Decision **PROPOSED DECISION OF COMMISSIONER RECHTSCHAFFEN**
(Mailed 03/26/2019)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U902M) for Review of its Safety Model Assessment Proceeding Pursuant to Decision 14-12-025.	Application 15-05-002
And Related Matters.	Application 15-05-003 Application 15-05-004 Application 15-05-005

PHASE TWO DECISION ADOPTING RISK SPENDING ACCOUNTABILITY REPORT REQUIREMENTS AND SAFETY PERFORMANCE METRICS FOR INVESTOR-OWNED UTILITIES AND ADOPTING A SAFETY MODEL APPROACH FOR SMALL AND MULTI-JURISDICTIONAL UTILITIES

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PHASE TWO DECISION ADOPTING RISK SPENDING ACCOUNTABILITY REPORT REQUIREMENTS AND SAFETY PERFORMANCE METRICS FOR INVESTOR-OWNED UTILITIES AND ADOPTING A SAFETY MODEL APPROACH FOR SMALL AND MULTI-JURISDICTIONAL UTILITIES

Summary

This decision requires Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) (collectively investor-owned utilities or IOUs) to annually report on 26 safety performance metrics to measure achieved safety improvements. To improve understanding of the metrics, it requires the IOUs to include in their reports examples of how they used the metrics to improve safety training, take corrective action and support risk-based decision-making. It directs the IOUs to include in the reports summaries of how reported data reflect progress against the risk mitigation and management goals approved in the applicable Risk Assessment Mitigation Phase filing and General Rate Case (GRC) application and to identify and provide additional information for any metrics that may be linked to financial incentives. It requires each company to annually file a Safety Performance Metrics report by March 31 and for Safety and Enforcement Division (SED) staff to submit a review of each IOU report in a staggered schedule.

This decision approves reporting format requirements for annual IOU Risk Spending Accountability Reports (RSARs) in which the IOUs will report on deviations between approved and actual IOU risk mitigation and maintenance spending and activities. It requires the IOUs to file their RSARs on March 31 of each year and provides parties with an opportunity to comment on the reports. SoCalGas and SDG&E must comply with the RSAR requirements approved in this decision starting with their 2019 RSAR filing (due March 31, 2020), PG&E

starting with its 2020 RSAR filing (due March 31, 2021), and SCE starting with its 2021 RSAR filing (due March 31, 2022).

This decision approves a Voluntary Risk-Based Decision-Making Framework for use by Southwest Gas Corporation, Bear Valley Electric Service, Liberty Utilities, and PacifiCorp (doing business as Pacific Power) in their GRCs. It defers approval of specific reporting requirements for a Risk Mitigation Accountability Report and the identification and benchmarking of industry risk-based decision-making practices to a subsequent Safety Model Assessment Proceeding (S-MAP).

As indicated in Decision (D.) 18-12-014, the Commission will initiate an Order Instituting Rulemaking to consider additional issues associated with the development and implementation of the S-MAP. This proceeding is closed.

1. Background

On November 14, 2013, the California Public Utilities Commission (Commission) opened Rulemaking (R.) 13-11-006, Order Instituting Rulemaking (OIR) to Develop a Risk-Based Decision-Making Framework to Evaluate Safety and Reliability Improvements and Revise the Rate Case Plan for Energy Utilities. The purpose of the rulemaking was to integrate a risk-based decision-making framework into the Rate Case Plan (RCP) for energy utilities' General Rate Cases (GRCs) in which utilities request funding for safety-related activities.

The Commission modified the RCP framework in D.14-12-025 to integrate risk-based decision-making into the GRCs of the large energy utilities, including Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Southern California Gas Company (SoCalGas) (collectively investor-owned utilities or IOUs). D.14-12-025 required the IOUs to file Safety Model Assessment Proceeding (S-MAP) applications containing proposed risk-based decision-making

frameworks starting May 1, 2015 and every three years subsequently.[1] On May 1, 2015, SDG&E, PG&E, SoCalGas, and SCE filed S-MAP Applications (A.)15-05-002, A.15-05-003, A.15-05-004, and A.15-05-005, which were consolidated on June 19, 2015, as A.15-05-002 and Related Matters. A Phase One decision (D.16-08-018 or Interim Decision) in A.15-05-002 adopted initial requirements for IOU risk-based decision-making models and directed the IOUs to continue work to develop a more uniform approach to risk management in Phase Two of the proceeding.[2] D.18-12-014 adopted a Phase Two Settlement Agreement (SA Decision) and in doing so approved a standardized risk-based decision-making model that the IOUs are now required to employ in Risk Assessment Mitigation Phase (RAMP) submissions and GRC filings.[3]

D.14-12-025 stated that energy utilities' risk-based decision-making systems should be regularly evaluated in terms of the "implementation of best practices, industry standards, and the associated metrics of the security and safety of its electric grid, gas pipelines, and facilities."[4] To achieve this, D.14-12-025 required the IOUs to prepare two new annual reports, the Risk Mitigation Accountability Report (RMAR), and the Risk Spending Accountability Report (RSAR), which the IOUs would produce after Commission

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[1] On March 14, 2018, the Commission's Executive Director granted the Joint Utility and Joint Intervener's March 12, 2018 request to extend the IOU filing date for the second S-MAP applications from May 1, 2018 to May 1, 2019; D.18-12-015 further determined to hold in abeyance D.14-12-025's requirements for the IOUs to file S-MAP applications every three years, directing the IOUs to await direction to be provided in an OIR. (*See* D.18-12-025, Ordering Paragraphs 5 and 6.)

[2] "Interim Decision Adopting the Multi-Attribute Approach (or Utility Equivalent Features) and Directing Utilities to Take Steps Toward a More Uniform Risk Management Framework," August 29, 2016.

[3] "Phase Two Decision Adopting Safety Model Assessment Proceeding (S-MAP) Settlement Agreement with Modifications," December 13, 2018.

[4] D.14-12-025 at 6.

approval of risk mitigation spending in their respective GRCs.[5] The purpose of the RSAR is to compare a utility's GRC-projected spending for approved risk mitigation projects to the actual spending on those projects, and to explain any discrepancies between the two. The purpose of the RMAR is to compare a utility's GRC-projections of the benefits and costs of the risk mitigation programs adopted in the GRC to the actual benefits and costs. D.14-12-025 adopted a schedule for the reports and directed the Commission's Safety and Enforcement Division (SED) to file a review of RMARs and Energy Division (ED) to submit a review of RSARs in the applicable utility GRC proceeding within 120 days from the date the RSAR or RMAR was filed, as indicated in Table 1 below:

Table 1
RSAR and RMAR Schedule adopted in D.14-12-025

Utility Report Filing Date	PG&E	SCE	SoCalGas	SDG&E	Staff Review
Risk Mitigation Accountability Report	March 31 (after the applicable reporting period)	May 31	July 31	Sept 30	120 days after utility report filing
Risk Spending Accountability Report	March 31	May 31	July 31	Sept 30	120 days after utility report filing

D.14-12-025 also required Bear Valley Electric Service, Liberty Utilities, PacifiCorp doing business as Pacific Power (PacifiCorp), and Southwest Gas Corporation (Southwest) (collectively small and multi-jurisdictional utilities or SMJUs)[6] to include a risk-based decision-making framework in their GRC

[5] *Ibid.* For a more complete description of report requirements, *see* D.14-12-025 Section 3.5 "Verification and Annual Reporting," at 43-47, and Sections 3 and 4 of this decision.

[6] D.14-12-025 uses the term "small energy utilities" for Bear Valley Electric Service, Liberty Utilities, PacifiCorp doing business as Pacific Power, and Southwest Gas Corporation.

applications. It did not require SMJUs to use the same risk-based decision-making framework as the IOUs, stating that it would be best to gain experience with an approved IOU framework prior to requiring it for the SMJUs. D.14-12-025 required the SMJUs to start using a risk-based decision-making framework by December 2017, but an October 2017 Administrative Law Judge (ALJ) Ruling delayed this until further guidance could be provided in the instant proceeding.[7]

On December 13, 2016, the assigned Commissioner issued a Phase Two Scoping Memo with questions on the content and format of the RMARs and RSARs, safety performance metrics, benchmarking, and on the appropriate risk-based decision-making framework for the SMJUs.[8]

1.1. Procedural Background

1.1.1. Safety Performance Metrics

As directed in the Phase One Scoping Memo, work on safety performance metrics began during Phase One. The Interim Decision provided a status update stating that Phase One parties had identified 70 potential safety metrics and directing SED to reconvene a Technical Working Group (TWG) to continue to refine these.[9] SED convened the TWG on September 28, 2016, with representatives from California Utility Employees (CUE), Energy Division, the Office of Ratepayer Advocates (now California Public Advocate's Office or Cal

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In alignment with how other Commission Decisions refer to these utilities, this decision uses the term small and multi-jurisdictional utilities, or SMJUs.

[7] D.18-05-044, *Order Extending Statutory Deadline* at 2-3, Finding of Fact 3 indicates that additional time was necessary to complete deliverables in A.15-05-002; *see* also October 5, 2017. *Administrative Law Judge Ruling Updating Schedule in Response to Comments and Entering Phase Two S-MAP Workshop #2 Staff Summary into the Record*, at 5.

[8] Scoping Memo of Assigned Commissioner, December 13, 2016 at 13.

[9] Interim Decision, Ordering Paragraph 11.

Advocates),[10] the Office of Safety Advocates (OSA), the Utility Reform Network (TURN), the Southern California Generation Coalition (SCGC), and the IOUs.

The TWG started its Phase Two work in early January 2017. On November 30, 2017, an ALJ Ruling provided SED staff's proposed performance metrics based on TWG discussions, which included a set of Guiding Principles, and requested party comments.[11] The IOUs filed Joint Comments and TURN and OSA filed comments on January 5, 2018. The same parties filed reply comments on January 12, 2018.

Pursuant to Public Utilities Code Section 8386, an existing proceeding (R.18-10-007) requires the electric utilities to file annual wildfire mitigation plans. As part of those plans, utilities must include a description of the metrics they plan to use to evaluate the plan's performance and the assumptions that underlie the use of those metrics. Those plans were recently filed and include several metrics related to fire risk.[12]

1.1.2. Risk Spending Accountability Report (RSAR)

ED staff convened a workshop on February 22, 2018 to take input on its Proposal for Standardized Reporting and Outline (Staff Proposal) for the RSAR.[13]

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[10] Senate Bill 854 (Stats. 2018, ch. 51) amended Pub. Util. Code Section 309.5(a) so that the Office of Ratepayer Advocates is now named the Public Advocate's Office of the Public Utilities Commission. We will refer to this party as Cal Advocates.

[11] "Administrative Law Judge's Ruling Entering Phase Two S-MAP Metrics Staff Proposal into the Record, and Seeking Comments," November 30, 2017. This ruling included a list of "Guiding Principles" developed by the TWG but did not seek comment on these. We provide these in Attachment 4 for reference purposes only.

[12] *See* February 6, 2019 Compliance Filings filed by PG&E, SCE, and SDG&E. in R.18-10-007 containing proposed "2019 Wildfire Mitigation Plans."

[13] ED's February 2018 Staff Proposal was made available here: (http://cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Safety/Risk_Assessment/S-MAP/Staff%20Proposal%20for%20Standardized%20Reporting%20and%20Outline.pdf

A May 22, 2018 ALJ Ruling provided a Revised Staff Proposal and requested comments.[14] The IOUs, TURN and ORA filed comments on the Revised Staff Proposal on June 11, 2018. SDG&E/SoCalGas and SCE filed reply comments on June 21, 2018. An August 31, 2018 ALJ Ruling provided a Second Revised Staff Proposal (Second Revised Proposal) and requested comments.[15] The IOUs and TURN filed comments on the Second Revised Proposal on September 24, 2018. The same parties filed reply comments on October 1, 2018. Southwest Gas Corporation (Southwest Gas) filed a Motion for Party Status on September 24, 2018, which was granted on October 18, 2018. Southwest Gas filed comments on the Second Revised Proposal on October 26, 2018.[16]

On September 25, 2017, Senate Bill (SB) 549 was signed into law as Public Utilities Code Section 591 and became effective January 1, 2018.[17] Public Utilities Code Section 591 requires the Commission to:

> "(a) … require an electrical or gas corporation to annually notify the commission, as part of an ongoing proceeding or in a report otherwise required to be submitted to the commission, of each time since that notification was last provided that capital or expense revenue authorized by the commission for *maintenance*, safety, or reliability was redirected by the electrical or gas corporation to other purposes (emphasis added); and

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[14] "Administrative Law Judge's Ruling Entering Revised Staff Proposal for Standardized Reporting and Outline into the Record, Requesting Comments on Staff Proposal and Directing Safety and Enforcement Division to Collaborate with Small Utilities to Develop and File a Proposal for Risk-Based Decision-Making Framework," May 22, 2018.

[15] "Administrative Law Judge's Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," August 31, 2018.

[16] Southwest Gas Corporation, "Comments on ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," October 26, 2018.

[17] Unless otherwise stated, all code section references are to the Public Utilities Code.

> (b) …[to] ensure that the notification provided by each electrical or gas corporation is also made available in a timely fashion to the Office of the Safety Advocate, Public Advocate's Office of the Public Utilities Commission, and parties on the service list of any relevant proceeding."

D.14-12-025 addressed safety and reliability risk-based decision-making and mitigation spending only; Section 591 adds the additional requirement that IOUs must report on any redirection of maintenance spending. Staff indicated in their Second Revised Proposal that they had determined that the RSAR was the most appropriate reporting vehicle in which to address Section 591 requirements.[18] Parties were invited to comment on this ED proposal in their September 24 and October 1, 2018 comments and reply comments on the Second Revised Proposal. No party objected to this approach.

1.1.3. Guidelines for SMJUs

Commission staff convened a workshop on the question of the appropriate risk-based decision-making framework for the SMJUs on February 22, 2018. A May 22, 2018 ALJ Ruling directed SED to collaborate with the small utilities to develop a proposed format for a SMJU risk-based decision-making framework. On August 30, 2018, SED served a "Voluntary Agreement between SED and Bear Valley Electric Service, Liberty Utilities, PacifiCorp and Southwest Gas Corporation" on the service list of A.15-05-002 and requested informal

[18] "Second Revised Proposal at 4," in ALJ Ruling, August 31, 2018. Legislative Analyses of SB 549 had highlighted the S-MAP proceeding and the RSARs, "Bill Analysis of Assembly Committee on Utilities and Energy for June 21, 2017 hearing," available at available at: http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201720180SB549.

comments. On September 20, 2018, TURN provided informal comments.[19] No other party commented on the SED proposal.

1.2. Issues in Scope

The Phase Two Scoping Memo asked the following questions, which are addressed in this decision:

Reporting

- What direction can and should be provided to the utilities for the structure and detail of the two accountability reports required by D.14-12-025?
- What direction can and should be provided to the utilities regarding developing, tracking, and reporting a set of performance metrics that are designed to measure the safety improvements achieved by the utilities?
- What safety performance metrics should be developed for the first S-MAP and/or second S-MAP?

Identify Industry-Wide Practices/ Benchmarking

- What industry wide practices and/or benchmarking elements should be developed in the first and/or second S-MAP?[20]

S-MAP Application to Small Utilities

- How should S-MAP and RAMP requirements apply to small utilities and in what time frame?

[19] "Informal Comments of The Utility Reform Network on the Voluntary Agreement Between the Risk Assessment Section of the Safety and Enforcement Division and Small and Multi-Jurisdictional Utilities for a Risk-Based Decision-Making Framework," September 20, 2018.

[20] The Phase I Scoping Memo also asked, "What direction can and should be provided to the utilities regarding the value of benchmarking to gauge effectiveness of risk management programs?" September 9, 2015 at 7.

The Phase Two Scoping Memo asked many additional questions. These have been addressed in D.18-12-014 and/or deferred to a subsequent phase of this proceeding.

2. Jurisdiction

Public Utilities Code Section 963(b)(3) states that it is the policy of the state of California that the Commission and each gas corporation place safety of the public and gas corporation employees as the top priority and that the commission shall take all reasonable and appropriate actions necessary to carry out a safety priority policy consistent with the principle of just and reasonable cost-based rates. Section 961(b)(1) requires gas corporations to develop plans for the safe and reliable operation of facilities that implement Section 963(b)(3) requirements.

Section 750 requires the Commission to develop formal procedures to consider safety in a rate case application by an electrical corporation or gas corporation which must include a means by which safety information acquired by the Commission through monitoring, data tracking and analysis, accident investigations, and audits of an applicant's safety programs may inform consideration of the application. Section 321.1(a) requires the Commission to assess and mitigate the impacts of its decisions on customer, public and employee safety.

3. Safety Performance Metrics

This section approves 26 Safety Performance Metrics (Version 1.0) and requires the large IOUs to annually file the metrics and accompanying narratives in any future S-MAP proceedings and in their respective GRC proceedings. It approves three reporting requirements for these annual reports, including that the IOUs must include in them narrative discussions of their use of the approved safety metrics in corrective actions, training and to improve their risk-based

decision-making, and that the IOUs must identify and provide additional information for any metrics that may be subject to bias for reasons of linkage to financial incentives. It requests that the SED reconvene the S-MAP TWG and complete a proposal on Safety Management System (SMS) metrics and a revised version of its proposed "Electric Overhead Conductor" Index and associated metrics within 180 days of issuance of this decision.

3.1. Staff's Proposed Metrics

The November 30, 2017, ALJ Ruling provided SED's list of proposed metrics based on the TWG's discussions. These are presented below.

SED's Proposed S-MAP Performance Metrics[21][22]

By all IOUs:

- Transmission & Distribution Overhead Wires Down;
- *911 Emergency Response – Electric;*[23]
- Contractor Lost Work Day Case Rate;
- Fire Ignitions;
- Contractor Occupational Safety and Health Administration (OSHA) Recordables Rate;
- Contractor Serious Injuries and Fatalities (Contractor-SIF);
- Employee Serious Injuries and Fatalities (Employee-SIF);
- Employee Days Away, Restricted and Transfer (DART);
- Electric Overhead Conductor Index;
    1. Circuit miles of electric distribution infrared inspections completed.

[21] "Administrative Law Judge's Ruling Entering Phase Two S-MAP Metrics Staff Proposal into the Record, and Seeking Comments," November 30, 2017.

[22] This decision does not approve staff's proposed metrics indicated in this list with an asterisk (*). *See* discussion in Section 3.2. We slightly modify the metrics in italics before adopting them.

[23] We rephrase this metric to "Electric Emergency Response" prior to adopting it.

2. Circuit miles of distribution electric conductor upgraded/replaced.
3. Number of trees trimmed/removed as part of the vegetation management program.

- Records and Information Management Training; and*
- Transformer at Seismic Guidelines.*

By PG&E, SoCalGas and SDG&E:

- Gas Dig-in;
- Gas Emergency Response;
- Gas In-Line Inspection;
- Shut-In-The Gas Average Time (Min) – Mains;
- Shut-In-The Gas Average Time (Min) – Services; and
- Cross bore intrusions found per 1,000 inspections;

By SCE, SoCalGas and SDG&E:

- Helicopter/Flight Incident.[24]

By SCE:

- Secure Behavior Index.*

By Sempra:

- *Percentage of the System that is Internally Inspectionable*[25]
- Wells Inspected Using an Enhanced Inspection Protocol*

The ruling asked five broad questions: (1) Should any of the metrics be eliminated? (2) Are there any metrics that should be added? (3) Do you support tracking the additional metrics proposed by OSA or should these topics be addressed elsewhere? (4) Are there any metrics being collected by one or more utilities that should be collected by another utility as well? (5) How do the

[24] This decision also requires PG&E to report on the underlined metrics in Staff's proposed list. (*see* discussion in Section 3.2.)

[25] We rephrase this metric to "Percentage of the Gas System that can be Internally Inspected" prior to adopting it.

20 metrics proposed by PG&E relate to PG&E's RAMP mitigations?

Should PG&E report these as S-MAP metrics?

Metrics Proposed by PG&E:[26]

- Gas in-line upgrade;
- SIF Corrective Actions Index
  1. Percentage of SIF corrective actions completed on time
  2. Quality of corrective actions as measured against an externally derived framework;*
- SIF Effectiveness of Corrective Action;*
- Natural Gas Storage Baseline Inspections Performed;
- Employee Lost Workday Case Rate;
- Employee OSHA Recordables Rate;
- Contractor DART;
- Hard Break Rate;
- Driver's Check Rate;
- Diablo Canyon Power Plant Reliability and Safety Indicator -Unit 1;*
- Diablo Canyon Power Plant Reliability and Safety Indicator -Unit 2;*
- Hydro Public Safety Actions Index;*
- Near-Hits Reported;*
- Preventable Motor Vehicle Incident Rate;*
- Serious Preventable Motor Vehicle Incident Rate;*
- Timely Reporting of Injuries;*
- Employee SIF-Exposure Rate;*

[26] "Administrative Law Judge's Ruling Entering Phase Two S-MAP Metrics Staff Proposal into the Record, and Seeking Comments," November 30, 2017. This decision does not approve metrics in this list for reporting by PG&E that are indicated with an asterisk (*) It approves the underlined metric for all gas utilities (*see* Section 3.2).

- Workforce Unavailable Due to Health;*
- 12 month Rolling Average Lost Workday Rate;* and
- Percentage of Contractor Assessments that Include Non-Conformance Findings.*

3.1.1. Eliminating Metrics Applicable to all IOUs

Regarding the elimination of metrics, TURN stated that the "Records and Information Management Training" metric should be eliminated because data based on this would not reflect the quality or effectiveness of the training.[27] The IOUs suggested that the components of the proposed "Electric Overhead Conductor Index" metric should be treated as separate metrics, did not currently allow for comparability due to how the IOUs tracked the issues, and that both the index and the metrics should be eliminated and taken up in subsequent discussions.[28] OSA objected to deleting the "Electric Overhead Conductor Index" and related metrics, stating that they had value and the TWG should collaborate to improve them.[29]

3.1.2. Adding Metrics Applicable for all IOUs, Including OSA's Proposed Metrics

The November 30, 2017 ALJ Ruling queried parties on their view of metrics proposed by OSA and available online in a "Master Metrics list."[30] The Master Metrics list indicated that OSA had proposed five additional metrics: (1) procedure management; (2) work-arounds; (3) qualified workforce/workforce planning; (4) emergency response,

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[27] TURN, "Comments on S-MAP Metrics Staff Proposal," January 5, 2018.

[28] "Joint Response of PG&E, SCE, SoCalGas and SDG&E to ALJ Ruling," January 5, 2018.

[29] SED staff internal communication regarding May 2018 informal TWG comments, received November 10, 2018.

[30] Link provided in November 30, 2017 ALJ Ruling: http://cpuc.ca.gov/General.aspx?id=9099

management and preparedness; (5) safety culture elements: (a) safety decision-making; (b) leadership accountability; (c) safety communication; and (d) continuous learning. In addition, OSA formally proposed additional metrics in its January 05, 2018 comments.[31] These were:

OSA's January 2018 Proposed Metrics[32]

- Public Serious Injuries and Fatalities (Public-SIFs);
- Safety Culture Assessments;*
- Staffing Level Data;*
- Backlog Data; and
- Incident and Near-Miss Reporting Data;
- Root Cause or Causal Analysis Program Data;*
- Quality Assurance/ Control Program Data;*
- Emergency Response, Management and Preparedness Data;*
- Pipeline Utility Metrics Required or Described by the Pipeline and Hazardous Materials Safety Administration's (PHMSA's) Advisory Bulletin on Metrics;* and
- Pipeline Utility Metrics already required by GO-112F.*

OSA described these metrics, aside from Public-SIFs, as organizational, safety culture, or SMS metrics. OSA argued that they cross-cut multiple risks and as such, "may help uncover systemic, underestimated, emergent or unidentified risks that could be used to validate, corroborate, or show

[31] OSA, "Comments on ALJ Ruling," January 5, 2018.

[32] This decision adopts metrics not marked with an asterisk (*) and several of OSA's suggested metrics as contained in the "Master Metrics list" for further development by SED (*see* discussion in Section 3.2.).

weaknesses or limitations in other metrics data collected for specific risks."[33] The IOUs agreed that OSA's suggested additional metrics were "conceptually appropriate and relevant to safe utility operations," but opposed adding them formally as metrics at that time, stating they were too, "vague and open-ended."[34] TURN supported the IOUs internally tracking OSA's suggested metrics but opposed requiring formal reporting on the metrics, arguing that some of them contained "subjective" reporting triggers that would, "make them difficult to report on reliably and consistently." [35] TURN suggested that additional group discussions could be helpful to better-define OSA's proposals to allow for meaningful evaluations of trends and comparison across IOUs.

3.1.3. Adding and Eliminating Metrics that Apply to Specific IOUs

Regarding metrics proposed for only one IOU, TURN suggested that the SDG&E/SoCalGas metric "Wells Inspected Using an Enhanced Inspection Protocol" should be collected by PG&E as well.[36] TURN also suggested that "Helicopter/Flight Incident," proposed just for SoCalGas/SDG&E and SCE should also be collected by PG&E.[37]

OSA stated that all IOUs should report on the metrics proposed just for PG&E, "to the extent they are applicable."[38] TURN opposed this, stating that

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[33] OSA, "Comments on ALJ Ruling," January 5, 2018, Attachment A. OSA's January 12, 2018, "Reply Comments on ALJ Ruling," appended its "Comments on Performance Metrics," provided in 2013 in R.11-02-019 on Adopting New Safety and Reliability Regulations.

[34] PG&E, SCE, SoCalGas and SDG&E, "Joint Replies to Comments on ALJ Ruling," January 12, 2018.

[35] TURN, "Reply Comments to ALJ Ruling," January 12, 2018.

[36] TURN, "Comments on the SMAP Metrics Staff Proposal," January 5, 2018.

[37] *Ibid* at 3.

[38] OSA, "Comments on ALJ Ruling," January 5, 2018.

many of the PG&E-only metrics "are not clearly defined or are not capable of objective definition and therefore defeat the critical goal of verifiable and consistent measurement."[39] TURN recommended that 11 of the 20 metrics suggested by PG&E should be eliminated for this reason. In Joint IOU comments, PG&E provided a mapping of its 20 proposed S-MAP safety metrics against the risks it had identified in its 2017 RAMP. PG&E's mapping indicated that 15 of the 20 metrics PG&E had proposed related directly to PG&E's RAMP risks.[40]

3.2. Discussion: Approved Safety Performance Metrics

The Interim Decision set initial priorities for safety metrics and stated that the Commission should adopt an initial set of safety metrics and improve this over time. It also emphasized leading rather than lagging metrics (without defining these), metrics less prone to inconsistencies or bias in collection or those that are auditable, uniformly-defined metrics, and metrics with reliable data that are ready for use.[41]

Staff's proposed metrics largely meet the criteria adopted in the Interim Decision and were generally supported by party comment. Regarding eliminating metrics, we concur with TURN's suggestion to eliminate Staff's proposed metric, "Records and Information Management Training" from our approved list. While this metric may well be useful (for instance, we

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[39] TURN, "Comments on the SMAP Metrics Staff Proposal," January 5, 2018.

[40] SoCalGas, "Joint Response of PG&E, SCE, SoCalGas, and SDG&E to ALJ Ruling," January 5, 2018. PG&E clarifies that one of these fifteen metrics, "Gas In-Line Upgrade," is included as part of its proposed RAMP Index, "In-Line Inspection."

[41] Interim Decision at 142-146. Neither the Interim Decision nor the Staff Proposal defined "leading" or "lagging" metrics. However, lagging metrics typically measure the impact of safety incidents after the fact (for example, the number of explosions due to cross bore intrusions), whereas the related leading metric would be the number of cross bore intrusions found.

recognize that standardized training, on information systems or other elements, is important and can be a leading indicator), we concur with parties that further refinement is warranted prior to its adoption. We decline to adopt the metric, "Secure Behavior Index (Cybersecurity)" at this time as we believe this metric should be developed by the Commission's newly-established Utility Cyber Security Branch (established within SED in July 2018) and considered in a later S-MAP proceeding. We also decline to adopt the metric, "Transformer at Seismic Guidelines," as this metric is primarily focused on reliability. We discuss the "Electric Overhead Conductor" Index and related metrics below.

Regarding metrics additional to those proposed by Staff, we appreciate OSA's proposals and concur that some of their proposed metrics could help uncover systemic risks. They appear to also need further refinement, as stated by TURN. Nonetheless, we find it appropriate to adopt the Public-SIF metric at this time as doing so will enhance party and public understanding of IOUs' progress addressing safety risks. We acknowledge that IOU reporting on Public-SIF without any context could be problematic, however. For example, some incidents reportable under this metric may not be directly related to an IOU's safety performance (such as an inebriated driver hitting a utility-owned electric pole). We therefore approve the metric of Public-SIF for reporting by all IOUs with modifications in the reporting practice to improve the accuracy of the data reported as described below.

For the approved Public-SIF metric, we require the IOUs to provide SED staff with their individual Public-SIF data 60 days prior to the due date for each annual Safety Performance Metrics Report as approved in this decision. We direct the IOUs to work with SED staff prior to submittal of their first Safety Performance Metrics report (and subsequent reports as requested by SED) to agree on a format for submittal of this data. Annually, within 30 days of

submittal of this data, SED staff will designate subcategories for final IOU reporting of Public-SIF data in that year's Safety Performance Metrics report. SED staff should start from the Public-SIF subcategories indicated below and modify these as appropriate.

Subcategories for IOU Reporting on Public Serious Injuries and Fatalities

1. Dig in;
2. Individual contact with conductor;
3. Fall from utility facilities;
4. Vehicle collision with utility facilities;
5. Wildfire;
6. Gas explosion; and
7. Vehicle collision with a utility employee or contractor while on duty.

In addition, we concur with OSA that adopting rigorous organizational, safety culture, and/or SMS metrics could be useful and should be pursued by this Commission. However, OSA's proposals have not yet been sufficiently developed or vetted to adopt them in this decision. We also are aware that OSA's Opening Brief in the PG&E Safety Culture Investigation proceeding Investigation (I.) 15-08-019 provided an updated list of suggested SMS metrics and recommended that the Commission adopt these in the S-MAP proceeding or in I.15-08-019.[42]

Public Utilities Code Section 963(b)(3) provides authority for the Commission to direct the IOUs to develop SMS metrics by stating that, "the Commission and each gas corporation place safety of the public and gas corporation employees as the top priority and that the commission shall take all

[42] Office of Safety Advocates, "Opening Brief" in I.15-08-019, May 5, 2018 at 4 and Attachment 1.

reasonable and appropriate actions necessary to carry out a safety priority policy consistent with the principle of just and reasonable cost-based rates." We find that directing the IOUs to develop SMS metrics is reasonable.

We therefore approve a process to adopt SMS metrics. We ask that SED staff reconvene the S-MAP TWG within 30 days of issuance of this decision, with participation in the group open to interested parties and other stakeholders. To the extent that metrics can be developed in the following areas, SED staff should consult with the TWG and complete a proposal within 180 days of issuance of this decision:

- Safety Decision-making;
- Safety Communications;
- Continuous Learning Related to Safety;
- Backlog Data; and,
- Near Miss Data.

Under ideal circumstances, SED's proposed metrics would allow the Commission to compare metrics developed in these areas across utilities and over time. However, the absolute safety of each individual utility is of paramount importance and, as needed, SED staff may propose metrics in these areas that vary across IOUs.

TURN and the IOUs suggested deleting the "Electric Overhead Conductor" Index and its related metrics of "circuit miles of electric distribution infrared inspections completed," "circuit miles of distribution electric conductor upgraded/replaced," and "number of trees trimmed/removed as part of the vegetation management program" as these warranted more refinement prior to adoption, in their view. We agree with this but believe that improvement of these metrics to make them meaningful should be moved forward expeditiously. We therefore require the IOUs to present a proposal to the TWG authorized

above within 45 days of issuance of this decision to modify the proposed "Electric Overhead Conductor" Index and metrics. The IOUs' proposal should provide enough context to render a modified version of the index and metrics meaningful. We anticipate that this would entail defining the metrics relative to the IOUs' adopted goals, scope, and progress in key areas and modifying them to track IOU progress relative to forecasted units or authorized plans for each respective utility. SED should include an updated version of the "Electric Overhead Conductor" Index and associated metrics in its proposal due within 180 days of issuance of this decision.

D.18-12-014 held in abeyance the requirement that IOUs file updated S-MAP applications every three years as was directed in D.14-12-025. D.18-12-014 also directed Commission staff to take steps to promote an OIR to identify lessons learned from the first S-MAP, further consider and refine a "Long-Term Road Map," and develop a scope and timeline for future S-MAP applications.[43] When initiated, this OIR would be an appropriate vehicle for consideration of SED staff's SMS and revised "Electric Overhead Conductor" Index and metrics proposal as directed in this decision.

Regarding proposed metrics that should be reported by additional IOUs, we concur with TURN that the metric "Helicopter/Flight Incident" should also be collected by PG&E. The metric proposed for PG&E, "Natural Gas Storage Baseline Inspections Performed," should also be reported on by SDG&E and SoCalGas and should replace the metric proposed just for SDG&E and SoCalGas, "Wells Inspected Using an Enhanced Inspection Protocol." These metrics will provide useful, consistent safety data that can be tracked over time.

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[43] D.18-12-015, Ordering Paragraphs 5 and 6.

Regarding metrics proposed just for PG&E, we agree again with TURN that some of these metrics appear to lack clear definitions and as such could be difficult to report on reliably and consistently. We find that twelve of PG&E's 20 proposed metrics should not be adopted at this time. However, five of PG&E's proposed metrics were not disputed by parties and align with risks identified in PG&E's RAMP. These are, "Employee Lost Workday Case Rate," "Employee OSHA Recordables Rate," "Contractor DART," "Hard Brake Rate," and, "Drivers Check Rate." We adopt these metrics for PG&E only. Also, "Natural Gas Storage Baseline Inspections Performed" was proposed by PG&E, but we approve this metric for reporting by all gas IOUs, as suggested by OSA. Data exists for this metric and it is appropriate that all gas IOUs report this data.

In addition, two metrics proposed by PG&E and linked to PG&E's RAMP risks, "Gas in-line upgrade" and "Percentage of SIF Corrective Actions Completed on Time," are appropriate to approve at this time for reporting by PG&E only.[44] Although these metrics may benefit from additional refinement, as suggested by TURN regarding the SIF Corrective Actions Index, we believe they are important enough to approve in this decision for immediate use, to be refined over time as necessary.

All other metrics proposed by Staff and indicated in bold in the lists of proposed metrics in Section 2.1. are non-controversial, have reliable, quantitative data available, and are ready for use now.[45] In all, we adopt these 26 Safety Performance Metrics (Version 1.0) as discussed above and present them in full in Attachment 1. Attachment 1 includes the metric name, risk drivers, risk

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[44] *See* Attachment 1, metrics 7 and 24.

[45] PG&E indicated in comments on the proposed decision that it will require a transition period to report on all distribution overhead wires down as part of metric 2.

categorization, reporting units, full metric description, the IOUs required to report on the metric, and whether the metric is primarily a leading or a lagging indicator.[46] We emphasize that this is an initial list of safety metrics that may be added to and refined over time. Towards this end, SED staff shall convene the S-MAP TWG a minimum of every two years (biennially) to discuss the Safety Performance Metrics and any needed changes. We authorize SED staff to initiate Commission Resolutions to update the metrics we adopt in this decision, including modifying and adding metrics. SED should post any updated Safety Performance Metrics adopted by the Commission on the SED website in a manner that clearly indicates a new version and date. SED and the TWG should also prepare and periodically update a high-level TWG work plan.

The list of approved Safety Performance Metrics contains four metrics in the "electric" category, ten in the "gas" category, ten in the "injuries" category, and three in "vehicle" category. Each metric has been categorized according to a key risk, but we caution that these categorizations represent only a subset of the risks reflected in the adopted metrics. For instance, the metric "Transmission and Distribution (T&D) Overhead Wires Down" is categorized as an "electric" risk but will support risk incident reporting related to wildfires, transmission systems, overhead conductors (distribution) and overhead conductors (primary). Similarly, the metric "Fire Ignitions," is categorized as an electric risk but would report on risk incidents relating to overhead conductors, wildfire, public and worker safety, catastrophic events and preparedness.

We highlight that today's decision approves four safety performance metrics for reporting by PG&E, SCE and SDG&E that will support tracking of

[46] The Metrics Master list referenced in the ALJ November 30, 2017 ruling also contained this additional information for each metric.

utility performance mitigating wildfire risks. These are metrics one through four, "Transmission & Distribution Overhead Wires Down," "Transmission & Distribution Overhead Wires Down- Major Event Days," "Electric Emergency Response," and "Fire Ignitions" (*See* Attachment 1). Pursuant to Public Utilities Code Section 8386, R.18-10-007 will consider Wildfire Mitigation Plans filed by PG&E, SCE and SDG&E, which must include a discussion of how "the application of previously identified metrics to previous plan performances" has informed the proposed Wildfire Mitigation Plans. Section 8386 also requires that utility Wildfire Mitigation Plans include a "description of the metrics the electrical corporation plans to use to evaluate the plan's performance and the assumptions that underlie the use of those metrics."[47]

As indicated in Attachment 1, all IOUs are required to report on eleven metrics, PG&E, SoCalGas and SDG&E on an additional seven metrics, SoCalGas and SDG&E on one additional metric, and PG&E on an additional seven metrics. Of the 26 adopted metrics, just three are primarily "leading" metrics and 23 are primarily "lagging" metrics. Adopting leading indicators remains our priority, as indicated in the Interim Decision. However, we find that improvements in data quality and availability are needed before adopting additional leading indicators. We are confident that the newly-adopted SA Decision methodology will yield this additional data. As stated in the Interim Decision, we intend to continue work to identify appropriate and useful metrics to track utility safety performance going forward. In the future, metrics that correspond to the top safety risks and top risk drivers in the IOU's RAMPs will be our top priority.

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[47] Public Utilities Code Section 8386(b)(4)-(5); *See* also Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901 (2018)," October 25, 2018, in R.18-10-007.

Starting in 2020, we direct each of the IOUs to annually file and serve a Safety Performance Metrics Report to the Service Lists of A.15-05-002, any successor S-MAP, and to their most recent or current GRC.[48] We alter the timeline adopted in D.14-12-025 and direct all IOUs to file their Safety Performance Metrics reports by March 31st of each year, starting in 2020. SED staff shall provide their reviews in a staggered schedule. These changes coincide with similar modifications approved for the RSAR filing schedule in Section 5.5 and will allow for the most efficient review schedule for parties and staff. We direct the IOUs to report monthly metric data each year according to the schedule in Table 2 and continuing annually using the adopted Safety Performance Metrics, definitions and units included in Attachment 1, as updated by SED through the process described above. To improve Commission, party and public understanding of IOU safety trends, we require the IOUs to include data for the last ten years for all in Safety Performance Metrics for which such data exists.[49]

Table 2: IOU Safety Performance Metrics Annual Schedule

Action	**Utility Report Filing Date**			
	PG&E	**SCE**	**SoCalGas**	**SDG&E**
Safety Performance Metrics report	March 31			
Staff Review	June 19	September 7	December 3	

[48] For proceedings that have been closed, the relevant assigned ALJ will direct the Commission's Docket Office to administratively file the IOU reports.

[49] For Metric 22, Public Serious Injuries and Fatalities, we do not require the IOUs to report ten-year historical data using the subcategories for IOU reporting on public serious injuries and fatalities discussed in this decision. The requirement to report subcategories for this metric applies prospectively and should be reported for the current and future years.

To enhance understanding of IOU progress on safety we adopt three additional reporting requirements that the IOUs must address in their annual Safety Performance Metrics reports. As stated in the Interim Decision, a priority for the S-MAP process is ensuring that Safety Performance Metrics data is reported using accurate and unbiased information. IOU reporting on Safety Performance Metrics that are tied in any way to financial incentives and/or employee compensation may be subject to either unwitting or intentional bias. However, the TWG process did not identify any metrics that may be subject to this bias and this decision does not eliminate any metrics from our adopted list for this reason. Pub. Util. Code Sections 321.1(a), 591, 750, 961, and 963(b)(3) collectively state that the Commission and the IOUs must place the safety of the public and employees as our top priority. To fulfill this mandate, it is imperative that the Commission have access to accurate, unbiased Safety Performance Metrics data. The Commission cannot perform its oversight function and assure the public that the IOUs are fully and responsibly implementing safety mandates without access to unbiased data.

We therefore require the IOUs to clearly identify in their annual Safety Performance Metrics Reports all metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals. In each annual Safety Performance Metrics report, we direct the IOUs to clearly: (1) identify any metrics used for purposes of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals, with the executive level defined as positions at the Director level and higher; (2) identify the Director-level or higher executive positions to which the metric(s) is linked;

and, (3) describe the bias controls that the utility has in place to ensure that reporting of the metric(s) has not been gamed or skewed to support a financial incentive goal.

Second, while the approved Safety Performance Metrics list has undergone substantial review, we are concerned that readers may have difficulty contextualizing the reported information. Referring to the Interim Decision, a key objective of adopting S-MAP safety metrics is not just tracking but improving utilities' safety performance. We believe that IOU inclusion of narrative context about the value of the safety metrics to them will support this aim. We therefore require the IOUs to provide narrative contextual information in their annual Safety Performance Metrics Reports in two areas. First, we direct each IOU to provide three to five examples of how they used data contained in the reports to improve staff and/or contractor training and to take corrective actions aimed at minimizing top risks or risk drivers. Second, we require each IOU to summarize and provide three to five clear examples of how it is using Safety Performance Metrics Report data to support risk-based decision-making as required in the S-MAP and RAMP processes.[50]

Finally, we direct the IOUs to utilize a Safety Performance Metrics Report format that is relatively consistent across IOUs and over time. We direct the IOUs to work with SED staff to develop a standardized, easy-to-read Safety Performance Metrics Report format.

Going forward, the Commission should develop additional safety metrics that correspond to the top safety risks and top risk drivers identified in IOU RAMPs. Fortunately, we have and will continue to grow the body of data

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[50] *See* D.14-12-025 and D.18-12-014. In the first one or two Safety Performance Metrics reports, the IOUs may provide fewer examples if the relevant data is not yet fully available.

indicating these risks and risk drivers.[51] We are confident that the improved risk-based decision-making framework adopted in the SA Decision will result in IOU production of better quantitative data on top risks and risk drivers, which will assist in this task.

4. Risk Mitigation Accountability Report

4.1. D.14-12-025 Requirements

D.14-12-025 required the RMARs and the RSARs to, together, "explain how… risk mitigation activities and risk spending are meeting the goals for managing and minimizing the risks that were identified in the utility's RAMP and GRC submissions."[52] It required the RMARs to describe any deviations from the risk-mitigation activities originally requested and authorized in the GRC to those performed and the reasons for those deviations. It envisioned that this would allow for verification of IOU safety-related activities, understanding of the reasons for any changes in priority, and accountability for ratepayer monies.[53]

Specifically, D.14-12-025 stated that RMARs would compare utility GRC-projected costs and benefits of specific risk mitigation programs with the actual benefits and costs. The RMAR,

> would consist of a program-by-program comparison of the utility's GRC predictions of risk mitigation programs—quantified as much as possible using the models examined in the S-MAPs and used to prepare the RAMP assessments—with measured results of actual risk mitigation programs, *including a comparison of projected and actual Risk Mitigation to Cost Ratios*.[54]

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[51] SDG&E, SoCalGas, SCE and PG&E have each, as of January 2019, filed a RAMP proposal for consideration. *See* I.16-10-015, I-16-10-016, I.18-11-006, and I.17-11-003, respectively.

[52] D.14-12-025 at 46.

[53] *Ibid* at 39.

[54] D.14-12-025 at 39, emphasis added.

D.14-12-025 cautioned that "the actual benefits will be difficult to quantify" and that there could be overlapping information in the report that would need to be reconciled.[55] It directed Commission staff to publish annual written evaluations of the RMAR to alert the Commission of any concerns in these reports and to include in their reviews other applicable information submitted to the Commission, as necessary (*see* Table 1).

4.2. Phase Two Staff RMAR Activities

Staff's focus since the issuance of the Phase Two Scoping Memo has been on assessing whether the Risk Spend Efficiencies (RSE) as presented in PG&E, SoCalGas and SDG&E's 2017 and 2018 RAMPs filings could provide the basis for a comparison of projected and actual risk mitigation to cost ratios as required in D.14-12-025.[56] SED's review of PG&E's 2017 RAMP filing found improvements in PG&E's RSE calculations and that PG&E had introduced a Multi-Attribute Risk Score (MARS) approach. Overall, SED found that the MARS calculations lacked a reliable quantitative foundation, and were, "not at a state of maturity for use as the sole basis of projecting the efficacy of safety programs, prioritizing funding of competing safety programs, or determining the related resource requirements necessary to reduce the identified risks."[57]

4.3. Impact of Settlement Agreement Decision (D.18-12-015)

The SA Decision requires the IOUs to provide RSEs for each proposed risk mitigation program or portfolio in its RAMP filings. Over time, the SA Decision methodologies will improve how IOUs quantify changes in the likelihood

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[55] *Ibid* at 44.

[56] *See* I.16-10-015, I-16-10-016, I.18-11-006, and I.17-11-003.

[57] SED, "Risk and Safety Aspects of Risk Assessment and Mitigation Phase Report of Pacific Gas & Electric Company Investigation 17-11-003," March 30, 2018. http://www.cpuc.ca.gov/riskassessment.

and/or consequences of specific risks and eventually, all IOU RAMP filings will include changes in RSE scores between one GRC to the next for each approved mitigation program or portfolio.[58] This will produce more reliable data and allow for greater transparency into IOU risk-based decision-making, including on how IOUs use subject matter expert judgments to develop risk scores.

However, due to the time lag inherent in the S-MAP/RAMP/GRC/RMAR processes, 2019 will be the first time that an IOU (SoCalGas/ SDG&E) files a RAMP that includes RSE scores developed using the SA Decision methodology. 2020 will be the first time that an IOU (SoCalGas/ SDG&E) files a GRC with RSE scores using the SA Decision methodology. PG&E and SCE will not file a GRC containing RSE scores developed using the SA Decision methodology until 2021 and 2022 respectively (*see* Table 3 below). In addition, RAMP filings comparing the changes in risk mitigation RSE scores between successive GRC application periods using the SA Decision methodology will not be possible until 2022-2024.

Table 3: Timeline to RMARs Comparing RSE Scores Based on SA Methodology

RAMP and GRC filings include RSE scores					**RAMP and GRC filings compare RSE scores**				
Test Year	Letter Requesting OII	RAMP Filing	GRC Filing	RMAR Report	Test Year	Issue Letter Requesting OII	RAMP Filing	GRC Filing	RMAR Report
Sempra TY 2022	*Sept 1, 2019*	*Nov 30, 2019*	*Sept 1, 2020*	*July and Sept 31, 2021*	*Sempra TY 2025*	*Sept 1, 2022*	*Nov 30, 2022*	*Sept 1, 2023*	*July 31 and Sept 31, 2024*
PG&E TY 2023	*Sept 1, 2020*	*Nov 30, 2020*	*Sept 1, 2021*	*March 31, 2022*	*PG&E TY 2026*	*Sept 1, 2023*	*Nov 30, 2023*	*Sept 1, 2024*	*March 31, 2025*
SCE TY 2024	*Sept 1, 2021*	*Nov 30, 2021*	*Sept 1, 2022*	*May 31, 2023*	*SCE TY 2027*	*Sept 1, 2024*	*Nov 30, 2024*	*Sept 1, 2025*	*May 31, 2026*

4.4. Discussion

D.14-12-025 required the RMARs and RSARs to together explain how IOU risk mitigation activities and spending are meeting the goals for managing and minimizing the risks identified in the utility's RAMP and GRC submissions. It also stated that the RMARs would provide a program-by-program comparison

[58] D.14-12-025 at 31–42.

of projected and actual risk mitigation program benefit-to-cost ratios. As indicated above, the IOUs as a group will not all file RAMP reports that include RSE scores developed using the SA Decision methodology until 2021, and the IOUs will not all file RAMP reports comparing changes in RSE scores between successive GRC application periods using the SA Decision methodology until 2024. Further, the Phase Two TWG did not consider and SED did not propose specific RMAR reporting requirements for use in the interim.

Based on this, we find it premature to approve specific RMAR requirements or to require separate, more general RMARs at this time. Instead, it is reasonable to defer consideration of a specific RMAR methodology to compare projected and actual RSEs until closer to the time when this can be accomplished given the schedule outlined in Table 3. In the interim, we direct the IOUs to include in their annual Safety Performance Metrics Reports some of the information originally envisioned as belonging in the RMARs. Specifically, we direct the IOUs to include an explanation of how the reported safety metric data reflects progress against the safety goals in the utility's RAMP and approved GRC application and a high-level summary of their total estimated risk mitigation spending level as approved in their most recent GRC. These additional requirements are reasonable as they will support parties' assessment of whether the mitigation strategies performed by each utility are having a beneficial impact.

We consider the requirement adopted in D.14-12-025 for the RSAR and RMAR to explain how risk mitigation activities and risk spending are meeting the goals for managing and minimizing the risks that were identified in the utility's RAMP and GRC submissions in Section 5. We intend to revisit the need for D.14-12-025's proposed program-by-program comparison of changes of cost-benefit ratios in a future S-MAP proceeding.

We request that SED submit annual reviews of the IOUs' Safety Performance Metrics reports in the same proceedings where they are filed by the IOUs according to the schedule provided in Table 2. As suggested for the RMARs, the SED's annual Safety Performance Metrics reviews should draw upon other published reports and/or filings with the Commission, as needed, and should highlight any Staff concerns.[59] We request that SED staff annually post on the Commission website each IOU Safety Performance Metrics report and SED's Safety Performance Metrics review within 30 days of submitting its review. In addition, we request that SED convey the IOUs' Safety Performance Metrics reports and SED's reviews of them to the Electric Safety and Reliability Branch (ESRB) and the Gas Safety and Reliability Branch (GSRB) of the Commission, and that the ESRB and the GSRB consider information in the reports as they plan and execute their safety inspections and compliance audits.

In addition, we request that SED provide guidance to the IOUs on the desired format for the expanded report prior to the first IOU filing. We request that SED confer with each IOU on suggested revisions to the format or contents of their filed reports for each of the three years following issuance of this decision in order to ensure that the reports are as clear and useful as possible. SED should include recommendations for improvements to enhance the clarity and usefulness of the Safety Performance Metric reports in their annual reviews.

5. Risk Spending Accountability Report

As discussed above, D.14-12-025 required the IOUs to prepare annual RSARs and RMARs that together would explain how risk spending and risk mitigation activities are meeting IOU GRC and RAMP goals for managing and

[59] D.14-12-025 at 44.

minimizing risks.[60] Like the RMAR, D.14-12-025 stated that the RSAR should consist of a project-by-project comparison of authorized versus actual spending above an appropriate Commission-determined dollar cut-off and a utility narrative explanation of any significant differences between the two.[61] In addition, D.14-12-025 required the RMAR and the RSAR to "describe any deviation, and the reasons for doing so, from what activities were originally requested and authorized in the GRC, to what activities were actually performed. This will allow Commission staff to more readily review and verify these safety-related activities, and to understand the reasons for the changes in priority that may have taken place... Both reports shall report on the activities and spending the utility undertook during the GRC test year, and during each attrition year."[62]

5.1. Identifying Safety, Reliability and Maintenance Programs

In lieu of defining a "project," the Second Revised Staff Proposal for RSAR format and content requirements defined the term "program," provided examples of programs for each IOU, indicated that the RSARs should group programs along general business lines, and suggested specific categories.[63] The IOUs and TURN commented on the definition of "program" for the RSARs in written comments. SDG&E/SoCalGas suggested that the definitions of safety and reliability programs for the RSAR should align with those included in the

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[60] D.14-12-025 at 46.

[61] *Ibid* at 44.

[62] D.14-12-025 at 46.

[63] ALJ Ruling, "ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," Appendix at 15.

then-pending, now approved, SA Decision.[64] SCE requested that the final RSAR guidance acknowledge that if a program categorization changes in a rate case proceeding, the related RSAR would need to be consistent with this change.[65] SoCalGas/ SDG&E suggested that maintenance program for purposes of Section 591 implementation should be defined as the electric and gas Federal Energy Regulatory Commission (FERC) accounts.[66] SoCalGas/SDG&E opposed the Second Revised Proposal's suggestion that IOUs should report at the "cost center" and TURN proposed that reporting should occur at the "work unit" level.[67] SoCalGas/SDG&E also suggested that a program should be reported on only if 50% of its work paper pertains to safety, maintenance or reliability.[68]

5.1.1. Discussion

To assist with oversight of IOU risk spending, the RSARs must be organized into appropriately defined programs for which spending can be tracked over time. We concur with SoCalGas/SDG&E that the most appropriate approach to this is for the RSARs to define "programs" as was done in the SA Agreement (D.18-12-014). The SA Agreement defined a "program" as a set of projects, activities, and/or functions with a defined scope that is intended to meet a specific objective or outcome. Reflecting Public Utilities Code Section 961, the SA Agreement indicated that relevant programs include those justified

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[64] SoCalGas/ SDG&E, "Opening Comments on the Energy Division September 2018 Workshop," September 24, 2018 at 2.

[65] SCE, "Comments on Energy Division Second Revised Staff Proposal," September 24, 2018.

[66] SoCalGas/SDG&E indicated the relevant FERC accounts as: 510-515, 528-532, 551-554, 590-598, 935, 830-837, 843, 861-869, 885-895, and 932/935. SoCalGas/ SDG&E, "Opening Comments on the Energy Division September 2018 Workshop," September 24, 2018 at 3.

[67] TURN, "Opening Comments on the Second Revised Staff Proposal for Standardized Reporting," September 24, 2018.

[68] SoCalGas/ SDG&E, "Opening Comments on the Energy Division September 2018 Workshop," September 24, 2018.

primarily on the basis of reducing a safety or reliability risk.[69] However, GRC and RAMP proceedings have different objectives and they, correspondingly, may present "programs" somewhat differently. Some risk mitigation programs included in the RAMP may fully overlap with GRC spending programs (e.g. Major Work Categories, or MWC) and some may not (and vice versa), but, regardless, the RSARs must clearly identify all utility risk mitigation programs.

To minimize confusion, we require the IOUs to map the risk spending authorized in their GRCs with the risk spending programs presented in their RAMPs. We direct the IOUs to:

- Develop a list of programs that include activities relating to safety, reliability or maintenance authorized or in effect during the record period;
- Separate the list into risk mitigation programs identified in the RAMP and GRC spending programs related to safety, reliability or maintenance presented in the relevant GRC application;
- Report on the activities and spending undertaken during the utility's GRC test year and each attrition year;
- Report the authorized and actual spending for each program in the record period and the difference in dollars (actual less authorized) and in percent (actual less authorized, divided by authorized);
- Report on authorized activities and actual activities performed, for each program, using, where available "work units" as the unit of reporting;
- Group the GRC programs by the general lines of business as presented in the GRC where the funding request was authorized; divide programs into expense and capital programs;

[69] D.18-12-014, "Phase Two Decision Adopting Safety Model Assessment Proceeding Settlement Agreement with Modifications, Attachment A," at 15-16, December 13, 2018; "Assigned Commissioner's Scoping Memo and Ruling," December 13, 2016 at 2.

- Include a separate section in the report to discuss the cost recovery of actual expenditures for programs where any portion of the program is tracked in a balancing account or memorandum account; and,
- Include total authorized spending for the record period categorized into expense and capital programs.

As introduced in Section 1.1.2, Staff's Second Revised Proposal suggested that IOU reporting on any diversion of maintenance spending as required in Public Utilities Code Section 591 should occur in the RSARs. No party objected to this suggestion. We therefore direct the IOUs to include information on any redirection of maintenance program spending in their annual RSARs. To accomplish this, we slightly modify SoCalGas/SDG&E's suggested approach. We require that the RSARs identify maintenance programs as those activities that relate to the preservation of electric or natural gas utility property or equipment in good condition to prevent failure. For expensed programs, maintenance programs must include activities that are recorded in the maintenance accounts of the FERC Uniform System of Accounts for electric and gas utilities. For additional guidance on defining and reporting on capital maintenance programs, we direct the IOUs to refer to General Orders 95 and 128. We provide additional guidance regarding thresholds for narrative explanations of maintenance programs below. This approach to maintenance programs is reasonable and fulfills the requirements of Public Utilities Code Section 591.

In addition, we concur with SCE's suggestion that if the categorization of a program changes in a rate case proceeding, the subsequent RSAR would need to be consistent with this change and provide for this in Attachment 2, which summarizes the approved RSAR requirements. We also concur with SoCalGas/SDG&E's and find it reasonable to require reporting at the "budget code" rather than at the "cost center" level.

The RSAR requirements discussed above and explained more fully in Attachment 2 are consistent with the RSAR reporting requirements outlined in D.14-12-025. They will provide for improved accountability of utility safety, reliability and maintenance spending. They balance the existing complexities of various proceedings and utility program naming conventions and reflect party feedback in workshops and in comments. They are reasonable and are approved.

5.2 Reporting on Risk Mitigation Activities

D.14-12-025 requires the IOUs to report on both risk mitigation program spending and risk mitigation program activities, and to compare the authorized activities and the actual activities performed during a GRC's test year and each attrition year. TURN underscored these requirements in its comments on the proposed decision and in comments and reply comments on Staff's Second Revised Proposal. TURN recommended in all of these comments that in order to realize this requirement, the Commission should require the IOUs to report on work units completed for each safety, reliability and maintenance program included in the report. TURN observed that the IOUs typically forecast in their GRC applications what work the IOU will be able to complete for the requested budget and so the Commission typically expressly or implicitly adopts a certain amount of work units in its decision. SCE, SDG&E and SoCalGas disagree that work unit information is typically available for all GRC programs.

5.2.1 Discussion

D.14-12-025 requires the IOUs to report on authorized and actual risk mitigation program activities and to explain any deviations from authorized and actual safety activities. Work units are a key metric for understanding IOU risk spending and it is feasible for the IOUs to report on units of work authorized as compared to units of work performed for many if not most approved safety and

reliability programs and for some maintenance programs. Including this information in the RSAR partially fulfills D.14-12-025's objective for parties to more easily verify IOU safety-related mitigation activities and to understand the reasons for any changes in priority. We direct the IOUs to report on activities authorized and activities actually performed by describing the types of and units of work authorized as compared to the types of and units of work performed in their RSARs for the approved safety, reliability and maintenance programs for which such information exists. The IOUs must consult with ED staff and, as needed, the TWG, on the specific manner to report types of and work units authorized versus types of and work units performed. Where information on risk mitigation program work units authorized and performed is not available, the IOUs must work with ED staff and, as needed, the TWG to appropriately identify these programs and must include in the RSAR general explanations for the lack of inclusion of work unit information for such programs.

As discussed in D.18-12-014, the future S-MAP OIR may discuss coordination across GRC, RAMP and S-MAP proceedings, including increasing the standardization of terminology and units across these proceedings.

5.3. Threshold for Narrative Explanation of Variances in Risk Mitigation Spending and Activities

D.14-12-025 stated that utility RSARs would not only compare projected and actual spending, but that this comparison would be accompanied by a, "narrative explanation of any significant differences between the two."[70] D.14-12-025 also required IOU safety accountability reports to describe any deviation, and the reasons for doing so, from what activities were originally requested and authorized in the GRC, to what activities were actually performed.

[70] D.14-12-025 at 43-44.

Staff's Second Revised Proposal recommended that the IOUs select for discussion those programs where variances exceed pre-established, IOU-specific absolute and/or proportional dollar threshold values. Staff's Second Revised Proposal recommended IOU thresholds for narrative explanations of between 50% and 100% of authorized spending.[71]

The IOUs and TURN commented on these proposed thresholds, with the IOUs generally supporting a 30% threshold to explain spending variances.[72] Although TURN had earlier recommended a 30% threshold, TURN stated in its comments on the Second Revised Staff Proposal that it now believed a 20% threshold to be most appropriate, given the integration of Section 591 requirements into the RSAR.[73] TURN observed that a 20% threshold would capture the majority of utility spending variances while limiting the burden on IOUs of reporting and of reporting and review. TURN also recommended that the Commission require the IOUs to provide an explanation for any variation of at least 20 percent between authorized work units and the units of work completed for a particular activity or program and that the Commission require the IOUs to apply the same absolute dollar threshold requirements to such explanations as for deviations in spending.

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[71] ALJ Ruling, "ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," Appendix at 15-16.

[72] SoCalGas/ SDG&E, "Opening Comments on the Energy Division September 2018 Workshop," September 24, 2018 at 5; SCE, "Opening Comments on ED Guidance," September 24, 2018 at 4; PG&E, "Comments on ED Guidance," September 24, 2018 at 3;

[73] TURN, "Opening Comments on Revised Staff Proposal," June 11, 2018 at 3; TURN, "Opening Comments on the Second Revised Staff Proposal for Standardized Reporting," September 24, 2018 at 4.

SDG&E and SoCalGas commented that their absolute value thresholds should be less than the levels proposed for SCE and PG&E and more consistent with the ratios of thresholds adopted in the SA Agreement.[74]

5.3.1. Discussion

D.14-12-025 and Public Utilities Code Section 591 require the IOUs to explain any significant variances in authorized and actual spending and in authorized and actual risk mitigation activities performed for safety, reliability and maintenance programs. A 20% variance threshold for these explanatory narratives for changes in approved and actual spending levels is reasonable, in the public interest and will provide uniformity across IOU reports.

We therefore adopt a 20% spending variance level for explanatory narratives for the IOUs. We also adopt minimum dollar thresholds for explanatory narratives appropriate for each IOU according to the size of its business operations and spending. We direct the IOUs to explain the difference between authorized and actual spending for the GRC programs chosen using the selection criteria specific to each utility indicated below. We vary these minimum dollar threshold criteria based on the relative size of each IOU as suggested by SoCalGas/SDG&E.[75]

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[74] *Ibid* at 6.

[75] D.17-05-013 at 182-186. PG&E has the option of continuing its current practice of explaining variances in spending that exceed a 10 percent threshold as has been PG&E's practice since D.11-05-018 required reporting for expense and capital expenditures for electric distribution, electric generation and gas distribution. PG&E's 2011-2016 Budget Reports and 2017 Spending Accountability Report have explained deviations between approved and actual GRC spending at the 10% threshold level. PG&E's 2011-2016 Budget Reports applied a minimum variance of $1 million for companywide spending and its 2017 Spending Accountability Report applied a minimum variances of between $1 - $3 million for Electric and Gas Distribution programs (for GRC Expensed items and

We direct the IOUs to provide a description of each program included in its RSAR and specific references to GRC testimony where the program is described. For each program selected for a narrative explanation in accordance with the criteria below, the IOUs should provide: (1) a detailed explanation of the causes of the difference including whether any projects were canceled, deferred or expanded that may have led to the difference; (2) a description of how the program relates to safety, reliability and/or maintenance; and, (3) the location in the prior GRC and current GRC testimony where the program is described, where applicable. Attachment 2 explains these requirements in more detail.

We also find that it is reasonable for the IOUs to provide narrative explanations of activities for those risk mitigation programs for which work unit data is available and where the deviation between authorized work units and performed work units is equal to or greater than 20 percent. D.12-14-025 required IOU accountability reports to report on risk mitigation activities performed as compared to risk mitigation activities approved and to explain "any deviation." Where data is available, work units are the most practicable unit with which to report on activities. We direct the IOUs to provide narrative explanations of activities for those risk mitigation programs for which work unit data is available and where the deviation between authorized work units and performed work units is equal to or greater than 20 percent. The IOUs shall describe deviations of 20 percent or more both in the quantity of work units performed and in the type of work units performed. The IOUs must consult

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Capital Programs respectively), and between $5 - $10 million for Generation programs (for GRC Expensed items and Capital Programs respectively).

with ED staff and, as needed, the TWG on the format for reporting this information.

The RSAR requirements adopted in this decision replace PG&E's existing Spending Accountability Report requirement approved in D.17-05-013, which approved PG&E's 2017 GRC application.

Table 4. Selection Criteria for Narrative Explanation of Spending Variance:

		GRC Expensed items					Capital Programs				
		Minimum variance	OR	Min. % variance	AND	Minimum variance	Minimum variance	OR	Min. % variance	AND	Minimum variance
SCE	All	$10 million	OR	20%	AND	$5 million	$20 million	OR	20%	AND	$10 million
PG&E	Electric & Gas Distribution and Other (MAT programs)	$10 million	OR	20%	AND	$5 million	$20 million	OR	20%	AND	$10 million
	Generation (MWC programs)	$10 million	OR	20%	AND	$5 million	$20 million	OR	20%	AND	$10 million
SDG&E	Electric Operations and Other	$5 million	OR	20%	AND	$2.5 million	$10 million	OR	20%	AND	$5 million
	Gas Operations	$2.5 million	OR	20%	AND	$0.5 million	$5 million	OR	20%	AND	$1 million
SoCalGas	All	$5 million	OR	20%	AND	$1 million	$10 million	OR	20%	AND	$2 million

5.4. Treatment of Corporate Overhead

D.14-12-025 and Public Utilities Code Section 591 did not address the issue of whether or how corporate overhead should be included in the RSAR. Staff's Second Revised Proposal recommended that, "items within a program include, for example, direct capital expenditures but exclude items such as corporate overheads and other adjustments."[76] TURN, PG&E and SoCalGas/SDG&E commented that the exclusion of corporate overheads and other adjustments could complicate a comparison of GRC spending in the RSAR

[76] ALJ Ruling, "ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," Appendix at 15.

as GRC decisions frequently combine overheads and other adjustments into the authorization for each program.[77] No party objected to these parties' comments.

We agree with commenting parties and will not require the IOUs' RSARs to separate corporate overhead amounts from expenditures for the purposes of reporting amounts in the RSAR. However, ED Staff should investigate this issue in its review of IOU RSARs and should include in its reports any recommended changes needed. We provide additional guidance on this topic in Attachment 2.

5.5 Additional Items

D.14-12-025 requires ED staff to review and verify the utility's risk management and mitigation activities and spending that took place during the reporting period. TURN commented that ED staff review of the RSAR, "should be limited to whether the utility has fulfilled the requirements laid out in the report. The Energy Division review is not a review of the spending itself. Any determination regarding the reasonableness of the spending itself is reserved for the General Rate Case, or other applicable proceeding." [78] PG&E disagreed with TURN's statement that ED review of the IOUs RSARs should be "limited to whether the utility has fulfilled the requirements of the report," and offered that, "PG&E expects Commission staff as well as interveners to review the data provided, seek understanding, and raise concerns in a timely fashion."[79]

We are sympathetic to the views of both parties. On the one hand, TURN's statement regarding "reasonableness review" pertains, we assume, to

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[77] TURN, "Opening Comments on the Second Revised Staff Proposal for Standardized Reporting," September 24, 2018; SoCalGas/ SDG&E, "Opening Comments on the Energy Division September 2018 Workshop," September 24, 2018; PG&E, *Ibid*.

[78] TURN, "Opening Comments on the Second Revised Staff Proposal," September 24, 2018 at 5.

[79] PG&E, "Reply Comments on September 4, 2018 Energy Division Workshop on Spending Accountability Reports," October 1, 2018 at 1.

Public Utilities Code Section 451, which requires that the Commission determine whether a utility's proposed rates, services and charges are just and reasonable.[80] We concur with TURN that Commission staff's review of the IOUs' RSARs does not constitute a review of the reasonableness of the utility's proposed risk mitigation budgets or programs as required in Public Utilities Code Section 451. As TURN stated, this is accomplished in the GRC application process. On the other hand, PG&E is correct that the Commission will engage with IOUs on the RSARs, including raising concerns, to better understand data presented in the RSAR as part of the staff report on RSARs authorized in D.14-12-025.

As discussed in Section 4.4, we require the IOUs to include in their annual Safety Performance Metrics reports a general description of how their risk mitigation activities and risk spending are meeting their RAMP and GRC goals for managing and minimizing safety risks. This is a reasonable approach that meets the general requirements of D.14-12-025. We therefore decline to also require this explanation in the RSARs.

5.6. IOU RSAR Filing Schedule

As required in D.14-12-025, the IOUs must file and serve their annual RSARs in the applicable GRC proceeding in which funding for the risk mitigation activities and spending was authorized.[81] It is reasonable, and we also require in this decision that the IOUs also file each annual RSAR in the current or most recent RAMP/GRC at the time of its filing. Requiring this supports a key objective of the RSARs, that parties and the Commission use them to inform review of GRC budget requests.

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[80] Public Utilities Code Section 451.

[81] For proceedings that have been closed, the relevant assigned ALJ will direct the Commission's Docket Office to administratively file the IOU reports.

Public Utilities Code Section 591 requires the Commission to provide a timely notice of any redirection of maintenance funding to other purposes to OSA and California Advocates (*See* Section 1.1.2). The RSAR schedule approved in D.14-12-025 can be improved upon to ensure this. We therefore approve the IOU RSAR filing schedule indicated in Table 5 below, and continuing annually, and require the IOUs to serve copies of the RSAR to Cal Advocates and OSA. SoCalGas and SDG&E shall comply with the RSAR requirements approved in this decision starting with its 2019 RSAR filing (due March 31, 2020); PG&E shall comply with the RSAR requirements approved in this decision starting with its 2020 RSAR filing (due March 31, 2021); and, SCE shall comply with the RSAR requirements approved in this decision starting with its 2021 RSAR filing (due March 31, 2022).

ED shall conduct and submit an ED Review of each IOU RSAR in the applicable GRC proceedings each year. In addition, ED should annually rotate its review schedule so as to focus first where the ED Review is most likely to be immediately useful to parties and the Commission. To accomplish this, we direct ED to submit its first ED Review each year on the most recently opened IOU GRC, its second on the GRC opened most recently before that, and so on. To ensure that all ED Reviews are submitted in the same year, ED shall consolidate its review of SDG&E and SoCalGas into one submittal. In addition, ED shall by April 10 of each year submit to the IOUs and parties in relevant open GRC proceedings and post on the Commission website a letter providing that year's Annual RSAR Review Schedule. This direction is summarized in Table 5, which continues annually. As directed in D.14-12-025, ED should consider other applicable reports or information that have been submitted to the Commission as part of its review and should alert the Commission and parties about any concerns regarding utility risk spending.

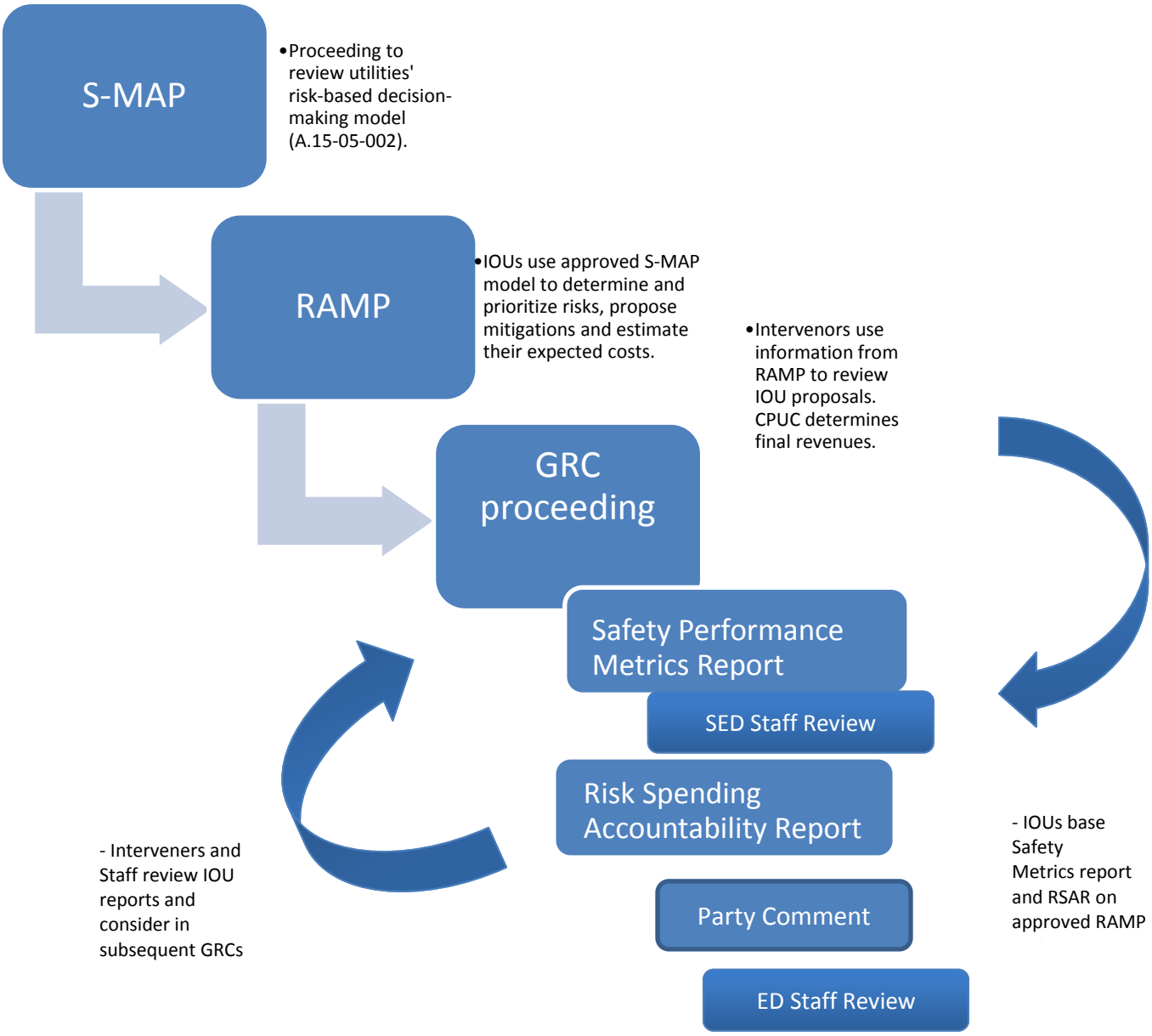
In addition, parties to the proceedings that receive IOU RSAR filings may wish to comment on the IOU reports directly. To provide for this, we authorize parties to the proceedings where the IOUs file their annual RSARs to comment on the reports according the schedule provided in Table 5, and according to each year's prioritization, as indicated in the Annual RSAR Review Schedule. Table 5 provides parties with approximately 40 days after the initial RSAR filings and each ED Review to comment. Parties shall file their comments according to the timeline in Table 5 in the most recent open GRC/RAMP proceeding that their comments pertains to and shall also email their comments to ED staff using the email: edtariffunit@cpuc.ca.gov. Parties should clearly identify the RSAR on which they are submitting comments. The IOUs shall prominently highlight the ED email address for comments and the party commenting timeline in each RSAR filing. In addition, ED should post on the Commission website all party comments received by the appropriate respective timelines within 30 days of the respective due dates and should consider, discuss, and append, as applicable, these party comments in its own review. ED should also post each utility's annual RSAR and the relevant ED review on the Commission website within 30 days of submitting its review in the relevant proceedings.

Table 5: RSAR Filing and ED Review Schedule

RSAR Schedule	
Date	**Action**
March 31	All IOUs file RSARs
April 10	ED serves Annual Schedule
May 10	Party Comment (GRC 1)
June 19	ED Review (GRC 1)
July 29	Party Comment (GRC 2)
Sept 7	ED Review (GRC 2)
Oct 17	Party Comment (GRC 3)
Dec 3	ED Review (GRC 3)

Figure 1 illustrates the approved RSAR and Safety Performance Metrics filing and review processes.

Figure 1: S-MAP – RAMP – RSAR - Safety Performance Metrics Cycle



5.7. SMJU Risk Spending Accountability Reports

D.14-12-025 sets forth RSAR requirements for the large IOUs only. However, the August 31, 2018 ALJ Ruling included an ED staff proposal, "General Guidance for the Small and Multi-Jurisdictional Utilities on the Risk Spending Accountability Report" (General Guidance). This General Guidance

suggested six principles that the SMJUs should adhere to in filing interim and final RSARs. The General Guidance suggested that the SMJUs should file interim annual RSARs beginning on June 30, 2019 for the 2018 record year and that the SMJUs would receive further instructions from the Commission's ED Director. It also stated that each SMJU's annual RSAR and Staff's review of it would be published on the Commission's website.[82] Southwest Gas was the only SMJU to file formal comments on the General Guidance. It stressed that its 2019 report (for record year 2018) could not follow Staff's suggested approach as their initial GRC filing had not categorized programs as Staff had suggested.[83]

We concur with Southwest Gas that it may be difficult for the SMJUs to strictly follow Staff's suggested approach for the first few years of transitioning to RSAR reporting. Therefore, we approve a general, simplified approach for the SMJUs to follow in their annual RSAR reports for the time-being. We direct the SMJUs to follow the general RSAR procedures outlined in Attachment 3, providing the same level of detail on the utility's risk mitigation and risk spending as presented in its GRC, unless otherwise directed by Commission Staff.

It is reasonable to adopt similar RSAR filing and schedule requirements for the SMJUs as for the IOUs. The SMJUs shall file their annual RSARs in the applicable GRC proceeding in which funding for the risk mitigation activities was authorized and in the current or most recent GRC at the time of its filing as outlined in Table 5 and continuing annually.

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[82] ALJ Ruling, "ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments."

[83] Southwest Gas, "Comments on ALJ Ruling Noticing Workshop, Entering Second Revised Staff Proposal into the Record and Soliciting Comments," October 26, 2018 at 3.

Table 6: RSAR Reporting Schedule for SMJUs

Utility	Reporting Period	Utility Report Due	ED Response
Bear Valley	2018	June 30, 2019	October 31, 2019
PacifiCorp	2019	June 30, 2020	October 31, 2020
Liberty Utilities	2019	June 30, 2020	October 31, 2020
Southwest Gas	2021	June 30, 2022	October 31, 2022

6. SMJU Risk-Based Decision-Making Framework

D.14-12-025 directed the SMJUs to include a risk-based decision-making framework in their GRC application filings beginning three years from the effective date of that decision. It determined that the risk model developed for use by the IOUs should be tested prior to being adapted for small utilities but that the, "GRC presentations of these small energy utilities will have to address the safety risks that each utility faces in its system and operations, and to explain how it plans to manage, mitigate, and minimize those risks during the GRC cycle in the context of GRC revenue requirement request."[84]

6.1. SED's Proposed SMJU Voluntary Agreement

On August 30, 2018, SED served a "Voluntary Agreement for a Risk-Based Decision-Making Framework" (Voluntary Agreement) to the service list of Application (A.)15-05-002 on behalf of SED and the four SMJUs and requested informal comments. The proposed agreement is included as Attachment 3.

TURN was the only party to comment informally on the proposed Voluntary Agreement.[85] TURN supported the Voluntary Agreement's suggestion that the SMJUs should address risks in their GRCs rather than in a stand-alone RAMP application, stating that this would allow for administrative efficiency amongst the SMJUs and reviewers. TURN suggested, however, that

[84] D.14-12-025 at 18-19.

[85] TURN, "Informal Comments on the Voluntary Agreement Between RASA SED and the SMJUs for a Risk-Based Decision-Making Framework," September 20, 2018.

reference to use of a 7x7 matrix for scoring risks should be removed from the Voluntary Agreement, as both the Interim Decision and the SA Decision had explicitly stated that utilities should move beyond this approach.[86] TURN stated that the 7x7 approach may initially be appropriate for the SMJUs, but that the SMJUs should, over time, take advantage of and begin to replicate progress made by the IOUs. We agree that the SMJUs should move toward a more probabilistic approach to risk-based decision-making to the extent feasible. The final Voluntary Agreement contained in Attachment 3 reflects TURN's comments.

The Voluntary Agreement relies on the model of how Bear Valley and PacifiCorp assessed safety risks in their 2018 GRC filings. It follows the Interim Decision's direction regarding IOU presentation of risk-based decision-making in GRC testimony, specifically the RAMP 10 Elements.[87] The Voluntary Agreement summarizes how the SMJUs will describe and explain how they plan to manage, mitigate, and minimize their safety risks in their GRCs, as required in D.14-12-025. It does not require the SMJUs to file individual RAMP applications, as noted by TURN. The Voluntary Approach is consistent with both D.14-12-025 and the Interim Decision in its structuring of informational requirements for SMJUs' GRCs. We approve the Voluntary Agreement between SED and the SMJUs as contained in Attachment 3.

It is our understanding that the SMJUs will begin utilizing the Voluntary Agreement to structure the risk-based decision-making components of their GRC filings in each of their next GRC filings. SED staff should monitor the SMJU's adherence to the Voluntary Agreement and report on their observations

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[86] D.16-08-018 at 48; D.18-12-014.

[87] D.16-08-018 at 131-155

in subsequent S-MAP proceedings. As needed, we will revisit, revise and formalize the Voluntary Agreement between SED and the small utilities in future S-MAP proceedings.

7. Categorization and Need for Hearing

The Commission preliminarily categorized this proceeding as rate-setting with a need for hearings pursuant to Rule 7.1 (Resolution ALJ 176-3357, dated May 2015). However, in the interest of promoting transparency, open dialogue among parties, and shared learning about high-level policy considerations and implications in the initial phase of the S-MAP program, the Assigned Commissioner's Phase One Scoping Memo determined that this proceeding would be categorized as quasi-legislative, and the Phase Two Scoping Memo confirmed this.[88] Technical working groups, meet and confer processes, and workshops, rather than evidentiary hearings, constituted the primary avenues to Staff and party proposals.

8. Comments on Proposed Decision

The proposed decision of the Commissioner in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed by PG&E, SCE, SDG&E and SoCalGas, and TURN on April 15, 2019, and reply comments were filed by PG&E, SCE, SDG&E and SoCalGas, TURN, OSA and Cal Advocates on April 22, 2019.

In response to comments from parties, and in addition to non-substantive changes and fine technical refinements, the following substantive changes have been made to the proposed decision. The final decision:

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[88] "Scoping Memo and Ruling of Assigned Commissioner," September 9, 2015; "Scoping Memo and Ruling of Assigned Commissioner," December 13, 2016.

- Requires the IOUs to include in their RSARs information on authorized risk mitigation activities and actual risk mitigation activities performed and to provide a narrative explanation for deviations between the two as required in D.14-12-025;
- Requires IOUs to report mitigation activities in their RSARs using work units where this information is available and to identify the programs for which this information is not available and provide a general explanation for this in the RSAR, after consulting with ED staff;
- Approves a 20 percent threshold for IOU narrative explanations of deviations in types and number of work units performed for IOU risk mitigation activities;
- Clarifies Commission expectations for IOU identification of all Safety Performance Metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals;
- Authorizes SED to initiate Commission Resolutions to modify or add to the Safety Performance Metrics approved in this decision;
- Clarifies the first years for IOU compliance with the RSAR requirements adopted in this decision, which vary according to each IOU's GRC schedule;
- Clarifies that RSAR requirements adopted in this decision replace PG&E's existing Spending Accountability Report requirement from D.17-05-013, which approved PG&E's 2017 GRC application; and,
- Clarifies the Commission's expectation that electric IOUs will report on all secondary distribution overhead wires down as part of metric 2, in the IOU Safety Performance Metrics Reports.

9. Assignment of Proceeding

Commissioner Clifford Rechtschaffen is the assigned Commissioner and Cathleen A. Fogel and Colette E. Kersten are the assigned ALJs in this proceeding.

Findings of Fact

1. Public Utilities Code Section 963(b)(3) states that it is the policy of the state of California that the Commission and each gas corporation place safety of the public and gas corporation employees as the top priority.

2. Public Utilities Code Section 961 requires gas corporations to develop plans for the safe and reliable operations of facilities subject to Public Utilities Code Section 963(b)(3).

3. Public Utilities Code Section 750 requires the Commission to develop formal procedures to consider safety in a rate case application by an electrical corporation or gas corporation which must include a means by which safety information acquired by the Commission through monitoring, data tracking and analysis, accident investigations, and audits of an applicant's safety programs may inform consideration of the application.

4. Public Utilities Code Section 321.1(a) requires the Commission to assess and mitigate the impacts of its decisions on customer, public and employee safety.

5. Public Utilities Code 963(b)(3) provides authority for the Commission to direct the IOUs to develop safety management system metrics.

6. Public Utilities Code Section 591 requires the IOUs to annually notify the Commission of any redirection of approved maintenance, safety or reliability funds and to provide this notification timely to Cal Advocates and the Office of Safety Advocates.

7. The proposed Safety Performance Metrics Version 1.0 measure key safety risks identified by the IOUs, parties and the SED.

8. IOU tracking and reporting on safety performance metrics will enhance public, customer and employee safety.

9. D.16-08-018 prioritized "leading" safety performance metrics, metrics less prone to bias, uniformly-defined metrics and metrics for which reliable data exists.

10. Some proposed metrics require further refinement prior to adoption.

11. It is reasonable to adopt the leading metric of Public Serious Injuries and Fatalities (Public-SIF) and to require additional contextual information on this issue in the Safety Performance Metrics report.

12. It is reasonable to approve a process to adopt rigorous organizational, safety culture and/or safety management systems metrics.

13. The approved Safety Performance Metrics (Version 1.0) reflect a large range of safety and operational risks and will provide measurable data that can be tracked over time.

14. IOU provision of data for the last ten years for all Safety Performance Metrics for which such data exists will enhance Commission, party and public understanding of IOU safety trends.

15. It is reasonable for SED staff to work with the S-MAP TWG to develop safety management system metrics that may be considered in a subsequent S-MAP OIR.

16. It is an S-MAP priority to ensure that Safety Performance Metrics data is reported using accurate and unbiased information.

17. It is imperative that the Commission have access to accurate, unbiased IOU Safety Performance Metrics data as it cannot perform its oversight function

and assure the public that the IOUs are fully and responsibly implementing safety mandates without this.

18. IOU reporting on metrics tied to financial incentives such as employee compensation may be subject to unwitting or intentional bias.

19. It is reasonable to require the IOUs to clearly identify in their annual Safety Performance Metrics Reports all metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals.

20. It is reasonable to require the IOUs to report additional information in the Safety Performance Metrics reports on metrics tied to financial incentives.

21. It is reasonable to require a narrative discussion about the value of safety metrics to the IOUs in the Safety Performance Metrics Report.

22. A comparison of changes in projected and actual IOU Risk Spend Efficiency scores will not be available for the IOUs until 2022 - 2024.

23. It is premature to approve specific RMAR requirements or to require separate RMARs in this decision.

24. It is reasonable to require the IOUs to include in the Safety Performance Metrics reports some of the information approved in D.14-12-025 for inclusion in the RMARs.

25. It is reasonable to authorize SED staff to initiate Commission Resolutions to update the Safety Performance Metrics approved in this decision, as needed, and to request that SED staff submit reviews of IOU safety metrics reports 120 days after the report is filed.

26. D.14-12-025 stated that IOU safety accountability reports should compare authorized and actual risk mitigation spending levels, authorized and actual risk

mitigation activities performed, and should explain deviations between the authorized and actual risk mitigation spending and activities performed.

27. Work units are a key metric for understanding IOU risk spending and it is feasible for the IOUs to report on units of work authorized as compared to units of work performed for many if not most approved safety and reliability programs and for some maintenance programs.

28. Consistent with D.14-12-025 and the Commission's objective of prioritizing safety issues, the RSAR should include information that compares authorized and actual units of work for each program covered by the RSAR for which such information exists and should explain any deviation greater than 20 percent in the type and number of work units between authorized and actual work for these programs.

29. Where information on risk mitigation program work units authorized and performed is not available, the IOUs should work with ED staff to appropriately identify these programs and include in the RSAR general explanations for the lack of work unit information for such programs.

30. It is reasonable to require the IOUs to use the same definition of "program" in their RSARs that was used in the SA Decision.

31. It is reasonable to allow the IOUs to include corporate overhead costs in their RSARs and for Commission staff to investigate this topic in future RSAR reviews.

32. Commission staff's review of RSARs as required in D.14-12-025 does not constitute a reasonableness review for the purposes of Public Utilities Code Section 451.

33. It is reasonable to update the IOUs' RSAR filing schedule to accommodate the requirements of Public Utilities Code Section 591.

34. It is reasonable for SED staff to submit reviews of IOU safety metric reports according to the schedule set forth in Table 2 of this decision and to develop and periodically update a TWG work plan.

35. It is reasonable to provide parties with an opportunity to comment on the RSARs and to request that ED staff append party comments to its RSAR review.

36. It is reasonable for the Commission to adopt SMJU-specific RSAR filing requirements.

37. It is reasonable to adopt the RSAR requirements contained in Attachment 2 and Section 5 of this decision.

38. It is reasonable to approve the Voluntary Agreement for a Risk Based Decision-Making Framework between SED and the Small and Multi-Jurisdictional Utilities as contained in Attachment 3 of this decision.

Conclusions of Law

1. The Safety Performance Metrics requirements adopted in this decision are consistent with the responsibilities of the Commission and the utilities to ensure public, employee and customer safety pursuant to Public Utilities Code Sections 321.1(a), 961(b)(1) and 963(b)(3) and to mitigate safety risks consistent with Commission Decisions D.14-12-025, D.16-08-018 and D.18-12-014.

2. The requirement of Public Utilities Code Section 961(a) for the Commission and gas corporations to prioritize safety to include reliability is within the scope of this proceeding and decision.

3. It is reasonable for the Commission to fulfill the requirements of Public Utilities Code Section 591 by requiring the IOUs to include maintenance spending in their annual RSARs and to serve each RSAR to Cal Advocates and the Office of Safety Advocates as well as several other proceedings.

4. The Commission should adopt an initial list of Safety Performance Metrics that can be added to and refined over time.

5. The IOUs should report on the Public-SIF metric with modifications to improve the accuracy of the data and its usefulness in tracking trends over time.

6. The Commission should approve a process to adopt safety management system metrics.

7. The IOUs should clearly identify all metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals in their annual Safety Performance Metrics Reports.

8. The IOUs should provide narrative contextual information in their annual Safety Performance Metrics reports.

9. The Commission should request SED staff review of each IOU's Safety Performance Metrics report.

10. The Commission should defer consideration of a specific RMAR format to compare changes in projected and actual Risk Spend Efficiency scores until closer to the time when this can be accomplished.

11. The Commission should require the IOUs' Safety Performance Metrics reports to explain how the reported Safety Performance Metrics data reflects progress against IOU RAMP and GRC safety goals and provide a high-level summary of total estimated risk mitigation spending as approved in the most recent GRC.

12. The Commission should require the IOUs to include maintenance spending in their annual RSARs.

13. The IOUs should define maintenance programs for the RSARs as those activities that relate to the preservation of electric or natural gas utility property or equipment in good condition to prevent failure, and that, for expensed

programs, include activities that are recorded in the maintenance accounts of the FERC Uniform System of Accounts for electric and gas utilities.

14. The Commission should require the IOUs to define "program" in the RSAR as done in the SA Decision and should require the RSARs to include a clear mapping of safety, reliability and maintenance programs as presented in each IOU's RAMP and GRC.

15. Requiring the IOUs to provide a comparison of authorized and actual units of work and a requirement to explain deviations greater than 20 percent in the RSAR fulfills D.14-12-025's expectation that the RSAR will enhance Commission and party ability to hold IOUs accountable for safety spending.

16. The Commission should adopt the RSAR requirements contained in Attachment 2 and Section 5 of this decision.

17. The Commission should approve SMJU-specific RSAR requirements.

18. The Commission should approve the Voluntary Agreement for a Risk Based Decision-Making Framework between the SED and the Small and Multi-Jurisdictional Utilities as contained in Attachment 3.

O R D E R

IT IS ORDERED that:

1. The Safety Performance Metrics contained in Attachment 1 of this decision are adopted. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company (IOUs) shall annually file and serve a Safety Performance Metrics report (report) in Application 15-05-002, any successor Safety Model Assessment Proceeding, and their most recent or current General Rate Case (GRC). The IOUs shall work with the Commission's Safety and Enforcement Division to develop a standardized format and will use that format in the filed reports.

2. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall report monthly Safety Performance Metric data according to the schedule indicated, starting in 2020 and continuing annually, using the approved Safety Performance Metrics (Version 1.0), definitions and units included in Attachment 1 of this decision — or any updated versions of the approved metrics issued pursuant to Ordering Paragraph 7 — and including data for the last ten years for all Safety Performance Metrics for which such data exists:

Action	**Utility Report Filing Date**			
	PG&E	**SCE**	**SoCalGas**	**SDG&E**
Safety Performance Metrics report	March 31			
Staff Review	June 19	September 7	December 3	

3. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall provide Safety and Enforcement Division (SED) staff with data on Public Serious Injuries and Fatalities (Public-SIF) 60 days prior to the due date for each Safety Performance Metrics report (report) and shall submit final Public-SIF data for current and future years in the report in the format requested by SED.

4. Safety and Enforcement Division staff are authorized to reconvene the Safety Model Assessment Proceeding Technical Working Group (TWG) within 30 days of issuance of this decision, consult with the TWG, and develop Safety Management System metrics and an updated Electric Overhead Conductor Index and metrics to the extent feasible, as discussed in this decision.

5. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall provide an updated proposal for an Electric Overhead Conductor Index and

metrics to the Safety Model Assessment Proceeding Technical Working Group within 45 days of issuance of this decision.

6. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company, shall, in each Safety Performance Metrics report, clearly:

   A. Identify all metrics linked to or used in any way for the purpose of determining executive compensation levels and/or incentives, regardless of whether or not systems are in place to control bias, and including all metrics linked to individual and group performance goals; executive compensation levels are defined as positions at the Director level and higher;

   B. Identify the Director-level or higher executive positions to which the metric(s) is linked;

   C. Describe the bias controls that the utility has in place to ensure that reporting of the metric(s) has not been gamed or skewed to support a financial incentive goal;

   D. Provide three to five examples of how the utility has used Safety Performance Metrics (metrics) data to improve staff and/or contractor training, and/or to take corrective actions to minimize top risks or risk drivers; and, provide three to five examples of how the utility is using metrics data to support risk-based decision-making as required in the Safety Model Assessment Proceeding and Risk Assessment Mitigation Phase (RAMP) processes;

   E. Explain how the safety metrics reflect progress against the utility's RAMP and General Rate Case safety goals; and,

   F. Provide a high-level summary of their total estimated risk mitigation spending level as approved in their most recent GRC.

7. Safety and Enforcement Division (SED) staff shall submit a review of each Safety Performance Metrics report according to the schedule indicated in Ordering Paragraph 2 and in the proceedings identified in Ordering Paragraph 1. We delegate to SED staff the authority to convene the Safety Model Assessment

Proceeding Technical Working Group (TWG) a minimum of every two years (biennially), to consider necessary updates to the Safety Performance Metrics, and to initiate Commission Resolutions to update the Safety Performance Metrics as approved in this decision, as needed, unless a subsequent Safety Model Assessment Proceeding provides other direction. SED and the TWG should prepare and periodically update a high-level TWG work plan.

8. We approve the Risk Spending Accountability Report (RSAR) requirements contained in Attachment 2 and included in this decision. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall comply with these requirements in each of their annual RSARs, shall file each annual RSAR in the utility's current or most recent Risk Assessment Mitigation Phase (RAMP) and General Rate Case (GRC) proceeding at the time of filing as well as the RAMP/GRC that approved the risk spending, shall serve each RSAR to the California Public Advocate's Office and the Office of Safety Advocates, and shall file the RSARs according to the following schedule, continuing annually:

RSAR Schedule	
Date	**Action**
March 31	All IOUs file RSARs
April 10	ED serves Annual Schedule
May 10	Party Comment (GRC 1)
June 19	ED Review (GRC 1)
July 29	Party Comment (GRC 2)
Sept 7	ED Review (GRC 2)
Oct 17	Party Comment (GRC 3)
Dec 3	ED Review (GRC 3)

9. Southern California Edison Company shall comply with the RSAR requirements approved in this decision starting with its 2021 RSAR filing (due March 31, 2022), Southern California Gas Company and San Diego Gas & Electric Company shall comply with the RSAR requirements approved in this decision starting with their 2019 RSAR filing (due March 31, 2020), and Pacific Gas and Electric Company shall comply with the RSAR requirements approved in this decision starting with its 2020 RSAR filing (due March 31, 2021).

10. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall define "program" in their Risk Spending Accountability Reports (RSARs) as a set of projects, activities, and/or functions with a defined scope that is intended to meet a specific objective or outcome and shall:

A. Develop a list of programs that include activities relating to safety, reliability or maintenance authorized or in effect during the record period;

B. Separate the list into risk mitigation programs identified in the Risk Assessment Mitigation Phase (RAMP) and other programs related to safety, reliability or maintenance presented in the relevant General Rate Case (GRC) application;

C. Report the authorized and actual spending for each program in the record period and the difference in dollars (actual less authorized) and in percent (actual less authorized, divided by authorized);

D. Report on authorized activities and actual activities performed, for each program, using, where available "work units" as the unit of reporting;

E. Group the GRC programs by the general lines of business as presented in the GRC where the funding request was authorized;

F. Divide programs into expense and capital programs;

G. Include a separate section in the report to discuss the cost recovery of actual expenditures for programs where any portion of the program is tracked in a balancing account or memorandum account;

H. Include total authorized spending for the record period categorized into expense and capital programs; and,

I. Follow the additional guidance on RSARs provided in Attachment 2.

11. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas & Electric Company shall explain in their Risk Spending Accountability Reports the difference between authorized and actual units of work for those programs for which this information is available and these amounts deviate by 20 percent or more, and shall explain the difference between authorized and actual spending for the General Rate Case (GRC) programs chosen using the selection criteria specific to each utility indicated in Table 4 of this decision and, for each such program selected shall:

A. Provide a detailed explanation of the causes of the difference including whether any projects or other units of work were canceled, deferred or expanded that may have led to the difference;

B. Describe how the program relates to safety, reliability and/or maintenance; and

C. Indicate the specific location in prior and current GRC testimony where the program is described, where applicable.

12. For Pacific Gas and Electric Company, the Risk Spending Accountability Report and Safety Performance Metrics report required by this decision supersede and replace the Spending Accountability Report required by Decision (D). 17-05-013.

13. Bear Valley Electric Service, Liberty Utilities, PacifiCorp doing business as Pacific Power (PacifiCorp), and Southwest Gas Corporation shall file annual Risk Spending Accountability Reports in the General Rate Case (GRC) proceeding in which funding for the risk mitigation spending was authorized, and in the current or most recent GRC at the time of its filing, according to the schedule provided below (and continuing annually):

Utility	Reporting Period	Utility Report Due	Staff Review
Bear Valley	2018	June 30, 2019	October 31, 2019
PacifiCorp	2019	June 30, 2020	October 31, 2020
Liberty Utilities	2019	June 30, 2020	October 31, 2020
Southwest Gas	2021	June 30, 2022	October 31, 2022

14. Energy Division (ED) should, as described in this decision, submit a review of the Risk Spending Accountability Reports (RSARs) of Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, San Diego Gas & Electric Company, Bear Valley Electric Service, Liberty Utilities, PacifiCorp doing business as Pacific Power (PacifiCorp), and Southwest Gas Corporation in the applicable General Rate Case proceeding(s) as indicated in Ordering Paragraphs 8 and 13, should consider other applicable reports or information that have been submitted to the Commission and alert the Commission and parties about any concerns as part of its review, should post on the Commission website all party comments received according to the schedule in Ordering Paragraph 8, should consider and discuss, as appropriate, and append party comments to its own review, and should post each utility's annual RSAR and the relevant ED review on the Commission website within 30 days of filing the ED review.

15. We approve the Voluntary Agreement for a Risk Based Decision-Making Framework between the Safety and Enforcement Division and the Small and Multi-Jurisdictional Utilities as contained in Attachment 3 of this decision with the understanding that Bear Valley Electric Service, Liberty Utilities, PacifiCorp doing business as Pacific Power, and Southwest Gas Corporation will begin using this framework to structure the risk-based decision-making components of their General Rate Case (GRC) applications starting with their respective GRC applications filed following issuance of this decision.

16. Application A.15-05-002 is closed.

This order is effective today.

Dated _____, at San Francisco, California.

Attachment 1:

Approved Safety Performance Metrics (Version 1.0)

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
1. Transmission & Distribution (T&D) Overhead Wires Down	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of wire down events	Number of instances where an electric transmission or primary distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object; excludes down secondary distribution wires and "Major Event Days" (typically due to severe storm events) as defined by the IEEE.	Lagging	PG&E, SCE, SDG&E
2. Transmission & Distribution (T&D) Overhead Wires Down - Major Event Days	Wildfire Transmission Overhead Conductor Distribution Overhead Conductor Primary	Electric	Number of wire down events	Number of instances where an electric transmission or primary distribution conductor is broken and falls from its intended position to rest on the ground or a foreign object; includes down secondary distribution wires. Includes "Major Event Days" (typically due to severe storm events) as defined by the IEEE.	Lagging	PG&E, SCE, SDG&E
3. Electric Emergency Response	Wildfire Overhead Conductor Public Safety Worker Safety	Electric	Percentage of time response is within 60 mins	The percent of time utility personnel respond (are on-site) within one hour after receiving a 911 (electric related) call, with on-site defined as arriving at the premises to which the 911 call relates.	Lagging	PG&E, SCE, SDG&E
4. Fire Ignitions	Overhead Conductor Wildfire Public Safety Worker Safety Catastrophic Event Preparedness	Electric	Number of ignitions	The number of powerline-involved fire incidents annually reportable to the CPUC per Decision 14-02-015. A reportable fire incident includes all of the following: 1) Ignition is associated with a utility's powerlines and 2) something other than the utility's facilities burned and 3) the resulting fire traveled more than one meter from the ignition point.	Lagging	PG&E, SCE, SDG&E

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
5. Gas Dig-in	Transmission Pipeline Failure - Rupture with Ignition Distribution Pipeline Rupture with Ignition (non-Cross Bore) Catastrophic Damage involving Gas Infrastructure (Dig-Ins)	Gas	The number of 3rd party gas dig-ins per 1,000 USA tags/tickets	The number of 3rd party gas dig-ins per 1,000 Underground Service Alert (USA) tags/tickets for gas. Excludes fiber and Electric tickets. A gas dig-in refers to any damage (impact or exposure) that results in a repair or replacement of underground gas facility as a result of an excavation. A third party dig-in is damage caused by someone other than the utility or a utility contractor.	Lagging	PG&E, SDG&E, SoCalGas
6. Gas In-Line Inspection	Catastrophic Damage Involving High-Pressure Pipeline Failure	Gas	Reported two ways: 1. Miles Inspected 2. Total number of inspections scheduled/ Total number of targeted inspections	Total miles of transmission pipe inspected by inline inspection	Leading	PG&E, SDG&E, SoCalGas
7. Gas in-Line Upgrade	Catastrophic Damage Involving High-Pressure Pipeline Failure	Gas	Miles	Miles upgraded	Leading	PG&E

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
8. Shut In The Gas Average Time - Mains	Distribution Pipeline Rupture with Ignition (non-Cross Bore)	Gas	Average (median) time in minutes required to stop the flow of gas	The average time (in minutes) required for the utility to stop the flow of gas during incidents involving mains when responding to any unplanned/uncontrolled release of gas. The timing for the response starts when the utility first receives the report and ends when the utility's qualified representative determines, per the utility's emergency standards, that the reported leak is not hazardous or the utility's representative completes actions to mitigate a hazardous leak and render it as being non-hazardous (i.e., by shutting-off gas supply, eliminating subsurface leak migration, repair, etc.) per the utility's standards.	Lagging	PG&E, SDG&E, SoCalGas
9. Shut In The Gas Average Time - Services	Distribution Pipeline Rupture with Ignition (non-Cross Bore)	Gas	Average (median) response time in minutes	The average time (minutes) that a Gas Service Representative (GSR) or qualified first responder (Gas Crew, Leak Surveyor, etc.) takes to respond and stop gas flow during incidents involving services. The timing for the response starts when the utility first receives the report and ends when the utility's qualified representative determines, per the utility's emergency standards, that the reported leak is not hazardous or the utility's representative completes actions to mitigate a hazardous leak and render it as being non-hazardous (i.e., by shutting-off gas supply, eliminating subsurface leak migration, repair, etc.) per the utility's standards.	Lagging	PG&E, SDG&E, SoCalGas

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
10. Cross Bore Intrusions	Catastrophic Damage Involving Medium Pressure Pipeline Failure	Gas	Number of cross bore intrusions per 1,000 inspections	Cross bore intrusions found per 1,000 inspections	Leading	PG&E, SDG&E, SoCalGas
11. Gas Emergency Response	Distribution Pipeline Rupture with Ignition	Gas	Average response time in minutes, additionally: response times in five-minute intervals, segregated first by business hours (0800 – 1700 hours), after business hours and weekends/legal state holidays. The intervals start with 0-5 minutes, all the way to 40-45 minutes, an interval of 45-60 minutes and then all response times greater than 60 minutes.	The average time that a Gas Service Representative or a qualified first responder takes to respond after receiving a call which results in an emergency order.	Lagging	PG&E, SDG&E, SoCalGas
12. Natural Gas Storage Baseline Inspections Performed	Gas storage	Gas	Number of Inspections	Tracks the progress of completing baseline and reassessment inspections that were expected to be completed within a given year	Lagging	PG&E, SDG&E, SoCalGas

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
13. Percentage of the Gas System that can be Internally Inspected	Catastrophic Damage Involving High-Pressure Pipeline Failure	Gas	Percentage	The ratio of transmission pipe miles that can be inspected internally to all transmission pipe miles.	Leading	SDG&E, SoCalGas
14. Employee Serious Injuries and Fatalities	Employee Safety	Injuries	Number of Serious Injuries and Fatalities	A work-related injury or illness that results in a fatality, inpatient hospitalization for more than 24 hours (other than for observation purposes), a loss of any member of the body, or any serious degree of permanent disfigurement.	Lagging	PG&E, SCE, SDG&E, SoCalGas
15. Employee Days Away, Restricted and Transfer (DART) Rate	Employee Safety	Injuries	DART Cases times 200,000 divided by employee hours worked	DART Rate is calculated based on number of OSHA-recordable injuries resulting in Days Away from work and/or Days on Restricted Duty or Job Transfer, and hours worked.	Lagging	PG&E, SCE, SDG&E, SoCalGas
16. Employee Lost Workday Case Rate	Employee Safety	Injuries	Number of LWD Cases / productive hours worked x 200,000.	This measures the number of LWD cases incurred for employees and staff augmentation (excluding contractors) per 200,000 hours worked, or for approximately every 100 employees. A LWD Case is a current year OSHA Recordable incident that has resulted in at least one lost workday. An OSHA Recordable incident is an occupational (job related) injury or illness that requires medical treatment beyond first aid, or results in work restrictions, death or loss of consciousness. The formula is: LWD Case Rate = Number of LWD Cases / productive hours worked x 200,000.	Lagging	PG&E
17. Employee OSHA Recordables Rate	Employee Safety	Injuries	Rate; OSHA recordables times 200,000 divided by employee hours worked.	An OSHA recordable incident is an occupational (job-related) injury or illness that requires medical treatment beyond first aid, or results in work restrictions, death or loss of consciousness. OSHA recordable rate is calculated as OSHA recordable times 200,000 divided by employee hours worked.	Lagging	PG&E

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
18. Contractor OSHA Recordables Rate	Contractor Safety	Injuries	OSHA recordable times 200,000 divided by contractor hours worked associated with work for the reporting utility.	An OSHA recordable incident is an occupational (job-related) injury or illness that requires medical treatment beyond first aid, or results in work restrictions, death or loss of consciousness. OSHA recordable rate is calculated as OSHA recordable times 200,000 divided by contractor hours worked.	Lagging	PG&E, SCE, SDG&E, SoCalGas
19. Contractor Days Away, Restricted Transfer (DART)	Contractor Safety	Injuries	OSHA recordable times 200,000 divided by contractor hours worked associated with work for the reporting utility.	DART Rate: Days Away, Restricted and Transfer (DART) Cases include OSHA-recordable Lost Work Day Cases and injuries that involve job transfer or restricted work activity. DART Rate is calculated as DART Cases times 200,000 divided by contractor hours worked.	Lagging	PG&E
20. Contractor Serious Injuries and Fatalities	Contractor Safety	Injuries	Number of work-related injuries or illnesses associated with work for the reporting utility.	A work-related injury or illness that results in a fatality, inpatient hospitalization for more than 24 hours (other than for observation purposes), a loss of any member of the body, or any serious degree of permanent disfigurement.	Lagging	PG&E, SCE, SDG&E, SoCalGas
21. Contractor Lost Work Day Case Rate	Contractor Safety	Injuries	Number of Lost Workday (LWD) cases incurred for contractors per 200,000 hours worked associated with work for the reporting utility.	This measures the number of Lost Workday (LWD) cases incurred for contractors per 200,000 hours worked (for approximately every 100 contractors). A Lost Workday Case is a current year OSHA Recordable incident that has resulted in at least one lost workday. An OSHA Recordable incident is an occupational (job related) injury or illness that requires medical treatment beyond first aid, or results in work restrictions, death or loss of consciousness. The formula is: LWD Case Rate = Number of LWD Cases / productive hours worked x 200,000.	Lagging	PG&E, SCE, SDG&E, SoCalGas
22. Public Serious Injuries and Fatalities	Public Safety	Injuries	Number of Serious Injuries and Fatalities	A fatality or personal injury requiring in-patient hospitalization involving utility facilities or equipment. Equipment includes utility vehicles used during the course of business.	Lagging	PG&E, SCE, SDG&E, SoCalGas

Metric Name	Risks	Category	Units	Metric Description	Leading or lagging indicator?	IOUs Required to Report
23. Helicopter/ Flight Accident or Incident	Aviation Safety Helicopter Operations Public Safety Worker Safety Employee Safety	Vehicle	Number of accidents or incidents (as defined in 49 CFR Section 830.5 "Immediate Notification") per 100,000 flight hours.	Defined by Federal Aviation Regulations (FARs), reportable to FAA per 49-CFR-830.	Lagging	PG&E, SCE, SDG&E, SoCalGas
24. Percentage of Serious Injury and Fatality Corrective Actions Completed on Time	Employee Safety Contractor Safety Public Safety	Injuries	Total number of SIF corrective actions completed on time (as measured by the due date accepted by Line of Business Corrective Action Review Boards (CARB)) divided by the total number of SIF corrective actions past due or completed.	The percentage of SIF corrective actions completed on time. A SIF corrective action is one that is tied to a SIF actual or potential injury or near hit.	Leading	PG&E
25. Hard Brake Rate	Motor Vehicle Safety	Vehicle	Total number of hard braking events per thousand miles driven in a given period	The total number of hard braking events (>=8 mph per second decrease in speed) per thousand miles driven in a given period.	Leading	PG&E
26. Driver's Check Rate	Motor Vehicle Safety	Vehicle	Total number of Driver Check complaint calls received per 1 million miles driven	This measures the total number of Driver Check complaint calls received per 1 million miles driven by vehicles included in the Driver Check program.	Leading	PG&E

Attachment 2

Risk Spending Accountability Report Guidance

for Investor-Owned Utilities;

(and for Small and Multi-Jurisdictional Utilities — Section IX only)

I. Summary

1. The utilities should develop a list of programs that include activities relating to safety, reliability or maintenance authorized or in effect during the record period.
2. The list should be separated into risk mitigation programs identified in the risk assessment and mitigation phase (RAMP) and other programs related to safety, reliability or maintenance presented in the General Rate Case (GRC) application.
3. The utilities should report the authorized and actual spending for each program in the record period and the difference in dollars (actual less authorized) and in percent (actual less authorized, divided by authorized).
4. The utilities should explain the difference between authorized and actual spending for the GRC programs chosen using the selection criteria specific to each utility. A description of the program and references to testimony should be provided as well.
5. The utilities should report on authorized activities and actual safety activities performed, for each program, using, where available "work units" as the unit of reporting.
6. The utilities should group the GRC programs by the general lines of business as presented in the GRC in which the funding request for the record period was authorized. Programs should be divided into expense and capital programs.
7. If a balancing account or memorandum account tracks any portion of a program, the utilities should include a separate section in the report to discuss the cost recovery of the actual expenditures for the program.
8. The utilities should include the total company authorized spending for the record period categorized into expense and capital programs.

II. Introduction

Commission Decision (D.) 14-12-025 revised the General Rate Case (GRC) plan and requires the filing of annual Risk Spending Accountability Reports (RSARs) starting in 2020.

The objective of the reporting framework discussed below is two-fold: (1) it endeavors to improve utility accountability for safety and reliability risk mitigation spending, as well as spending on maintenance activities, and (2) it enhances Commission oversight of the spending on these activities and could prove useful in assessing funding requests in subsequent GRC applications. The framework best achieves this objective by establishing a set of programs that allows the utilities to show spending associated with risk mitigation activities presented in the GRC that are associated with the risk assessment and mitigation phase (RAMP) in the context of the entire GRC funding request for safety, reliability and maintenance activities.

Staff offers the following direction for all electric and gas investor-owned utilities (IOUs) in preparing the annual Risk Spending Accountability Report. A potential outline for the report and an example table layout listing the programs are attached to this guidance to assist in preparation of the report.

III. Scope of Spending Programs

In this guidance, a program is defined as a set of projects, activities, and/or functions with a defined scope that is intended to meet a specific objective or outcome.[89] Programs exist within the context of risk mitigation programs presented in the RAMP report and general utility spending on activities related to safety, reliability or maintenance. Risk mitigation programs are a collection of specific risk mitigation activities and may span across several spending categories. Likewise, spending categories may contain several risk mitigation programs designed to address distinct risks facing the utility. Specifically, programs can be categorized as:

- The risk mitigation programs presented in the most recent GRC application that address the top safety risks identified by the utility in the RAMP report filed in connection with the GRC application;

[89] D.18-12-014, Agreement of Settling Parties, Step 1A-Building a Multi-Attribute Value Function table, No. 28(5) at A-15 – A-16.

- Other risk mitigation programs presented in the GRC application that arise from evaluation of the top safety risks included in the RAMP subsequent to filing the RAMP report;
- Spending programs presented in the GRC application that the utility identifies as addressing a safety or reliability risk;[90] and
- Other spending programs presented in the GRC application that include maintenance activities.

The dual nature of programs requires them to be characterized by both the name of the GRC spending program as well as the risk mitigation program associated with it, where applicable. The GRC spending programs are defined for each utility as follows:

PG&E: Programs are defined at the Maintenance Activity Type (MAT) level or at the Major Work Category (MWC) level for those lines of business where MATs are not used.

SCE: Expensed programs are defined at the GRC "Sub-Activity" level (i.e. the components of the GRC Activity). Capital programs are defined at the Work Breakdown Structure (WBS) level, which groups common WBS elements within a capital program.

SDG&E and SoCalGas: Expensed programs are defined at the workpaper level, which may contain one or more cost centers. Capital programs are defined at the budget code level, which may aggregate workpaper groups that share the same budget code.

Like the GRC spending programs, the risk mitigation programs vary among utilities and may vary between RAMP reports filed by a single utility as the utility assesses its risks and its approach to addressing them. The RAMP reports filed to date include risk mitigation programs such as:

SDG&E and SoCalGas

<u>Wildfires Caused by SDG&E Equipment risk</u>:

[90] *Ibid*, No. 28(1)(b) at A-14.

- Inspection, Repair, Maintenance and Replacement Programs, Vegetation Management, Design and Engineering Approaches, Legal and Regulatory, Rapid Response; and Monitoring and Detection Programs.

Catastrophic Damage Involving Third Party Dig-Ins risk:

- Training, Locate and Mark Activities, Public Awareness, Prevention and Improvements, and Analysis.

PG&E[91]

Measurement and Control Failure risk:

- HPR Replacement, SCADA Visibility – Distribution, and Station OPP Enhancements.

Distribution Overhead Conductor Primary risk:

- Overhead Infrared Inspection, Public Awareness Programs, Additional Public Awareness Outreach, and Overhang Clearing.

SCE

Contact with Energized Equipment risk:

- Pole Remediation and Loading Programs; Vegetation Management; Overhead Detailed Inspections, Apparatus Inspections, and Preventive Maintenance; Intrusive Pole Inspections; Overhead Conductor Program; and Public Outreach.

The illustration below could help describe how the scope of the programs can overlap one another and how the reporting framework attempts to isolate spending for each type of program to ensure spending accountability for safety, reliability and maintenance activities. Note that the "Other Spending" in GRC Spending Program 3 must be related to safety, reliability or maintenance activities. Otherwise, the program must not be included in the report.

[91] Risk mitigation programs where PG&E seeks cost recovery in the Gas Transmission and Storage application are excluded.

Table 1: Possible Relationships between GRC Spending Programs and Risk Mitigation Programs

GRC Spending Program	GRC Spending Program May Contain	Risk Mitigation Program	Risk Mitigation Program May Be Reflected In
Program 1	Risk Mitigation Program A Risk Mitigation Program B Other Spending	**Program A**	GRC Spending Program 1
Program 2	Risk Mitigation Program C	**Program B**	GRC Spending Program 1
Program 3	Other Spending	**Program C**	GRC Spending Program 2 GRC Spending Program 4
Program 4	Risk Mitigation Program C Risk Mitigation Program D	**Program D**	GRC Spending Program 4

The overlap shown in Table 1 complicates effective reporting between programs. Reporting spending for GRC programs obscures the utility's expenditures on risk mitigation programs presented in the RAMP report. Reporting spending solely for risk mitigation programs from the RAMP report ignores spending related to safety, reliability or maintenance for activities not presented in the RAMP report. Combining the programs in one template for reporting purposes allows for accountability of both types of spending.

Therefore, the IOUs should develop a list of programs that include utility activities relating to safety, reliability or maintenance authorized or in effect during the record year. A program is defined as a set of projects, activities, and/or functions with a defined scope that is intended to meet a specific objective or outcome. Programs consist of GRC spending categories and risk mitigation programs. The entire collection of programs should be included in one list as an appendix to the report. An example appendix is included as Appendix A. The IOUs should use the appendix to report the spending for each type of program. While the entire collection of programs will be reported, the IOUs should only provide explanations for the GRC programs selected by the criteria discussed below.

IV. Identification of GRC Spending Programs Affecting Safety, Reliability or Maintenance

The IOUs should include in its report those risk mitigation programs and GRC spending programs discussed above. The list of programs should be evaluated annually to incorporate any changes to the utility's enterprise risk registry for risks having a safety or reliability attribute.

Public Utilities Code Section 591 was added with the passage of Senate Bill 549 and became effective on January 1, 2018. It reads:

> "(a) The commission shall require an electrical or gas corporation to annually notify the commission, as part of an ongoing proceeding or in a report otherwise required to be submitted to the commission, of each time since that notification was last provided that capital or expense revenue authorized by the commission for maintenance, safety, or reliability was redirected by the electrical or gas corporation to other purposes.
>
> (b) The commission shall ensure that the notification provided by each electrical or gas corporation is also made available in a timely fashion to the Office of the Safety Advocate, Public Advocate's Office of the Public Utilities Commission, and parties on the service list of any relevant proceeding."

The IOUs may identify maintenance programs as those activities which relate to the preservation of electric or natural gas utility property or equipment in good condition to prevent failure. For expensed programs, maintenance activities are those that are recorded in the maintenance accounts of the Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts. For capital programs, maintenance activities are those that serve the general definition above. For further guidance, the utilities are directed to General Order (GO) 95 ("maintenance means the work done…for the purpose of extending [the asset's] life") and to GO 128 ("maintenance means the work done on any facility or element for the purpose of preserving its efficiency or physical condition in service").

V. Reporting Program Spending

For each GRC and risk mitigation program, utilities should report the authorized and actual spending for the record year and the difference in dollars (actual less authorized) and in percent (actual less authorized, divided by authorized). In addition, the IOUs must report authorized and actual units of work for the

record year and the difference in number of work units (actual less authorized) and in percent (actual less authorized, divided by authorized), for all programs for which such information exists. Where it is necessary to fill in the details between a Commission decision and the authorized amount provided in the report for a program, the IOUs should include the derivation of the authorized amount. The programs should be reported using the same types of costs as requested and authorized in the GRC, so that authorized and actual spending comparisons are comparable. The GRC programs and risk mitigation programs are subject to evaluation by Commission staff during the review of the RAMP and GRC phases.

The IOUs shall adhere to the template provided in this attachment and shall consult with ED staff and, as needed, the TWG, regarding additional details of the specific manner to report types of and work units authorized versus types of and work units performed. Where information on risk mitigation program work units authorized and performed is not available, the IOUs must work with ED staff and, as needed, the TWG to appropriately identify these programs and must include in the RSAR general explanations for the lack of inclusion of work unit information for such programs.

VI. Selecting Programs for Explanation

Activities or Work Units:

We direct the IOUs to provide narrative explanations of activities for those risk mitigation programs for which work unit data is available and where the deviation between authorized work units and performed work units is equal to or greater than 20 percent. The IOUs shall describe deviations of 20 percent or more both in the quantity of work units performed and in the type of work units performed. The IOUs shall adhere to the template provided in this attachment and shall consult with ED staff and, as needed, the TWG for additional guidance on the format for reporting this information.

Spending:

In addition, the IOUs should provide an explanation for those programs where the spending difference meets a set of criteria. The IOUs should apply the selection criteria only to the GRC spending programs as shown in the example table in Attachment B. PG&E is highly encouraged to explain deviations in spending of 10 percent or greater and to apply the lower absolute dollar

thresholds, in line with its current practice. We present the criteria for each of the utilities below.

SCE

- GRC expensed items: A variance of at least $10 million, or a percentage variance of at least 20% subject to a minimum variance of $5 million.
- Capital programs: A variance of at least $20 million, or a percentage variance of at least 20% subject to a minimum variance of $10 million.

PG&E – Electric Distribution, Gas Distribution and Other (MAT programs)

- GRC expensed items: A variance of at least $10 million, or a percentage variance of at least 20% subject to a minimum variance of $5 million.
- Capital programs: A variance of at least $20 million, or a percentage variance of at least 20% subject to a minimum variance of $10 million.

PG&E – Nuclear Generation and Power Generation (MWC programs)

- GRC expensed items: A variance of at least $10 million, or a percentage variance of at least 20% subject to a minimum variance of $5 million.
- Capital programs: A variance of at least $20 million, or a percentage variance of at least 20% subject to a minimum variance of $10 million.

SDG&E – Electric Distribution, Electric Generation, and Other

- GRC expensed items: A variance of at least $5 million, or a percentage variance of at least 20% subject to a minimum variance of $2.5 million.
- Capital programs: A variance of at least $10 million, or a percentage variance of at least 20% subject to a minimum variance of $5 million.

SDG&E – Gas Distribution and Gas Transmission

- GRC expensed items: A variance of at least $2.5 million, or a percentage variance of at least 20% subject to a minimum variance of $0.5 million.
- Capital programs: A variance of at least $5 million, or a percentage variance of at least 20% subject to a minimum variance of $1 million.

SoCalGas

- GRC expensed items: A variance of at least $5 million, or a percentage variance of at least 20% subject to a minimum variance of $1 million.
- Capital programs: A variance of at least $10 million, or a percentage variance of at least 20% subject to a minimum variance of $2 million.

VII. Requirements for Explanation

For each program selected in accordance with the criteria above, the IOUs should provide a detailed explanation of the causes of the difference including whether any projects were canceled, deferred or expanded that may have led to the difference. Along with the explanation, the report should include:

- A description of each program including how the program relates to safety, reliability and/or maintenance,
- The location in the prior GRC and current GRC testimony where the program is described, where applicable.
- An explanation as to how the risk spending and amount of work performed are meeting the goals for managing and minimizing the risks that were identified in the utility's RAMP and GRC submissions.

VIII. Organization of the Report

The IOUs should group programs by the general lines of business as presented in the GRC such as by the categories below:

PG&E: Gas Distribution, Electric Distribution, Nuclear Generation, Power Generation, and Other (which includes Customer Care, Information Technology, Human Resources, etc.)

SCE: Distribution, Transmission, Power Supply, and Other (which includes Customer Service, Information Technology, Human Resources, Operational Services, etc.)

SDG&E: Gas Distribution, Gas Transmission, Electric Distribution, Electric Generation, and Other (which includes Customer Services, Information Technology, Human Resources and other services)

SoCalGas: Gas Distribution, Gas Transmission, Gas Storage, Gas Procurement, and Other (which includes Customer Services, Information Technology, Human Resources and other services).

Within each category, the programs should be separated into expensed and capital programs. In addition, the report should include a section for programs with any portion of their activities subject to a balancing or memorandum account. Within this section, the direct expenses and capital expenditures should be reported in addition to appropriate components of the revenue requirement. The section should include the account where the spending for each program is recorded, the end-of-year balance, and the disposition of any request for cost recovery. Finally, the report should include the total company authorized spending for the record year categorized into expensed and capital programs. Appendix C shows an example outline of the report.

IX. Service

As noted in D.14-12-025, the RSARs should enhance Commission oversight of utility spending and could be useful for interveners during the discovery process. For the larger utilities, the reports should be served and filed on the most recent combined RAMP/GRC service lists and served and filed on the GRC that authorized the funding for the record period. For the SMJUs, the reports should be served on the prior GRC service list until the next GRC proceeding is opened. Table 3 shows the proceeding in which the reports should be filed. The table assumes the GRC filings of the SMJUs occur before June 30. The report should be filed in the prior GRC if the filing of the next GRC occurs after this date.

Table 2: GRC Proceeding RSAR Filing Requirements

Utility	**Reporting Period**	**Proceeding**
SoCalGas	2019-21	2019 RAMP/GRC TY 2022
SDG&E	2019-21	2019 RAMP/GRC TY 2022
PG&E	2020-22	2020 RAMP/GRC TY 2023
SCE	2021-23	2021 RAMP/GRC TY 2024
Bear Valley	2018-2019 2020-21	2018 GRC 2022 GRC
PacifiCorp	2019 and later	2019 GRC
Liberty	2019 2020-21	2019 GRC 2022 GRC
SW Gas	2021 and later	2021 GRC

APPENDIX A

Example of Risk Spending Accountability Report Program
"Mapping" Expectations – Spending and Work Units

Line of Business (e.g. PG&E Electric Distribution): Expense									
GRC Spending Program	Risk Mitigation (RM) Program	Authorized Costs ($000) (A)	Actual Costs ($000) (B)	Difference ($000) (B - A)	Percent Change (%) (B – A) / A	Authorized Units (C)	Actual Units (D)	Difference (units) (D – C)	Percent Change (%) (D – C) / C
GRC A	RM 1	500	400	-100	-20%	100	100	0	0
GRC A	N/A	500	400	-100	-20%	200	150	-50	-25%
GRC B	RM 1	1,000	1,000	0	0%	200	200	0	0
GRC B	RM 2	500	1,000	500	100%	50	50	0	0
GRC B	N/A	400	90	-310	-78%	N/A	N/A	N/A	N/A
GRC C	N/A	100,000	110,001	10,001	10%	100	100	0	0

In this example table, GRC A Spending Program contains activities within the Risk Mitigation 1 Program from the RAMP as well as activities relating to safety, reliability or maintenance not addressed in the RAMP. These other activities may also include the programs identified for a supplemental risk analysis in the GRC. The table attempts to show what portion of the GRC request results from the RAMP analysis.

GRC Spending Program B includes two risk mitigation programs. Risk Mitigation Program 1 activities are split between two different GRC spending programs.

GRC Spending Program C does not include a Risk Mitigation Program from the RAMP but includes other safety, reliability or maintenance spending.

APPENDIX B

Risk Spending Accountability Report Table Example-

Spending and Work Units

PG&E Electric Distribution – Expense									
GRC Spending Program	Authorized Costs ($000) (A)	Actual Costs ($000) (B)	Difference ($000) (B – A)	Percent Change (%) (B – A) / A	Authorized Units (C)	Actual Units (D)	Difference (units) (D – C)	Percent Change (%) (D – C) / C	Selected (Y/N)
GRC A	1,000	795	-205	-21%	100	100	0	0	Y (20%)
GRC B	1,900	2090	190	10%	200	150	-50	-25%	Y (20%)
GRC C	100,000	110,000	10,000	10%	200	200	0	0	Y ($10M)
GRC D	1,000	0	-1,000	-100%	50	50	0	0	Y (20% and $1M)

GRC Spending Program A is selected for an explanation of the variance because the magnitude of the percent difference exceeds the 20% threshold value. GRC Spending Program D is selected because magnitude of the absolute difference and the percent difference exceed the threshold values.

The utilities should explain any deviations from the risk mitigation programs that are included within the GRC spending programs that contribute to the variance as well as other factors.

APPENDIX C

Risk Spending Accountability Report Outline

1. Introduction
2. Line of Business (e.g. Gas Distribution)
    a. Expensed programs
        i. List of all GRC spending programs, actual, authorized and spending difference (Table from Attachment B)
        ii. First GRC program selected for explanation
            1. Program description, location in GRC testimony, explanation of difference, subject to balancing/memo account, etc.
        iii. Next GRC program selected for explanation
        iv. Etc.
    b. Capital programs
3. Line of Business (e.g. Electric Distribution, etc.)
4. Programs recorded in balancing and memorandum accounts
5. Risk Mitigation Mapping Appendix
6. Etc.

Attachment 3

Voluntary Agreement on a Risk-Based Decision-Making Framework Between the Safety and the Small and Multi-Jurisdictional Utilities
September, 2018

The small utilities will provide a discrete chapter of testimony in their GRCs that describes the risk management process used to develop and implement a risk-based investment decision-making framework, adapting as relevant the Guidance for RAMPs that was determined in the S-MAP Interim Decision. The Interim Decision adopted 10 Major Components for RAMP filings. While this Agreement does not contemplate that small utilities will be making separate RAMP filings, the small utilities will adhere to the 10 RAMP Elements in their rate case testimony, with minor refinements noted below in italics.

General Principles:

The goal of Risk-informed Ratemaking is to make California safer by identifying the risk mitigations that can optimize safety. Overall, the utility should show how it will use its expertise and budget to manage, mitigate and minimize safety-related risks. To do so, each small utility should, in its GRC testimony:

1. Identify its top risks – Top risks will include those risks ranking median or higher using the utility's risk scoring methodology. Additionally, the utility may provide supplemental analysis of any risk it deems significant, even if it does not exceed the scoring threshold. The utility should adopt the risk scoring mechanism that is best suited to their general resources and compliant with the other general principles outlined below. The risk-scoring methodologies adopted by the large utilities may prove instructive.
2. Describe the controls or mitigations currently in place.
3. Present its plan for improving the mitigation of each risk.
4. Present two alternative mitigation plans that it considered – The alternatives analysis may include a proposal to continue the current level of controls or mitigations as one of the possible alternatives.
5. Present an estimate of "risk mitigated to cost ratio" or related "risk reduction per dollar spent."
6. Identify lessons learned to apply in future filings.

7. Move toward probabilistic calculations as much as possible –Data for modeling that is specific to the smaller utilities may be limited; therefore the utilities may continue to rely on Subject Matter Expertise so long as explanations are provided which include factors and inputs considered.
8. For those business areas with less data, improve the collection of data and provide a timeframe for improvement.
9. Describe the company's safety culture, executive engagement, and compensation policies.
10. Respond to immediate or short-term crises outside of the RAMP and GRC process.

Other Components of the Risk-Informed Approach

Cycla Ten-Step – The Interim Decision also adopted use of the Cycla Ten-Step Approach "as a common yardstick for evaluating the maturity, robustness, and thoroughness of utility Risk Assessment and Mitigation models." The small utilities may use alternate expressions of the Cycla Ten-Step approach (BVES and PacifiCorp each describe a six-step model that incorporates the 10 steps). In the future, alternative methods to the Cycla Ten-Step approach might be preferable; however, in all cases, a thorough explanation of any method applied must be provided to allow transition from the Cycla Ten-Step method.

Limiting Top Risks and Scoring Methodology –
The smaller utilities propose continued flexibility in identification of their top safety risks. It is expected that the initial models will rely upon a 7x7 matrix of impact versus frequency. However, as their sophistication grows, companies might exhibit flexibility in the scalability of the matrix. As a minimum, they should adhere to either the 4 or higher for impact dimension or frequency in the 7x7 matrix.[92] If an alternative model is proposed it should provide ranking of those risks ranking higher than the median for either impact or frequency.

Accountability Reporting – The small utilities are not necessarily subject to the same reporting requirements as the large utilities, but recognize the Commission's strong interest in accountability. At this time this Voluntary Agreement does not include specific recommendations for RSA or RMA reporting.

[92] For a more detailed discussion of what these reports require, *see* D.14-12-025 at 43-44.

Template for GRC Risk Testimony — The following template is drawn from the formats employed by BVES and PacifiCorp:

1) Witness Qualifications and Purpose of Testimony
2) Description of Risk-Based Methodology
3) Comparison with Cycla Ten-Step Approach
4) Identification and Scoring of Top Safety Risks
    a) Utilizing the PacifiCorp Risk Event Table
5) Discussion of each major risk
6) Existing Controls in place to mitigate risks
7) Proposed Mitigations
8) Risk-Spend Efficiency calculation per mitigation
9) Alternative Mitigations and RSE
10) Request for Funding of Mitigations
11) Proposed Accountability Reporting and Monitoring of Risk Reduction
12) Attachment or workpaper exhibits:
    a) Impact and Scoring
    b) Risk Templates for Top 10 Risks

Attachment 4

Technical Working Group Safety Metrics Guiding Principles (2017)
(provided for reference only)

1. Both leading and lagging metrics provide value, and the metrics list should include both.
2. Collecting metrics that are consistent across the utilities will be useful for benchmarking purposes; however, strictly limiting the metrics list to metrics that are collected by all the utilities may not be feasible given that risks vary across different utilities.
3. The subset of metrics that are consistent across the utilities should be made comparable by using consistent descriptions and definitions of the metrics. Differences should be eliminated to the extent feasible to allow uniformity. This subset of metrics should be normalized by uniform divisors (e.g. per customer served, per unit of assets, per square mile of service territory, etc.) to facilitate comparison across utilities of different sizes.
4. The metrics list should not be limited to the top risks, since those risks will change over time. In addition, some metrics for lower risks may actually provide good data for higher risks (e.g. gas ruptures vs. gas leaks).
5. Collecting multiple metrics for each risk may be valuable when appropriate, depending on the risk. Collecting multiple metrics could also help validate each metric, if certain metrics potentially create perverse incentives, such as OSHA recordables.
6. To avoid bias we should focus on objective data to the extent possible. Definitions should be clear and used consistently among parties and used consistently over time.
7. Descriptions of metrics should be complete and understandable by all parties. Technical jargon and acronyms should be explained or defined, and metric definitions established by a standards body or regulatory entity should be referenced. Metrics should be expressed in appropriate units (e.g. leaks per mile per quarter, serious injuries incurred by member of the public per quarter).

8. The metrics included on the list should provide actionable information that can be used to inform and focus programs and expenditures.

9. **Contested: Metrics that are tied to incentives, including financial incentives, should be adopted only with appropriate bias controls. Utilities reporting metric results should include whether an incentive at the utility is measured by the same metric.*

10. Metrics should be capable of being used to assess trends over time; therefore, the metrics need to be verifiably collected and measured consistently over time.

11. The metrics may need to be revised over time as needed, using the appropriate process established by the Commission.