

Docket: : A.13-12-012
I.14-06-016
Exhibit Number : ORA-02
Commissioner : C. Peterman
ALJ : A. Yip-Kikugawa
Witness : N. Skinner



OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

**Report on the Results of Operations
for
Pacific Gas and Electric Company
Test Year 2015
Gas Transmission and Storage Rate Case**

Chapter 2
Safety and Risk Management
CORRECTED
CLEAN

San Francisco, California
January 9, 2015

TABLE OF CONTENTS

- I. INTRODUCTION 1
- II. SUMMARY OF RECOMMENDATIONS 1
- III. GENERAL OVERVIEW 1
 - A. Procedural Background 1
 - B. Risk Assessment Model in Current Application 3
- IV. DISCUSSION / ANALYSIS OF “SAFETY AND RISK MANAGEMENT” 7
- V. COMMENTS ON SAFETY AND ENFORCEMENT DIVISION (SED)
PRELIMINARY REPORT 14

Chapter 2 – Safety and Risk Management

I. INTRODUCTION

This exhibit presents the analyses and recommendations of the Office of Ratepayer Advocates (ORA) regarding Pacific Gas and Electric Company's (PG&E) "Safety and Risk Management" proposals associated with its Test Year (TY) 2015 Gas Transmission and Storage (GT&S) rate case. Specifically, this exhibit addresses PG&E's proposals regarding safety and risk management, and its risk assessment-based model it used to determine which safety-related capital projects to include for cost recovery in this proceeding. ORA also responds to the Preliminary Report of the Safety and Enforcement Division, issued July 18, 2014, pursuant to the ALJ e-mail Ruling of July 21, 2014.

II. SUMMARY OF RECOMMENDATIONS

PG&E has failed to show that its proposed projects are just and reasonable strictly by use of its risk assessment model. PG&E's internally-developed risk assessment model is not sufficiently quantitatively rigorous to determine that specific projects are just and reasonable. The Commission should view PG&E's current risk assessment and associated metrics as the "alpha version" and first iteration of what will be a years-long (if not decades-long) process of determining methods and models to quantify risk, risk-reduction, and cost-effectiveness of mitigations. While PG&E's risk assessment model and results do represent a further step for PG&E in improving the incorporation of risk into its planning processes, the model is only a draft approach for informational purposes.

III. GENERAL OVERVIEW

A. Procedural Background

In a March 5, 2012, Letter to Tom Bottorff, PG&E Senior Vice President of Regulatory Affairs, Commission Executive Director Paul Clanon stated that PG&E's

1 then-pending 2014 General Rate Case, A. 12-11-009, should “be founded on an
2 explicit safety and security risk assessment” and that PG&E shareholders “should
3 fund a review focused on operational and public safety issues, as part of the GRC,
4 conducted by independent consultants hired by the Commission.” The letter further
5 said that “PG&E should give a risk assessment of its physical system as well as a
6 description of and a justification for the company’s risk mitigation program and
7 policies.”

8 In its Application (A.)12-11-009, filed November 15, 2012, PG&E did “not
9 explicitly include such a risk assessment and justification of its risk mitigation
10 programs and policies,”¹ according to Commission-hired consultant Cycla
11 Corporation. Another Commission-hired consultant, The Liberty Consulting Group
12 (Liberty), concluded that “[t]he 2014 GRC does not include structured and quantified
13 risk assessments as a basis for developing capital and operating expense
14 requests.”² Liberty further concluded that “[t]he expectations created by the March 5
15 letter anticipate a use of risk assessment beyond what one finds currently in the
16 industry.”³ PG&E quoted this Liberty conclusion in its Opening Brief⁴ and the
17 Proposed Decision of Administrative Law Judge Pulsifer included it as a Finding of
18 Fact.⁵

19 On November 14, 2013, the Commission issued Rulemaking (R.)13-11-006,
20 the General Rate Case (GRC) Order Instituting Rulemaking (OIR). The Commission
21 opened this rulemaking to consider reforms to the GRC process, primarily regarding

¹ “Evaluation of PG&E’s 2014 Gas Distribution Filing,” May 6, 2013, Cycla Corporation, Exhibit (Ex.)167, A.12-11-009, p. iii.

² “Study of Risk Assessment and PG&E’s GRC,” May 6, 2013, The Liberty Consulting Group, Ex.168__, A.12-11-009, p. S-6.

³ *Id.*, p. S-2.

⁴ Pacific Gas and Electric Company’s Opening Brief, A.12-11-009, September 6, 2013, p. 2-5.

⁵ Proposed Decision of Administrative Law Judge Pulsifer, A. 12-11-009, June 18, 2013, Finding of Fact 10, p. 659 (“10. The Liberty Consultants found that the expectations created in the Executive Director’s March 5, 2012 letter anticipate a use of risk assessment beyond what one finds currently in industry.”) Neither PG&E nor any other party suggested any alternate language to this Finding of Fact in their Opening Comments to the Proposed Decision.

1 the inclusion of better methods of assessment of safety and risk for the energy
2 utilities within its jurisdiction. On December 20, 2013 the energy utilities filed their
3 responses to a set of questions posed by the Commission in the OIR. ORA and
4 other parties filed comments on January 15, 2014 and reply comments on January
5 30, 2014. In response to comments, Commission Staff issued a straw proposal on
6 February 25, 2014 followed by three days of workshops between March 19, 2014
7 and March 21, 2014. In early April, parties provided redline edits to the straw
8 proposal. Ahead of the Prehearing Conference, Staff issued a revised straw
9 proposal. On April 29, 2014 ALJ Wong held a Prehearing Conference and
10 established the schedule for further comments. Comments were submitted on May
11 23, 2014, and reply comments on June 13, 2014. A second round of comments and
12 reply comments on the Refined Straw Proposal were added to the proceeding. The
13 proceeding is still pending any final determination.

14 **B. Risk Assessment Model in Current Application**

15 PG&E's opening testimony filed with its application on December 19, 2013,
16 explicitly mentions the March 5, 2012 letter and the Cycla Report as some of the
17 recommendations and directives its application attempts to satisfy.⁶ PG&E asserts
18 that "the 2015 forecast is supported by a risk-based asset management and
19 investment planning process. While PG&E's risk and asset planning capabilities are
20 continuing to evolve and have not yet reached full maturity, the GT&S forecast
21 resulted from the next stage in development and implementation since PG&E's 2014
22 GRC application and is consistent with the evaluation criteria Cycla set forth in its
23 2014 GRC report."⁷ However, PG&E also noted in response to discovery that "[t]he
24 Cycla Report identified ten 'Evaluation Criteria' that Cycla believes apply to an
25 operator's overall risk-informed resource allocation process. PG&E did not 'use' any

⁶ PG&E Prepared Testimony, Volume 1 (Stavropolous), p. 1-4.

⁷ *Id.*, pp. 1-4 to 1-5.

1 of these criteria in its [2015 GT&S] Application.”⁸ Furthermore, PG&E “did not make
2 any changes to its 2015 GT&S filing as a result of the 2014 GRC.”⁹

3 PG&E assesses risk through a decision making process that results in a Risk
4 Register determined by its own risk assessment model, and determined its
5 recommended capital additions in this proceeding on the basis of this model: “Using
6 the risk-based decision-making processes described above, PG&E identified the
7 threats, assessed the risks by considering likelihood and consequences, and
8 developed appropriate monitoring and mitigation programs to address and reduce
9 those risks. PG&E seeks funding for the resulting monitoring and mitigation
10 programs.”¹⁰

11 PG&E did not include the model that yielded the Risk Register in its
12 Application. In response to a data request by TURN, PG&E initially provided the
13 model and 2013 Risk Register in early February 2014 with supplements in late
14 March 2014.

15 PG&E describes its asset and risk management process and how those drive
16 PG&E’s programs and forecasts in this case in Chapter 2 of its testimony.¹¹ In
17 particular, PG&E states that “[t]his chapter sets the stage for the remaining chapters
18 to demonstrate why the forecast reflects the right scope, pace and prioritization of
19 work that provides an appropriate risk reduction over time given resource and
20 execution constraints and the need to continue to deliver gas to customers while
21 work is performed.”¹² Further, PG&E explains that “... risk reduction is a long-term
22 process requiring years of work and ongoing commitment.”¹³ PG&E states that it is
23 only willing to do the work it has determined needs to be done in 2015 through 2017,
24 cautioning that “[i]f the Commission provides fewer revenues than proposed,

⁸ PG&E Response to ORA-DR023Q6(b), p. 1

⁹ PG&E Response to ORA-DR-023 Q6.

¹⁰ PG&E Prepared Testimony, Volume 1 (Soto), p. 2-18.

¹¹ PG&E Prepared Testimony, Volume 1 (Soto), p. 2-1.

¹² *Id.*

¹³ PG&E Prepared Testimony, Volume 1 (Soto), p. 2-3.

1 however, the trajectory of risk-reduction will be slower, resulting in a higher level of
2 risk over a longer period of time.”¹⁴ PG&E has not, however, provided any estimate
3 of how much risk its proposed projects will reduce, let alone risk-reduction measures
4 compared with costs, to show what the current “trajectory of risk-reduction” is that
5 they are proposing and how that trajectory would be reduced.¹⁵ Ultimately PG&E
6 requests discretion to spend whatever amounts it deems reasonable on whatever
7 projects it deems reasonable, regardless of the revenue requirement amount
8 adopted by the Commission and the projects and activities relied upon to comprise
9 that figure,¹⁶ unless the Commission specifically requires limits on such spending
10 through balancing accounts or similar measures.

11 PG&E has created six categories of risks it assesses in its model at various
12 weights:¹⁷

- 13 • Health and Safety (30%)
- 14 • Financial (30%)
- 15 • Reliability (25%)
- 16 • Regulatory Compliance (5%)
- 17 • Environmental Impact (5%)
- 18 • Reputation (5%)

19 These categories are then grouped together: Safety (40%) includes health and
20 safety, regulatory compliance, and environmental impact; Reliability (30%) includes
21 reliability and reputation; and Financial (30%) comprises solely of the financial
22 category.¹⁸ Thus, PG&E’s risk model assumes at a starting point that reliability and
23 financial concerns are a combined 60% of the risks PG&E faces, and safety

¹⁴ PG&E Prepared Testimony, Volume 1 (Soto), p. 2-5.

¹⁵ PG&E Response to ORA-DR-023 Q07.

¹⁶ See PG&E Prepared Testimony, Volume 1 (Soto), p. 2-17.

¹⁷ PG&E Response to TURN-DR-001 Q01, Atch 02.

¹⁸ PG&E Response to ORA-DR-017 Q02 Atch1.

1 concerns only 40% of the risk,¹⁹ despite PG&E’s frequent rhetoric that PG&E places
2 safety as its highest priority in compliance with SB 705.²⁰

3 In creating these categories for its risk model, “PG&E did not consider any
4 other categories besides the six chosen,” and the overall framework was approved
5 in March 2012.²¹ The overall categories and weightings “mirror the weighting of the
6 same factors included with PG&E’s short term incentive plan.”²² These categories
7 are then weighted by consequence and likelihood of failure based on a combination
8 of expert judgment, experience, and technical knowledge,²³ and are subsequently
9 “calibrated” three further times.²⁴ PG&E further states that “the categorization, and
10 resulting risk ranking score, is not intended to predict the mathematical probability of
11 that specific failure occurring at any given time, but instead, to establish a relative
12 ranking of the likelihood of failure.”²⁵ The base model also produced “dilution due to
13 weighting factors” and a “dissatisfying and contra-intuitive result as the overall risk is
14 lower than the original Health and Safety value.”²⁶ To further correct the model, “if
15 the Financial Score was initially entered as a lower number than the H&S score, it is
16 increased to match the H&S score.”²⁷ Lastly, “PG&E did not consider another
17 alternative [modeling approach] and chose the current methodology to stay
18 consistent with the overall corporate weighting system.”²⁸

¹⁹ PG&E Response to ORA-DR-017 Q06.

²⁰ PG&E Response to ORA-DR-017 Q02 Atch1.

²¹ PG&E Response to ORA-DR-017 Q01.

²² PG&E Response to ORA-DR-017 Q06.

²³ PG&E Response to ORA-DR-017 Q05.

²⁴ PG&E Supplemental Testimony, July 15 2014, p. 2A-3 as corrected in PG&E Response to ORA-DR-110 Q1.

²⁵ *Id.*

²⁶ PG&E Response to TURN-DR-01 Q01 Atch02.

²⁷ *Id.*

²⁸ PG&E Response to ORA-DR-017 Q08.

1 **IV. DISCUSSION / ANALYSIS OF “Safety and Risk Management”**

2 At a fundamental level, PG&E’s safety and risk management approach does
3 not hold properly hold PG&E accountable for its statutory requirement “to promote
4 the safety, health, comfort, and convenience of its patrons, employees and the
5 public.”²⁹ ORA disagrees that PG&E’s approach meets the technical requirements
6 of Public Utilities Code § 963(b)(3), enacted by SB 705, by failing to prioritize
7 correctly the health of the public and utility employees and meet its responsibility to
8 provide just and reasonable, cost-based rates.³⁰ PG&E’s risk models are
9 fundamentally flawed due to their inability to assess the actual impacts of PG&E’s
10 proposed risk reductions,³¹ the need for better staging between information
11 gathering activities (such as locating areas of land movement by the end of 2015)
12 and the remedial activities one a problem has been identified (such as focusing the
13 programs to address pipe in areas of land movement in 2015, ahead of the
14 completion of the studies), the substantial changes between the models used today
15 and at the time of filing, and the clustering of the consequences of an event across
16 the measured categories. In particular, PG&E is attempting to shift to ratepayers the
17 costs of paying for years of mismanagement of its gas transmission and storage
18 system. For example, PG&E states:

19 The **risks identified and for which PG&E is proposing mitigation**
20 **programs in this rate case period are not new.** What is new is the
21 process by which PG&E evaluates the risks and prioritizes the mitigation

²⁹ CA. Pub. Util. Code § 451.

³⁰ CA Pub. Util. Code § 963(b)(3): “It is the policy of the state that the commission and each gas corporation place safety of the public and gas corporation employees as the top priority. The commission shall take all reasonable and appropriate actions necessary to carry out the safety priority policy of this paragraph consistent with the principle of just and reasonable cost-based rates.”

³¹ PG&E Response to ORA-DR-023 Q07. “Because of the evolving nature of the relative risk ranking in the Risk Management processes, along with the emergent nature of information that drives risks, **it is not always possible to predict or measure the risk reduction that will result from the mitigation measures presented in this rate case. At this time, PG&E’s tools cannot quantitatively measure the risk reduction.**”(Emphasis added.)

1 programs to address those risks. Inherent in this risk management
2 process is the reliance on asset data.³²

3

4 One example of this mismanagement is in corrosion control.³³ Federal regulations
5 have existed since 1971 and were last revised in 1978.³⁴ PG&E's consultant who
6 reviewed PG&E's corrosion control programs found the current status of PG&E's
7 programs to be only 20% compliant with federal code and aligning with best
8 practices, and the future guidance documents were only 29% compliant.³⁵

9 Another challenge with PG&E's risk assessments, which are based on
10 understanding its own gas transmission system, is the lack of knowledge maintained
11 by PG&E about their assets. PG&E's 2014 planning documents indicate for their top
12 transmission risks, that they have approximately 620 miles³⁶ of pipeline which "have
13 not yet been assessed for the identified risk using an integrity assessment method"³⁷
14 and the identification by PG&E was based on "evaluating the possibility of rupture of
15 the transmission pipeline due to these risks resulting in loss of containment and/or
16 uncontrolled gas flow that can lead to significant impact on public or employee
17 safety, prolonged outages, property damages and/or significant environmental
18 damage."³⁸

19

³² PG&E Response to ORA-DR-007 Q05 and PG&E Response to ORA-DR-023 Q07.a.i.

³³ For further information, see exhibit ORA-07 Ch 7 Corrosion Control (Karle).

³⁴ See 49 Code of Federal Regulations 192.467(c).

³⁵ PG&E Response to ORA-DR-073 Q13, Atch 01, p. 2.

³⁶ PG&E Response to ORA-DR-102 Q1.

³⁷ PG&E Response to ORA-DR-019 Q07, Atch 02, p. 16.

³⁸ PG&E Response to ORA-DR-040 Q04.

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Table 02-1 – Total Risk Miles and Unassessed Risk Miles³⁹

Risk Category	Total Risk Miles	Unassessed Risk Miles	Unmitigated Risk Miles
TRA1 - External Corrosion	1,706	518	
TRA3 - Welding/Fabrication Related - Pre-1962 Construction with Land Movement	66		66
TRA8 - Internal Corrosion	859	~620	
TRA4 - Manufacturing Threat Associated with Older Seam Types	490		148
TRA12 - Weather Related & Outside Forces – Land Movement	1,672	307	
TRA6 - Third Party/Mechanical Damage	1,706	518	

3

4

The top threats as of 2014 include the below items.⁴⁰ See Table 02-2 for the alignment of risk numbers between 2013 and 2014.

5

6

- TRA1 - Catastrophic pipeline failure due to external corrosion, for which federal regulations have existed since 1971.⁴¹ 30% of risk miles are unassessed, the likelihood of failure is 1 event in 200 years, and the risk score is 0.06. The lower probability (P50) risk has approximately 1 event in 10 months with a risk score of 1.21.

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- TRA3 - Catastrophic pipeline failure due to welding / fabrication – Pre-1962 construction with land movement. PG&E states it has 0 risk miles unassessed, the likelihood of failure is 1 event in 13 years, and this risk is scored at 15.89.

12

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14

15

- TRA8 - Catastrophic pipeline failure due to internal corrosion, for which federal regulations have existed since 1971.⁴² PG&E has approximately

16

³⁹ PG&E Response to ORA-DR-102 Q1.

⁴⁰ All references below are drawn from Table 1 above. The data on likelihood of failure and risk scores is public through PG&E’s July 15 2014 Supplemental Testimony, Ch02A, Public Volume 1, starting at p. 2A-B-33.

⁴¹ 49 Code of Federal Regulations 192, Subpart I. Requirements for Corrosion Control. <http://www.ecfr.gov/cgi-bin/text-idx?SID=c1301a4b44625ee9788c2311d688d610&node=49:3.1.1.1.8.9&rgn=div6#49:3.1.1.1.8.9.8.5>

⁴² *Id.*

1 72% of the risk miles unassessed and this risk was not in the 2013 Risk
2 Register.

3 • TRA5 - Catastrophic pipeline failure due to manufacturing threats from older
4 seam types. PG&E has identified the likelihood of failure at approximately 1
5 event every 10 months, and the risk is scored at 0.31.

6 • TRA12 - Catastrophic pipeline failure due to weather related and outside
7 forces causing land movement. For pipelines exposed to the atmosphere,
8 federal regulations have existed since 2003.⁴³ PG&E has approximately
9 18% of the risk miles unassessed and this risk was not in the 2013 Risk
10 Register.

11 • TRA6 - Third party or mechanical damage. Between 2010 and 2012, PG&E
12 had 9 Department of Transportation reportable excavation damage
13 incidents.⁴⁴ PG&E states it has approximately 30% of its risk miles
14 unassessed, the likelihood of failure is 1 event in 90 years, and this risk is
15 scored at 0.45.

16 PG&E's analyses have also changed in calculation and risk between 2013
17 and 2014.^{45, 46} Table 02-2 below compares the risk scores and risk areas. Based

⁴³ 49 CFR 192.479 and 192.481.

⁴⁴ PG&E Response to ORA-DR-007 Q02; PG&E Response to ORA-DR-019 Q05 and Q05 Atch01.

⁴⁵ In an email dated July 17 2014, PG&E stated:

"In summary, Session D 2013 (TURN 01) and Session D 2014 (ORA 19) are not confidential.

In response to your email regarding some differences in confidentiality treatment, the native 2013 Session D materials were initially deemed confidential when the document was prepared and as such the cover sheet shows as "confidential" When the document was provided in response to TURN 01, this particular document did not have the "CONF" extension on the attachment and the confidentiality note incorrectly identified "attachment 14" instead of "attachment 04" as a document that was initially prepared as Confidential but was no longer deemed confidential.

PG&E's response to ORA 19, Attachment 1 (2014 Session D) was not prepared as a confidential document."

⁴⁶ PG&E Response to ORA-DR-19 Q07 Atch 01, p. 30; PG&E Response to TURN-DR-001 Q01 Atch3 CONF; and PG&E Response to ORA-DR-40 Q10 Atch 01.

1 on the calculations and data provided by PG&E, not only did PG&E’s risk calculation
 2 methodology change between 2013 and 2014, the top risks changed, and even the
 3 scores assigned to those risks in 2014 differ. The “risk scores” have no units and no
 4 meaning other than that that can be derived from the robustness of the model and
 5 inputs and in relation to other scores.⁴⁷

6 **Table 02-2 – Comparison of Top 5 risks and scoring between 2013 and**
 7 **2014 Risk Registers**

2013 - Risk Register			2014 - Session D			ORA-DR-40 Q10 Atch1		
TRA3	Pre-1962 Land Movement	15.9	TRA1	External Corrosion	788	TRA1	External Corrosion	1094
TRA4	Older Seam Types	8.67	TRA3	Pre-1962 Land Movement	785	TRA3	Pre-1962 Land Movement	1092
TRA2	External Corrosion	1.21	TRA8	Internal Corrosion	583	TRA8	Internal Corrosion	810
STO16	Internal Corrosion	0.71	TRA4	Older Seam Types	581	TRA4	Older Seam Types	808
TRA7	Mechanical Damage	0.55	TRA12	Weather & Outside Forces	548	TRA12	Weather & Outside Forces	806

8
 9 The numbers from Table 02-2 demonstrate that PG&E’s risk register is highly
 10 evolving even in the limited time between PG&E’s filing of their GT&S Application
 11 and early 2014. Not only are the top risks changed between years, but the
 12 calculation of the relative scores has changed significantly. In the model provided
 13 the highest score for GT&S related risks was 15.9, while in the models PG&E is
 14 using today it is either 788 or 1094.⁴⁸ Accordingly, the more than sixty-fold increase
 15 in the risk value assigned to pre-1962 land movement and the eleven-hundred-fold
 16 increase in the risk value for external corrosion conclusively demonstrate the radical
 17 and continued evolution of PG&E’s model and why it is inappropriate at this time to
 18 use as a quantitative tool for determining PG&E’s highest risks, and therefore the
 19 funding allocation PG&E should receive from this GT&S application.

20 This concern about changing risk scores over time is reinforced by PG&E’s
 21 request for the Commission to “continue to provide us with the flexibility to re-
 22 prioritize projects as additional information is developed and system needs
 23 change.”⁴⁹ Based on the differences between the 2013 and 2014 models, PG&E is
 24 not asking for the flexibility to re-prioritize projects based on small changes, but may

⁴⁷ PG&E Response to ORA-DR-17 Q2c.

⁴⁸ PG&E Response to ORA-DR-19 Q07 Atch 01, p. 30; PG&E Response to TURN-DR-001 Q01 Atch3 CONF; and PG&E Response to ORA-DR-40 Q10 Atch 01.

⁴⁹ PG&E Prepared Testimony, Volume 1 (Soto), p. 2-17.

1 be doing wholesale and potentially significant shifts in budgets between programs.
2 For example, welding and fabrication threats were by far the most significant
3 transmission and storage threat in 2013⁵⁰ with external corrosion a distant third
4 place. In 2014, these two threats are considered nearly equal. If PG&E was
5 considering overall cost-effectiveness of their mitigations for risk reduction, then a
6 large change in spending from newly lowered risks would be expected.

7 Even without considering the changes in values between PG&E's application
8 and its current processes, it is highly unlikely that comprehensive new quantitative
9 information became available in less than a year that shifts the relative ranking of
10 corrosion as a threat by over ten-fold.⁵¹

11 PG&E's scores, which are on a log 10 scale,⁵² are in many cases based
12 loosely on a qualitative scale or have underlying values that do not increase
13 logarithmically, such as damage from loss of service or direct financial damage.⁵³

14 PG&E's categorization of risks leads towards clustering of values, since a risk
15 that clearly poses a large health and safety risk would also generally have higher
16 financial and reliability consequences. Table 02-3 demonstrates the clustering of
17 these scores, which is further impacted by the Enterprise Risk Management
18 adjustment to bring financial consequence scores up to match Health and Safety
19 Scores if they are lower.⁵⁴ Since the scores are based on ranges, only values
20 separated by two or more points for Health and Safety or Reliability are highlighted
21 to indicate divergence. For example, a reliability score with value of service lost

⁵⁰ PG&E Response to TURN-DR-01 Q01 Atch04, p. 8.

⁵¹ PG&E's July 15 2014 Supplemental Testimony, Ch02A, Public Volume 1, starting at p. 2A-B-28. Financial damage increases from \$14k to \$80k to \$500k and onward. This is mirrored in the lost value of service for reliability.

⁵² This type of scale is similar to the Richter scale, where an increase from a value of 5 to 6, while increasing numerically by 1, represents a 10-fold increase in power.

⁵³ PG&E's July 15 2014 Supplemental Testimony, Ch02A, Public Volume 1, p. 2A-B-28.

⁵⁴ PG&E Response to ORA-DR-017 Q08.

1 equivalent to \$40 million would receive a “5”, whereas a \$41 million loss of service
 2 would be a “6.”⁵⁵

3 **Table 02-3 – Comparison of Health and Safety, Reliability, and Financial**
 4 **Scores for Transmission and Storage Risks**

5

Risk ID	LoF	Weighting			
		30%	25%	30%	
		N _{H&S}	N _{Rel}	N _{Fin}	N _{fin-ERM}
TRA1	0.005	5	5	3	5
TRA2	4.293	3	3	2	3
TRA3	0.077	7	5	3	7
TRA4	0.042	7	5	3	7
TRA5	1.171	3	3	3	3
TRA6	0.011	6	5	3	6
TRA7	1.964	3	3	2	3
STO1	0.001	6	6	4	6
STO2	0.001	6	6	4	6
STO3	0.01	6	6	4	6
STO4	0.0001	1	6	7	7
STO5	0.0001	6	4	4	6
STO6	0.1	1	4	3	3
STO7	0.0001	6	4	4	6

6

7 In this case, for transmission risks, while TRA3 and TRA4 are separated by two
 8 points, the minimum scores are above 5. For storage risks, the low health and
 9 safety and high reliability risk for STO4 is driven by operator failure during fluids
 10 injections, or are caused by a lower consequence (P50) corrosion scenario.

11 On the financial weighting side, out of the 14 risks included in the table, only
 12 three did not have to be adjusted to avoid counter-intuitive results.

13 Lastly, PG&E’s changes to accounting have rendered PG&E unable to readily
 14 provide the funding or levels of work performed in the past to assess whether or not
 15 PG&E’s changes in proposed work or cost are reasonable from a safety

⁵⁵ PG&E’s July 15 2014 Supplemental Testimony, Ch02A, Public Volume 1, p. 2A-B-28.

1 perspective.⁵⁶ Neither can PG&E determine how much of any given program or
2 project is broken down into safety, integrity, reliability, or capacity programs. While
3 ORA agrees with PG&E that many programs deal with multiple risks and drivers,⁵⁷
4 this also allows PG&E to make claims of virtually any project having a safety impact,
5 even though the primary focus is to address capacity or reliability issues.
6

7 **V. Comments on Safety and Enforcement Division (SED)**
8 **Preliminary Report**

9 The April 17, 2014 Scoping Memo and Ruling of Assigned Commissioner and
10 Administrative Law Judge noted that “it is uncertain when SED will prepare a report
11 on the risk assessment approach set forth in PG&E’s application.”⁵⁸ Via e-mail on
12 July 14, 2014, SED informed parties that it would be issuing a draft report on July
13 18, 2014, and a workshop on July 30, 2014. Via an e-mail ruling on July 21, 2014,
14 ALJ Wong provided intervenors the opportunity to comment on the preliminary report
15 in opening testimony due August 11, 2014, and PG&E the opportunity in additional
16 testimony also due August 11, 2014. Reply responses are allowed as part of
17 concurrent rebuttal on September 15, 2014. At the July 30, 2014 workshop, SED
18 asked for informal written comments no later than August 6, 2014 to assist in its final
19 report.

20 At the time of ORA’s preparation of its testimony, the final version of the
21 Safety and Enforcement Division (SED) Preliminary Staff Report on PG&E Proposal
22 for Cost of Service and Rates for Gas Transmission and Storage for 2015-2017
23 (SED Report) was not available. Therefore, the comments below reflect ORA’s
24 position on the preliminary SED Report, provided on July 18, 2014.

25 The SED Report qualitatively examined and assessed PG&E’s risk evaluation
26 process and compared the decision-making process between PG&E’s Pipeline

⁵⁶ PG&E Response to ORA-DR-007 Q05; PG&E Response to ORA-DR-073 Q01.

⁵⁷ PG&E Response to ORA-DR-007 Q10.

⁵⁸ Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge, p. 6.

1 Safety Enhancement Plan (PSEP) and the GT&S Application.⁵⁹ While SED did data
2 request and receive 250 of the specific Risk Register item assessments from
3 PG&E,⁶⁰ SED did not review PG&E’s actual risk model itself, or the quantitative
4 calculations and bases for those calculations, but noted that improvement was
5 needed, particularly “to demonstrate the incremental value of risk control measures
6 at different scopes and paces of implementation.”⁶¹ SED did not comment on
7 whether the costs of the specific requested projects are “just and reasonable” to be
8 included in rates,⁶² or on the specific results derived by the model for inclusion in the
9 Risk Register. SED’s Report did not review, or find reasonable, PG&E’s
10 mathematical model used to derive its Risk Register and rate requests in this
11 proceeding.

⁵⁹ SED Preliminary Report, p. 2.

⁶⁰ “Summary of Documents Discussed and Provided to SED.” PG&E Response to SED-DR-01.

⁶¹ SED Preliminary Report, p. 21.

⁶² SED Preliminary Report, pp. 1, 2.