

MGRA REDLINE OF Staff Straw-Proposal R.13-11-006

I. Introduction

The purpose of R.13-11-006 is to effectively address present and foreseeable safety concerns posed by utility infrastructure and operations through a transparent and iterative process that includes stakeholder full participation throughout.

Following the San Bruno natural gas pipeline explosion in 2010, the Commission fully recognizes the need to transform present regulatory policy concerning the safety and resiliency of utility operations in order to ensure the safety of utility customers. This proceeding will produce a process that utilizes stakeholder input throughout to identify safety concerns in order to form a risk reduction and mitigation portfolio for each utility. The process shall include both identifying and ranking of risks and providing a mechanism for utilities to propose specific projects to reduce risks, accompanied by stakeholder analysis and assessments of the IOU proposal. Additionally, a general set of Utility Risk Management Guidelines shall be maintained by the Commission to provide input to the process in order to help ensure that all Californians are afforded the same level of risk protection.

There are two components to this proposal:

1. Establishing general guidelines regarding utility risks that may be applied to all GRCs.
2. Establishing a process for incorporating risk-based decision making into each GRC, based on the specific characteristic of the utility and its service area.

To facilitate the implementation of the uniform risk assessment process, the Commission will facilitate the creation of Utility Risk Management Guidelines, to be produced as an output from this proceeding. The purpose of the Guidelines would be 1) to help guarantee that all California utility customers are provided a standard level of risk protection, 2) To ensure that emerging risks and new information about currently managed risks are incorporated into all relevant GRC proceedings, and 3) to help reduce duplication between GRCs and thereby simplify the GRC process and reduce costs. The Utility Risk Management Guidelines would consist of:

- Best practices in risk estimation and risk reduction where there is general consensus between utilities and other parties.
- Identification and prioritization of specific risks that all utilities in a given sector should address.

The Utility Risk Management Guidelines will serve as input to the risk analysis (RAPP) phase of the GRC. It is not intended to be a binding document – utilities shall be free to use alternative risk rankings and estimation methods, but shall provide justification for doing so. The advantage to using methods and

rankings from the Guidelines, however, is that the GRC may proceed more quickly and efficiently if stakeholders share basic assumptions regarding risk rankings and estimation methods.

The Utility Risk Management Guidelines shall be reviewed and revised every five years to incorporate new information that has emerged regarding utility risks, or alternatively any party may petition to modify the guidelines in the event that new best practices or emergent risk information needs to be incorporated prior to the next revision cycle. Development of the Guidelines shall be an iterative process that includes workshops that solicit input from both experts and intervenors.

The overall process for incorporating risk-based decision making into the first phase of the GRC proceeding shall include the following:

- Identification of the top safety issues.
- Description of the utility asset needing replacement or upgrade to reduce identified safety issues. The description may also include the estimated risk, existing controls in place to mitigate the risk, and the effect of not replacing or upgrading.
- A description on the method used to estimate the risk. For instance was the risk scored on a purely quantitative basis, a Subject Matter Expert (SME) basis, or a hybrid approach? Quantitative risk assessment shall be preferred, since this can be directly used to establish the need for spending.
- The estimated risk reduction and cost implications if the replacement or upgrade is authorized or if the other alternatives are authorized.

Developing these processes and the capability to credibly deliver and interpret risk information suggests that several other supporting capabilities may also need to be in place. Utilities may need to expand their risk management processes, and the Commission, as well as intervenors may need to expand their own capabilities and understanding of risk management.

The method of incorporating this process into GRC decision making shall be:

- A) A Risk Assessment Planning Procedure (RAPP) shall occur as the first Phase of each utility's GRC proceeding, with the risk-reduction project portfolio comprising separate testimony and analysis by stakeholders. The resultant budget for the approved project list would be incorporated into the utility's total revenue request for that Test Year.

This proposal also shall establish a new verification component to GRCs, which would require the utility at the time it files its Notice of Intent (NOI) to also file a chart showing the projects approved versus the projects implemented. This verification process is discussed in more detail in the later section of this proposal.

This approach shall consist of three components:

- Step 1: Identify and rank top risks to be addressed and result in a safer and more resilient

system, and to create a process that allows the utility to bring to the Commission its justification/rationale for these risks and ways to mitigate the identified risks. This step shall also include analysis of IOU proposals by stakeholders regarding ranking of risks, costs and the methods the utility has chosen to eliminate and/or mitigate the risks identified. The outcome of Step 1 shall provide guidance for establishing recommended levels of funding for Safety and Resiliency.

- Step 2: Conduct of the traditional General Rate Case litigation for each utility. The prior identification and ranking of the risks would not guarantee that all costs proposed in the GRC will get approved
- Step 3: Verification. The Commission shall require **a uniform and simple verification** system that will be reported by the utility to the Commission’s Safety & Enforcement Division (SED) and available to all stakeholders. For example, if utility X was approved in 2015 to replace 1000 poles by 2020 with a budget of \$200 million; in 2020 the utility should show in a most simple chart that 1000 poles were approved in 2015; in 2016 250 poles were replaced at a cost of \$30 million; in 2017 300 poles were replaced at a cost of \$65 million; in 2018 450 poles were replaced at a cost of \$100 million; the utility will refund the extra \$5million and/or shall use the balance toward other identified safety concerns. This should be illustrated in a table and will include other items that were approved in the GRC.

In the next sections we further explain each of the three steps referenced above.

II. Risk Assessment

The goal of this aspect of the proceeding is for the utility to identify and clearly define its priorities and policies for assuring a safe and resilient system. More specifically, the utility shall identify the top risks to its system – the risks must be separated as operational risks that the utility faces, legacy risks, and emerging risks that could impact long-term performance and unanticipated risks to a safer more resilient system¹. The utility must justify these risks based on measureable and verifiable risk assessment. Each utility’s assessment should use the Utility Risk Management Guidelines as input to their risk-assessment and definition process and address points of variation from the Guidelines. This process should identify the safety objectives, implementation options, and the information required to evaluate the performance of the proposed projects. Further, the utility shall also identify risk mitigation projects by demonstrating how, and by how much, each project is expected to reduce the probability of a hazardous event occurring as well as the consequences of the event if it does occur, including threat to life and safety in addition to financial impacts. The utility shall also estimate deadlines by which the expected safety improvements would be realized and the duration or lifetime of the project impacts (e.g. replaced pipe has expected lifetime of “X” years, employees are retrained every three years, etc.). Safety projects shall be identified as either direct safety improvement projects (e.g. pipeline replacement), risk assessment projects (e.g. pipeline safety testing and inspection, risk modeling), or

¹ These are suggested risk categories and may be further developed as part of a risk taxonomy identification process in the RAPP

safety enabling projects (e.g. safety training).² Throughout this process all stakeholders shall have the opportunity to comment on the utility testimony and identify risks through stakeholder expert panels conducted in a workshop environment. The Commission’s final decision in the GRC would reflect full stakeholder participation within a robust and transparent record developed as the first phase of the GRC which shall include stakeholder identification of risks, additional to any required SED report or IOU risk identification, stakeholder analysis of any SED and/or utility reports regarding risks, and the submission of comments by stakeholders on any and all elements of the proceeding.

One of the most apparent challenges is simply identifying the risks to a safer and more resilient system – e.g. breakdowns in infrastructure such as old utility infrastructure in high fire risk areas; transformer failures that lead to fires; cybersecurity threats; pipeline failures; natural gas storage failures. The assessment process shall be designed to identify and contextualize these risks to maximize stakeholder input, feedback and/or meaningful alternatives.

GUIDING PRINCIPLES for developing risk-based regulations

Based on a review of several risk management processes, we have identified 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. Where possible the uncertainties themselves should also be quantified so as to enable a more quantitative approach to decision-making.
- **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 risk management 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 within the enterprise. To the extent that portfolio risk can be quantified, the overall safety spending needs can be justified in an objective way. While it is difficult to achieve, this should be a goal that risk management programs work towards.

² These are suggested categories that may be further defined as part of the RAPP

- **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.

a) Requirements for Risk Assessment and Planning

In order to better understand how system-wide risk assessment and management can be used to support and achieve the objectives of safe, resilient and cost effective service, we have developed a preliminary set of regulatory process requirements. These requirements incorporate the five guiding principles and also recognize that developing a robust risk management paradigm for regulating IOUs also requires meaningful and informed input from stakeholders. The key issues to resolve with stakeholder input are how to balance the fundamental objectives of safe and resilient service at reasonable rates; how to determine risk tolerance at the program level; and how to determine an acceptable level of risk for a portfolio of programs in the GRC.

The risk assessment process as an initial Phase of the GRC is designed to elicit three fundamental requirements of risk assessment and management in three steps:

1. Develop an objectives hierarchy / risk taxonomy,
2. Identify and characterize program level risks and mitigating options, and
3. Select an acceptable level of risk given a limited set of alternatives.

These requirements outline the desired outcomes and goals of a new regulatory process.

1. Develop an Objectives Hierarchy / Risk Taxonomy

An objective hierarchy (or risk taxonomy) is a structured way to identify, classify and order the risks that can impact the core objectives of safety, resiliency and costs. While the hierarchy is a stable representation of the concerns of stakeholders, it is also a comprehensive and evolving tool. This tool also documents and includes risks that have not recently occurred or may have not yet occurred.³ This hierarchy has several benefits:

- Encourages a comprehensive review of all risks that can impact a utility.
- Refines the understanding of how core objectives are managed and can be impacted by specific programs.
- Creates a clear method for rolling up risks in an agreed on manner.
- Creates a clear way to identify the program risks such as operational, legacy, and emerging risks.

A framework for an objectives hierarchy and risk taxonomy will be provided by the Utility Risk

³ The staff straw proposal focuses on the overall risk. However, there is an inherent accepted risk in the present systems. With that in mind, focusing on the net change in risk may be more productive as it relates to acceptance of risk relative to the difference from the present state. This may also help deal with the risk of not taking action on a project. While discussions about the risk inherent in the present systems may be productive overall, it may present a level of complexity that does not essentially focus on the proposed projects.

Management Guidelines. Each utility, however, will need to customize this framework in order to suit its own specific situation and the needs of its service area and present these as its RAPP submission. Initially developing and building out this hierarchy can be a challenge. It will require input from IOUs about the systems and process used to manage their systems. Interveners will also have input into how core objectives should be weighted in this hierarchy. Fundamentally the hierarchy is a tool for mapping core objectives to specific programmatic activities.

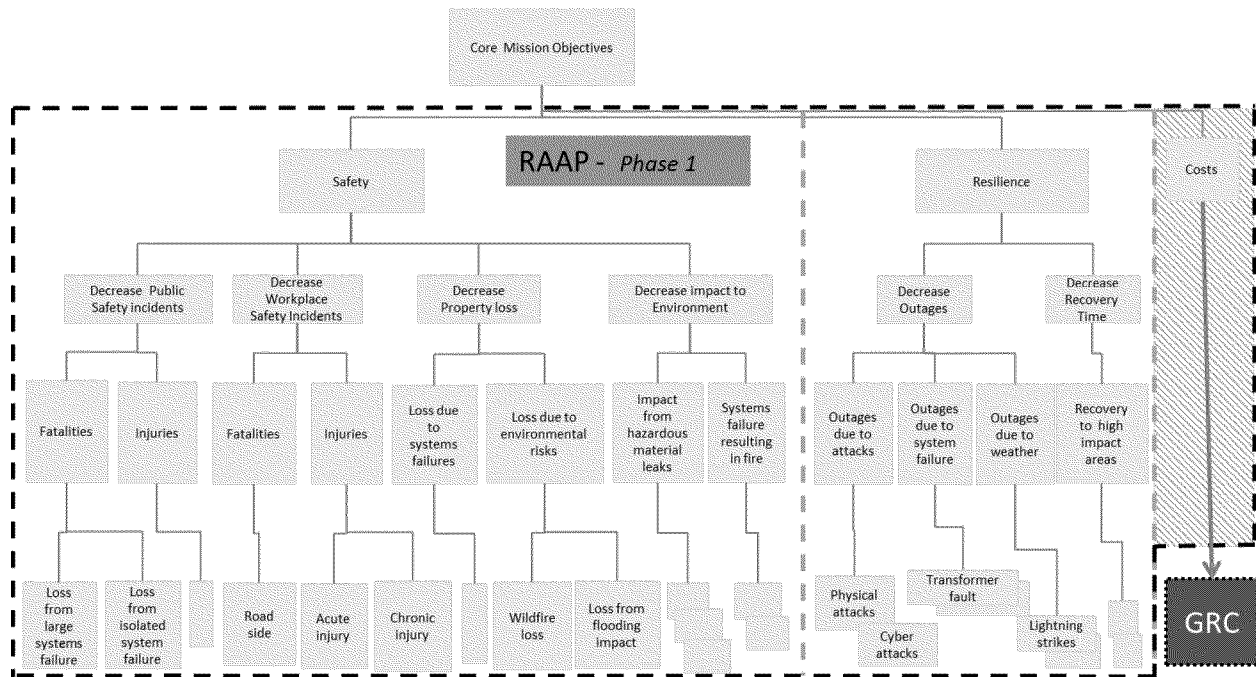


Exhibit 1: Notional diagram of an objective hierarchy –This is not a comprehensive review of objectives

2. Program level risk reporting – Program evaluation

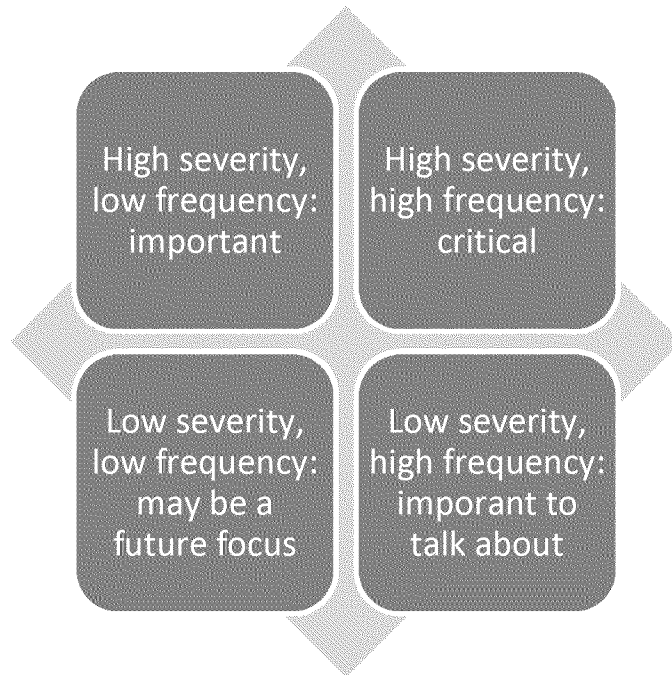
With a hierarchy in place, each and every program proposed within the GRC should be identified within that hierarchy. Each of these proposed programs should be evaluated using a simple estimation of risk. This serves two purposes. First it informs the system-wide evaluation of risks. These program level risks can be rolled up using the hierarchy developed above. Second, it specifies an expectation of the program level risks and serves as a simple performance metric.

Risk evaluation is the IOUs' estimate of the performance expectations, the potential impacts (both negative and positive), and the overall risk mitigation potential for every project within the GRC. While some projects may have a big impact on reliability, and others have an impact on safety, each project nevertheless has some impact on both of these core objectives. This evaluation could be summarized on a one page summary of the projects goals and expectations.

3. Portfolio segmentation & ranking graphic

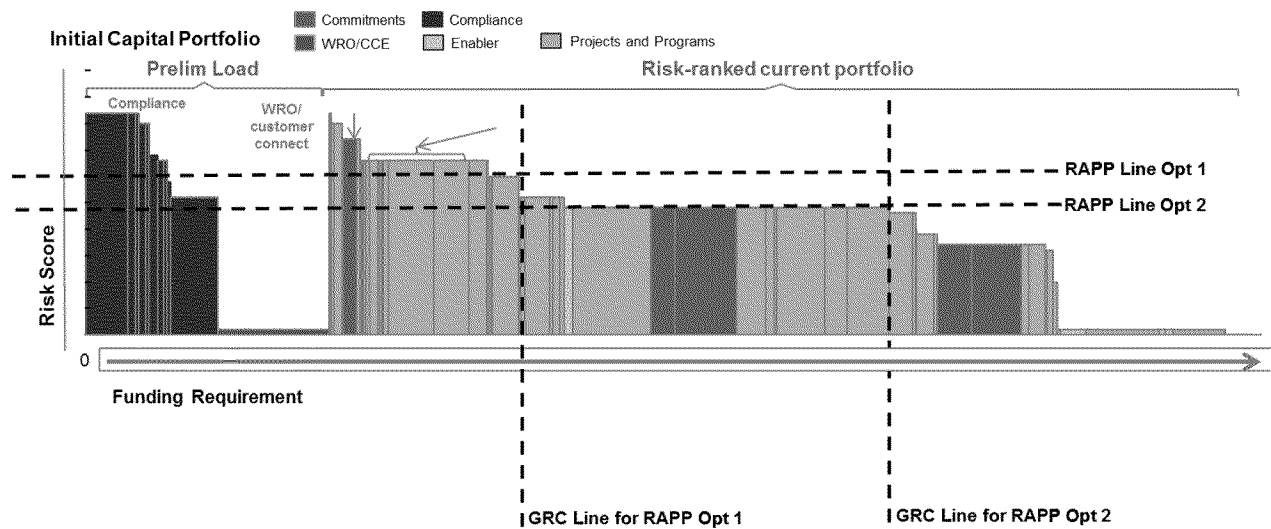
In order to make an evaluation of the full portfolio of requests made by an IOU, we can segment and then potentially rank a program based on the desired criteria. These criteria can be any of the estimated

values used in the previous program evaluation phase. Since each program has already been identified and the impacts to safety, resiliency and cost have been agreed on in program summary phase, we can now segment and then within each of those segments rank each of the programs. The segments can be based on a number of criteria and chosen based on whatever the stakeholders believe is most appropriate. This segmenting also identifies the risk classification, so that each type of program is identified and minimum standards and compliance issues can be assured.



Once it is classified whether it is high frequency or low severity, we can then begin to rank each program within that classification/segmentation. Comparing across segmentation the stakeholders would then need to determine the risk cut-off (RAPP line) for all programs – see the figure below. This level of risk acceptance balances all the concerns and implicitly selects projects to be adopted. It should be anticipated that fully quantified rankings based on utility-specific information and stakeholder input will be different than ranking suggested by the Utility Risk Management Guidelines, however the process will ensure that the reasons for all rankings and for prioritizing or de-prioritizing certain risks will be addressed.

With the risk level established the budget constraint would be established within the GRC process.



III. Incorporating the Results of Risk Assessment into the General Rate Case (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 Commission 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.

Essentially, the GRCs are entirely cost driven. 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 ensure that the Commission and interveners have dedicated staff. 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.

This proposal recommends that a four-year rate case cycle be adopted, thereby giving the utility at least one year of actual spend that will become the base year for the next GRC. It should be understood that the further into the future we forecast the more likely it is that we will be wrong in one direction or another. Therefore, extending our forecast to a four-year GRC cycle will require the Commission to be flexible in dealing with the differences between forecast and actual results. One possibility could be that

the utility would be required to file annual advice letters updating top line cost information.

The real question is which GRC cycle will be able to incorporate a new risk-analysis process. To answer this question we will highlight the GRC cycles of the three large utilities and make a recommendation that is reasonable considering timeliness and completeness of the RAPP record.

Current GRC cycles:

- PG&E's GRC = filed in Nov 2012 for test year 2014. The next cycle begins with an application that will be filed in Nov 2015 for test year 2017 (this will commence the 4 year GRC cycle for PG&E of 2017 – 2020.)
- PG&E's Gas Transmission and Storage (GT&S) = filed December 2013 for test year 2015. We will propose that the current GT&S cycle continue as a 4 year cycle.⁴ This is consistent with the last PG&E GT&S proceeding in which the Commission adopted a 4 year cycle. Under the 4-year (2015 – 2018) cycle, the next filing will be in December 2017 for test-year 2019.
- Edison GRC = filed in Nov 2013 for test year 2015. The next cycle begins with application that will be filed in Nov 2016 for test year 2018. (This application will commence the 4 year GRC cycle for Edison of 2018 - 2021)
- Sempra GRC = the next filing is an application filed in Nov 2014 for test year 2016. This should be a 4 year cycle (2016 – 2019). This is consistent with the last Commission D.13-05-010 which adopted a 4 year (2012 – 2015) GRC time frame.

The risk assessment phase of the GRC should conclude 12 months before the next phase of the GRC addressing costs is filed.

With this in mind, we envision that the RAPP will be incorporated in the GRC first time beginning with Sempra's GRC test year 2020 which Sempra will file in November 2018. Working back from that date, the RAPP proceeding will need to be concluded 12 months before November 2018 which is Nov 2017. We envision that this proceeding will take 12 months to process from filing to the issuance of the RAPP decision. So the RAPP proceeding will need to be filed in Nov 2016. We need the parties' input on the how to coordinate the timing of the RAPP with the GRC for best use of the risk assessment.

The Commission may want to consider expanding this process to include the smaller utilities that are subject to the Commission's jurisdiction.

IV. Verification

As stated above, the Commission should require a uniform and simple verification system. We note the existence of PU Code 958.5; however, this is different and much simpler. PU Code 958.5 reporting requirement focuses mainly on the review requirement. The verification report that we're looking for is for specific projects – for instance 2000 poles were authorized for upgrade at the authorized cost of

⁴ PG&E has proposed a three year cycle in its application.

\$200 million. The utility when they file their NOI will also have to separately file a simple table that has five columns:

- Column 1 = what was authorized (replacement of 2,000 poles)
- Column 2 = the cost authorized (\$200million)
- Column 3 = what was actually replaced (as an example let's say 1,900 were replaced)
- Column 4 = how much did it actually cost (\$200 million actual spend)
- Column 5 = a narrative as to why there is a discrepancy

The Commission's Safety & Enforcement Division (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.

This proposal would require that the utility file a report at the same time it files its NOI. The report will simply be in the form of a table or chart. It should include a list of items that were approved in the prior GRC along with the cost/budget that was approved for; and a corresponding column that shows what was actual spend and actual build/upgrade. If approved does not match spend then the utility must include a narrative to explain the discrepancy otherwise no other narrative is required or preferred. The report functions more like an audit of what the utility was approved for and what they actually spent on.

SED is not asked to testify as part of the GRC. It will verify what the utility has claimed, issue a report detailing the verification, and provide its assessment of the existing safety-related programs. Stakeholders will be able to compare the SED report with individual utility GRC requests for safety improvement as well as analyze the SED report and IOU requests against stakeholder expert panel results and submit such analysis as comments within the RAPP phase of the GRC regarding safety issues.

This proposal for verification and assessment could be put into place as part of PG&E's next GT&S filing in December 2017. Given that the GT&S proceeding has no formal NOI process, it is proposed that PG&E will file its GT&S Verification Report in August 2017.

V. Next Steps

This proposal is an iterative process. The Commission will hold a three-day workshop to receive stakeholder feedback. Following the workshop stakeholders will submit redline versions of this RAPP proposal, or alternative RAPP proposals, to the Commission through the service list for this proceeding. Following receipt of these, staff will revise the RAPP Straw Proposal accordingly. Once revised, this proposal will be re-issued prior to the April 29th Prehearing Conference scheduled for this proceeding for formal opening and reply comments.