

REVISED Staff Straw-Proposal (REDLINE by UWUA/CCUE) R.13-11-006

I. Introduction

Even before the San Bruno natural gas pipeline explosion in 2010, the Commission faced an urgent 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. The Commission has articulated a vision of safety as a journey. However, the Commission has focused much of its attention on backward-looking issues of responsibility and accountability for the San Bruno event. The journey metaphor requires forward-looking guidance, standards and mapping of the terrain. As the Commission applies lessons learned in the gas and electric industry tragedies to establish procedures, standards and goals it must reach closure on its existing proceedings – such as the update to its gas operation and maintenance General Order 112; assessment of the work of the Risk Assessment Unit of the Commission’s SED; greater depth and focus on its approach to implementing the statutes, particularly SB 705 relating to gas safety plans that map hazards and deploy systems to eliminate them. This effort reiterates the Commission’s call for a shift from a culture of compliance (adherence to procedure) to a culture of performance (substantive reduction of hazards and events) that initiated the Commission’s effort to respond to San Bruno.

In this Rulemaking – R.13-11-006 - the Commission has asked stakeholders how to more effectively integrate safety into utility General Rate Case (GRC) funding proposals, and also asked for ideas to potentially streamline the GRC process. Over eighteen different stakeholders filed comments in response to the Rulemaking. The principles that guide us are **transparency** in identifying risks and the costs of mitigating them, **inclusiveness** in the perspectives from which risks are identified; **clarity** in articulating goals and outcomes, and in identifying the metrics for measuring progress; **accountability** for outcomes; and **timeliness** in reaching conclusions.

The Staff Straw Proposal draws on the ideas proposed by the Office of Ratepayer Advocates and the Coalition of California Utility Employees, among other stakeholders.

The goal of this Revised Proposal is to develop regulatory processes for defining, acquiring, and disseminating risk-based information that supports rate-setting and project prioritizing decisions. This new process - the initial phase of the GRC proceeding - should include the following:

- Identification of a risk or hazard;
- Identification of programs or projects, including description of a utility asset needing replacement or upgrade. The estimated risk, the existing controls already in place to mitigate the risk, and the effect of not replacing or upgrading. This process will also examine the capacity of the utility workforce to perform the work necessary to achieve,

maintain and restore safe and resilient utility operations.

- 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?
- What alternative solutions are available to reduce or eliminate the risk?
- The expected outcome and/or risk reduction if the program, facility upgrade or replacement 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, the Commission and other stakeholders may need to re-evaluate on-gong operation and maintenance practices and the safety implications of continued “business-as-usual” practices; expand their risk assessment and risk management processes; and the Commission, as well as interveners may need to expand their own capabilities and understanding of risk assessment and risk management.

Of the two proposed alternatives in the original proposal, only including the RAPP as the initial phase of the GRC will accomplish the Commission’s goals. The separate proceeding approach fails to observe the principles of transparency, inclusiveness and timeliness. It replicates a stubborn problem at the Commission of fragmenting consideration of issues among a myriad of proceedings that frustrates and ultimately prevents coherent decision-making.

Proposal: The RAPP filing would occur as the first Phase of each utility’s GRC proceeding, with the risk-reduction project portfolio comprising a separate book of testimony and related working papers, and the budget for the approved project list incorporated into the utility’s total revenue request for that Test Year.

This proposal also sees a necessity for adding a new verification component to GRCs, which would entail the utility at the time it files its Application to also file a very simple chart showing the projects that were previously approved versus the projects that were implemented. This verification process is discussed in more detail in the later section of this proposal.

This approach essentially consists of three components:

- Step 1 is to identify the risks that must mitigated in order to achieve a safer and more resilient system, and to create a process that allows the utility to bring to the Commission its justification/rationale for identifying these risks and the ways it proposes to mitigate them. The outcome of this Step would provide a basis for establishing recommended levels of funding for operations and for capital programs to improve Safety and Resiliency.
- Step 2 is the traditional General Rate Case application litigation for each utility (Revenue Requirement Phase). The prior identification and/or ranking of the risks to the utility would not guarantee that all programs, capital projects and associated costs proposed in the GRC will get

approved. In the GRC Revenue Requirement Phase, stakeholders can debate the cost as well as the path the utility has chosen to eliminate and/or mitigate the risks identified.

- Step 3 is verification. The Commission should require **a uniform and simple verification** system that will be reported by the utility to the Commission’s Safety & Enforcement Division (SED) in order to improve accountability for outcomes as well as level and direction of spend.

In the next sections we will further explain each of these three steps.

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 by identifying hazards and describing the systems for mitigating them, as required by SB 705, PU Code 961(d) in a manner that enables the Commission to clearly link this aspect of adequate service to revenue requirements.¹

More specifically -- taking into account the periodic reports it files with the Commission and with federal authorities; the enforcement actions taken by the Commission pursuant to Resolution ALJ-274; the periodic examinations of utility activity by the Risk Assessment Unit and by the Commission in offset proceedings -- the utility must identify the top risks to its system. The risks should be separately identified as operational risks of damage or injury to the public and the environment that the utility faces; legacy risks; and emerging risks that could impact the safety of the public and the environment; long-term performance of the utility infrastructure including the workforce responsible for operation and maintenance of the facilities; and how the risk identification and mitigation contributes to the journey toward a safer more resilient system². The utility must justify the ranking of these risks based on a transparent, measureable and verifiable method of risk assessment. This process should identify the safety objectives, implementation options, and the information required to evaluate the performance of the proposed projects. Further, the utility must also identify risk mitigation projects and activities. They should show how, and by how much, each ranked project is expected to reduce the probability of a hazardous event occurring and the consequences of the event if it occurs. The utility should also estimate when they expect these safety improvements to 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.). These projects should be identified as either direct safety mitigation projects (e.g. pipeline or electric plant repair,³ maintenance⁴ or replacement), risk assessment projects (e.g. pipeline safety testing and inspection, risk modeling), or safety enabling projects (e.g. safety

¹ Although SB 705 applies only gas utilities, the Commission has the legal authority to apply the same structure to other energy utilities pursuant to PU Code sections 451, 761 and 768.

² These are suggested risk categories and may be further developed as part of a risk taxonomy identification process in the RAPP

³ E.g., leak repair; valve operation; repair of downed powerlines, etc.

⁴ E.g., maintaining cathodic protection systems; leak patrol and survey; electric transformer inspection and maintenance, etc.;

training).⁵ ***Through this process all stakeholders will have an opportunity to comment on the utilities' proposal and provide feedback, if any should be adopted and/or modified.*** The RAPP phase should result in a ***risk-informed*** evaluation of projects individually, and within the entire portfolio. That information will then transfer to the Revenue Requirement Phase where the Commission will weigh the record evidence in determining the appropriate levels of safety and reliability and the funding to support those levels of safety and reliability based on the analysis performed in the RAPP phase. The Commission's final decision at the end of the Revenue Requirement Phase would reflect this robust and transparent record.

In order to build the most robust and transparent record in the RAPP phase, the intervenors would have the opportunity to analyze the IOU's RAPP filing and submit a report. During workshop discussions, PG&E offered a proposal wherein the RAPP filing would be analyzed by SED only. That process is inappropriate. All parties will have the opportunity to analyze the IOU's RAPP filing.

After the RAPP filing, SED and all other interested intervenors may conduct discovery on the filing, analyze the proposals, and submit a final report and/or alternate proposals to be filed, served and moved into the record. These reports will then provide a diverse range of comment on the IOU's proposals and give intervenors a voice in the RAPP phase of the proceeding. The Commission strives for transparency and inclusiveness in redesigning the GRC process and would therefore not exclude intervenors from actively participating.

One of the most apparent challenges is simply identifying the risks of physical failure or impairment that may offer obstacles to achieving a safer and more resilient system – e.g. breakdowns in infrastructure such as old utility poles in high consequence areas; transformer failures that lead to fires; cybersecurity threats; aging workforce; pipeline failures; natural gas storage failures. The assessment process must be designed to identify and contextualize these risks so that stakeholders can provide, input, feedback and/or meaningful alternatives. We discussed at the initial workshops for this proceeding identifying/defining a risk taxonomy that comprehensively classifies the risks that a utility faces, develop and agree on a set of requirements for measuring risk, evaluate options and alternatives for mitigating risks, and validate a process for prioritizing risks mitigation opportunities. The Commission should, either through this proceeding or through actual RAPP filings, begin the process of creating a risk taxonomy/common lexicon.

a) GUIDING PRINCIPLES for developing risk-based regulations

Based on a review of several risk management processes, we have identified six guiding principles of risk management that can form the foundation for proactive risk-based regulation.

- Risks involve uncertainty about achieving objectives. The Commission must describe the objectives from the perspective of the public that uses utility service. These objectives include: avoiding injuries and damage caused by failure of utility facilities; avoiding injuries and damage

⁵ These are suggested categories that may be further defined as part of the RAPP

caused by actions of utility personnel; avoiding service interruptions caused by failure of utility facilities and utility personnel, and minimizing the duration of the service interruptions when they do occur; anticipating the impacts of natural disasters such as storms, earthquakes, fires, etc. and assuring a resilient and speedy restoration of service when they occur; reducing emissions of greenhouse gases and other forms of damage to the environment.

- 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.
- Risk is sometimes 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. *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 a the initial Phase of the GRC, is designed to elicit these three fundamental requirements of risk assessment and management in three steps:

1. Develop an objective hierarchy / risk taxonomy that identifies objectives and ranks threats,
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.⁶ This hierarchy has several benefits:

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

Initially developing and building out this hierarchy can be a challenge. The example hierarchy below does not include a comprehensive review of objectives, and will require input from IOUs and stakeholders about the systems and process used to manage their systems. Interveners must also have input into how core objectives should be weighted in this hierarchy. For example, workforce capacity and training would potentially be weighted under every single second tier objective. Alternatively, there should be a separate branch that addresses workforce size, training, demographics and prospective losses through retirement. Fundamentally the hierarchy is a tool for mapping core objectives to specific programmatic activities.

⁶ 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.

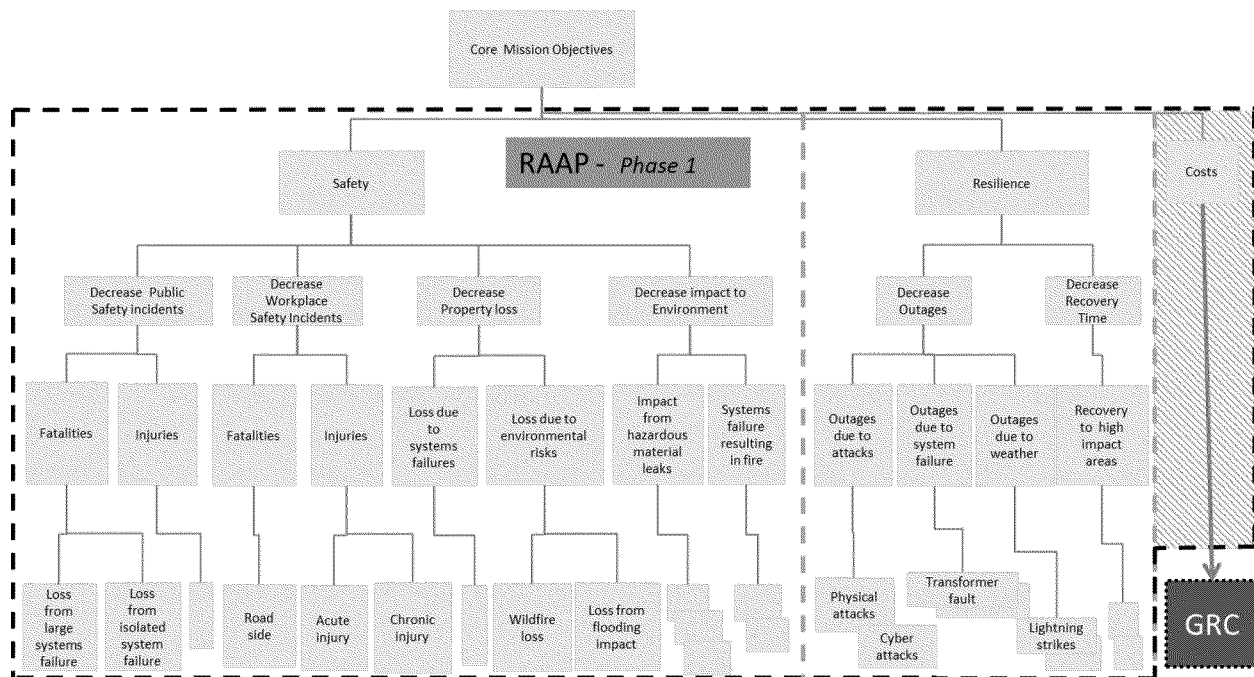


Exhibit 1: Notional diagram of an objective hierarchy –This is not a comprehensive review of objectives

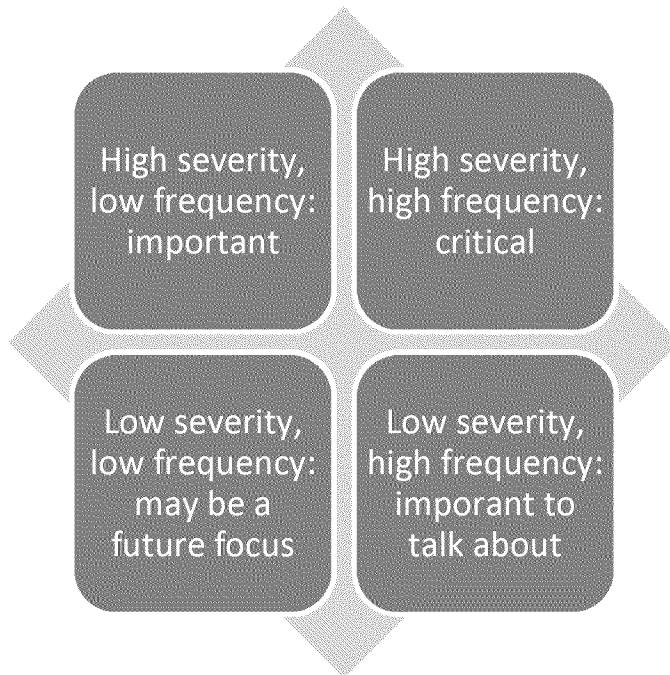
2. Program level risk reporting – Program evaluation

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 those projects within the GRC that can be analyzed through this mechanism. 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.

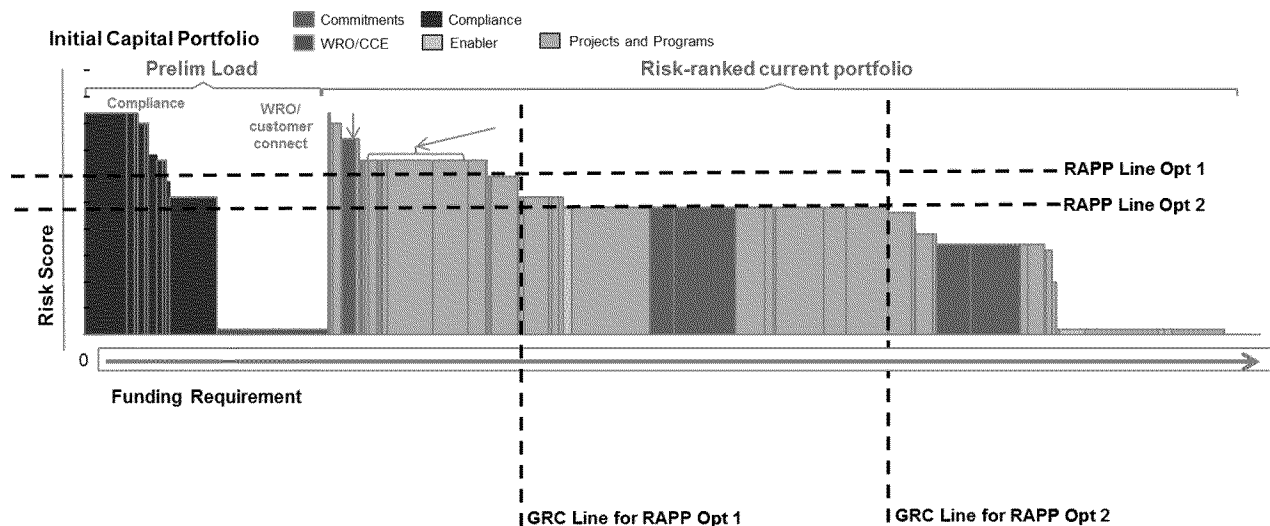
3. Portfolio segmentation & ranking graphic

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 analyzed 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.

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



TOP 10 RISKS:

- During workshops, the IOUs and Intervenor were tasked with identifying the top 5-10 risks for each IOU.

- Because of the residual effect of adequate workforce capacity and training on all safety and reliability issues, it should always be included as a top risk. The risks inherent to the entire system hinge on having (1) adequate staff to respond to risks and/or events; (2) adequate training to respond to risks; (3) adequate training to maintain the system integrity; and (4) adequate workforce to perform system maintenance, staff assigned to specific projects, and response to events.

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.

The important innovation of the RAPP will place the factors that impact safety and risk in the open where they can be accorded the focused, transparent and objective evaluation they deserve, rather than being embedded in the depths of massive utility GRC filings. It enables the public to get a sense of what they are paying in the rates and revenues at issue in the GRC.

Essentially, the GRCs are mainly 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 the Commission maintain the three-year GRC cycle. 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, maintaining the three-year GRC cycle will still require the Commission to be flexible in dealing with the differences between forecast and actual results. Extending the GRC cycle to four years would result in stale data and emerging risks as the IOUs will be required to identify and evaluate risks two years prior to the Revenue Requirement Phase filing. The schedule PG&E proposed at the workshops for incorporating the RAPP phase into the GRC is a good example of how the RAPP phase will not lengthen the GRC timeline. Feb. 1: RAPP Filing

⁷July 31: SED and Intervenor Reports/Analysis of RAPP filing

Oct. 1: Revenue Requirement Filing

Nov. 1: ORA determines Revenue Requirement Filing completeness

Dec. (following year): GRC Decision Issued

The risk assessment phase of the GRC should conclude 2 months before the next phase of the GRC addressing costs is filed.

As we move along this process, 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 \$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 next 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.

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 in whole is and will be an iterative process. We ask the utilities to file case studies using the RAPP process described above. The Commission will hold a three-day workshop to get stakeholder feedback and revise the proposal accordingly, or to incorporate new ideas. Once staff revises the proposal it will be re-issued and that's when we will ask for formal opening and reply comments which will be included as part of the record of this proceeding. We are not asking for comments prior to the workshop.