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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Develop a Risk-Based Decision-Making Framework to Evaluate Safety and Reliability Improvements and Revise the General Rate Case Plan for Energy Utilities.	Rulemaking 13-11-006 (Filed November 14, 2013)

ADMINISTRATIVE LAW JUDGE'S RULING REGARDING REFINED STRAW PROPOSAL

This ruling describes the next steps to be taken with regard to the refined straw proposal. The refined straw proposal sets forth a proposal for incorporating a risk-based decision-making framework into the Commission's Rate Case Plan (RCP) process.

The refined straw proposal is the result of the opening of the above-captioned Order Instituting Rulemaking (OIR). The OIR was initiated to "determine whether and how we should formalize rules to ensure the effective use of a risk-based decision-making framework to evaluate safety and reliability improvements presented in General Rate Case (GRC) applications, develop necessary performance metrics and evaluation tools, and modify the RCP documentation requirements for the investor owned energy utilities." (OIR at 1.)

The OIR directed the respondent utilities to respond to data requests regarding their use of risk management tools to evaluate safety and reliability risks. In addition, the OIR invited interested persons to file comments on the issues and questions raised in the OIR. A straw proposal was then drafted by the

Commission's Policy and Planning Division to describe the "essentials of a risk-based decision-making framework, evaluation tools that need to be developed," and how such framework and tools can be incorporated into the RCP process. (OIR at 13.)

After the straw proposal was made available on February 20, 2014, a three-day workshop was held on March 19-21, 2014 to discuss the straw proposal. The workshop was then followed by parties providing input on possible revisions to the straw proposal. That input, and the discussion at the workshop, has resulted in the refined straw proposal. A copy of the refined straw proposal is attached to this ruling as Appendix A.

The purpose of the refined straw proposal is to provide a useful starting point for the Commission to develop and adopt a regulatory process which incorporates risk-based information and methods that can be used to support the Commission's RCP and rate-setting processes. Since it incorporates many of the ideas that the respondent utilities and other parties have provided input on, some consensus on the type of approach to adopt has already been reached.

The next step in this process is to have parties file opening and reply comments on the refined straw proposal. In accordance with the February 26, 2014 ruling, the opening comments on the refined straw proposal shall be filed with the Commission's Docket Office, and served, on or before May 12, 2014. The reply comments on the refined straw proposal shall be filed and served no later than May 30, 2014.

As noticed in the February 26, 2014 ruling, a prehearing conference will be held on Tuesday, April 29, 2014, at 10:00 a.m. in the Commission Hearing Room at 505 Van Ness Avenue, San Francisco, California. The prehearing conference will discuss, among other things, the scope of issues that should be addressed in

this proceeding, whether proposals other than the refined straw proposal should be considered, whether the Commission should resolve the issues in this proceeding through a comment only process, and the procedural schedule for resolving the issues in this proceeding.

IT IS RULED that:

1. The refined straw proposal is attached to this ruling as Appendix A.
2. Interested parties may file and serve their opening comments on the refined straw proposal with the Commission's Docket Office on or before May 12, 2014, and their reply comments on or before May 30, 2014.

Dated April 17, 2014, at San Francisco, California.

/s/ JOHN S. WONG
John S. Wong
Administrative Law Judge

APPENDIX A

Refined Staff Straw-Proposal
R.13-11-006
April 17, 2014

I. Introduction and Summary

The key goal of this proceeding is to modify the current General Rate Case (GRC) process to ensure that the utilities are focusing on safety, assessing the right risks, and spending ratepayer money to address those risks in a cost-effective manner. The reformed process should meet this overarching goal, while satisfying the following procedural principles:

- **Transparency**: the Commission and all interested parties should be given full access to all data and models on which the utilities, the Commission staff, and any other parties base their proposals or recommendations;
- **Participatory Inclusivity**: all interested parties should have a full opportunity to participate in each step of the process; and
- **Accountability**: the utilities should be held accountable for achieving the risk mitigation benefits they claim and for spending ratepayer money wisely and efficiently.

To achieve this goal and to satisfy these principles, three new processes should be adopted:

1. Beginning either as part of this proceeding or as an immediate spin-off from this proceeding (i.e., separate from GRCs), the Commission should initiate a periodic (perhaps triennial), generic (i.e., all energy utility)[1] Safety Model Assessment Proceeding (S-MAP), the twin purposes of which would be to: (1) allow parties to understand the models the utilities propose to use to prioritize the programs/projects intended to mitigate risks and (2) allow the Commission to establish standards and requirements for those models. Similar to the now well-established Long Term Procurement Planning (LTPP) proceedings, each successive S-MAP would have the ability to respond to changing circumstances and could build on its predecessor S-MAPs and tackle increasingly sophisticated and challenging issues.

[1] Or at least the four major energy utilities: PG&E, SCE and the SDG&E and SoCalGas.

2. As an initial phase of each utility's GRC there will be a Risk Assessment and Mitigation Phase (RAMP)[2], in which the utility presents the top ten asset-related risks for which the utility expects to seek recovery in the GRC. The focus of at least the initial RAMP will be on asset conditions and mitigating risks to those assets. However, as this process matures, S-MAPs will become more and more sophisticated and the Commission will also have better information on guidelines and standards thus allowing us to move beyond just asset conditions. As S-MAPs are developed the assessment that make up the RAMP would be based on the model that was vetted in the S-MAP and that complies with all CPUC requirements for the model determined in the most recent S-MAP. All parties, including the Commission staff, would have an opportunity to understand the analysis, data and assumptions underlying the utility's presentation and to present a response to the utility's presentation. Although there would be no Commission decision in this phase, the utility's presentation and the staff and interested party responses would inform the utility's recommended projects and funding requests in the subsequent phase of the GRC, which would be equivalent to the current project-focused GRC.

3. Two annual Verification documents to be submitted by each utility:

    a. A Risk Mitigation Accountability Report, in which the utility compares its GRC projections of the benefits and costs of the risk mitigation programs adopted in the GRC with the actual benefits and costs, and explains any discrepancies; and

    b. A Risk Spending Accountability Report, in which the utility compares its GRC projected spending for approved risk mitigation projects with the actual spending on those projects, and explains any discrepancies.

    c. To be most useful, these Reports should be audited by appropriate Commission staff, with the audit methodology and findings made available to all interested parties.

Each of these proposed new processes is discussed in more detail below, followed by a recommendation for integrating these processes into the GRC framework.

II. Safety Model Assessment Proceeding (S-MAP) – A New Proceeding Separate from the GRC

Because the utilities intend to rely upon potentially complex models, often of a quantitative nature, to prioritize both risks and risk mitigation measures, the Commission should institute a periodic - perhaps based on the overall GRC cycle – proceeding that would serve two main purposes with respect to these models: (1) to allow the Commission and parties to examine,

[2] This phase is meant to be equivalent to the RAPP in the Staff Straw Proposal, with a change in wording of the name to reflect (a) the importance of not just identifying and prioritizing risks, but also prioritizing risk mitigation efforts and (b) the recommendation that this be a part or phase of the GRC and not a separate proceeding.

understand and comment upon these models; and (2) for the Commission to establish guidelines and standards for these models.

In each S-MAP, each of the major utilities would present a complete explanation of the current version of their model (or models) that they plan to use in the RAMP phase of their upcoming GRC for prioritizing risk and risk mitigation measures. Consistent with the principle of transparency and Commission Rules of Practice and Procedure 10.3 and 10.4 (governing computer models), the utilities would make their models, data sources, and assumptions fully available for review by Commission staff and any interested party. 3 At a minimum, the utilities would provide documentation sufficient for interested parties to understand the basic logical processes linking the input data to the output, including but not limited to a manual which includes:

- A complete description of how the model operates and its logic. In the interest of Participatory Inclusivity, this description should be understandable by non-experts in computer modeling. For the benefit of experts, the utilities should supplement this lay description by making use of equations, algorithms, flow charts, or other descriptive techniques.
- A complete list of variables (input record types), input record formats, and a description of how input files are created and data entered as used in the sponsoring utility's computer model(s).
- A description of a diagnostics and output report formats as necessary to understand the model's operation.

The Commission staff and any interested party would be given an opportunity to ask questions, comment upon and make recommendations regarding these models. To assist in the Commission's review, the Commission may wish to hire technical experts. Any comments and/or recommendations of Staff and parties would be made available to all interested parties.

Similar to the evolution of LTPPs, the goals and outcomes of each successive S-MAP would evolve with changing circumstances and likely become more sophisticated over time. The initial S-MAP may serve primarily an informational and educational function – acquainting parties with the utilities' models – and provide utilities an opportunity to hear reactions from Commission staff and parties and modify their models as they deem appropriate in response to Staff/parties' concerns and recommendations. However, even the initial S-MAP could result in required standards and guidelines that each utility must satisfy. For example, to avoid unnecessary definitional issues, the Commission could determine a uniform lexicon that all models must follow. The Commission could also establish other basic elements that utility

[3] *See,* http://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&DocID=89380172.

models must satisfy. This initial S-MAP could be initiated promptly, either as part of this docket or a separate spin-off docket.

In successive S-MAPs, the Commission could establish more detailed standards or guidelines for utility models, with a goal of making the utility models as uniform as possible. Uniformity of models would have the obvious benefit of reducing burdens on Commission staff and parties to learn multiple models and would also increase the comparability of risk priority and mitigation analyses among the utilities.

The table below shows some models that may be evaluated in the S-MAP phase.

Model	Description of models and processes to be evaluated
Asset condition models	Models of the current and expected status of assets within the utility network. This includes hazard analysis models, failure analysis models, vulnerability analysis models, etc.
Enterprise risk models	ERM is used to evaluate and compare risks across several domains within a utility. This capability allows a utility to establish a uniform and consistent risk reduction strategy and is manifest in the development of programmatic priorities. The accuracy, precision , and reproducibility of these models are key indicators of the effectiveness of the resultant strategies.
Data models	Database schemas, repositories and other methods are used to store, track and archive, data about the assets of a utility. How, when, and how often data records are updated and validated are key indicators of the veracity and the value of information utilized by other models.
Information gathering methods	Physical tests (e.g. Hydrostatic tests) and other testing and survey protocols are used to verify asset condition and identify areas of concern.
Risk Taxonomy	A taxonomy is a model of and process for classifying , defining and identifying different types of risks that the utility faces. A taxonomy should include the top risks that a utility faces. A taxonomy also identifies interrelationships of risks and provides guidance about how new risks can be classified and contextualized against known risks.
Risk Lexicon	A lexicon may not typically be thought of as a model , but a common language is required to facilitate meaningful communication about risk models. S-MAP should develop a lexicon and promote the use of a common lexicon among all the IOUs.

Depending on the issues to be addressed in a given S-MAP, these proceedings, like LTPP, should be able to do much of their work through workshops and comments. However, the Commission would always be free to order evidentiary hearings when appropriate.

In the RAMP phase of GRCs (discussed in the next section), utilities would need to show that the models they are using to prioritize risks and mitigation measures comply with any Commission requirements or guidelines emerging from the most recent S-MAP. Utilities would also be required to explain in the RAMP any ways in which the models they use for their RAMP showing differ from the model presented in the last S-MAP.

III. Risk Assessment and Mitigation Phase (RAMP) – A New Phase of the GRC

RAMP would be a new initial phase of each utility's GRC4 (equivalent to the RAPP in the Straw Proposal), the purpose of which would be to examine the utility's assessment of its key risks and its proposed programs for mitigating those risks. Commission Staff5 ("Staff") would issue a staff report that assesses (i) the risk assessment procedures that provide the basis for the utility proposals and (ii) the technical merits of the utility proposals. To the extent Commission Staff recommends a different portfolio, such recommendations should be clearly articulated in the report and the basis for such recommendations provided. All stakeholders will have an opportunity comment on the Commission Staff's report. This phase will not have a standalone Commission decision. The final report would be made part of the record in the proceeding and Commission Staff would be made available to testify during evidentiary hearings in the GRC. The final report must be included in the utility's formal GRC submittal along with an exhibit showing (i) how the utility addressed the various recommendations in the Staff report and (ii) any changes to the proposed programs or projects set forth in the RAMP submittal.

The RAMP would contain at least the following:

- The utility's prioritization of the risks it believes it is facing and a description of the methodology used to determine such risks. Additionally, if the GRC (e.g., in PG&E's case) does not address all aspects of the utility's CPUC-jurisdictional operations, the utility should place the risks that are germane to the GRC in the context of all risks faced by the utility.
- A description of the controls currently in place, as well as the "baseline" costs associated with the current controls;
- The utility's prioritization of risk mitigation alternatives, in light of estimated mitigation costs in relation to risk mitigation benefits (Risk Mitigated to Cost Ratio).[6]

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[4] After the 3-day workshop discussion it is the staff's recommendation to continue with the 3-year GRC cycle to ensure timeliness in terms of authorized revenue requirement and time relevancy of the risk analyses for RAMP.

[5] Safety & Enforcement Division.

[6] *See* SCE Case Study, slides 13 and 14.

- The utility's risk mitigation plan, including an explanation of how the plan takes into account:
    - Utility financial constraints
    - Execution Feasibility
    - Affordability Impacts
    - Any other constraints identified by the utility

- For comparison purposes, at least two other alternative mitigation plans the utility considered and an explanation of why the utility views these plans as inferior to the proposed plan.

The assessment needs to focus on asset conditions. For the first RAMP we would like to see the top 10 assets that the utility is seeking recovery for in the GRC and by association feels that these 10 asset or asset families pose the most risk to a safe, resilient and reliable system. The utility's first RAMP would include the following:

The risk phase would commence with the utility submitting its RAMP report to the Safety and Enforcement Division. Concurrently, the utility would file a Notice of Availability of this material with the Commission's docket office, providing service of the NOA to the service list for the utility's prior GRC. At this stage, the Commission would assign a Commissioner and Administrative Law Judge(s) to the matter.

Within 30 days of submission of the risk material, the utility and Commission Staff would jointly hold a public workshop. During the workshop, the utility would provide an informational overview of the contents of its RAMP report and any changes to its risk model since the last S-MAP and Commission Staff would explain the process it will follow in conducting its technical review. Participants would be invited to ask questions of the utility and Commission Staff, as well as to provide input to Commission Staff regarding its upcoming review.

Within 150 days of submission of the risk material, the Commission Staff would provide to the utility and make available to interested parties its draft report that assesses (i) the risk assessment procedures that provide the basis for the utility proposal and (ii) the technical merits of the utility proposal. To the extent Commission Staff recommends a different portfolio such recommendations should be clearly articulated in the report and the basis for such recommendations provided.

Staff's report would answer the following questions:

- Is the proposal complete - i.e. does the proposal address the top risks as identified by the utility?
- Are there any significant risks that have been missed in the proposal?
- Are there reasonable mitigation options that have not been examined?
- Is the proposed risk mitigation contained in the proposal an efficient allocation for the risks that the utility faces? I.e., are there any proposed programs that are clearly dominated by possible alternative programs in terms of the risk mitigation per dollar spent?

- Do the proposed programs and alternatives represent a realistic set of options given the current condition of the installed assets, best practices for management of those types of assets, and the identified risks?
- Are the proposed risk mitigation programs in line with stakeholder preferences?

Within 30 days of submission of Staff's draft reports, the Commission would hold a public workshop to present, answer questions, and receive comments on, its draft report(s). Within 45 days of the submission of Staff's draft report, interested parties would provide comments on the draft to Commission Staff, the utility and interested parties.

Within 225 days of submission of the risk material, Commission Staff would provide to the utility and make available to interested parties its final report, taking into consideration comments made on its draft report and input from the public workshop. Commission Staff's final report would be made part of the record in the proceeding[7] and Commission Staff would be made available to testify during evidentiary hearings in the GRC. Commission Staff such as those in the Safety & Enforcement Division would not be expected to become a formal party to the proceeding.

Through this process, all stakeholders will have an opportunity to (i) receive information regarding the utility's operational plans and Staff's planned technical review, (ii) review discovery between Commission Staff and the utility, (iii) comment and provide feedback on the Staff draft report(s), and (iv) cross-examine Commission staff or its consultants during evidentiary hearings. The Staff's final report(s) would reflect this robust and transparent record.

In the interest of avoiding delay in GRC-decision-making, there would be no Commission decision in the RAMP phase. However, as noted, the Staff and parties would gain an early indication of the utility's risk priorities and mitigation plans and Staff and party Responses would inform the utility's recommended projects and funding requests in the subsequent phase of the GRC. One possible mechanism that would streamline inclusion in the record of the GRC, as discussed below, would be transcriptions of any presentations and the open availability of any documents used in the RAMP phase.

The subsequent phase would be equivalent to the current GRC, in which the utility presents a complete application with supporting testimony and work-papers, parties conduct discovery

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[7] The SED report must be included in the utility's formal GRC submittal along with an exhibit showing (i) how the utility addressed the various recommendations in the SED report(s) and (ii) any changes to the proposed programs or projects set forth in the RAPP submittal.

and prepare responsive testimony, and evidentiary hearings are held. The utility's application and testimony would need to include its RAMP showing, explain how its detailed GRC proposal relates (maps) to its RAMP showing, and explain any changes to its assessment and plans in response to the RAMP phase. If Staff or any party wishes to introduce its Response to the utility RAMP showing into the GRC record, the Responses would be subject to discovery and cross-examination. Absent such election, Responses would not be part of the record on which the Commission could base its GRC decision.

IV. Schedule for GRC Phase I

Below is a depiction of a GRC timeline without a filing of Notice of Intent (NOI). In GRC applications the utility's preparation of a "Notice of Intent" is an opportunity for ORA to review a draft of the utility's application in order to determine whether the application is complete and, if it is not, to secure supplementation from the utility as a condition to filing. The NOI time period is close to six months and with ORA as well as the rest of the Commission always in a state of limited resources staff wonders whether this is an opportune time to re-direct staff resources to drafting testimony and analysis of utility's filing. The utilities always have and will always continue to have the burden of proof to support its forecasts by a preponderance of evidence. If the utility's filing is not complete then ORA as well as other parties should identify the lack of proof/completion as part of their testimony. The assigned administrative law judge will then consider this information as he/she drafts the proposed decision. Additionally, and this should go without saying that the utilities must respond to all discovery requests made by ORA and other Commission staff during this GRC process.

Deadline	Activity	Time After Prior Activity (illustrative and not to conflict with calendar deadlines at left)
October 1 of Base Year	Utility provides RAMP submittal on operational lines of business	--
November 1	Utility and Commission Staff host public workshop on risk submittal	30 days after submittal
March 1 of Base Year, Plus 1	Staff issues draft report	150 days after submittal
April 1	Staff hosts public workshop on draft report	30 days after issuance of draft report
April 15	Stakeholders provide comments on Staff report	45 days after issuance of draft report
May 15	Staff issues final report	30 days after receiving comments on draft report
September 1	Utility files GRC application, including possible changes from RAMP submittal	105 days after issuance of final report

October 1	Utility hosts public workshop on overall GRC application	30 days after filing of application
November 1	Staff issues verification that utility has addressed technical recommendations in Staff Report	60 days after filing of application
April 11 of Base Year, Plus 2	ORA & Interveners submit opening testimony	7 months after filing of application
April 25	Concurrent rebuttal testimony	Two weeks after opening testimony
March/April	Public Participation Hearings	
May 12 – May 30	Evidentiary Hearings, including Staff participation	2 weeks after rebuttal testimony
June 30	Opening briefs	1 month after end of hearings
July 14	Reply briefs	2 weeks after opening brief
July	Update testimony and hearings, if necessary	--
November	Proposed decision	4 months after reply briefs
December	Final decision	1 month after proposed decision

V. Verification – New Accountability Tools

To assist in the goal of improving utility accountability for the ratepayer money spent on risk mitigation efforts, the utilities would be required to prepare two new annual reports.

The first would be a Risk Mitigation Accountability Report, in which the utility compares its GRC projections of the benefits and costs of the risk mitigation programs adopted in the GRC with the actual benefits and costs, and explains any discrepancies. This Report 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. The document would provide a high-level summary of the utility's explanation of the reason for any variation between projected risk mitigation and actual risk mitigation. The utility files this report by December 31st of each year. Commission Staff such as staff from Safety & Enforcement Division will audit the findings and issue its report on March 31st of each year.

The second would be a Risk Spending Accountability Report, in which the utility compares its GRC projected spending for approved risk mitigation projects with the actual spending on those projects, and explains any discrepancies. This Report would consist of a project-by-project (above an appropriate Commission-determined dollar cut-off) comparison of authorized vs. actual spending, accompanied by the utility's narrative explanation of any significant

differences between the two. The utility files this report by December 31st of each year. Commission Staff such as staff from the Energy Division will audit the findings and issue its report on March 31st of each year.

Both Reports would be prepared annually, served on the Commission and all interested parties, and promptly posted on the Commission's website on March 31st of each year. As part of its opening comments to this staff proposal, utilities are asked to provide a sample form for each of these reports. These sample forms will be used as guidance for all stakeholders to modify and/or simplify the utility reports as part of reply comments to this staff proposal.

These Reports would only be a starting point for achieving utility accountability for risk mitigation spending. Utility representations would not be accepted at face value by the Commission. Instead, the Reports would be audited by Commission Staff, and, in furtherance of the goal of transparency, the Staff audit methodology and findings would be made available to all interested parties and posted on the Commission's website.

Provided that they are effectively audited by Commission Staff, these Reports and the audit findings would serve the primary purpose of enhancing Commission oversight of utility safety-related activities and spending. The Reports, coupled with the Staff audit methodology and findings, could also be useful tools for intervenors to help in holding the utilities accountable for GRC spending. For example, intervenors could use the Reports to frame discovery requests or otherwise raise issues regarding a utility's failure to achieve Mitigation to Cost Ratio targets or a utility's repeat request for risk mitigation that was supposed to be completed in the previous GRC cycle. If a utility wished to introduce a Report or if Staff wished to introduce its audit findings into the record of a GRC, in both instances, the documents to be introduced would be subject to discovery and cross-examination.

VI. Lexicon

In pursuit of developing fundamental regulatory processes for defining, acquiring, and disseminating risk-based information that supports rate-setting and project prioritizing decisions in order to focus on safety and resiliency of the utility operations below is a list of definitions of terms that are most commonly used. This is not an exhaustive list and parties are asked to comment not only on the above sections, but also on whether these are the right definitions for these terms and whether we should add additional terms to this list. This lexicon is at its infancy at best. This would need to be developed as part of the first S-MAP.

1. ***Asset*** – A utility infrastructure such as transformers, pipelines, poles, etc.

2. ***Enterprise Risk Management*** - A comprehensive approach to risk management that engages organizational systems and processes together to improve the quality of decision making for managing risks that may hinder an organization's ability to achieve its objectives.

3. ***Hazard*** - Any existing or potential condition that can lead to injury, illness or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that is a prerequisite to an accident or incident.

4. ***Hazard Function*** - The conditional probability that an asset will fail in the next interval of time, given that it has survived up to the beginning of that interval; depends on the operating condition of the asset.

5. ***Incident*** - An occurrence other than an accident that affects or could affect the safety of operations.

6. ***Safety*** - Safety is the state in which the possibility of harm to persons or of property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification, and safety risk management, and safety assurance.

7. ***Safety Objective*** - Safety goals or desired outcomes, which are typically measurable.

8. ***Safety Requirement*** - A safety condition or capability that must be met or passed by a system to satisfy a contract, standard, specification or other formally imposed document or need.

9. ***Safety Risk*** - The composite of predicted severity and likelihood of the potential effect of a hazard. The potential to property damage that will lead to worker and/or public injury.

10. ***Safety Risk Control*** - A characteristic of a system that reduces safety risk. Controls may include process design, equipment modification, work procedures, training or protective device.

11. ***Threat*** - A natural or man-made occurrence, individual, entity, or action that has or indicates the potential to harm life, information, operations, the environment, and/or property.

12. ***Uncertainty*** - A situation in which more than one outcome is possible and one does not know which outcome will occur.

(END OF APPENDIX A)