BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Develop Safety Culture Assessments for Electric and Natural Gas Utilities.

Rulemaking 21-10-001

ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON POLICY QUESTIONS FOR SAFETY CULTURE ASSESSMENTS

Summary

This Ruling directs comment from parties of record on policy questions related to the development of safety culture assessments for Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), Pacific Gas & Electric Company (PG&E), and Southern California Gas Company (SoCalGas). Parties are directed to respond to this ruling in the form of comments. Opening comments shall be filed and served no later than October 4, 2022. Reply comments shall be filed and served no later than October 18, 2022.

1. Background

On April 28, 2022, the assigned Commissioner issued a Scoping Memo and Ruling (Scoping Memo) for this proceeding. The Scoping Memo set a schedule of activities for Phase 1 of this proceeding, which focuses on activity for developing safety culture assessments for the large electric and natural gas Investor-owned Utilities (IOUs): (1) SCE; (2) SDG&E; (3) PG&E; and (4) SoCalGas. The Scoping Memo also directed parties of record to participate in technical working group meetings facilitated by the Commission's Safety Policy Division.

On July 22, 2022, Safety Policy Division's third technical working group was held. On July 28, 2022, Safety Policy Division's fourth technical working group was held. Following these technical working groups, this ruling solicits formal stakeholder comment on the policy questions below. Attached to this ruling is a Safety Policy Division Staff Safety Culture Concept Paper 2 (Attachment 1) that parties should refer to when responding to this ruling. Also attached to this ruling, is a Safety Policy Division Guiding Principles Proposal that offers a set of values to direct the safety culture assessments (Attachment 2).

2. Request Formal Comment

2.1. Policy Comment Questions

1. What should be the proposed timeframe, schedule, and frequency for conducting safety culture assessments? For example, for the large electrical and natural gas corporations, should the safety culture assessments be scheduled such that all utilities are on the same schedule (Option 1, Synchronized); so that they align with and are considered in the utilities' Risk Assessment and Mitigation Phase Applications and General Rate Cases (Option 2, Staggered to align with RAMP), or some other schedule (*See* Attachment 1)?

   (a) Please discuss the advantages and disadvantages of each.

   (b) Should the IOUs conduct an initial assessment in 2023?

2. How should the Commission ensure that the safety culture assessment process developed through this proceeding is complementary to, and not duplicative of, the annual safety culture assessments conducted by the Office of Energy Infrastructure Safety pursuant to Assembly Bill 1054? Are there additional ways, beyond those listed in Attachment 1 that the CPUC safety culture assessments should be coordinated with the annual Office of Energy Infrastructure Safety assessments?

3. Is the PURE maturity model compatible with maturity models used internally by the IOUs?

4. What safety outcomes or indicators should be used to evaluate the efficacy of the safety culture assessment process developed within this proceeding?

   (a) How should the Commission refine, maintain, and improve the integrity, veracity and validity of safety culture indicators that track and monitor improvement within each domain?

   (b) Discuss how these indicators can be applied to other areas/proceedings where the Commission has to take into account safety considerations.

5. What methodologies should be employed in the safety culture assessments to ensure results are comparable across our regulated entities and can measure changes in our regulated entities' safety culture over time?

6. Should the Commission designate one specific entity with expertise in safety culture to conduct the independent safety culture assessments required by law? If so, should this entity be a public entity that is independent of the Commission? In other words, how should the independent third-party assessor be engaged? By the IOU, through the Commission, or through an outside entity independent of the Commission?

7. Should the same third-party assessor be engaged by all IOUs for each four-year cycle?

2.2. Policy Comment Questions Relating to the Guiding Principles

With respect to the Guiding Principles to aid the Commission's development of rules, polices, and procedures to enhance the on-the ground results of the safety culture assessments, parties are invited to comment on the suggested initial principles attached to this ruling. Specifically, parties may comment on:

- The appropriateness of the proposed principles;
- Whether additional items should be included in the principles;
- How the principles should be integrated into the safety culture assessments;
- If and how the principles should inform the sequencing of the safety culture assessments; and
- How should the principles inform the goals of the safety culture assessments.

IT IS RULED that:

1. Parties of record shall respond to the questions presented in this ruling in the form of comments.

2. Opening Comments shall be filed and served no later than October 4, 2022.

3. Reply comments shall be filed and served no later than October 18, 2022.

4. The Safety Policy Division Safety Culture Concept Paper 2 (Attachment 1) is hereby entered into the formal record of this proceeding.

5. Safety Policy Division Guiding Principles Proposal (Attachment 2) is hereby entered into the formal record of this proceeding.

Dated September 13, 2022, at San Francisco, California.

/s/ COLIN RIZZO

Colin Rizzo
Administrative Law Judge

ATTACHMENT 1

CPUC Safety Policy Division Staff Safety Culture Concept Paper #2

September 2022

This document outlines a proposed safety culture maturity model and options for a safety culture assessment process for the large electric and natural gas investor-owned utilities (IOUs) (Southern California Edison Company, San Diego Gas & Electric Company, Pacific Gas & Electric Company, and Southern California Gas Company) as discussed in the second two technical working group meetings for Rulemaking (R.) 21-10-001 hosted in July 2022.[1] As noted within the text, it does not yet integrate feedback received on the first Safety Policy Division Staff Safety Culture Concept Paper in response to the Administrative Law Judge's July 22, 2022 Ruling.[2]

<u>Safety Culture Maturity Models</u>

Introduction

Safety culture is the collective set of values, principles, beliefs, norms, attitudes, behaviors, and practices that an organization's employees and contractor personnel share with respect to risk and safety.[3] Safety culture maturity models are used to help organizations understand their current level of safety culture maturity and the actions required to reach the next level.[4]

Developing a safety culture maturity model requires determining:

1. An underlying conceptual *framework* for the model, or the set of elements that are commonly seen as core traits of healthy safety cultures that the model will assess against. These are sometimes referred to as domains or traits.
2. The evaluation *process* that the model will use, including which methodologies will be used to gather data for the assessment, such as surveys, focus groups, interviews, and document analysis.

One safety culture maturity model, the PURE model (Public Utility Risk Evaluation), was developed on behalf of the Safety Policy Division (SPD) of the California Public Utilities Commission (CPUC) by a team from BSMS and Motive Power. This model was introduced at the Technical Working Group meetings for R.21-10-001 held in summer 2022 and is summarized below.

To develop the maturity model for this proceeding, staff looked for a model that could assess cultural influences on the safety practice of the IOUs. Over more than thirty years

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[1] Workshop recordings and presentations are available on the Safety Policy Division webpage.
[2] The Administrative Law Judge's July 22, 2022 Ruling and Safety Policy Division Staff Concept Paper #1 are available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=496284638.
[3] From Staff Safety Culture Concept Paper #1 from July 2022; Adapted with modification from American National Standards Institute (ANSI)/ American Petroleum Institute (API) (2015). Recommended Practice 1173, Pipeline Safety Management Systems.
[4] Fleming, Mark. 2001. "Safety culture maturity model." United Kingdom.

industry organizations and regulatory bodies have developed safety culture frameworks and related evaluation methodologies that are used to assess safety cultures. The CPUC has leveraged that knowledge and work already done by these organizations.

Staff also followed a set of requirements in the development of the safety culture maturity model:

- The model should be able to distinguish between different levels of safety maturity and should be broad enough to apply to different lines of business.
- The model should be able to identify findings that are actionable by an IOU.
- The model should be evidence-based.
- An independent third-party should be able to use the model to conduct an assessment.
- The assessment results should be reproducible by any qualified assessor.

SPD acknowledges the feedback received on the PURE model and related safety culture assessment framework from the July 2022 ALJ Ruling for this proceeding from IOUs and other parties. Staff will work to integrate this feedback, along with feedback received from this September 2022 ruling, into a revised proposed safety culture framework this fall.

Overview of the PURE Maturity Model Framework

The PURE maturity model is built on a framework of 10 'Functional Domains' that each utility would be assessed against.[5] Seven of these Functional Domains derive from root causes of major safety incidents, and three encompass core business tools for safety, described below. The PURE model is intended to be used as a dynamic diagnostic tool to measure and monitor change in safety culture over time within each domain.

Major safety catastrophes, such as those that occurred at Chernobyl and on the Piper Alpha and Deepwater Horizon oil platforms, are typically subject to detailed and comprehensive incident investigations. Their root causes are often complex and the result of a series of failures, beginning with decisions and actions taken within the leadership of an organization. Analyzing the causes of these failures from the last 50 years has allowed researchers to coalesce around seven principal areas (i.e., Functional Domains):[6]

- *Profit Before Safety*, the prioritization of and resources provided to safety.
- *Just Culture*, ensuring trust and eliminating the presence of a blame culture.
- *Safety Leadership*, taking responsibility and being held accountable for safety.
- *Managerial Compliance*, ensuring that safety actions exceed the compliance limitations set by rules and procedures.

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[5] These domains were introduced within SPD's Staff Safety Culture Concept Paper #1, which described a proposed framework for safety culture, available as an attachment from the July 22, 2022, ALJ Ruling: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=496284638.
[6] For a full description of the Functional Domains, please see SPD's Staff Safety Culture Concept Paper #1.

- *Safety Communication*, ensuring two-way communication and feedback channels exist laterally and horizontally within the organization, and that safety messages are received, understood, and acted upon.
- *Safety Competence*, defining and ensuring the competencies of those in safety-critical job roles.
- *Lessons Learned*, ensuring that there are systems in place to report adverse events, understand their root causes, and communicate lessons learned.

Based on this research, and a wider literature review, these seven Functional Domains are the foundation of the PURE model. A consistent theme across the seven root cause Functional Domains is the role of leadership. To reinforce the role of leadership in the creation of a positive safety culture, we also introduce three core business tools: Strategy, Risk Assessment, and Corrective and Preventative Actions (CAPA).

- *Strategy,* the process of planning to attain organization goals.
- *Risk Assessment*, the process of identifying potential impacts to a business and developing deliberate actions to avoid, transfer, mitigate or accept the consequences.
- *Corrective And Preventative Action*, the systematic identification and elimination of non-conformities or undesirable outcomes.

Domains are called "functional" because actions can be taken to improve each domain. Domains are interdependent of each other and are not mutually exclusive.

Overview of the PURE Maturity Model Assessment Process

The safety culture assessment process using the PURE model relies on data collected from focus groups that sample a representative cross-section of executive, senior, and mid-level line management across job functions, business lines, and seniority. At each focus group, assessors would facilitate an interactive session where groups of attendees would rate their organization on the maturity of its safety culture using the PURE model. The data from focus groups then would be validated through a document review, interviews, and observations.

To plan and implement an assessment using the PURE model, users should:

1. Conduct managerial focus groups:
    a. *Determine and arrange the number of respondent sample(s):* 50-60 senior and mid-level managerial participants would attend each focus group exercise, with three to six rounds of focus groups total. Attendees would be divided into groups of five to six people who would respond and provide maturity ratings. The assessor should have experience designing focus groups to ensure attendees are representative of the business and knowledgeable of their utility's operations across the functional domains.
    b. *Plan for conducting the focus group exercises*: Focus group exercises should be held at an off-site venue local to attendees with executive, senior, and mid-level management of an IOU.

      c. *Facilitate the focus group exercises*: At each focus group, the assessors would facilitate an interactive session where groups of attendees would rate their organization on the maturity of its safety culture using the PURE model. Maturity levels would be assigned to each focus area, then rolled up to a maturity level for each functional domain, and overall maturity.

2. Verify the results of focus group exercises through document review, interviews, and observations:

      a. *Complete document review*: For each focus area, focus group attendees would be required to cite documented evidence of the assigned maturity level. Upon completion of the focus groups, the assessors would conduct a detailed review of all documentation cited as evidence for maturity in each focus area. This document review aims to ensure that executives are representing documents, processes, and actions that reflect a utility's current or 'as-is' state, and not basing their maturity level on aspirational plans.

      b. *Conduct onsite observations*: Site observations, concerned with objective fact-finding, would be used to help verify any evidence provided via the focus group exercises.

      c. *Conduct interviews*: Semi-structured interviews would be used to explore the focus group evidence provided by attendees when other forms of evidence are unavailable, or if the assessor seeks to clarify their understanding of an issue.

Safety Culture Assessment Schedule and Process

Overview of the Assessment Process

Regardless of the schedule options (described below), utilities would engage an independent third-party contractor to conduct an initial comprehensive safety culture assessment in 2023 using the PURE model augmented by additional methods as prescribed by the CPUC. After this initial assessment, every four years utilities would engage an independent third-party to conduct a comprehensive assessment using the PURE model augmented by a multi-method approach. In the three intervening years between comprehensive assessments, utilities would use the PURE model to conduct an annual self-evaluation and develop a safety culture improvement plan.

As described in the introduction, staff anticipates revisions to the PURE model and its underlying framework based on party feedback.

Comprehensive Assessments

Comprehensive assessments conducted by an independent third-party every four years would help verify and validate results of annual self-evaluations, identify blind spots that the annual self-evaluations may have missed, provide a roadmap for improvement

between comprehensive assessments, and allow SPD to modify the maturity model and guidelines for the annual self-evaluations to reflect insights and trends.

The comprehensive assessment would include (1) a multi-method, comprehensive safety culture assessment conducted by a third party and corresponding safety culture improvement plan; (2) an audit of the previous annual self-evaluations using the PURE model; and (3) a gap analysis that analyzes the discrepancies between the annual self-evaluations and the findings of the comprehensive assessment. Methods for the comprehensive safety culture assessment could include interviews, focus groups, a safety culture perception survey, document review, and site observations. Findings from the comprehensive assessment would be included within a summary report submitted to SPD.

After reviewing findings from the comprehensive assessments, SPD would recalibrate and update the maturity model as needed.

- *Estimated comprehensive assessment timeframe*: 6 months
- *Methods*: Interviews, focus groups, a safety culture perception survey, document review, site observations, plus an audit of IOU self-evaluations, a gap analysis, and maturity model recalibration
- *Assessor*: Independent third-party contractor
- *Reporting and outputs*: Utilities would submit the comprehensive summary report and safety culture improvement plan to the Commission and participate in a safety briefing or other public process determined by the CPUC; SPD would update the maturity model based on party feedback and learnings from the comprehensive assessments.

Self-Improvement Evaluations

Self-improvement evaluations completed in intervening years between comprehensive assessments would serve as progress reports to monitor effectiveness of safety culture improvement efforts between comprehensive four-year assessments. They would provide a roadmap for tracking safety culture strategies implemented following the comprehensive assessments, help to ensure utility responsibility for their safety culture, and create a track record of data that can be analyzed and reviewed during the four-year comprehensive assessment.

Utilities would complete the self-evaluation using the PURE model. At a minimum, the self-evaluation would include a series of managerial focus group exercises and reporting on safety culture activities, with additional methods and procedures at the discretion of the utility.

- *Estimated self-improvement evaluation timeframe*: Six weeks
- *Methods*: May include managerial focus group exercises, documentation analysis, and interviews
- *Assessor*: Utilities

- *Reporting and outputs*: Utilities would submit a progress update to the safety culture improvement plan to SPD describing the implementation status of safety culture strategies from their safety culture improvement plan and would participate in a safety briefing or other public process determined by the CPUC to report findings to the Commission.

Two Assessment Timing Options

At the Technical Working Group meeting on July 22, staff described two potential options for the schedule of safety culture assessments.

Option 1 – Synchronized Schedule

With this option, utilities would conduct comprehensive assessments on the same schedule with an independent third-party every four years. In intervening years, utilities would conduct self-evaluations and develop improvement plans to monitor progress on actions recommended from the comprehensive assessment and report on progress to the CPUC.

While the timing of this option would not align with Risk Assessment Mitigation Phase (RAMP) filings,[7] it would allow SPD to implement safety culture maturity model and guideline improvements on a coordinated timeframe since the comprehensive assessments would be completed in the same year. Utilities could also share lessons learned and common themes from comprehensive safety culture assessments with each other and with the CPUC on the same schedule.

- 2023: Initial (comprehensive) assessment, conducted by an independent third-party
- 2024, 2025, 2026: Annual self-evaluations with reporting to the CPUC
- 2027: Comprehensive assessment
- RAMP years (variable): Each utility would report on progress from its most recent safety culture assessments in the safety culture section of RAMP filings, which requires each utility to analyze its successes and failures at improving its safety culture.

Option 2 – Timing Coordinated with RAMP/GRC

With this option, utilities would eventually conduct comprehensive assessments on a staggered schedule in the same year they file RAMP reports. In intervening years, utilities would conduct self-evaluations and report on progress to the CPUC.

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[7] The Commission requires energy utilities to incorporate a risk-based decision framework to evaluate the safety and reliability improvements in their General Rate Case (GRC) applications in D.14-12-025. Through the Commission's Risk Assessment Mitigation Phase (RAMP) process, utilities describe their plans to identify, assess and mitigate risks. As part of RAMP, each utility must describe the company's safety culture and executive engagement and compensation policies related to safety. Each utility should also "analyze its successes and failures at improving its safety culture and describe its path forward toward a deep and pervasive safety culture."

While this timing would allow an explicit tie between the safety culture assessments and risk management and funding processes, it may add complexity in figuring out the timing of subsequent comprehensive assessments. Since model updates would follow comprehensive assessments and these assessments would take place in different years, it may be challenging to implement PURE model and assessment guideline improvements on a coordinated timeframe.

- 2023: Initial (comprehensive) assessment, conducted by an independent third-party
- 2024: Annual self-evaluation (all utilities)
- 2025: SoCalGas and SDG&E's comprehensive assessment with RAMP
- 2026: SCE's comprehensive assessment with RAMP
- 2028: PG&E's comprehensive assessment with RAMP

Coordination with the Office of Energy Infrastructure Safety

This section provides a high-level summary of proposals for coordinating the safety culture activities of the Office of Energy Infrastructure Safety (Energy Safety) and SPD related to the large electric IOUs (PG&E, SCE, and SDG&E).

CPUC/ Energy Safety Meetings on Safety Culture Activities

SPD and Energy Safety staff will continue to meet routinely and as needed to discuss coordination on activities including, but not limited to, safety culture oversight.

Additionally, Energy Safety will present the results of its annual safety culture assessments conducted pursuant to Public Utilities Code § 8389(d)(4) to SPD at the end of each assessment period. At this meeting Energy Safety and SPD staff will discuss any coordination needed to follow up on issues identified within Energy Safety's safety culture assessments. When the CPUC's safety culture assessment results are available, SPD staff will reciprocate.

Leveraging the Results from the Annual Energy Safety Assessments within the CPUC Assessments and Avoiding Duplication

The primary assessment methods for Energy Safety's 2022 safety culture assessments for the large IOUs are a workforce survey, management self-assessment, interviews, and description of safety culture objectives and lessons learned.[8] Proposed assessment methods for the CPUC's safety culture assessments (proposed to occur once every four years as described above) would include focus group exercises, site observations, documentation analysis, personnel interviews, review of safety climate survey results, and safety management system audits.

The CPUC's safety culture assessments may include *document analysis* to verify findings or corroborate evidence provided in focus groups. As part of this document analysis,

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[8] See Energy Safety's Final 2022 Safety Culture Assessment Guidelines for Electrical Corporations (March 1, 2022), available at: https://energysafety.ca.gov/what-we-do/electrical-infrastructure-safety/wildfire-mitigation-and-safety/safety-culture-assessments/.

the assessor should review the most recent Energy Safety's safety culture assessment. The CPUC's safety culture assessments may also include *review of existing IOU safety survey data*. As part of this analysis, the assessor should review data from the most recent Energy Safety assessment.

While both assessments may use interviews, their subjects will likely differ. Energy Safety's interviews are targeted at two specific populations: (1) those targeted for participation in the workforce survey (electrical corporation frontline employees, supervisors, managers, and possibly contractors who are engaged in wildfire mitigation activities)[9], and (2) those who completed the management self-assessment (employees representing the management perspective). The CPUC's safety culture interviews should target a broader subsection of staff, including any workers, contractors, management, and leadership across the organization whose work functions relate to safety.

For the large electric IOUs, there may be opportunities to synchronize SPD's annual self-evaluation reporting with existing reporting within Energy Safety's annual safety culture assessments.

(END OF ATTACHMENT)

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[9] Work related to the electrical corporation's most recent wildfire mitigation plan as defined by any initiative listed within that plan.

ATTACHMENT 2

Safety Culture Draft Guiding Principles – Staff Proposal Framework

The guiding principles listed below are intended to establish a basis for developing a staff proposal ("proposal") that sets the framework, scope, and schedule of safety culture assessments of regulated investor-owned natural gas and electric utilities and independent gas storage operators.

These principles are not static and are expected to evolve based on learning and deliberation throughout the proceeding. As long as the proposal is working towards meeting the intended goals of continuous safety culture improvement, some level of flexibility in applying the principles should be expected.

The order of these principles does not indicate priority.

To the extent possible, the proposal should:

- Strive to institutionalize safety as an intrinsic priority beyond compliance and enforcement.
- Promote and adopt a systemic approach to safety culture improvement.
- Ensure that safety culture assessments, and resulting recommendations, are tied to tangible IOU safety-related behaviors and outcomes.
- Provide methods to measure and monitor IOU safety culture improvements resulting from the implementation of recommendations.
- Reflect commitment to continuous safety improvement and learning based on practical experience and research evidence.
- Coordinate with, but not duplicate, existing safety and reporting requirements of the Commission, Office of Energy Infrastructure Safety, and other local, tribal, state, and federal agencies.
- Foster collaboration between the IOUs, local, and tribal governments to: (1) increase outreach and communication; and (2) designate teams within the IOUs to directly engage with local and tribal governments regarding IOU safety culture efforts and community impacts.
- Describe how IOU safety culture assessments results will be reviewed and how the CPUC's safety culture assessment and reporting requirements should be updated, as needed, based on these results. The goal is to ensure assessment and reporting requirements are robust enough to facilitate early observation, detection, and mitigation.
- Result in meaningful information sharing among regulated utilities and describe how assessment results will be comparable across regulated utilities.
- Promote participation from all IOU employees, IOU contractors, and key stakeholder such as local and tribal governments.
- Provide that all resulting safety culture assessment methods maintain privacy, data confidentiality, and workforce anonymity.

(END OF ATTACHMENT)