SDG&E and SoCalGas Redlined Staff Straw-Proposal
R.13-11-006

I. Introduction

Coming out of the energy crisis, the California Public Utilities Commission (CPUC) radically changed its policies around energy procurement to secure reliability as it formed the so called "hybrid market" that combined elements of regulated utility services with competitive markets. This process evolved over the years to become the Long-Term Procurement Plan proceeding (LTPP). The LTPP combined two core functions: approving short-term (generally less than five year) procurement of electric energy supplies on an expedited schedule, and approving long-term contracts for generating resources to provide adequate generation capacity to meet planning reserve margins.

Since the San Bruno natural gas pipeline explosion in 2010, the Commission has faced a similar need for transformation of its policies concerning the safety and resiliency of utility operations. In response to date, the Legislature has enacted multiple statutes, and the Commission has also opened several investigations and rulemakings; however, neither the statutes nor the rulemakings/investigations fundamentally changed the core mechanisms by which regulated utilities, intervenors, and the CPUC consider and review safety and its enhancement.

Gas and electric utility General Rate Case (GRC) filings have focused on establishing cost-effective rates that safeguard the safe and reliable delivery of energy services. Although safety and reliability are considerations that the CPUC balances against providing reasonable rates, there presently is no legal requirement in the GRC process to formally demonstrate how the risks are to be addressed. Furthermore, there is no requirement to establish a definable relationship between the investments being made and the corresponding mitigation or elimination of risk.[1]

The CPUC's 2013 Order Instituting Rulemaking (OIR) – R.13-11-006 – provides a unique opportunity to establish a collaborative process that will optimize the utility investments and confirm that they address the risks associated with providing safe and reliable service. **Accordingly, the question is not *whether* to do a risk-informed GRC, but rather *how* this should be accomplished.**

The existing GRC process is labor intensive and rightfully involves many stakeholders with varying interests. The purpose of this paper is to outline a proposal for the integration of risk analysis into the GRC process. This paper will discuss the necessary evolution of utilizing a risk-informed approach to utility investments. The reality of an evolving process must be addressed because (similar to a GRC) utilizing risk models and optimizing investments is a challenging and arduous process that will not be accomplished overnight. Indeed, it may take several years for the practice to be well developed. Once

[1] Risk¬: A standard risk taxonomy should be adopted by the CPUC. A workshop would be a good method to develop the CPUC's risk taxonomy. The Federal Department of Homeland Security (DHS) lexicon was discussed during the OIR Workshops as a pre-existing, comprehensively developed standard that could be used as the basis of initial draft standard by the CPUC. This taxonomy will aid in the successful establishment of a risk-informed GRC process, as all parties will be using the same terminology and definitions.

well developed, the practice is likely to evolve with better data, insight and analytics.

The proposed Risk Assessment Planning Proceeding (RAPP)/General Rate Case (GRC) process will consist of four components:

1. RAPP Procedures and Timeline .
2. Risk Assessment and Management
3. The RAPP Informed GRC
4. RAPP/ GRC Verification

In the next sections we will further explain each of these four components.

II. RAPP Procedures and Timeline

For the purposes of this proposal, we coin the term Risk Assessment Planning Proceeding (RAPP) to serve as a means to accomplish the objective of the OIR.

The goal of this proposed RAPP is to develop a fundamental regulatory process for defining, acquiring, and disseminating risk-based information that supports rate-setting and project prioritization decisions. This new process should include the following:

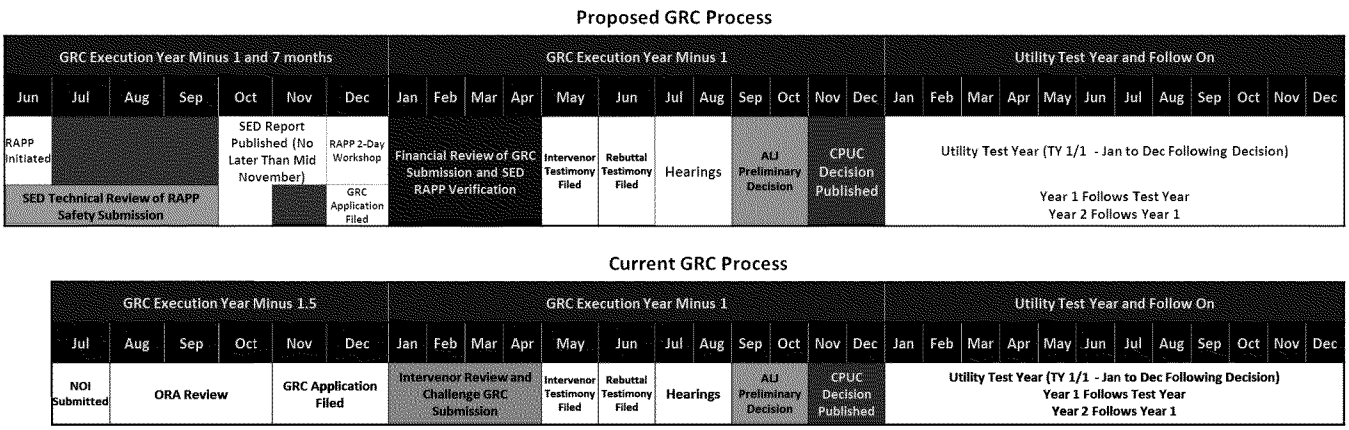
- Description of the utility risk, the existing controls already in place to mitigate the risk, and the expected mitigation results;
- A description on the method used to evaluate the risk. For instance was the risk scored on a purely quantitative basis, a Subject Matter Expert (SME) basis, or a hybrid approach;
- A narrative on what alternative solutions were also considered to mitigate the risk; and
- The estimated risk reduction if the risk mitigation request, or presented alternative, is adopted

The RAPP should be optimally integrated into the GRC process. This will promote risk-informed analysis throughout the GRC, firstly and especially with regards to safety, but also later to include other processes, such as evaluation of depreciation, which are presently not evaluated from a risk perspective. (Currently, evaluation of depreciation associated with rate base is a financial evaluation and is not evaluated for underlying risk related to the state of the asset base.) Separating the RAPP analysis from the GRC would exacerbate the already lengthy duration of the existing process, by adding an entirely separate evaluation with no rules or timelines as an essential precursor to the GRC.

From a procedural perspective, the RAPP analysis submission should effectively initiate the GRC process and eliminate the requirement for a Notice of Intent (NOI). This would both provide the CPUC's Safety and Enforcement Division (SED) approximately 4 months to review, analyze, and determine the

technical merits of the submittal and make a recommendation to the CPUC without appreciably lengthening the GRC schedule. This timeframe would enable the filing utility to address the SED findings and recommendations in its GRC submission before its initiating testimony. This timeframe can be shortened if the utility is able to participate in the SED evaluation, which also would help make certain that the best overall risk-informed investment opportunities are identified. Additionally, SED can provide Intervenors an opportunity to understand the scope of the RAPP during their evaluation period, once they have had ample time to review the document. SED could hold a two-day workshop to discuss its review and receive public comment concerning the RAPP submission. This would provide Intervenors the opportunity to participate in the RAPP evaluation, improving transparency and efficiency of the process. Intervening parties can use the normal discovery process to question the RAPP information and address findings or recommendations by SED prior to the utility's GRC application. A proposed timeline below compares the recommended Risk-Informed GRC Process with the Current GRC Process (Figure 1).

Figure 1 - GRC Process Comparison



III. Risk Assessment and Management

The second component of the risk-informed GRC is risk assessment and management. It is the identification of the risks for a safer and more resilient system, and the creation of a process that allows the utility to bring to the CPUC its justification/rationale for these risks and ways to mitigate them. This would be the initial RAPP risk-informed submission and the outcome of this component would be an assessment by the SED that reports on the technical merits of the utility's risk assessment procedures and the forecasted risk mitigation submissions and any recommendations for action by the utility for modification of the risk showing prior to formal GRC application.

[2]To facilitate the utility identification of risk priorities, the CPUC will define what California's risk vision is for the RAPP. Within this context, each utility can develop programs, projects, priorities, and policies for investment to achieve this overall vision and submit those plans for CPUC approval as part of its GRC

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filing.

The underlying challenge for this risk model is the balancing of the various risk management objectives. In fact, as more risk objective categories (i.e., safety, reliability, environmental, etc.) are included, analysis and optimization becomes more complex. Thus, the initial GRC showing of RAPP through 2018 will be focused solely on safety. The safety vision for all utilities in California should be the elimination of life-threatening injuries realized during typical "blue sky" daily operations. Isolating safety improvement as a first objective permits utilities to focus on developing a systematic and repeatable process that can be expanded into other areas of risk in orderly succession. As evidenced by some minimally successful attempts in other regulatory jurisdictions, it is unrealistic to expect that a truly integrated and optimized risk assessment-based capital and O&M investment portfolio can be achieved quickly by any sizeable utility. Therefore, it makes sense to begin with a focus on the most important risk faced by utilities: safety. On an annual basis, all stakeholders will review the RAPP process and improve/modify as needed.

Another reason to focus solely on safety is related to the nature of the utility industry. Each utility is attempting to optimize investments made on a large system that has been aggregated from smaller, disparate companies over the last 100 years while simultaneously operating, expanding, standardizing, and upgrading the system. Thus, when a complete risk assessment with thorough root cause analysis is completed for a gas and/or electric company, the results will require various initiatives to achieve the safety goal as set forth by the CPUC. Specifically, because the systems are so vast and there can be a great number of uncontrolled intervening events, there is no realistic way to completely eliminate every safety risk. Certainly, some risks can be eliminated, but the remaining risks must be mitigated (pending their elimination), and response strategies must be developed to minimize the impact of any event.

This process should identify the safety objectives, implementation options, and the information required to evaluate the performance of the proposed risk mitigation activities. [3]The CPUC's final decision would reflect this robust and transparent record.

a) GUIDING PRINCIPLES for developing risk-based regulations

There are five guiding principles of risk management that can form the foundation for proactive risk-based regulation.

- Risks involve uncertainty about achieving objectives. Although categories of risk, or even specified risk events can be identified and the likelihood of their occurrence quantified, there is still an underlying element of uncertainty in terms of when, extent of the impact, or ultimate outcomes of some event. Uncertainties are expressed as both negative and positive impacts. Negative impacts hinder the advancement of our objectives and positive impacts promote and enhance our objectives. Regulation should recognize this dual role and capability of risk management and adopt processes that provide incentives to utilities to address and find innovative ways to control risk in ways that comport with and advance stakeholder objectives.

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- Risk is an analytically measurable quantity, and may be reduced to a metric that is a function of the probability of an event and the impact of that event. Each event can either enhance or inhibit the ability to achieve objectives. These metrics can characterize risks that have occurred in the past (Lagging indicators) or can also assess our expectations of future events (Leading indicators).

- Risk management is predicated on a comprehensive review of risks. The effectiveness of a risk management paradigm depends on the ability to comprehensively review all project risks individually and as a portfolio. Risk occurs at all levels of an enterprise so risk management is the responsibility of everyone.

- Learning is a core competency of effective risk management. The task of resolving uncertainties and reducing negative risk requires that organizations plan for and embrace learning and continuous improvement processes as an integral part of risk management.

- Transparency in risk evaluation processes and third party review is essential to developing robust comparable risk metrics, confidence in the measurement process, and consistency in overall risk management processes.

b) GUIDELINES for Risk Assessment and Planning

It is important that a standardized method be used to evaluate risk, to conduct root cause analysis, and to prioritize investment needs with regard to managing risk. Standardization will facilitate the efficiency by which utilities will review and communicate their risks and associated investment needs. This approach will help to cost effectively achieve the statewide safety goal established by the CPUC.

As the regulatory process matures, the CPUC and utilities should – at a minimum – strive to incorporate the following into their GRC filings:

- Details and physical description regarding the most critical risks to utilities with detailed root cause analysis;

- Data-driven analysis to evaluate risk, including measurement of Inherent Risk, Residual Risk, and Target Risk;

- Methods and projects to mitigate the risk on a day-to-day operational basis;

- Resource requirements (technology and trained personnel) to address risk mitigation gaps;

- Descriptions of situations where current risk mitigation activities may not adequately decrease the risk;

- Cost assessments associated with recommended and alternative risk mitigation options; and

- Risk informed justification for the proposed mitigation activity.

In the proposed timeline (Figure 1), the RAPP process is envisioned as the CPUC's means to determine

that the utility reasonably and properly used a risk-informed methodology to justify the projects and programs brought forward into the GRC. Debate over the costs of the programs would occur in the customary financial review that is the traditional GRC. The utility should communicate the risks and needs clearly to enable the CPUC and Intervenors to assess the effects of funding (or not funding) specific initiatives, programs, and projects. The traditional GRC litigation phase would include the SED risk review report that would be available for cross examination on the record, as well as the verification elements presented previously.

To achieve a risk-informed GRC process, the CPUC should establish a reasonable and clear risk assessment and risk communication standard for utilities to meet. Indeed, both the public and the utilities would benefit from a standardized risk taxonomy adopted by the CPUC, from which the utilities would develop their individual risk registries.

The CPUC should establish a timeline to govern the risk-informed GRC process and allow utilities at least two GRC cycles to achieve the desired end-state. Interim workshops after GRC decisions for the three large California utilities that incorporates the CPUC staff, utilities, and interested parties can evaluate the successes and shortcomings of the RAPP and GRC processes and collaboratively evolve toward achieving the shared goal of safe and reliable service to all Californians.

The risk assessment process is designed to elicit these guidelines for risk assessment and management in two steps:

1. Identify and characterize program level risks and mitigating options, and
2. Select an acceptable level of risk given a limited set of alternatives.

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1. Program level risk reporting – Program evaluation

In the RAPP submission, utilities will submit the top risks that are affecting the scope of the CPUC RAPP. Through 2018, each utility company will submit the safety risks that it is addressing. Additionally, the utility will provide the risk assessment in terms of the current mitigation activities and costs associated with the activities and the requested additional mitigation activities and revenue requirements to further mitigate each risk. Key to the risk submission will be the utilities communication on how the risk mitigation will improve the risk exposure of the RAPP showing requirements (safety, environmental, etc.) This identification of the risk level and estimated improvement serves two purposes. First it informs the system-wide evaluation of risks. Second, it specifies an expectation of the program level risks and serves as a simple performance metric. While some risk mitigation investments may have a big impact on reliability, and others have an impact on safety or other objectives, many projects nevertheless will have some impact on more than one of these core objectives. This evaluation of the different effects of mitigation on the different objectives could be summarized on a one page summary of the projects goals and expectations.

2. Portfolio segmentation & ranking graphic

In order for the CPUC to make an evaluation of the full portfolio of requests made by a Utility, the utility

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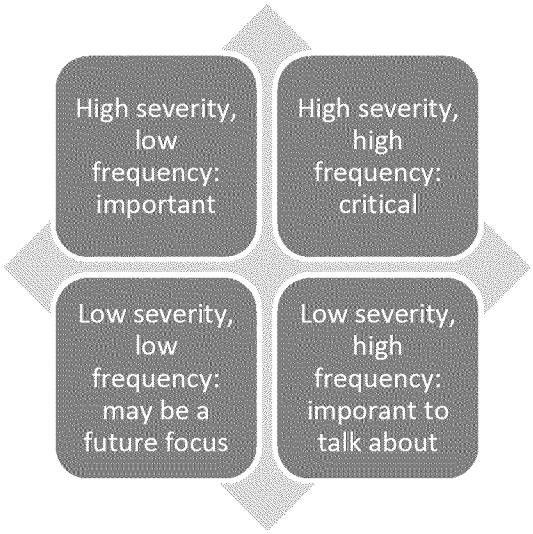
should segment and then potentially rank each program based on the risk priorities communicated by the CPUC's risk vision statement. Since each program has already been identified and the impacts to safety, resiliency and cost have been estimated in the previous program evaluation phase, the utility can now segment and then within each of those segments rank each of the programs based upon the value of risk mitigation. Figure 2 provides a high level illustration of the segmentation that may be used. Utilities may need expand it to fit their risk assessment purposes.

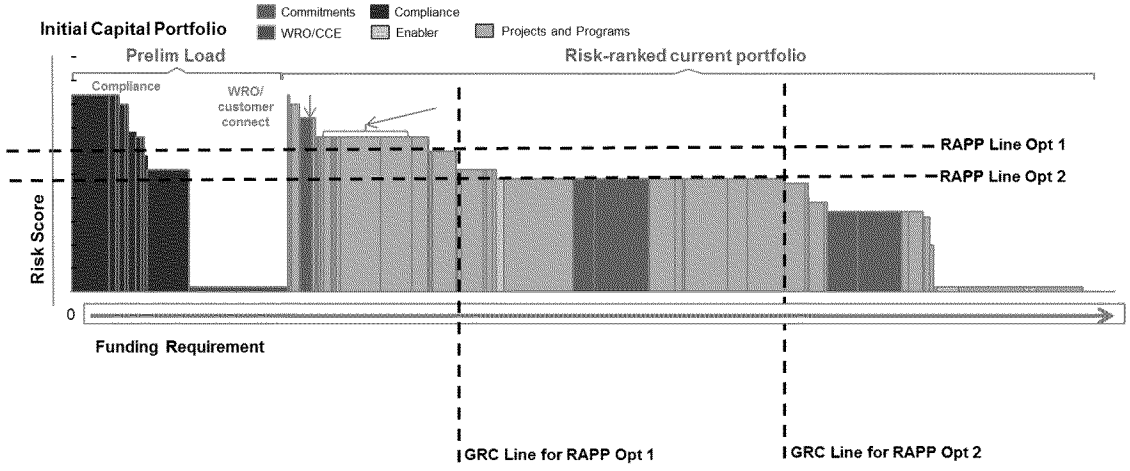
Figure 2 - Risk Segmentation Quadrants



Once a risk is classified by its likelihood and consequence severity, the utility can then begin to rank each program within that classification/segmentation. Comparing across segmentation the CPUC would then need to determine the risk cut-off (RAPP line) for all programs – see Figure 3. This level of risk acceptance balances all the concerns and implicitly selects projects to be adopted.

With the risk level established, the funding constraint would be established within the GRC process. Additionally, with the risk showing similar to the one illustrated in Figure 3, the utility and CPUC can make decisions concerning other work and compliance relevance to safety and other risks. The RAPP process does not burden the CPUC with the task of reassigning those priorities but rather to review the appropriateness of the programs it is being requested to fund and establish a risk cut-off line for the proposed portfolio. As previously mentioned, debate over the costs of the programs would occur in the customary financial review that is the traditional GRC.

Figure 3 - Risk Portfolio Presentation



c) SDG&E and SoCalGas Risks for consideration in the first RAPP

SDG&E and SoCalGas recommend the scope of the first RAPP to span the operational Gas, Electric and Generation activities at the utilities, and to address the risks with potential safety, reliability and environmental consequences.

IV. The RAPP Informed GRC

General rate cases are a traditional form of regulatory proceeding, in which, a utility files a revenue requirement request based on its estimated operating costs and revenue needs for a particular test year and the CPUC determines a just and reasonable revenue requirement. These cases aim to strike a proper balance between risks the utilities take and reasonable opportunity for returns, taking into account changing economic conditions. The GRC sets the baseline for utility costs to provide reliable, safe, environmentally sound service at just and reasonable rates. Therefore, regardless of where the system safety and security plans will be reviewed and approved, the implementation costs must be reviewed in GRCs.

The GRC approves the revenues and rates for the test year that was litigated. Year 1 is the test year, and for years 2 & 3 an attrition or rather post-test year ratemaking is also litigated and decided in the GRC. The historical practice has been to litigate the post test-year ratemaking within the GRC.

GRCs are typically filed every three years and are staggered to allow the CPUC and interveners to have dedicated staff available. A utility's base year under a three-year cycle is actually the utility's test year from the prior GRC. However, if there is a delay, then that could impact the utility's costs in a way different from what was forecast.

A three-year rate case cycle should be maintained, consistent with Public Utilities Code Section 314.5, which requires the CPUC to audit the utilities every three years. It should also be understood that the further into the future utilities and the CPUC proceedings forecast, the more likely it is that the risk showing will be reliant on out-of-date data or analysis, which could lead to erroneous regulatory decisions.

The traditional GRC is the litigation mechanism for each utility. In the GRC, the utility will have addressed all the recommendations of the technical review of its risk management submission in the RAPP. In the GRC, stakeholders would debate the cost as well as the path the utility has chosen to eliminate and/or mitigate the risks identified.

[5]To make sure the information used in risk assessment is not out of date by the time the GRC is filed and to make sure the utility has had sufficient time to incorporate the risk assessment developed in a RAPP proceeding into its GRC, we think the RAPP proceeding should be submitted in accordance with the timeline illustrated in Figure 1.

We envision an evolutionary process for the RAPP submission and integration into the GRC. We would like to initiate this process with safety and risk investment submissions for the 2017 Test Year GRC which would begin in July 2015 with the RAPP submission on July 1, 2015. With this compressed timeline, we understand that utilities will be working on their risk management processes, procedures and frameworks and that they will also provide a roadmap for continued maturity of their internal processes in their GRC testimony.

As we move along this process, the CPUC may want to consider expanding this process to include the smaller utilities that are subject to its jurisdiction.

V. Verification

The CPUC sees a necessity for adding a verification component to the GRC submission. The proposed verification approach is comprised of three elements:

a) Confirmation of utility action on RAPP report recommendations;

b) Review of risk management performance; and

c) Triennial Audit of utility risk management program

a) SED's Technical Review of RAPP Submission

The first element of verification pertains to the SED's technical review of the utility's RAPP submission and would take place upon the filing of the utility's GRC application. That is, the CPUC would require SED staff to verify that the forecasted work in the utility's formal GRC application has addressed each of the technical recommendations from the SED report that reviewed the initial risk submission.

SED will be required to draft an independent verification and safety report for each utility prior to their GRC filing. The report will be based on the information that the utility provides and SED's own independent field assessment.

b) IOU's Backward Looking Report on Authorized Funds

The second element is the backward looking report by the utility that compares the authorized risk mitigation to the risk mitigation spend since the previous GRC. Along with the comparative financial

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report on risk mitigation would be a safety trends report that would highlight the successes in safety improvement based upon the expenditures.

The utilities will submit outlines of previously-authorized investments and the resulting benefits and reduction of risks along with the RAPP submission. Because the first round of the RAPP is proposed to focus on safety, utilities can work with Intervenors and stakeholders to define a "State of Safety Scorecard" that outlines the current state of safety for California Utilities. This scorecard can also be used to help identify future investments necessary to achieve the safety goal of the CPUC. Utilizing the same scorecard for all utilities will help drive consistency and facilitate the common utilization of best management practices. As this RAPP process evolves, scorecards that address a wider range of risk objectives (e.g. reliability, environmental) can be defined for future verifications.

If desired, the scorecard can be used to track realized incidents. However, it may be more appropriate to have a separate process that requires reporting for certain types of safety events with a root cause analysis and recommendations for future avoidance. This separate process could be treated as a collaborative effort geared toward improving the system with benefits for all. Any reporting system should be confidential, voluntary, non-punitive, independent, and focused on continuous improvement. To enable the reporting system to produce solutions that protect critical infrastructure, detailed information may be provided in testimony during the GRC by one witness specifically identified in the GRC and redacted prior to public distribution of the report.

Recently, the California State Auditor report (Report 2013-108 released March 2014) provided various recommendations regarding the CPUC's need to improve the auditing of certain investment accounts made by utilities. Through the State of Safety Scorecard, detail can be provided that meets the audit requirements of the CPUC for certain utility investments. This will enable reconciliation of investments that address safety risk and serve as a useful audit for the CPUC. Likewise, where significant capital investment strategies are utilized to replace existing infrastructure, capital rate base tracking systems and modern technology can be utilized to maintain accurate rate base structures and promote streamlined rate making processes. Elements of the scorecard could be used to satisfy those public interests who desire some tangible and sensible summary of utility efforts toward risk reduction, and the CPUC's exercise of its oversight authority.

c) SED's 3-Year Risk Assessment Audit

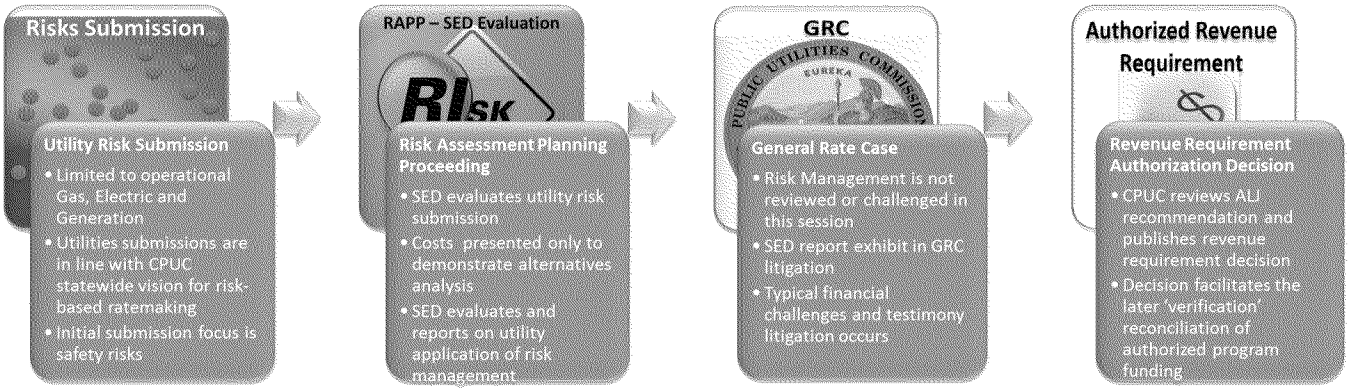
The third element is the SED risk mitigation audit process that will occur every three years that will review the utilities risk evaluation and mitigation process, procedures, methodologies and governance.

Every three years, the SED will conduct a risk-focused audit of the IOUs risk assessment and management practices and will produce a report that will be available for all parties for use in the GRC. Elements of the scorecard proposed in element 2 may be used for purposes of this audit. This audit should conclude prior to the initiation of the RAPP phase in a fashion such that findings of the audit may be incorporated by the utility into their RAPP submittal.

VI. Conclusion

As discussed, a risk-informed GRC process will ultimately improve the investments made by utilities throughout the state. However, due to the complexities associated with conducting effective risk-informed evaluations with varying objectives, SDG&E and SoCalGas believe it would be most effective to focus the CPUC's risk-informed GRC process on one objective: safety. A recommended content of the process aligned with key GRC milestones below highlights the application of the RAPP process through the GRC life cycle (Figure 4)

Figure 4 - RAPP GRC Details



In the near term, this process would establish a clear statewide goal for safety improvements, enable significant and methodical safety improvements by utilities, establish a standardized process and methodology used by all utilities in the state, and guarantee efficient use of utility and CPUC resources. Once the risk-informed GRC process is well defined for safety, the inclusion of additional risk objectives can be added to future RAPP processes. In order to further improve safety, SDG&E and SoCalGas believe that the development and utilization of a State of Safety Scorecard would cause consistent use of best management practices throughout the California utility industry.

VII. Next Steps

This proposal in whole is and will be an iterative process. As described in the ALJ's February 26 ruling, a prehearing conference will be held on April 29 to discuss the scope of issues in the rulemaking proceeding and the process for addressing this Revised Straw Proposal. Opening comments on the Revised Straw Proposal are to be filed with the Docket Office and served on or before May 12. Reply comments are to be filed and served no later than May 30.

Moving forward, the SED will hold a risk taxonomy workshop to involve utilities, Intervenors and stakeholders in the development of consistent and common risk terminology to use in future risk submissions and filings.