

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the  
Commission's Own Motion to Adopt New  
Safety and Reliability Regulations for Natural  
Gas Transmission and Distribution Pipelines  
and Related Ratemaking Mechanisms.

Rulemaking 11-02-019  
(Filed February 24, 2011)

**COMMENTS OF THE UTILITY REFORM NETWORK  
ON THE CPSD AND JACOBS CONSULTANCY REPORTS  
REGARDING PG&E'S PIPELINE SAFETY ENHANCEMENT PLAN**



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Pursuant to Ordering Paragraph No. 1 of the Assigned Commissioner's Ruling of December 21, 2011, the Utility Reform Network ("TURN") submits these limited comments on the Safety Division Report concerning PG&E's pipeline safety enhancement plan.

**1. The CPSD Reports Provide a Useful Summary of PG&E's Proposal, But Its Conclusions Are Limited by the Lack of Any Explained Independent Evaluation or Analysis**

On December 23, 2011 the Consumer Protection and Safety Division ("CPSD") filed its "Technical Report of the Consumer Protection and Safety Division Regarding Pacific Gas and Electric Company's Pipeline Safety Enhancement Plan" ("CPSD Report") and the accompanying "Assessment of Pacific Gas & Electric Company's Pipeline Safety Enhancement Plan" ("Jacobs Report") prepared by Jacobs Consultancy, Inc. The CPSD Report states that CPSD worked in collaboration with Jacobs Consultancy on the Jacobs Report.<sup>1</sup>

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<sup>1</sup> For this reason, TURN at times refers to both reports collectively as the "CPSD Reports."

The Jacobs Report provides a concise and useful summary of the elements of PG&E's Pipeline Safety Implementation Plan ("PSEP").<sup>2</sup> However, as discussed below, certain conclusions in the Jacobs Consultancy Report and the CPSD Report concerning the adequacy of PG&E's PSEP are not supported by any separate analyses or evaluations, calling into question the weight that should be given such conclusions.

In particular, the findings and conclusions in the portion of the Jacobs Report that purport to assess PG&E's pipeline modernization plan indicate considerable deference to PG&E's use of outside experts, rather than an independent analysis by the Jacobs Consultancy.<sup>3</sup> If such analysis was done, it is not explained. In addition, the Jacobs Report states that its only source of external information was PG&E, through interviews with PG&E employees. Although PG&E's use of outside experts appears important to the Jacobs Report, there is no indication that anyone spoke to those experts directly to confirm their scope of their involvement in the preparation of the PG&E plan.

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<sup>2</sup> The Jacobs Report fails to identify the person or persons who prepared the various portions of the report and their qualifications. TURN respectfully requests that CPSD and the Jacobs Consultancy provide this information.

<sup>3</sup> Jacobs Report, p. 25 (first and second bullets under Findings and first bullet under Conclusion).

This lack of explicit independent evaluation is in contrast to the extensive evaluation of PG&E's historical methods and practices contained in the recently released San Bruno Incident Investigation Report.<sup>4</sup>

TURN is thus unclear about the bases for the conclusions reached in the CPSD Reports, and we are concerned that the language implies greater validation of PG&E's analyses and outcomes than is warranted or perhaps intended. While these reports support PG&E's evaluation process and framework, we caution that they should not be relied upon to conclude that PG&E's specific analyses and proposed projects are the optimal method of identifying and mitigating pipeline risk threats.

TURN will be submitting our comprehensive testimony concerning PG&E's PSEP on January 31, 2012. For this reason, in these comments, we do not attempt to provide any comprehensive evaluation of the CPSD and Jacobs Reports. Rather, we highlight below some examples to illustrate the limitations of these reports as they relate to PG&E's specific PSEP proposals.

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<sup>4</sup> CPSD, Incident Investigation Report on the September 9, 2010 PG&E Pipeline Rupture in San Bruno, released January 12, 2012.

## **2. A Few Examples Illustrate the Limitations of the Conclusions in the Jacobs and CPSD Reports**

### **a. Pipeline Modernization Plan**

In the Executive Summary portion, the Jacobs Report concludes that PG&E's decision tree "provides a consistent and defined approach to validate threats ensuring that all decisions will be traceable and documented." (Jacobs, p. 9) The Jacobs Report cautions PG&E's existing GIS database "may not be accurate," so that the results should be updated and reviewed.

Chapter 5 of the Jacobs Report purports to provide findings, conclusions and recommendations regarding the pipeline modernization plan, based exclusively on a review of PG&E's testimony, as augmented by an interview with two PG&E witnesses. (Jacobs, p. 20.)<sup>5</sup> The "Discussion" Section (Section 5.1) of the Report provides a useful and succinct summary of PG&E's plan, including its decision tree, but it does not constitute analysis. The "Findings" Section (Section 5.2) of the Report further summarizes PG&E's process and plan, again without engaging in analysis. The "Conclusion" section (Section 5.3) summarily concludes that PG&E's process "is well defined, consistent and [will] ensure that all decisions will be traceable and documented," and that PG&E uses "industry accepted and proven methods to establish a margin of pipeline safety." (Jacobs, p. 25). Presumably based on the Jacobs Report, the CPSD report states that

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<sup>5</sup> It is unclear whether the review included even a review of PG&E's workpapers for pipeline modernization, or just the attachments to the testimony.

PG&E's "decision tree framework makes an appropriate assessment of risks, and logically identifies when to replace versus pressure test segments . . ."6

TURN is unsure whether CPSD is concluding that a deterministic decision tree process is an appropriate tool for choosing the proper evaluation/remediation method, or whether CPSD is endorsing the actual criteria, assumptions and outcomes embedded in and resulting from PG&E's decision tree. Aside from a detailed description largely copied from PG&E's testimony, there is absolutely no independent discussion of how PG&E's particular choices reflected in its decision tree relate to industry standard practices for identifying and remediating the relevant threat factors.

Accordingly, such unsupported conclusions reached by Jacobs and CPSD based only on a reading of the testimony are at best premature, and should *not be used to conclude that PG&E's entire pipeline modernization program is appropriate as filed*. Neither Jacobs nor CPSD appear to have conducted any independent evaluation to ascertain whether PG&E's decision tree evaluative criteria and results address all relevant threats, and whether its decision tree outputs result in

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<sup>6</sup> CPSD, p. 2.  
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the most optimal and cost-effective choices between pipeline assessment (hydrotesting or ILI) or pipeline replacement work.<sup>7</sup>

For the past four months, TURN and its expert consultants have been examining PG&E's workpapers, which provide additional details on the approximately 350 replacement and testing projects included in the pipeline modernization program. TURN has been examining PG&E's spreadsheet detailing the characteristics of over 26,000 pipeline segments. TURN has conducted discovery to ascertain historical and current pipeline replacement, testing and inspection practices.

TURN suggests that the output of PG&E's decision tree is flawed not only due to data inadequacies, but also due to certain deficiencies in the decision tree itself. While our full evaluation will be presented on January 31, we provide just a few examples of how PG&E's decision tree and proposed plan may be deficient:<sup>8</sup>

- Decision Tree Step M2 - PG&E's decision tree steps 1C, 1D, 1H and 1J result in a deterministic outcome that any pre-1970 pipe segment that is not seamless or DSAW pipe is immediately replaced if it operates at above

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<sup>7</sup>On the positive side, the CPSD Report does contain some analysis of the problems posed by PG&E's lack of accurate data regarding its pipeline system. (CPSD Report, pp. 2-3).

<sup>8</sup> TURN's examples are necessarily brief, as we are still developing our testimony, which will provide a fuller explanation of our concerns with PG&E's decision tree.



30% SMYS and there is no hydrotest record. The result is that approximately 100 miles of the 186 miles proposed for replacement in Phase 1 are defined by Step M2. The characteristics and threat risks of pipeline segments that result from Step 1D and flow through to Step 1J should be analyzed more carefully to ascertain the proper evaluation tool for the risk threat being addressed or mitigated. The more optimal plan may include more hydrotesting rather than immediate replacement.

- Decision Tree Step 2C – PG&E’s “Engineering Condition Assessment” does not provide sufficient detail to evaluate the validity of this process step.
- Decision Tree Point 2F and 2G – PG&E concludes that a hydrotest is necessary and sufficient to evaluate the existence of a fabrication threat. PG&E’s conclusion is questionable. At least for lower pressure pipelines, a leak survey and loading analysis may be an appropriate response.
- Decision Tree Step C2 – PG&E proposes to hydrotest pipe in urban areas that has not been tested, operates at >30% SMYS, and has corrosion or third party damage threat. For such pipe, in-line inspection may be the superior inspection method, depending on the piggability of the pipe.

**b. Valve Automation**

Similar to the pipeline modernization section, the Jacobs Report provides a good summary of PG&E’s proposed valve automation program. Once again, however, there appears to be no independent analysis of the underlying assumptions and choices embedded in PG&E’s decision tree to determine whether PG&E’s approach is optimal, both for safety and cost effectiveness.

The Jacobs Report provides four recommendations for additional evaluation and analysis, but provides no recommendations for changes to the program.<sup>9</sup> Any conclusions as to the validity or appropriateness of PG&E’s valve automation program based on the Jacobs Report are entirely premature.

The CPSD Report provides additional discussion of certain issues concerning valve automation. CPSD explains that greater use of ASV valves would allow for a larger spacing to achieve the same blow down time, resulting in fewer valves. CPSD does not directly address PG&E’s “analysis” of ASV valves, but concludes that “[i]f the CPUC is willing to accept some risk of false closure, the number of automated valves proposed in the PSEP could be reduced with the installation of ASVs....” (CPSD Report, p. 5.)

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<sup>9</sup> Jacobs recommends annual review of the “state of technology on ASV valve error rates,” so as to evaluate the potential for future change from RSV to ASV mode for some unstated number of valves.

TURN provides the following examples of potential deficiencies in PG&E's plan, neither of which are addressed in the CPSD Report, which we shall address further in our testimony:

- PG&E does not intend to automate any valves in Class 1 and 2 locations, unless they are automated incidentally to address adjacent Class 3 and 4 locations. TURN will address the need to automate certain pipelines in Class 1 and 2 HCA locations.
- PG&E uses the Potential Impact Radius both to identify pipelines for automation, and to prioritize replacement schedules. TURN suggests that an analysis of heat flux impact radius is a more appropriate tool than just PIR calculation, and results in a different choice and prioritization for pipeline automation.
- PG&E intends to configure automated valves as Remote Control Valves, rather than Automatic Shut-off Valves, except for certain earthquake crossing. TURN suggests that the concern about false closures of ASV's is overblown, and that PG&E should install ASV's on certain large diameter pipelines.

**c. Records Integration and Project Management**

TURN does not provide any comments on these sections of the Jacobs Report at this time, as we have thus far focused our evaluation on the pipeline and valve-related components of PG&E's plan.

#### **d. Cost Sharing**

The Jacobs and CPSD Reports do not explicitly address PG&E's proposal for "cost sharing," which is to have shareholders cover the approximately \$220 million forecast cost of work conducted in 2011 and ratepayers cover the remaining \$2 billion in costs. Nevertheless, the Jacobs Report does make two recommendations relating to cost sharing. It concludes that PG&E should bear the costs of any hydrotesting of pipe installed between 1961 and 1970 that is missing the records of the original hydrotest that was required pursuant to General Order 112. (Jacobs Report, p. 9) It also concludes that, as part of the MAOP validation process, PG&E will have to revise or reinput data into the GIS system due to existing data deficiencies. The Jacobs Report concludes that "to some extent the expense associated with originally populating the GIS will need to be duplicated," though the Report makes no specific recommendation concerning shareholder contribution. (Jacobs Report, pp. 13, 46.)

TURN does not at all disagree with these two limited observations related to shareholder contributions. We presume that these examples do not illustrate or confine CPSD's conclusions, if it has any, concerning a proper amount of shareholder sharing. We note that CPSD proposed much more specific and serious examples of potential shareholder contributions in its January 12<sup>th</sup> "Incident Investigation Report" concerning the San Bruno explosion. In that Investigation Report, CPSD recommended that *prior to seeking additional ratepayer*

*funding* for transmission pipeline and storage expenditures, PG&E should first use the \$39,257,000 previously authorized for O&M in 1997-2010 but unspent, the \$95,372,000 previously authorized for capital in 1997-2010 but unspent, and the \$429,841,000 in earnings above authorized collected in 1999-2010. (CPSD Investigation Inspection Report, p. 168.)

TURN intends to provide a comprehensive proposal concerning shareholder contribution, based on a review of past practices and spending and an evaluation of increased costs, in our testimony.

### **3. Conclusion**

TURN appreciates the useful summary of PG&E's plan in the Jacobs Report. We find interesting the discussion concerning valve automation in the CPSD Report. However, we are troubled by the implication in certain conclusory sentences that these Reports appear to rubber stamp PG&E's entire proposal. The Reports do not provide any explanation or description of any independent evaluation or analysis. Thus, any conclusions reached in these Reports should be considered extremely preliminary. TURN intends to evaluate certain components of PG&E's plan in our direct testimony due on January 31, 2012.

January 13, 2012

Respectfully submitted,

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