratepayer Advocates’
Report on
Pacific Gas and Electric Company’s
Cost of Service and Rates for Gas
Transmission and Storage
Services for the Period 2019 - 2021**

Chapter 4: Safety, Risk and Planning

San Francisco, California
June 29, 2018

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1 **I. INTRODUCTION**

2 This exhibit presents the analyses and recommendations of the Office
3 of Ratepayer Advocates (ORA) regarding the Gas Distribution proposals of
4 Pacific Gas and Electric Company (PG&E) in its Test Year (TY) 2019 General
5 Transmission and Storage Proceeding (GT&S). Specifically, ORA addresses
6 PG&E’s Investment Planning Process (IPP) and the Risk Management
7 Process, PG&E’s Compliance with the 2017 GRC Settlement Agreement, and
8 the relationship between the Risk Assessment Mitigation Phase (RAMP) and
9 the 2019 GT&S Rate Case.

10 **II. SUMMARY OF RECOMMENDATIONS**

11 The following summarizes ORA’s recommendations regarding PG&E’s
12 safety and risk planning:

- 13 • The use of Risk Evaluation Tool and Risk-Informed Budget
14 Allocation scoring for the prioritization of risks and selection of
15 mitigation programs should be phased out;
- 16 • ORA supports PG&E’s transition to a more quantitative risk
17 assessment methodology, as represented by their 2017 RAMP
18 filing; and
- 19 • PG&E should provide more support for its deferred work subject
20 to the 2017 GRC Settlement Agreement.

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1 **III. DISCUSSION/ANALYSIS**

2 **A. Gas Operations Risk Management and Investment Planning**
3 **Process**

4 PG&E's Gas Operations uses Risk Management and Investment
5 Planning Processes to identify, assess, and rank risks, develop mitigation
6 plans, and lead the process to develop a multi-year investment plan to
7 address risks with the objective of prioritizing higher risks while considering
8 constraints such as funding and timing.¹ PG&E's process for assessing and
9 ranking risks involves the use of a Risk Evaluation Tool (RET), which is used
10 to calculate a relative risk score for each risk based on its potential impact and
11 frequency on a 7x7 risk matrix.²

12 PG&E's Investment Planning Process similarly uses a Risk-Informed
13 Budget Allocation (RIBA) scoring to assess and relatively rank the mitigation
14 benefit of programs and projects. As noted previously by ORA and other
15 parties, the method for RET and RIBA scoring is non-intuitive and lacks
16 transparency due to its use of a log-10 scale in the scoring, lack of basis in
17 units, and is highly sensitive to the subjective decisions and assumptions of
18 Subject Matter Experts.³ While PG&E has since made some changes to the
19 model, including expanded criteria definitions for all Company risks and a
20 different risk score calculation, the methodology remains largely the same.⁴
21 PG&E was unable to feed the outputs of the RAMP into GT&S, as is expected
22 for PG&E's 2020 GRC.⁵ ORA supports this transition from RET and RIBA to

¹ PG&E Prepared Testimony, pp. 4-6 and 4-9.

² PG&E Prepared Testimony, p. 4-7.

³ See D.16-08-018 pp. 43-57:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M165/K862/165862364.PDF>. See also ORA-02 (Testimony of N. Skinner) in PG&E's 2015 GT&S (ORA-04-SA, p.1)

⁴ See ORA-04-SA, p. 18 (GRC-2017-PHI_DR-ORA_011 Q01)

⁵ PG&E Prepared Testimony, p. 4-30.

1 the models presented in PG&E’s 2017 RAMP filing for assessing and
2 prioritizing risks and mitigations. Per the April 24th, 2018 Scoping Ruling, ORA
3 defers its comments on the RAMP methodology to PG&E’s RAMP proceeding
4 (I.17-11-003).

5 **B. Compliance with 2017 GRC Settlement Agreement**

6 ORA understands that PG&E may require some flexibility in
7 reprioritizing projects as it receives additional information or system needs
8 change. However, aside from the very broad explanation that “PG&E’s Asset
9 Family Owners (AFOs) gained new information on asset threats, risks, and
10 costs” during the one to three-year gap between forecast and budget,⁶
11 PG&E’s testimony in this chapter does not provide sufficient insight into
12 PG&E’s decision making process for reprioritizing work. It provides no
13 explanation or example of what type of new information or change in system
14 needs would lead PG&E to reprioritize work, and there is no discussion of the
15 specific factors that led to the differences between the planned and adopted
16 amounts shown in Tables 4-3 and 4-4. PG&E instead seems to leave much of
17 the discussion of why work was deferred to the specific chapters, like
18 Chapters 5, 7 and 10, that include deferred projects or programs. However, if
19 PG&E does indeed evaluate work holistically on a portfolio level,⁷ PG&E
20 should provide a more substantive high-level explanation in its Safety Risk
21 and Planning chapter of the factors considered in the Investment IPP in
22 producing the implemented portfolio of projects and programs. A helpful high-
23 level summary would also include for each program/project a description of
24 why the work was not completed (whether it was deprioritized in favor of
25 higher risk work and what the higher risk work was, or due to timing issues),

⁶ PG&E Prepared Testimony, p. 4-24.

⁷ PG&E Prepared Testimony, p. 4-25.

1 whether PG&E is forecasting work in the program in the 2019-2021 period,
2 and whether PG&E has evaluated and reduced the pace in this 2019 GT&S
3 application.

4 While PG&E provides more specific explanations for re-prioritizing
5 projects and programs in their respective chapters, PG&E often fails to
6 satisfactorily explain how it determined what work needed to be completed
7 during the previous rate case period to avoid safety hazards. With the Pipe
8 Replacement and Shallow Pipe programs in Chapter 5, for example, PG&E
9 provides only a generic explanation that “Although PG&E reprioritized some
10 work in this program, PG&E performed the highest priority work, and the work
11 that PG&E did not perform did not create a safety hazard.” PG&E does not
12 provide the criteria used to determine which portion of the work was the
13 highest priority or constitutes an immediate safety hazard (eg. higher pressure
14 pipe or includes High Consequence Areas).

15 **C. Relationship Between PG&E’s RAMP and the 2019 GT&S Rate** 16 **Case**

17 While PG&E was unable to feed the outputs of RAMP into the GT&S
18 Rate Case due to the concurrent timing of the RAMP and GT&S, PG&E did
19 have the opportunity to review how the outcomes suggested by RAMP
20 modeling compare to those produced by PG&E’s IPP. As ORA has detailed in
21 its RAMP comments, some of the differences in outcomes may be reconciled
22 by improvements to the model, such as refining the model inputs and
23 quantifying the uncertainty associated with them, the expansion of the timeline
24 over which mitigation benefits are quantified to beyond 2022, and the
25 consideration of interactions between mitigations in calculating the Risk Score
26 Efficiency.⁸ In other cases, the difference in outcomes may provide insights

⁸ ORA RAMP Opening Comments, pp. 3-5. Also see ORA-04-SA, p.19.

1 into where PG&E can improve its current risk prioritization and mitigation
2 selection process through the use of RAMP modeling.

3 RAMP represents a first-generation model and still has several issues
4 to be addressed before it can be used to determine PG&E's risk prioritization
5 and mitigation strategy.⁹ ORA looks forward to PG&E's increased
6 incorporation of such quantitative probabilistic risk modeling in its risk
7 management and investment planning process.

8 **IV. CONCLUSION**

9 ORA recommends that the use of Risk Evaluation Tool and Risk-
10 Informed Budget Allocation scoring for the prioritization of risks and selection
11 of mitigation programs should be phased out, particularly as PG&E transitions
12 to a more quantitative risk assessment methodology, as represented by their
13 2017 RAMP filing. PG&E should also provide more support for its deferred
14 work subject to the 2017 GRC Settlement Agreement.

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⁹ Although as noted above, PG&E has been developing models and refining inputs as early as the 2015 GT&S, in A.13-12-012.

1 **WITNESS QUALIFICATIONS**

2 My name is Nusrat Molla. My business address is 505 Van Ness
3 Avenue, San Francisco, California, 94102. I am employed as a Utilities
4 Engineer in the Office of Ratepayer Advocates' Energy Safety and
5 Infrastructure Branch. I am responsible for ORA's testimony regarding the
6 recommended 2019 forecasts for PG&E's Operations and Maintenance
7 Program.

8 I have a Bachelor of Science in Civil and Environmental Engineering
9 from University of California, Berkeley. I am a California-registered Engineer
10 in Training (EIT), number 162397.

11 Prior to joining ORA, I have been involved in water quality and energy
12 efficiency research at the National Institute of Standards and Technology,
13 University of California, Berkeley, and Lawrence Berkeley National
14 Laboratory. Since joining ORA in 2017, I have worked on, or am currently
15 working on proceedings and projects related to pipeline safety, gas and gas
16 safety, wildfires, utility pole safety and reliability, and risk assessment,
17 including SoCalGas/SDG&E's Pipeline Safety Enhancement Plan (PSEP)
18 Reasonableness Review (Application (A.) 16-09-005), SoCalGas/SDG&E's
19 PSEP Forecast (A.17-03-021), PG&E's Wildfire Expense Memorandum
20 Account application (A. 17-07-011), and PG&E's Risk Assessment Mitigation
21 Phase (A. 17-11-003).

22 This completes my prepared testimony.

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