Rulemaking (R.) 20-07-013: Phase 3 Workshop #1: July 12, 2023

Evaluation of Post-Test Years

Uncertainty: Transparency Pilot

California Public Utilities Commission

Metallic Ballons

PG&E: **1-800-743-5000**

SCE: **1-800-611-1911**

SDG&E: **1-800-411-7343**

Workshop #1 Agenda

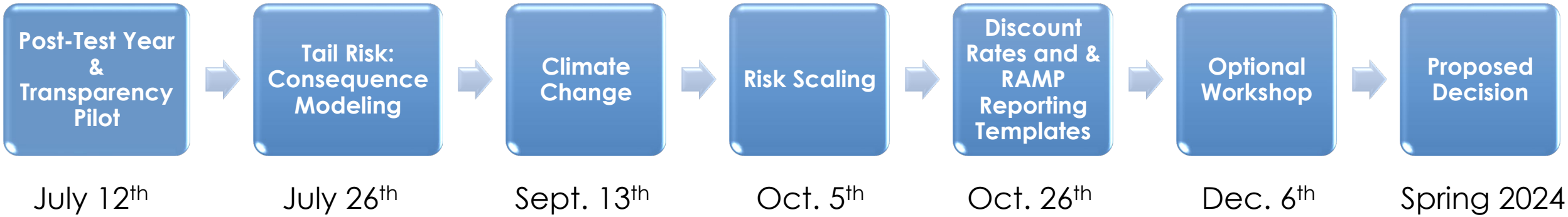
Introductions	10:00 – 10:10 am
Opening Remarks: Commissioner John Reynolds	10:10 – 10:15 am
Review Phase 3 Timeline and Purpose and Expected Outcomes of Workshop 1	10:15 – 10:30 am
Post-Test Years Presentation: SPD	10:30 – 11:00 am
Break	11:00 – 11:05 am
Post-Test Years Discussion	11:05 am – 12:00 pm
Lunch	12:00 – 1:00 pm

Workshop #1 Agenda (Cont.)

Transparency Pilot: PG&E Presentation	1:00 – 1:30 pm
Transparency Pilot: SCE Presentation	1:30 – 2:00 pm
Transparency Pilot: SPD Presentation	2:00 – 2:15 pm
Break	2:15 – 2:30 pm
Transparency Pilot: Discussion	2:30 – 3:30 pm
CPUC Close and Next Steps	3:30 – 4:00 pm

Review of Phase 3 Timeline

Phase 3 Timeline



PURPOSE & EXPECTED OUTCOMES OF THE WORKSHOP

Purpose & Outcomes for Workshop #1

- Post-Test Year
  - Discuss merits of presenting Cost-Benefit Ratios for each GRC post-test year
  - RDF does not currently require utilities to provide post-test year calculations
  - Review decision-makers ability to determine the true risk reduction benefits
- Transparency Pilot
  - Discuss structure of pilot proposal from PG&E (D.21-11-009)
  - Review SCE's test drive of the pilot (2022 RAMP application)
  - Consider additional refinements to PG&E's pilot proposal
- Provide feedback on post-test year cost-efficiency calculations in the RAMP and GRC applications, as well as on the Transparency Pilot.

Staff Proposal for Post-Test Years Cost Efficiency Metrics

Presenter: Safety Policy Division

Summary of Issues

- IOUs are inconsistent in how they present RSE calculations or Cost-Benefit Ratios (CBRs) for controls and mitigations beyond the test year in General Rate Case (GRC) applications.
- The Risk-based Decision-making Framework (RDF) adopted in D.18-12-014 and modified in D.22-12-027 does not explicitly require IOUs to provide post-test year CBRs in the RAMP and GRC.
- Should the Commission consider revising or refining the RDF methodology to provide more prescriptive guidance regarding post-test year that could help decision-makers determine whether a mitigation program has diminishing safety reduction benefits from one post-test year to the next?

Most Recent Post-Test Year Analysis by IOUs

Investor-Owned Utilities (IOUs)	Inconsistency in RAMP and GRC
PG&E	RSEs for each of the post-test years – PG&E provided individual year risk reduction and costs.
Sempra Companies (SDG&E and SoCalGas)	Single RSE for the sum of the three post-test years - Sempra provided aggregate RSEs for post-test years.
SCE	SCE provided RSE information by tranche for each GRC post-test year and provided individual year risk reduction and costs.

Elements of an Informative Post-Test Year Evaluation

1. Reason for Requiring Post-Test Year Cost-Benefit Ratios

- CBR calculations for each year will allow decision-makers to determine if the continuing investment will produce cost-effective risk mitigations over the rate case period.

2. Requirements

- Need appropriate number of tranches for post-test year CBRs to be effective.
- Require IOUs to submit CBRs for all controls and mitigation programs.

Staff Recommendations

1. Modifications to the RDF would require IOUs to provide detailed analysis of their proposed mitigations in the RAMP and GRC filings for each of the GRC post-test years.
2. IOUs should submit CBRs in each of the GRC post-test years, by tranche, for all controls and mitigations.
3. IOUs should use appropriately granular tranches to prioritize the highest risk elements from their entire assets.

Proposed Modifications to RDF

No.	Element Name	Element Description and Requirements
26.	GRC Post-Test Year Reporting	All Controls and Mitigation programs must include Cost-Benefit Ratios in each of the GRC post-test years and by Tranche.

Note: The underlined text represents proposed additional language made to the RDF.

Break

11:00 – 11:05 am

Discussion

11:05 am – 12:00 pm

Lunch

12:00 – 1:00 pm

Uncertainty: Transparency Pilot

Presenters: PG&E, SCE, and SPD

Uncertainty: Transparency Pilot PG&E Presentation

Revisit of Decision D.21-11-009 for the Risk-Based Decision-Making Framework Rulemaking R.20-07-013

Transparency Proposal Overall Approach

Data Tables for Excel Data & Pivot Table Analysis

Central Questions

- Where should we focus modeling efforts?
- What is the Quality of the Modeling Assumptions/Input Parameters? Does it matter?
- How good is the quality of the Models?
- How good is the quality of the Risk Scores?

Elements of the Transparency Proposal

The Transparency Proposal addresses transparency and uncertainty using two Elements

- **Standard Workpaper Templates**
  - Three data tables per Risk:
    - Risk Results
    - Risk Sensitivity Analysis
    - Risk Model Listing
- **Estimate Quality Criteria**
  - Set of criteria to objectively assess the Estimate Quality associated with the information presented in the data tables.

Planning Question 2.1: Are parties familiar with the information contained in and the purpose of the:

1. Risk Results Table (See pg. 3-5 of Appendix C)
2. Risk Sensitivity Analysis Table (See pg. 6-8 of Appendix C)
3. Risk Model Listing Table (See pg. 8-9 of Appendix C)

Standard Workpaper Templates

Risk Results Table

Column	Description
Risk	Name of Risk
Tranche	Name of Tranche
Year	Year for which the Value pertains to
Mitigation	One of: • Name of Mitigation • "Baseline": The Values represent baseline estimates • "All": Values are for Post Mitigation estimates assuming all the proposed mitigations are in place.
Attribute	One of: • Name of MAVF Attribute: e.g., for PG&E it can be "Safety", "Electric Reliability", etc. • "Overall": Values represent the overall MARS score, or are not related to Attributes (e.g., likelihood estimates are not related to Attributes)
Value	Numerical value
Result Type	See table below for valid Result Types
Estimate Quality	"High", "Medium", "Low". The qualitative degree of certainty/confidence associated with the output. See discussion in the Estimate Quality section below.
Confidence Interval	Quantitative confidence interval of estimate/calculation. This field is only populated with numerical values if such values are applicable and can be readily determined based on available data and established statistical principles, otherwise "N/A".

Planning Question 2.2: Does the Risk Results Table provide a useful means to summarize and explore Risk scores across various categories (e.g., by Tranche/Attribute)? Are there other analyses on Risk scores that the Risk Results Table could support?

Standard Workpaper Templates

Risk Results Table

The Risk Results Table allows for various forms of aggregation

Risk	Wildfire				
Result Type	Risk				
Attribute	(All)				
Sum of Value	**Year**				
Tranche		**2025**	**2026**	**2027**	**2028**
High Consequence		29.27	26.01	25.27	24.87
Other HFRA		2.89	2.76	2.71	2.70
Severe		15.45	14.91	14.55	13.26
Grand Total		**47.61**	**43.68**	**42.52**	**40.84**

Planning Question 2.2: Does the Risk Results Table provide a useful means to summarize and explore Risk scores across various categories (e.g., by Tranche/Attribute)? Are there other analyses on Risk scores that the Risk Results Table could support?

Standard Workpaper Templates

Risk Results Table

How good is the quality of the Risk Scores?

Risk	Wildfire
Year	2025
Result Type	Risk After
Attribute	Overall

Count of Value	Calc Quality/Trar									
	High			Medium			Low			#N/A
Mitigation	High Consequence	Other HFRA	Severe	High Consequence	Other HFRA	Severe	High Consequence	Other HFRA	Severe	
Aerial Suppression							1	1	1	
Branch Line (Fuses)				1	1	1				
Distr Aerial				1	1	1				
Distr Ground				1	1	1				
Distr Infrared				1	1	1				
DOPD				1	1	1				
DRI				1	1	1				
EFD				1	1	1				
Expanded Line Clearing				1	1	1				
Expanded Pole Brushing				1	1	1				
FR Poles				1	1	1				
Hazard Tree				1	1	1				
Hi-Z							1	1	1	
LSI				1	1	1				
RAR - PSPS risk mitigated										3
RAR - Wildfire risk mitigated				1	1	1				
REFCL (Total)	1	1	1							
Trans Aerial				1	1	1				
Trans Ground				1	1	1				
Trans Infrared				1						
Tree Attachment Remediation				1	1	1				
UG - PSPS risk mitigated										1
UG - Wildfire risk mitigated			1							
Vibration Damper - PSPS risk mitigated										3
Vibration Damper - Wildfire risk mitigated	1	1	1							
WCCP - PSPS risk mitigated										3
WCCP - Wildfire risk mitigated	1	1	1							
Grand Total	3	3	4	17	16	16	2	2	2	10

Planning Question 2.2: Does the Risk Results Table provide a useful means to summarize and explore Risk scores across various categories (e.g., by Tranche/Attribute)? Are there other analyses on Risk scores that the Risk Results Table could support?

Standard Workpaper Templates

Risk Sensitivity Table

Column	Description
Risk	Name of Risk
Tranche	Name of Tranche
Outcome	Outcome or "Overall"
Attribute or Driver/Sub-Driver	One of: • Name of MAVF Attribute: For e.g., for PG&E it can be "Safety", "Reliability – Electric", etc. "Overall": Values represent the overall MARS score Driver/Sub-Driver: Name of Driver/Sub-Driver
Year	Year
Mitigation	One of: • Name of Mitigation • "Baseline": The Values represent baseline estimates
Distribution	E.g.: "Poisson", "Log-normal", "N/A"
Parameter	The type of parameter and what it applies to: • Baseline LoRE mean • Baseline CoRE mean • Baseline CoRE stdev • Mitigation LoRE Effectiveness • Mitigation CoRE Effectiveness • Etc.
Value	Assumed value of the Parameter
Negative Sensitivity	Numerical value representing the change in Risk score when the Parameter is decreased by an incremental amount
Positive Sensitivity	Numerical value representing the change in Risk score when the Parameter is decreased by an incremental amount
Estimate Quality	"High", "Medium", "Low". The degree of confidence associated with the estimate/calculation. See discussion in the Estimate Quality section below.
Justification	Tag that contains the criteria that lead to the Estimate Quality determination. E.g., "Quantitative-Limited Internal Data". See Estimate Quality section below
Reference	Text field providing reference to further documentation, if necessary.
Comments	Column for SME input to allow information not otherwise captured, to be captured and shared, if available. This could include references to narratives in workpapers. For example, this may include SME concerns about the best way to use the data, or its limits, or opportunities to gather more or improve the data or its use.
Confidence Levels	Quantitative levels of output expressed at 10^{th} and 90^{th} percentile confidence levels of the parameter. These fields are only populated with numerical values if such values are applicable and can be readily determined based on available data and established statistical principles, otherwise "N/A".

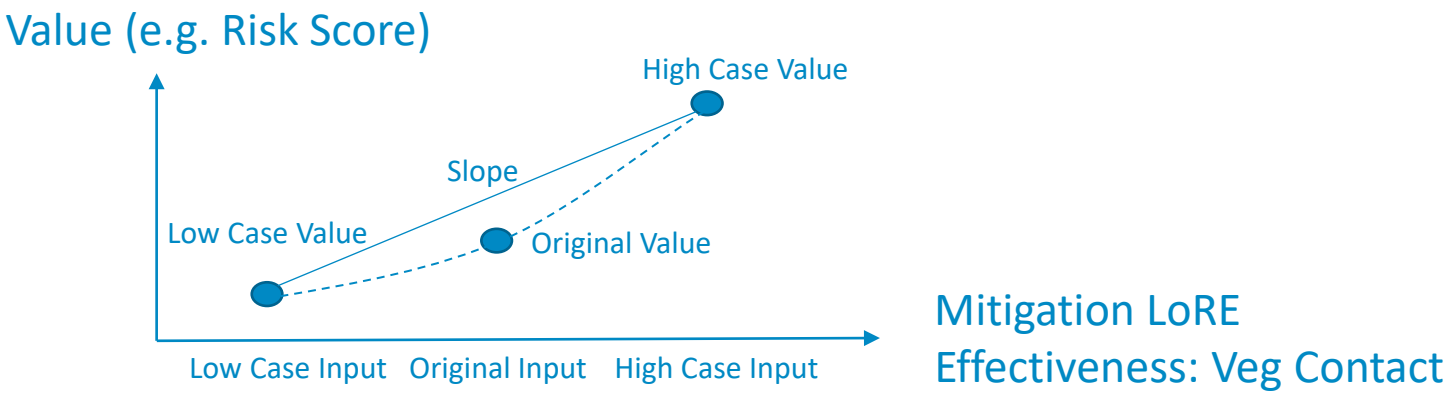
Standard Workpaper Templates

Risk Sensitivity Table

What is the Quality of the Modeling Assumptions/Input Parameters? Does it matter?

Sensitivity is measured by the Slope =
(High Case Score – Low Case Score) / (High Case Value – Low Case Value)

A higher Slope is an indication that the results are more sensitive to changes to the Input Parameter



- Transparency Proposal can be modified to calculate the Slope/Sensitivity; it only provides Positive and Negative Sensitivity (i.e., High and Low Value)

Standard Workpaper Templates

Risk Sensitivity Table

Risk	Tranche	Attribute or Driver/Sub-driver	Mitigation	Parameter	Estimate Quality	Sensitivity
Wildfire	Tier 1 - High Risk	Incident Mgmt and Learning drivers	Incident Mgmt and Learning	Mitigation LoRE Effectiveness	N/A	90126.97745
Wildfire	Tier 1 - High Risk	Pre-Qualification and onboarding drivers	Pre-Qualification and onboarding	Mitigation LoRE Effectiveness	N/A	68848.31211
Wildfire	At Risk Workers	Culver Public Outreach drivers	Culver Public Outreach	Mitigation LoRE Effectiveness	N/A	30704.49659
Wildfire	Tier 1 - High Risk	Oversight, Perf mgmt and Culture Dev drivers	Oversight, Perf mgmt and Culture Dev	Mitigation LoRE Effectiveness	N/A	21215.79381
Wildfire	Tier 1	Incident Mgmt and Learning drivers	Incident Mgmt and Learning	Mitigation LoRE Effectiveness	N/A	19029.38823
Wildfire	Distribution System Control	SCADA Cybersecurity drivers	SCADA Cybersecurity	Mitigation LoRE Effectiveness	N/A	17608.11145
Wildfire	Bulk Power System control	Data Protection drivers	Data Protection	Mitigation LoRE Effectiveness	N/A	15476.23226
Wildfire	Bulk Power System control	SCADA Cybersecurity drivers	SCADA Cybersecurity	Mitigation LoRE Effectiveness	N/A	10974.53133
Wildfire	High Consequence	Balloon contact- Distribution	EFD	Migitation LoRE Effectiveness	N/A	9996.391804
Wildfire	Bulk Power System control	Perimeter Defense drivers	Perimeter Defense	Mitigation LoRE Effectiveness	N/A	7848.304895
Wildfire	Field-Others	Safety Culture Transformation drivers	Safety Culture Transformation	Mitigation LoRE Effectiveness	N/A	6754.953615
Wildfire	Distribution System Control	Interior Defense drivers	Interior Defense	Mitigation LoRE Effectiveness	N/A	6611.477031
Wildfire	High Consequence	Conductor damage or failure â€" Distribution	EFD	Migitation LoRE Effectiveness	N/A	6311.921334
Wildfire	High Consequence	Veg. contact- Distribution	EFD	Migitation LoRE Effectiveness	N/A	5712.919787

Planning Question 2.3: Does the Risk Sensitivity Table provide a useful means to explain the role and importance of specified parameters and assumptions to Risk scores, etc.? The Risk Sensitivity Table quantifies how much a Risk result (e.g., risk score) would change if a specified parameter changes by a predetermined amount. Are there other measures of sensitivity that would be useful in your analysis?

Standard Workpaper Templates

Risk Model Listing Table

Column	Description
Risk	Name of Risk
Tranche	Name of Tranche
Outcome	Outcome, or “Overall”
Attribute or Driver/Subdriver	One of: • Name of MAVF Attribute: e.g., for PG&E it can be “Safety”, “Reliability – Electric”, “Overall”: Values represent the overall MARS score, or are not related to Attributes (e.g., likelihood estimates are not related to Attributes) • Name of Driver/sub-driver
Year	Year
Distribution	“Log-normal”, “normal”, etc.
Description	E.g., “Distribution of Safety Consequences”
Estimate Quality	“High”, “Medium”, “Low”. The degree of confidence associated with the data inputs. See discussion in the Estimate Quality section below.
Justification	Tag that contains the criteria that lead to the Estimate Quality determination. E.g., “Industry Consensus Model”
Reference	Text field providing reference to further documentation, if necessary.

Standard Workpaper Templates

Risk Model Listing Table

How good is the quality of the Models?

Risk	Tranche	Outcome	Attribute/Driver	Year	Distribution	Description	Estimate Quality	Justification	Reference
Contact with Energized Equipment - Intact	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Contact with Energized RAMP workpaper
Contact with Energized Equipment - Intact	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Contact with Energized RAMP workpaper
Contact with Energized Equipment - Wire Down	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Based on Machine Learning Algorithm	See Contact with Energized RAMP workpaper
Contact with Energized Equipment - Wire Down	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Based on Distribution Overhead Consequence Model	See Contact with Energized RAMP workpaper
Contractor Safety	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Contractor Safety RAMP workpaper
Contractor Safety	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Contractor Safety RAMP workpaper
Cyber	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Used Verizon Data Breech Report and SANS OT/ICS Survey Data	See Cyber RAMP Workaper
Cyber	All	All	Reliability	All	NA	Not Applicable - no distribution used	High	Combination of Industry and internal data	See Cyber RAMP Workaper
Cyber	All	All	Serious Injury	All	NA	Not Applicable - no distribution used	Medium	external/extroplated data	See Cyber RAMP Workaper
Cyber	All	All	Fatality	All	NA	Not Applicable - no distribution used	Medium	external/extroplated data	See Cyber RAMP Workaper
Cyber	All	All	Financial	All	NA	Not Applicable - no distribution used	Medium	external/extroplated data	See Cyber RAMP Workaper
Employee Safety	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Employee Safety RAMP workpaper
Employee Safety	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Employee Safety RAMP workpaper
Hydro	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Semi-Quantitrative Risk Assessments (SQRA) + Historical Frequencyes (ICOLD Bulletin)	See Hydro RAMP Workpaper
Hydro	All	All	Serious Injury	All	NA	Not Applicable - no distribution used	High	SME consensus in faciliated workshop	See Hydro RAMP Workpaper
Hydro	All	All	Fatality	All	NA	Not Applicable - no distribution used	High	SME consensus in faciliated workshop	See Hydro RAMP Workpaper
Hydro	All	All	Financial	All	NA	Not Applicable - no distribution used	Medium	Reliability based on limited internal data.	See Hydro RAMP Workpaper
Hydro	All	All	Reliability	All	NA	Not Applicable - no distribution used	Medium	Financial is a SME approximation	See Hydro RAMP Workpaper
Major Physical Security	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Internal historical data	See Major Physical Security RAMP workpaper
Major Physical Security	All	All	Consequences	All	NA	Not Applicable - no distribution used	Medium	Internal data	See Major Physical Security RAMP workpaper
PSPS	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Based on historical back-cast	See PSPS RAMP workpaper
PSPS	All	All	Consequences	All	NA	Not Applicable - no distribution used	Medium	Proxy data	See PSPS RAMP workpaper
Seismic	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	UCERF3-TD Earthquake rupture forecast	See Seismic RAMP workpaper
Seismic	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	ShakeOut Scenario + SME estimations	See Seismic RAMP workpaper
Underground Equipment Failure	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Based on Machine Learning Algorithm	See Underground Equipment Failure workpaper
Underground Equipment Failure	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Based on Distribution Underground Consequence Model	See Underground Equipment Failure workpaper
Wildfire	All	All	Drivers	All	NA	Not Applicable - no distribution used	High	Based on Machine Learning Algorithm	See Wildfire RAMP workpaper
Wildfire	All	All	Consequences	All	NA	Not Applicable - no distribution used	High	Based on Technosylva WRRM model + estimates for reliability	See Wildfire RAMP workpaper

Planning Question 2.6: Does the Risk Model Listing Table provide a quick and useful means to determine the maturity of the models employed by the IOU?

Estimate Quality

Criteria for Input Parameters

Overall, How was Parameter Determined?	Detailed Description of Method Used	Estimate Quality
Quantitative	Bayesian or other formal analysis incorporating industry data with internal data.	High
	Internal data only, no available industry data or industry data was not used.	High
	Limited internal data.	Medium
SME-Judgment	Multiple SMEs with consensus utilizing proxy data.	High
	Multiple SMEs with uncertainty, or single SME with high confidence in proxy data.	Medium
	Single SME with uncertainty or high level of interpretation of proxy data.	Low

Criteria for Risk Calculation

Estimate Quality of Post-Mitigated Risk Scores	Type: Mitigation Parameter Estimate Quality		
Type: Driver or Baseline Parameter Estimate Quality	High	Medium	Low
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Low

Planning Question 2.7: Did the criteria employed for determining Estimate Quality (See pg. 9-11 of Appendix C) help you to assess the Quality of the Data and calculations? Are there suggestions or modifications that you would make to the criteria? Can the Estimate Quality Criteria approach employed in the Transparency Proposal be improved or refined? If so, how?

Additional Questions to Consider

The following questions have not yet been considered

- **Planning Question 2.4:** Does a scenario analysis (See pg. 3 of SCE Transparency Pilot) help provide the same amount of transparency that a sensitivity analysis can provide?
- **Planning Question 2.5:** If an IOU's sample risk does not assume a probability distribution, what analytical method/approach should be used to assess the impact of uncertainty on key parameters used in the risk modeling process?
- **Planning Question 2.8:** Are there other kinds of analysis that you are considering that is not currently supported by the Transparency Proposal?

Thank You

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SCE Pilot "Test Drive" of PG&E Transparency Proposal

July 12 , 2023

Timeline of Transparency Proposal

November 9, 2021	Findings of Fact 11 of D.21-11-009 (Decision) - *"It is reasonable to clarify that this decision directs SCE to complete the transparency guidelines templates only to the best of its ability and that the Commission will consider the test results as purely informational"* Ordering Paragraph (OP) 3 of D. 21-11-009 (Decision) – *"(SCE) shall "test drive" the Pacific Gas and Electric Company Transparency Proposal, as modified here and contained in Appendix C, and shall serve the completed transparency documents to the SCE 2022 Risk Assessment and Mitigation Phase (RAMP proceeding service list no later than 60 days from the date SCE files its 2022 RAMP Report"*
May 13, 2022	SCE files its 2022 RAMP Report
July 12, 2022	SCE served the Transparency Proposal "test-drive" on the service list of SCE's RAMP proceeding (A.22-05-013)
June 14, 2023	SCE served a copy of its Transparency Proposal "test-drive" in accordance with Ordering Paragraph in Assigned Commissioner's Phase 3 Scoping Memo and Ruling Extending Statutory Deadline in the current docket (R.20-07-013)
July 12, 2023	R.20-07-013, Phase 3 Workshop #1

Observations and Feedback

SCE provides general themes and feedback[1] on its implementation PG&E's transparency proposal. The test drive is meant to be "*purely informational regarding the template's feasibility and their usefulness in providing transparency for Staff and parties*"[2].

Data Table #1: Risk Results

- General Observations
  - Clarifying that the data either represent beginning or end of year values
  - Clarifying that the analysis pertains only to the proposed portfolio
- Estimate Quality
  - SCE provided "estimate quality" for both driver and consequence data.
  - Is the expectation to also provide the "estimate quality" for the product of these two components?
    - What would be the product of, for example, a "High" Driver estimate quality and a "Medium" Consequence estimate quality?

Data Table #2: Risk Sensitivity

- General Observations
  - Clarify whether the RSE estimate is the "sensitivity" value to be analyzed
  - SCE provided feedback on two different potential types of analysis
    - **Sensitivity** – a small change (e.g., +/- 1% in mitigation effectiveness) to an input variable to assess the "sensitivity" of an RSE estimate
    - **Scenario** - the impact to the RSE estimate based on a set of "high" or "low" set of assumptions. (e.g., High vs Low mitigation effectiveness).

	Original Mitigation Effectiveness	Sensitivity Run #1	Sensitivity Run #2	Sensitivity Run #3
Driver-A	5%	**6%**	5%	5%
Driver-B	10%	10%	**11%**	10%
Driver-C	15%	15%	15%	**16%**

Sensitivity

	Original Mitigation Effectiveness	High Scenario Run	Low Scenario Run
Driver-A	5%	9%	1%
Driver-B	10%	20%	3%
Driver-C	15%	23%	9%

Scenario

Data Table #3: Risk Model Listing

- General Observations
  - Recommend including distribution parameters (e.g., mean, standard deviation, etc.) as appropriate.

[1] For more specific details and other feedback, please refer to SCE's submittal of the transparency proposal on Jun 14, 2023
[2] D.21-11-009, pg. 41

SPD Staff's Key Observations of the SCE Transparency Pilot

Presenter: Safety Policy Division

California Public Utilities Commission

Background on the Transparency Proposal

- TURN suggested greater transparency in RAMP applications to be a topic for the Commission's consideration in Phase 1 of R.20-07-013. Features TURN desired to see in a more transparent RAMP/GRC process:
    - Repeatability of results: IOUs should provide information sufficient that a stakeholder can repeat the calculations and arrive at roughly the same result.
    - Uncertainty is an important piece of information that should be presented. IOUs should identify, describe, and, if possible, quantify the uncertainty of the assumptions or estimates; and
    - Risk analysis should be sufficiently granular.
- TURN and PG&E submitted competing proposals of transparency templates. The original PG&E proposal, which was subsequently slightly modified by SPD staff, was selected by the Commission for test drive using the 2022 SCE RAMP.
- SCE submitted the completed transparency templates into the SMAP OIR proceeding.

Key Elements of Transparency Proposal

- Risk Results Table – For each risk, this table shows tranche, mitigation, year, attribute, pre-post mitigation LoRE, CoRE, risk score, confidence levels of estimates, qualitative description of quality of results.
- Sensitivity Analysis Table – For each risk, IOU will identify key parameters that affect risk calculation, and will present in the spreadsheet tranche, attribute, year, mitigation, 10/50/90 percentile confidence levels of the parameter.
- Pivot Tables summarizing the Risk Model Listing Table

SPD's Key Observations on SCE's Transparency Submission

1. SCE largely fulfilled the objectives of the transparency test drive, with several key exceptions related to the sensitivity analysis portion of the transparency template, as explained below.
2. SCE deviated from the template by providing RSEs instead of the requested risk score information.
3. The emphasis of the sensitivity analysis template is implicitly on key risk modeling parameters contained in the probability distributions. The sensitivity analysis intends to examine how uncertainty in a parameter of a risk model affects the risk the risk score. SCE instead selected mitigation effectiveness as a parameter for performing sensitivity analysis. The selection is not necessarily wrong, but it is not ideal for the test drive. SCE provided the sensitivity analysis based on changes to mitigation effectiveness and measured the resultant changes in RSEs, instead of the changes to the risk score as required by the transparency template.

Continued …

4. SCE performed sensitivity analyses by applying a small +/- 1% perturbation on mitigation effectiveness. This is different from what the template expected. The template expected larger changes based on larger positive and negative ranges of the parameter, instead of +/-1% perturbations. SCE's misinterpretation of what the template expected may be traced to the fact that SCE used an example risk that does not rely on probability distributions. The template implicitly assumes the use of probability distributions and requires the sensitivity of the risk score based on changes to key parameters of the distributions.

Possible Improvements to Transparency Template

- To avoid confusion, clarify that "year" refers to the beginning of the year.
- Adding a column in the Excel spreadsheet to show the existing value of the parameter before sensitivity analysis is applied.
- Clarify that sensitivity analysis assumes only the selected parameter in question is changed while holding other parameters constant.

Break

2:15 – 2:30 pm

Discussion

2:30 pm – 3:30 pm

CPUC Close and Next Steps

3:30 pm – 4:00 pm

Next Steps

1. Workshop Recording on Youtube (3-4 days)

   https://www.youtube.com/user/CaliforniaPUC

2. Workshop #1 Summary Filed by PG&E and SCE (July 21)

3. SPD Files Post-Test Year Proposal (July 21)

4. Workshop #1 Opening Comments (August 10)

5. Workshop #1 Reply Comments (August 17)

Thank you!

Edwin “Eddie” Schmitt
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