DIVISION OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report on the Application of Southern California Gas Company to Establish a Biogas Conditioning and Upgrading Services Tariff

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I. INTRODUCTION AND BACKGROUND

This exhibit presents the analysis and recommendations of the Division of Ratepayer Advocates (DRA) regarding the Southern California Gas Company’s (SoCalGas) Application (A.) 12-04-024, the Application of Southern California Gas Company to Establish a Biogas Conditioning and Upgrading Tariff (Application). The Application, filed on April 25, 2012, seeks authorization for a new biogas conditioning and upgrading tariff to serve non-residential customers who wish to upgrade raw biogas to biomethane. DRA developed this analysis pursuant to the Ruling and Scoping memo of the Assigned Commissioner and Administrative Law Judge issued on December 28, 2012.

SoCalGas proposes to build, own, operate and maintain biogas conditioning and upgrading equipment on customer premises in order to upgrade raw biogas to biomethane suitable for pipeline injection or for on-site use. SoCalGas has identified a number of potential customer classes producing sufficient raw biogas to require upgrading services; such as dairy farms, wastewater treatment plants, landfill diversion, and food/green waste producers.¹

SoCalGas’ Opening Testimony states that it seeks to provide such services in response to customer demand and inquiries.² SoCalGas claims that the proposed tariff supports state policy in regard to environmental and Renewable Portfolio Standard (RPS) goals, and that these environmental benefits to ratepayers justify the proposed tariff program.³ SoCalGas claims that the tariff is designed to capture and recover all costs associated with provision of the upgrading and conditioning service and that as such there would be no net increase in rates.⁴ SoCalGas claims that they intend to reimburse any embedded ratepayer funded resources used in

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¹ SoCalGas Opening Testimony, Chapter II, pp. 6, 8-9.
² SoCalGas Opening Testimony, Chapter I, pp. 2, 12-13.
³ Attachment 1, DRA Data Request 1, Question 1.
⁴ SoCalGas Opening Testimony, Chapter II, pp. 3, 11-12.
providing the tariff and that the risk to ratepayers is minimal. SoCalGas did not elect to request funding for the proposed Biogas Conditioning and Upgrading services Tariff in its 2012 General Rate Case (GRC). At this time there is no Sempra affiliate attempting to provide this conditioning service. Neither authorized base margin nor general base rates in the GRC Application include the proposed tariff.

The Scoping Ruling identified 11 factual and legal issues for resolution in this proceeding, as follows:

- Should the Commission grant approval to SoCalGas to establish a biogas conditioning and upgrading services tariff?
- Should an unregulated affiliate subject to the Commission’s adopted affiliate transaction rule be approved to establish a biogas conditioning upgrading services tariff?
- How does SoCalGas’ proposed tariff affect market competition?
- Is it beneficial and useful for SoCalGas to provide biogas conditioning and upgrading services to its customers?
- Are there any environmental benefits and environmental costs of the biogas conditioning and upgrading services?
- Are any of these environmental benefits unique to SoCalGas’ offering?
- Will the biogas conditioning and upgrading services aid in obtaining California environmental goals, including its Renewables Portfolio Standard (RPS) goals?
- What will be the risks to ratepayers if the instant Application is granted?
- What will be the benefits to ratepayers if the instant Application is granted?
- What will be the risks to shareholders if the instant Application is granted?

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5 Attachment 1, DRA Data Request 1, Question 10.
• What will be the benefits to shareholders if the instant Application is granted?  

Further, the Scoping Ruling identified the following issues raised in DRA’s protest as within the scope of the proceeding:

• What is the impact on this Application of the Commission’s alleged rejection of SoCalGas’ request in Advice Letter (AL) 4172 to provide biogas conditioning?

• Are there any differences between the instant Application and the biogas conditioning program that SoCalGas has before the Commission in the San Diego Gas & Electric Company (SDG&E) and SoCalGas General Rate Case Test Year 2012 (Applications A.10-12-005/006)?

• Is the instant Application related to the SoCalGas Application 11-11-011 (Natural Gas Compression Service Tariff) and the SoCalGas AL 4337 (Compression Services Agreement with Los Angeles Unified School District)? If so, how will the decisions in these related cases affect the outcome of the instant Application?

Finally, the scoping memo requested that testimony address the impact of AB 1900 and the associated Rulemaking on the Application. Consistent with the Scoping Ruling, DRA’s report addresses herein each of the issues identified above.

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6 A.12-04-024 Scoping Ruling; p. 3.
7 Ibid. p.4.
II. SUMMARY OF DRA RECOMMENDATIONS AND FINDINGS

The following summarizes DRA’s recommendations:

1. DRA recommends that the Commission deny SoCalGas’ Application without prejudice to the utility providing such service through an unregulated Sempra affiliate.

2. Should the Commission choose to allow SoCalGas to enter directly into this market, DRA recommends that any resulting program be subject to the ratepayer protections outlined in section H of this report, including the following:
   1. Any investments made through the Tariff should be excluded from ratebase.
   2. Tariff customers should bear all costs and all risks arising from the tariff, and non-participating ratepayers should not bear any cost or risk.
   3. SoCalGas should be required to establish balancing and tracking accounts consistent with those required in D.12-12-037 to ensure that non-participating ratepayers do not subsidize the program.
   4. The Commission should put in place other protections against anti-competitive behavior on SoCalGas’ part consistent with those in D.12-12-037.

DRA’s analysis of SoCalGas’ A.12-04-024 shows:

1. SoCalGas has failed to meet its burden of proving any substantive ratepayer benefit resulting from the proposed tariff.

2. SoCalGas’ market power in any unregulated and competitive energy or gas related market is potentially substantial, and as such any proposal by the utility to enter such markets should be subject to a high level of scrutiny. Should a monopoly utility wish to enter such a market the appropriate way to do so is through an unregulated affiliate.
3. The economics of biogas production are uncertain, the industry faces challenges finding a sustainable business model, and the potential for project failure is substantial.

4. The sole beneficiary of the proposed tariff is SoCalGas shareholders, while the majority of the proposal’s risk accrues to ratepayers.

5. Entering into the business of gas processing opens SoCalGas to the potential for substantial liability in the event contaminants enter the gas stream. In such an event SoCalGas as the conditioner would be responsible to SoCalGas as the gas deliverer for the contaminants. SoCalGas as the gas deliverer is the entity responsible for setting standards for gas injected into the pipeline. SoCalGas ratepayers could face limited recourse in seeking compensation for damage to pipeline integrity, customer premise appliances, or customer health.

6. SoCalGas refers to the ratemaking proposed in the Application as “traditional utility ratemaking.”\(^8\) As the proposed tariff is outside of SoCalGas core distribution business and as SoCalGas has failed to meet the burden of showing any ratepayer interest served by the tariff this ratemaking treatment is not appropriate.
   a. It is not appropriate for SoCalGas to recover in rates at any point any costs associated with the proposed tariff.
   b. It is not appropriate for SoCalGas to use any level of uncompensated ratepayer funded utility staff or assets.
   c. It is not appropriate that compensation for ratepayer resources used in provision of the tariff be rolled into existing balancing accounts. Further, a two way balancing account is not appropriate as the account

\(^8\) Attachment 3, DRA Data Request 3, Question 6.
exists solely to compensate ratepayers for use of embedded resources.
III. DISCUSSION

A. It is Not Appropriate for a Monopoly Utility to Enter Directly into an Unregulated Competitive Market

Through this application, SoCalGas asks to be allowed to enter into an unregulated competitive market. SoCalGas seeks to finance, build, maintain, and operate on customer premises the equipment required to enter that market; equipment which is outside of the utility’s core competency. Approving the proposed tariff would run counter to the great body of Commission precedent and culture seeking to foster competitive markets. Commission policy has long been strongly supportive of bringing more competition into regulated markets, while protecting competition in unregulated markets. The Commission should not approve the instant application as it would stifle competition in a currently unregulated market.

The Commission has previously considered when and how monopoly energy and gas utilities should be allowed to compete in unregulated markets, and determined that utilities seeking to provide products or services in unregulated markets should do so through an affiliate and in accordance with the affiliate transaction rules. The affiliate rules were crafted after careful consideration of the detrimental effect that a monopoly utility’s inherent market power could bring to competitive markets. The market power borne by SoCalGas is potentially significant; and far from ‘jump-starting’ the market as SoCalGas claims, would instead stifle competition and crowd out private investment.

1. Monopoly Utilities Seeking to Enter Unregulated and Competitive Markets Must Do So through an Unregulated Utility Affiliate

If a corporation such as Sempra with a regulated monopoly like SoCalGas seeks to compete in an unregulated market, the proper vehicle to do so is through an unregulated affiliate of its holding company (i.e. Sempra). The proposed biogas conditioning and upgrading service should be pursued through a Sempra affiliate rather than the regulated utility. To do so would realize any potential environmental benefits resulting from the service without significant risk to ratepayers and without undermining the development of a competitive biogas services market.
The affiliate rules were designed to minimize the effects of a monopoly utility’s inherent market power on unregulated, competitive markets. SoCalGas proposes in the instant application that the Commission accept that cost tracking and ratepayer reimbursements will properly insulate both the competitive market from monopoly derived market power and ratepayers from subsidizing the proposed tariff. The Commission has previously considered and rejected as inadequate this type of arrangement.

The Commission explained its reasoning behind developing the affiliate rules in D.97-12-088, stating that when markets were less competitive, it had largely relied upon the corporate separation of the regulated and unregulated entities and some cost accounting measures to protect against anti-competitive behavior… With the advent of the marketplace characterized by increasing competition, we wish to ensure that utilities’ market power does not discourage competition.\(^9\)

The Commission chose “to adopt rules that generally require more separation between a utility and its affiliate, rather than rely almost exclusively on tracking costs”\(^10\) as is proposed by SoCalGas in the instant Application. It was recognized that relying on cost tracking solely to protect competitive markets had proven both prone to abuse and difficult to monitor. The Commission held that “rules that rely more upon separation and less on cost accounting solely, can minimize the likelihood of abuses. At the same time, rules that rely upon separation are easier to monitor than rules that primarily rely on a multitude of reporting requirements.”\(^11\)

The Commission held that new products and services should be offered through an affiliate, and stated that “We do not wish to adopt a mechanism by which the utility can circumvent the rules we adopt today by offering the products or services itself instead of through an affiliate.”\(^12\) This is precisely what SoCalGas proposes in the instant application. SoCalGas is circumventing the Commission’s

\(^{9}\) 1997 Cal. PUC LEXIS 1139, p.17  
\(^{10}\) 1997 Cal. PUC LEXIS 1139, p.18  
\(^{11}\) 1997 Cal. PUC LEXIS 1139, p.167; FoF #6  
\(^{12}\) Ibid. *175; FoF 40.
Affiliate Transaction Rules and requesting that the Commission allow it to offer these services directly. The Commission should deny this request.

2. SoCalGas’ Market Power in Energy and Gas Related Markets is Significant

The Commission has previously established that a utility can have market power even with regard to a service not yet offered by the utility. In fact the Commission has specifically established in the 1995 SoCalGas Performance Based Ratemaking (PBR) decision that there is a very real possibility of SoCalGas in particular having significant market power in the energy and natural gas field.

We also note SoCal's argument that the Commission should presume that if SoCal does not currently offer a service, it cannot have market power with respect to it, and it is therefore a competitive service. By the very nature of SoCal's monopoly position in the energy and energy services market, its access to comprehensive customer records, its access to an established billing system, and its "name brand" recognition, it may be that SoCal enjoys significant market power with respect to any new product or service in the energy field.13

In addition to the sources of market power identified by the Commission in the PBR decision, there are a number of other areas of concern in which SoCalGas' proposal could lead to abuses of market power through the use of monopoly utility resources in the unregulated gas processing market.

- **Ratepayer Funded Utility Staff**14– SoCalGas proposes to use existing utility staff authorized in rates to support the tariff, but acknowledges the possibility of having to hire new staff in order to administer the tariff.15 Those new staff will cause significant incremental costs to ratepayers. SoCalGas claims that all incremental costs will be

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13 1997 Cal. PUC LEXIS 751, p. 110

14 DRA analysis of the data contained in Data Request 2 Question 6 (Attachment 2) indicates that if projects commence under the proposed tariff at the conservative rate of 2 per year, by the third year the equivalent of 4.14 full time staffers will be working on the biogas tariff. SoCalGas has indicated that there is potential for “roughly 20 projects in SoCalGas service territory over the next 5-10 years.” Spread over 10 years, those 20 projects would require 7.36 full time equivalent staffers. Spread over 5 years, they would require 10.12 full time staffers.

15 Attachment 2, DRA Data Request 2, Question 6.
recovered through the biogas tariff, but this depends on the accuracy and veracity of SoCalGas’ record keeping to avoid ratepayer subsidy, and does not account for the indirect costs to ratepayers of hiring and training new staff dedicated to implementing the tariff.

- **Ratepayer Funded Insurance Policy** – Ratepayers have already paid for SoCalGas’ insurance, and any liability caused by projects built under the proposed tariff would rely on this existing insurance. SoCalGas has stated in response to DRA discovery that “[t]o the extent that biogas-related claims increase our self-insured retention costs or insurance costs, there could be a related change to the cost forecasts we present to the CPUC in future GRCs.” In other words, should a liability arise from the biogas tariff which increases SoCalGas’ insurance costs, SoCalGas would seek to recover the increase in rates.

As outlined in Section F below, in this case the liability issue is much more significant with SoCalGas seeking to enter directly into the business of gas processing and production. Such an arrangement blurs the lines of responsibility and liability for any potential incidents involving improperly conditioned gas affecting pipeline quality, integrity, or safety, as well as the health and safety of end use customers. In any such incidents that may occur in conjunction with the proposed service, there could be substantial liability involved.

- **SoCalGas’ Brand Equity** – The Commission has previously held that a Utility’s brand equity can be considered a competitive advantage through “name brand recognition.” The Commission has adopted protections in the affiliate rules to prevent abuses, finding that “joint use of a name and logo, will promote customer confusion by allowing

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16 Attachment 2, DRA Data Request 2, Question 3.
17 1997 Cal. PUC LEXIS 751, p. 110
affiliates to capitalize on the public perception that their products are closely associated with the regulated utility’s.”

In addition there is a possibility that by having utility staff administering the new service, customers may take this as an implicit assurance that produced biomethane will meet SoCalGas’ safety standards, expressed, in part, in Rule 30.

- **Customer Information not Available to Competitive Enterprises –** SoCalGas will be aware of the amount of biogas being injected into the utility distribution system from every biogas producer in SoCalGas service territory. Such information could allow SoCalGas to undercut competitors, target sales leads, and cherry pick biogas conditioning customers.

- **Advanced Knowledge of Any Biogas Producer Seeking Pipeline Access –** Any independent producer of biogas seeking to upgrade and inject conditioned biogas into the utility distribution system must first seek permission to do so from SoCalGas by entering into a utility access agreement in accordance with SoCalGas Tariff Rule 39. This would provide SoCalGas with a competitive advantage in that SoCalGas would be fully aware of the parameters of any competitor’s biogas project at a very early phase in project development. Such information would provide SoCalGas with an advantage by providing sales leads for potential projects.

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18 1997 Cal. PUC LEXIS 1139, p. 171; FoF 25


3. It is Not Appropriate for a Monopoly Utility to Use Ratepayer Funds to “Jump Start” an Unregulated Market

In supplemental testimony SoCalGas asserts that the biogas market in California is “at a virtual stand-still,” and therefore the market requires a “jump start.” This characterization of the market is an oversimplification and one for which SoCalGas provides no evidence. The biogas market is in its infancy and will evolve over time. SoCalGas’ solution to this is to use ratepayer funding to “jump start” the market, but this could cause substantial damage to the prospects of a competitive market developing. Changes to law and policy are currently being made regarding biogas production; and to allow utility entrance now would undermine these efforts and preclude the evolution of the market.

In making its proposal to “jump start” the biogas market, SoCalGas neglects to mention that the utility has attempted to “jump start” a market before. The result was an ongoing ratepayer subsidy that undermined market competition to the point where the Commission ordered SoCalGas out of the market. In the 1990’s SoCalGas invested significant sums of ratepayer money in customer premise retail natural gas vehicle refueling stations. In 1995, the Commission ordered SoCalGas to divest its refueling facilities on customer premises using reasoning that can be equally applied in the instant proceeding: “The use of regulated monopoly funds for the development of a private business in this emerging market raises the potential for unfair competition.” The Commission ordered SoCalGas to divest its refueling assets on customer premises within six years. After investing roughly $40 million in refueling stations, SoCalGas then sold those stations for $2.7 million resulting in a total loss to ratepayers of roughly 93%, or $37.3 million. If SoCalGas is allowed to place biogas conditioning equipment on customer premises into ratebase, SoCalGas’ attempt to ‘jump-start’ the biogas processing industry could well result in

21 Supplemental Testimony of Jeffrey Reed; p. 5, 1.
22 Ibid; 5, 11-12.
23 1995 Cal. PUC LEXIS 978, p. 172; FoF 94. .
a similar loss to ratepayers. Beyond that, the use of regulated monopoly funds in the
development of private biogas businesses would serve to deter private investment in
the industry, stunting both market growth and the growth of technical expertise in
biogas production and processing by entities more suited to provide such services.

B. Public Utilities Code §740.8 Does Not Support the Proposed
   Tariff because the Tariff does Not Encourage Infrastructure
   Development for Low Emission Vehicles

SoCalGas claims that the Public Utilities (PU) Code § 740.8 supports the Application.\(^{25}\) This claim is based on an inaccurate interpretation of the
Public Utilities Code. PU Code § 740.8\(^{26}\) only refers the interests of ratepayers
within the context of PU Code §740.3.\(^{27}\) PU Code §740.3, in turn, charges the

\(^{25}\) See, Attachment 1, DRA Data Request 1, p. 1, which confirms that SoCalGas is relying on PU Code § 740.8.

\(^{26}\) PU Code § 740.8 states:

As used in Section 740.3, "interests" of ratepayers, short- or long-term, mean direct
benefits that are specific to ratepayers in the form of safer, more reliable, or less
costly gas or electrical service, consistent with Section 451, and activities that benefit
ratepayers and that promote energy efficiency, reduction of health and environmental
impacts from air pollution, and greenhouse gas emissions related to electricity and
natural gas production and use, and increased use of alternative fuels.

\(^{27}\) PU Code §740.3 provides, emphasis added:

(a) The commission, in cooperation with the State Energy Conservation and
   Development Commission, the State Air Resources Board, air quality
   management districts and air pollution control districts, regulated electrical and
   gas corporations, and the motor vehicle industry, shall evaluate and implement
   policies to promote the development of equipment and infrastructure needed
   to facilitate the use of electric power and natural gas to fuel low-emission
   vehicles. Policies to be considered shall include both of the following:

   (1) The sale-for-resale and the rate-basing of low-emission vehicles and supporting
       equipment such as batteries for electric vehicles and compressor stations for
       natural gas fueled vehicles.

   (2) The development of statewide standards for electric vehicle charger connections
       and compressed natural gas vehicle fueling connections, including installation
       procedures and technical assistance to installers.

(b) The commission shall hold public hearings as part of its effort to evaluate and
    implement the new policies considered in subdivision (a), and shall provide a
    progress report to the Legislature by January 30, 1993, and every two years
    thereafter, concerning policies on rates, equipment, and infrastructure

(continued on next page)
Commission, in consultation with other agencies, to promote the development of infrastructure for low emission vehicles. SoCalGas’ application does not satisfy the purpose of PU Code § 740.3. More importantly, § 740.8 has no bearing on this application because the ratepayers’ “interest” cited in this section only refer to benefits that ratepayers would gain through the promotion of infrastructure for low emission vehicles, as stated in §740.3.

The entirety of the policy rationale given to DRA by SoCalGas’ for using ratepayer funds in support of the proposed service hinges on it being within the definition of ratepayer interest in PU Code § 740.8. As this definition clearly applies only to PU Code § 740.3, and as the proposed service does not speak to the furtherance of the adoption of low emission vehicles, neither PU Code §§ 740.8 nor 740.3 justify authorizing SoCalGas to offer the proposed biogas conditioning service.

C. The Environmental Policy Goals Cited by SoCalGas are Generic in Nature and are not limited to SoCalGas Offering the Proposed New Service

State and local environmental policy goals do not constitute a blank check for SoCalGas to use ratepayer funds or dominate a market in pursuit of any initiative which might possibly mitigate GHG or other emissions. While SoCalGas cites a number of environmental policies which are supportive of Biogas and Bioenergy in the abstract, none of the policies support ratepayer subsidies or the exercise of monopoly power. There are other options to offer the same environmental benefits

(continued from previous page)

implemented by the commission and other state agencies, federal and local governmental agencies, and private industry to facilitate the use of electric power and natural gas to fuel low-emission vehicles.

(c) The commission's policies authorizing utilities to develop equipment or infrastructure needed for electric-powered and natural gas-fueled low-emission vehicles shall ensure that the costs and expenses of those programs are not passed through to electric or gas ratepayers unless the commission finds and determines that those programs are in the ratepayers' interest. The commission's policies shall also ensure that utilities do not unfairly compete with nonutility enterprises.
that a) do not place ratepayers at risk as in this proposal; b) do not create monopoly domination of a market; and c) do not create the same conflicts of interest and liability issues as the instant Application.

SoCalGas agrees that none of the environmental benefits claimed in Opening Testimony are unique to the proposed service, stating that “these benefits are not solely unique to SoCalGas’ tariff offering. Any customer or third party service provider who is interested in conditioning/upgrading biogas may realize the same environmental benefits.” The environmental benefits provided by the tariff are societal in nature and could be provided by any entity providing such service. The gas processing market is not a natural monopoly, the biogas production market requires no monopoly utility entrance. As established above, these environmental benefits are the sole benefit to ratepayers claimed by SoCalGas from the proposed tariff.

California’s GHG emission reduction goals do not abrogate SoCalGas’ responsibility to ratepayers to maintain the lowest possible rates consistent with safety and reliable service. SoCalGas cites AB 32’s GHG reduction goals as a support for the proposed tariff. However, the language in AB 32 calls for the “maximum technologically feasible and cost-effective reductions in greenhouse gas emissions.” SoCalGas does not speak to the cost-effectiveness of biogas conditioned though the tariff relative to other sources of GHG emission reduction. AB 32 does not endorse specific emissions reduction methods or technologies. As discussed in Section D of this report, the cost effectiveness of biogas relative to other emissions reductions is currently unproven.

SoCalGas cites the California Energy Commission’s (CEC) 2011 Bioenergy Action Plan’s (BAP) conclusion that bioenergy programs can provide significant GHG reduction benefits. This fact is not in dispute in this proceeding. SoCalGas is taking a policy generally supportive of emission reductions and claiming it supports its proposed tariff. Each of SoCalGas’ citations to the report are passages speaking

28 Attachment 2, DRA Data Request 2, Question 2.
29 AB 32, 38561(a).
of bioenergy in general, none speak to the specific challenges involved in developing biogas. The 2012 edition of the BAP speaks to the specific tariff in question, stating that the commission should “assess the proposed SoCal Gas tariff for biogas conditioning and pipeline injection to determine whether this is an effective and efficient means for increasing pipeline injection of biomethane.” This is not an endorsement, rather it asks the Commission to consider the issue. As outlined in this report, there are serious concerns as to whether this proposal can in fact be ‘effective and efficient’ as called for in the CEC’s report. If SoCalGas is unable to offer the service without ratepayer subsidy, and without exercising market power, then it is not the most effective or efficient way to encourage robust biogas production in California.

The BAP states that “If this method is not effective, [the Commission should] initiate a public process to identify barriers to injecting biogas and landfill gas into the California natural gas pipeline and implement actions to address these barriers.”

The Commission has recently opened a rulemaking (R.13-02-008) to does so. As will be outlined in Section G of this report, the ongoing rulemaking makes it premature to authorize SoCalGas to condition gas to standards which have yet to be determined.

SoCalGas claims that the proposed tariff will help California attain the bioenergy goals outlined in the CEC’s 2011 Integrated Energy Policy Report (IEPR). SoCalGas quotes the report’s finding that “One of the most daunting barriers renewable energy project developers face at every level is the high upfront cost.” This quote does not refer specifically to biogas or even to bioenergy, but to renewables as a whole. As outlined in section D of this report, the strongest impediment to developing biogas in California is the current low price of natural gas.

31 Ibid. 29.
33 SoCalGas Opening Testimony, Chapter I, p. 13, 14-15.
This factor keeps biogas from being cost competitive with non-renewable natural gas and other renewables. Issues involving upfront costs and financing constitute only a portion of the many current barriers to biogas production in California, and tellingly, is not an impediment to biogas production singled out in the IEPR.

SoCalGas attempts to rely on the State’s RPS rules, and the South Coast Air Quality Management Rule 1110.2. In both cases the policy support is generic in nature and does not support the specific tariff proposal in SoCalGas’ Application. The fundamental issues in this proceeding are not about the importance of biogas in general or the state’s environmental goals. These goals may be met in any number of ways, and are not dependent on the instant Application. In fact Pacific Gas & Electric (PG&E) has filed an advice letter\footnote{AL 4193-E. \url{http://www.pge.com/nots/rates/tariffs/tm2/pdf/ELEC_4193-E.pdf}; accessed 2/22/2013.} with this Commission to enter into Power Purchasing Agreements (PPA)\footnote{PG&E is Requesting to enter into PPAs for RPS eligible bioenergy from two projects, Stockdale and Old River. The Stockdale PPA has a capacity of 0.6 MW and a term of 10 years. The Old River PPA has a capacity of 1.84 MW and a term of 15 years.} with two dairy waste biomethane projects, which will use anaerobically digested dairy waste to generate electricity. The agreements being sought by PG&E will provide every environmental benefit (similar to those that SoCalGas suggests its tariff offers) without putting ratepayers in the same risk, without placing the facilities into ratebase, and without concentrating market power.\footnote{The PPAs are designed so that the cost of the facilities are not ratebased and ratepayers only pay for the energy delivered by the facility. If the facility does not produce energy or is shuttered before the end of the term of the PPA ratepayers do not pay. In SoCalGas’ proposal, ratepayers would end up paying for the facility in either of these situations.} The facilities that PG&E seeks to contract with are privately owned and do not rely on ratebased capital or embedded utility resources as SoCalGas’ tariff does.\footnote{DRA has not at this time taken an official position on the pending advice letter; it is included herein to demonstrate that promoting biogas need not require utility ownership of biogas facilities.}

There are better ways to meet the State’s bioenergy goals. In the tariff proposal at hand, an incumbent IOU seeks both to use ratepayer money to compete in an unregulated market and to process and produce rather than simply distribute gas. Each of these issues represents a material change to standing Commission policy.

\textsuperscript{35} PG&E is Requesting to enter into PPAs for RPS eligible bioenergy from two projects, Stockdale and Old River. The Stockdale PPA has a capacity of 0.6 MW and a term of 10 years. The Old River PPA has a capacity of 1.84 MW and a term of 15 years.
\textsuperscript{36} The PPAs are designed so that the cost of the facilities are not ratebased and ratepayers only pay for the energy delivered by the facility. If the facility does not produce energy or is shuttered before the end of the term of the PPA ratepayers do not pay. In SoCalGas’ proposal, ratepayers would end up paying for the facility in either of these situations.
\textsuperscript{37} DRA has not at this time taken an official position on the pending advice letter; it is included herein to demonstrate that promoting biogas need not require utility ownership of biogas facilities.
D. The Economics of Biogas Production are Uncertain

The biogas market in California is relatively new; and as finding workable business model has been a challenge for biogas producers. This is due to many factors, to primary of which is the low price of natural gas. While natural gas prices are currently between $3 and $4 per MMBTU, the cost of biomethane can range between $11 and $23 per MMBTU\textsuperscript{38} depending on the project. A rise in the price of carbon credits could bring biogas closer to profitability, but even so biomethane is extremely expensive as compared with most other renewables. Nowhere in SoCalGas’ testimony is there any indication that the business model underlying the proposed tariff will be more successful at developing biogas than the status quo.

1. Nearly Half of All Attempts to Produce Biogas in California Have Failed

Biogas production in California has been limited to date. To the extent that projects have been attempted, a substantial portion of such projects have resulted in failure. This is relevant to the instant proceeding because SoCalGas seeks only to process biogas which requires others to produce sufficient biogas for a sufficiently long time period so as to fulfill the terms of the tariff contract. If the producers cannot do so the ratepayer backstopped investments SoCalGas seeks in this Application would become stranded, resulting in ratepayer responsibility for the full undepreciated cost of the asset with no incoming revenues to offset the cost in rates. It should be noted that in such a case, ratepayers would continue to pay a rate of return for the failed investment.

According to the Environmental Protection Agency, of 22 agricultural digesters built to date in California, 10 have been shut down, representing a failure rate of 45\%.\textsuperscript{39} Of the 10 plants which have shut down, 7 were operational for 5 years or fewer. Of the 12 operating plants, half have been operating for 5 years or less.

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\textsuperscript{38} Economic Feasibility of Dairy Manure Digester and Co-Digester Facilities in the Central Valley of California, p.3-9.  
SoCalGas has indicated that a typical biogas conditioning contract would last 10-15 years. Only two digesters, one still functioning and one shut down, were in operation long enough to fulfill the fifteen year term of the contract proposed by SoCalGas.

The majority of these in state agricultural digesters were built with funding from two rounds of CEC grants in 2002 and in 2006. These grants were made when natural gas prices were much higher than current levels, and biogas, while still expensive, was closer economic parity. Even with high gas prices and the burden of up-front financing alleviated via grant funding, the failure rate for California’s agricultural digesters is 45%. SoCalGas claims that partial utility financing of these projects will lead to more projects and to more successful outcomes. The fate of the digesters built with CEC grant money does not support this claim.

2. SoCalGas’ Financing of Biogas is Dependent on an Implicit Ratepayer Subsidy

SoCalGas has made the claim that the lack of financing options for potential biogas producers is a key impediment to the expansion of biogas production in California. SoCalGas would mitigate this by providing finance for the upgrading and conditioning portion of the project. SoCalGas claims that this will lead to better financing terms for the project as a whole, as biogas producers who “[partner] with strong counterparties that are willing to take on some of the project risk… are more likely to secure better financing terms from lending institutions.”

The difficulty in financing biogas production stems from the underlying economics and the inherently risky nature of this new and unproven market. SoCalGas admits in Opening Testimony that there are a number of risk factors affecting overall project economics, noting that “many projects fail due to unanticipated circumstances such as failing to secure a solid feedstock agreement,

(continued from previous page)

39 Data from the EPA’s AgStar Anaerobic Digester Database; [http://www.epa.gov/agstar/downloads/digesters_all.xls](http://www.epa.gov/agstar/downloads/digesters_all.xls); accessed 2/19/2013.

40 Attachment 1, DRA Data Request 1, Question 19.

41 SoCalGas Opening Testimony, Chapter II, p. 10-11.
understanding the variability of gas constituents and ranges to be conditioned to pipeline quality, and ensure [sic] that there are adequate performance guarantees in place to minimize risk of equipment downtime.” Potential investors price this risk, which even SoCalGas acknowledges, into the cost of financing biogas production and conditioning. To the extent that SoCalGas’ proposal can “secure better financing terms” it is by shifting project risk onto ratepayers and guaranteeing a ratepayer bailout in the case of project failure. Such risks should be undertaken by a Sempra affiliate and not by SoCalGas ratepayers.

E. Benefits Accrue to Shareholders; Risks to Ratepayers

There is no compelling ratepayer interest served by SoCalGas’ proposal, and yet ratepayers would be subject to substantial risk by entering into an unproven and unregulated market. Shareholders will reap a rate of return regardless of the outcome of projects financed through the tariff. The upside for shareholders is substantial, while as established above, the benefit specific to ratepayers is entirely unsubstantiated. The risk accrues almost entirely to ratepayers; the benefits accrue entirely to shareholders. This is not an equitable proposal.

1. There is a Strong Incentive for SoCalGas to Underprice Tariff Contracts

SoCalGas has claimed that contracts signed under the tariff will be appropriately priced to recover the full cost of operating the facility over the life of the tariff. However in response to DRA discovery, SoCalGas indicated that should these projections result in the undercollection of revenues from a ratebased tariff contract the amount of the undercollection would be recovered in rates. SoCalGas claims that despite this being the case, there are “strong incentives” for SoCalGas to overcollect. Were this the case, the increased price of service under the tariff would be a deterrent to tariff adoption. In fact, the opposite is the case: were SoCalGas to systematically underprice tariff contracts the result would be an increased number of tariff agreements, leading to an increased rate of return to shareholders on the full

42 SoCalGas Opening Testimony, Chapter II, p. 10.
43 Attachment 1, DRA Data Request 1, Question 21.
amount of the tariff contracts for the life of the contracts. The difference between the cost of actually providing the service and the tariff revenues would be recovered in rates with ratepayers effectively subsidizing the program. SoCalGas shareholders would see better returns for underpricing the tariff and all losses will accrue to ratepayers.

2. Should a Tariff Customer be Unwilling or Unable to Fulfill the Full 10-15 Year Contract

Ratepayers are at Risk

If a tariff customer for any reason is unwilling or unable to continue tariff service for the full 10-15 year life of the contract, ratepayers would bear the full cost of the undepreciated asset with no tariff revenues to offset the costs. Ratepayers are, in effect, required to cover any losses incurred through breach of contract. If a project fails, a customer goes bankrupt, stops paying the tariff fee, sells or abandons the underlying customer property, or simply cancels the service ratepayers required to bear the full cost of the undepreciated asset. SoCalGas claims that in such cases they would “first exhaust all commercial and legal remedies to collect the remaining balance due and the required cost to remove and redeploy the asset from the customer premises.” They acknowledge that if the asset has been incorporated into ratebase, any unrecoverable cost remains in rates and is fully borne by ratepayers, stating that “SoCalGas shareholders bear the economic loss between GRC’s until the remaining undepreciated capital investment is rolled-in to ratebase” (italics added). If the asset has not yet been incorporated into ratebase, SoCalGas shareholders bear the loss only for the short period until the next GRC, at which point ratepayers bear the full remaining cost of the failed investment.

As this testimony has established, biogas production remains a risky investment. Biogas is in regulatory flux, the economics of biogas production are a continuing challenge, and the rate of failure for biogas facilities is substantial. SoCalGas has acknowledged as much; and relies upon this risk to justify ratepayer involvement, stating in supplemental testimony that “denial in advance of

44 Attachment 1, DRA Data Request 1, Question 10.
hypothesis that the recovery costs is inappropriate given the nascent nature of the market. It is almost likely that some facilities built under this tariff will fail, and when they do the cost to ratepayers could be substantial.

SoCalGas has indicated that the biogas potential in its service territory could support up to 20 projects large enough to be economically viable. SoCalGas has also indicated that a representative project would cost approximately $13.2 million. This would potentially mean that ratepayers would be at risk for costs associated with up to $264 million worth of biogas equipment.

F. Gas Production is Outside of SoCalGas’ Core Competency and Creates the Potential for Utility Liability

The production and processing of gas are not a core competency of SoCalGas. SoCalGas’ experience with biogas processing consists of a single demonstration project. SoCalGas is a monopoly gas utility, and as such its core competency is in the transmission and distribution of natural gas, not gas processing or production. SoCalGas has recently proposed extensive projects as part of its Pipeline Safety Enhancement program (A.11-11-002). SoCalGas’ efforts would be more properly focused on assuring the integrity and safety of its gas transmission and distribution pipeline operations and infrastructure.

The proposed tariff is not a version of a service SoCalGas already offers; rather it consists of a new service by which SoCalGas seeks to enter an entirely new field, one which carries substantial risk of utility liability. There is a conflict of interest in that SoCalGas, as the operator of the gas transmission and distribution system, is both responsible for establishing rules regarding the quality of gas entering its system and is simultaneously requesting to engage in the business of processing gas to meet those standards.

(continued from previous page)

Ibid.

Supplemental Testimony of Jeffrey Reed; p. 5, 3-5.

SoCalGas Opening Testimony, Chapter II, p. 12, 2-3.

Attachment 1, DRA Data Request 1, Question 18.

Attachment 3, DRA Data Request 3, Question 20.
1. SoCalGas Takes on Substantial New Liability by Entering into the Gas Processing Industry

By proposing to enter into the gas processing production business, SoCalGas is opening itself and its ratepayers up to a new level of potential liability. One such liability could stem from contaminated or otherwise impure gas processed by SoCalGas under the tariff entering the distribution system. Traditionally there has been separation between the entities processing and producing gas and those distributing the natural gas. In the case of such incidents SoCalGas is able to seek some level of restitution from gas producers.

There have been at least 15 incidents in which improperly treated or contaminated gas entered SoCalGas’ distribution system. SoCalGas has provided a list of such events, confirming at least 9 types of contaminants which have at various times been introduced into the natural gas distribution system through a supplier’s improperly treated gas.\(^{50}\)

Two such incidents involved hydrogen sulfide, one of the components of the raw biogas SoCalGas would seek to process under the proposed tariff. Each of these incidents is illustrative of the potential problems with pipeline injection of processed biomethane. These events show the importance of having separation and clear lines of liability between gas producers and the monopoly gas distributer.

On December 29 of 1983, a failure in the gas processing equipment at the Pacific Offshore Pipeline Company’s (POPCO) Las Flores Canyon Gas Treatment Plant resulted in 200 PPM hydrogen sulfide entering into SoCalGas’ distribution system.\(^{51}\) This incident resulted in evacuation orders being issued to over 20,000 SoCalGas customers.

A second incident occurred on May 12, 1984, when hydrogen sulfide was introduced into SoCalGas’ distribution pipelines at the Wilmington, California gas delivery point.\(^{52}\) Hydrogen sulfide is present in biogas, and is dangerous to both

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\(^{50}\) Attachment 5, Revised DRA Data Request 3, Question 19. p. 2.

\(^{51}\) Attachment 6, Federal Register, Vol. 54, No. 108.

\(^{52}\) Ibid.
human health and pipeline integrity. In both of these incidents the gas was procured from an independent producer who processed and injected the gas themselves. When contaminates were introduced into the pipelines the line of liability was clear. In the first incident a non-public settlement was reached.\textsuperscript{53} It is likely that the settlement reimbursed the utility for damage to its distribution system and to customer property caused by the incident.

In another incident, polychlorinated biphenyls (PCBs) were introduced into SoCalGas’ distribution system at the point of gas delivery from the Transwestern pipeline. This resulted in PCBs being found in pipeline liquids within the SoCalGas distribution system. PCBs are a known carcinogen, and are known to cause a number of other serious health problems in humans. The incident resulted in a non-public settlement in which Transwestern was held liable for contaminants introduced into SoCalGas’ distribution system.\textsuperscript{54}

When procuring gas from an outside entity, there is a clear line of liability in the event of an incident resulting in pipeline contamination. SoCalGas was able, in each of the instances referenced, to collect some level of restitution from the entities responsible for injecting the tainted gas into SoCalGas’ pipeline. SoCalGas proposes to enter into a contract with biogas owners assuring that the gas will comply with Rule 30 standards.\textsuperscript{55} The machinery to accomplish this will be designed, built, and owned by SoCalGas. The staff providing operations and maintenance will be hired and paid by SoCalGas. These investments are proposed by SoCalGas to be supported by ratepayer funds. The Rule 30 standards themselves are set by SoCalGas. These all, individually and collectively, create a situation rife with potential conflicts of interest.

\textsuperscript{53} DRA is not aware of the terms of that settlement; but is pursuing such information through discovery.
\textsuperscript{54} Again DRA lacks more detailed information regarding this incident, but is in pursuit of such information through discovery.
The more appropriate structure for both SoCalGas' shareholders and ratepayers is that there is a clear separation between the utility having ownership of the gas transmission and distribution system and the entities producing gas. In the examples given above this separation served to protect the interests of both SoCalGas and its captive ratepayers. With SoCalGas involved in the production of gas the lines of liability are unclear and no bright line exists. If SoCalGas as a regulated utility processing gas is liable for any contaminants introduced into the distribution network, then how are SoCalGas the distributor and its ratepayers to be compensated for such an event?

If contaminants should enter the natural gas distribution system as a result of gas improperly processed though the proposed service, SoCalGas could face liability both for cleaning up the damage done by any contaminants entering the gas stream, and to a lawsuit by the tariff customer for damages due to an interruption of their revenue stream and to the community for damages should contaminants be released. Should this foreseeable event occur, the captive ratepayer will pay the price if the Commission grants SoCalGas' the ability to enter the gas production and processing market.

G. AB 1900 and its Associated Rulemaking make the Instant Application Premature

One of the issue areas identified in this proceeding’s Scoping Memo was the effect of the passage of AB 1900 on the instant Application. The effect of AB 1900 lies outside the core issues in this Application. AB 1900 added § 399.24 to the Public Utilities Code, which states that “To meet the energy and transportation needs of the state, the Commission shall adopt policies and programs that promote the in-state production and distribution of biomethane.” Public Utilities Code § 399.24 does not address the Commission allowing utilities to use ratepayer funds in pursuit of promoting in-state biomethane. The statute does not require that the Commission support any particular biogas related application, and it does not require the Commission to approve the use of ratepayer funds as requested by SoCalGas.
PG&E’s pending PPA\footnote{AL 4193-E. \url{http://www.pge.com/nots/rates/tariffs/tm2/pdf/ELEC_4193-E.pdf}; accessed 2/22/2013.} shows that other utilities are proposing to support biomethane in ways that do not carry risk to ratepayers as proposed by SoCalGas.

The Commission can support the production of biomethane in California through development of a robust market of competitive providers of biogas related equipment and services. Allowing a monopoly utility to leverage its competitive advantages by entering into this nascent market using ratepayer funds would set back competitive market development and crowd out private investment. It could stifle innovation by preventing new market entrants who would not be able to compete against a regulated utility using funding and resources provided by captive ratepayers.

AB 1900 instructs the Commission to institute a rulemaking into new standards for pipeline injected biomethane to protect both human health and pipeline integrity.\footnote{AB 1900, 5(c): On or before December 31, 2013, for biomethane that is to be injected into a common carrier pipeline, the commission shall, by rule or order, adopt standards that specify, for constituents that may be found in that biomethane, concentrations that are reasonably necessary to ensure both of the following: (1) The protection of human health. In making this specification, the commission shall give due deference to the determinations of the board pursuant to paragraph (4) of subdivision (a). (2) Pipeline and pipeline facility integrity and safety.} The result of the rulemaking called for in AB 1900 will be a uniform set of standards for possible contaminants in biomethane. The Commission has instituted the requisite Rulemaking (R.13-02-008), but that proceeding is in its infancy, and these rules have not been adopted. SoCalGas has indicated that pipeline injection will be a primary usage of the biomethane produced through the proposed tariff. The rulemaking adopting standards for such pipeline injection is currently underway. At this time, with the regulatory environment surrounding pipeline injection of biomethane in flux, it is premature for SoCalGas to request approval of a tariff aimed at introducing biomethane into the utility distribution system.
SoCalGas’ Ratemaking Proposals are Inappropriate for a Tariff Proposing Utility Entrance into an Unproven and Unregulated Market

SoCalGas has proposed to use what it calls the “traditional ratemaking treatment”\(^{58}\) in determining the appropriate approach to ratemaking in the instant Application. Traditional ratemaking is appropriate for a monopoly utility’s provision of monopoly services. It is not appropriate for a monopoly utility seeking to enter into an unregulated market. For the reasons outlined in this report, DRA does not support SoCalGas’ underlying proposal; however even were the underlying proposal sound, the proposed ratemaking is unacceptable.

SoCalGas’ proposal is to ratebase the undepreciated portion of any tariff asset at the time of SoCalGas’ first GRC proceeding after the asset comes into service. This lag time could be as much as three years or as little as a few months. Once the asset has entered ratebase SoCalGas’ ratepayers will be fully responsible for the costs and risks associated with the facilities. As has been previously established, those potential risks are substantial. SoCalGas makes the claim that tariff revenues will fully offset costs, but provides no evidence that these projects will remain economically viable for the full life in rates of the assets. A more likely scenario is that project failure rates will remain substantial, leaving ratepayers to shoulder all the costs and the investment for any project which cannot maintain service fee payments for its full 10-15 service life.\(^{59}\)

SoCalGas has not met the burden of showing that there would be any ratepayer benefit to the proposed program. As such, no amount of ratepayer funding should be utilized in provision of the tariff proposed in the Application. The appropriate venue for a monopoly utility to offer a competitive service or product is through an unregulated affiliate. Short of such treatment there must be some level of assurance that SoCalGas will not be using ratepayer resources in support of the proposed tariff.

\(^{58}\) Supplemental Testimony of Jeffrey Reed; p. 4, 18-19.

\(^{59}\) As cited above, the failure rate for dairy digesters in California stands at 45%.
SoCalGas previously proposed to offer gas conditioning and upgrading service as a non-tariffed product or service (NTP&S) in advice letter 4172. In the advice letter, SoCalGas proposed that the program be treated as a “below the line” investment. SoCalGas describes such treatment as follows: “In general, costs that are not currently, or possibly in the future, to be recovered by the general ratepayers are considered “below the line” for ratemaking purposes.” The advice letter was rejected by the Commission as being inconsistent with the affiliate transaction rules. In rejecting the advice letter, Energy Division reiterated that “the Commission has stated its preference to have new products and services provided to non-utility markets by the utility’s parent through an affiliate, rather than by the utility itself.”

SoCalGas responded with the filing of the instant Application to provide the proposed service via tariff. In this application, the request for below the line treatment was removed. Such treatment of the Application could partially resolve the concerns with ratepayer funds being used in a competitive market and would be consistent with the Commission in D.12-12-037.

SoCalGas has proposed to track and recover the cost of ratepayer assets only until the next GRC proceeding after asset deployment, at which point ratepayer assets used in provision of tariff service would no longer be reimbursed. This ratemaking treatment is not appropriate for the same reason that putting tariff assets into rates at all is not appropriate: SoCalGas has not met its burden of showing any compelling ratepayer interest advanced by the tariff as proposed. As such tariff assets should be excluded from ratebase, and any ratepayer resources used in support of the tariff should be refunded to ratepayers for the full life of the asset.

Any such costs should be tracked and recovered in as transparent a manner as possible. SoCalGas has proposed to do so in the existing core fixed cost and noncore fixed cost balancing accounts. Such treatment would not be appropriate as it would serve to obscure the true amounts of ratepayer funding used to support the proposed tariff and make it more difficult to ensure that ratepayers are not unduly

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61 Attachment 3, DRA Data Request 3, p. 7.
subsidizing the tariff. If balancing accounts are approved as requested in this
application in order to refund the use of ratepayer resources, they should be unique
to the biogas tariff program so as to provide transparency with regard to the rate
impact of the tariff and as to the actual tariff costs. This is consistent with the
balancing account treatment in D.12-12-037. As these accounts are explicitly
designed to pay for ratepayer resources utilized in tariff implementation, these
accounts need only function in only one direction. As such any balancing account
established in relation to the proposed tariff should be a one-way balancing account.

It is important to note however that the changes to ratemaking suggested
herein do not constitute DRA endorsement of the tariff as proposed; rather the
changes serve only to moderate the significant financial risk to ratepayers inherent
to SoCalGas’ proposal. They do not eliminate these financial risks, and do nothing to
mitigate the additional financial risks stemming from liability issues as well as the
non-financial risks to pipeline integrity and safety.

(continued from previous page)

62 AL 4172, p. 3.
ATTACHMENT 1 – DRA DATA REQUEST 1
QUESTION 1:

Please explain in detail and quantify all benefits that would accrue to SCG ratepayers as a result of this application. Attach all spreadsheets with formulas if applicable.

RESPONSE 1:

Please see application testimony:
- Chapter I, Section IIA “SoCalGas’ Biogas Conditioning/Upgrading Services Tariff Provides Ratepayers with Environmental Benefits (Public Utilities Code § 740.8),” page 4
- Chapter II, Section VI “SoCalGas’ Proposed Service Provides Customer Benefits”, pages 16-17, and
- Supporting workpapers to the testimony, Workpapers 1, 3, 7, 8, and 9.

As outlined in the referenced testimony, the proposed service will provide qualitative and quantifiable environmental benefits to ratepayers.
QUESTION 10:

Please explain in detail and quantify all of the risks that are associated with this application. For each risk explain whether the risk is assumed by SCG shareholders, SCG ratepayers, or customers of the biogas service. For example:

a. Please explain in detail any liability risks associated with the construction of or operation of the biogas conditioning and upgrading services. Who takes on those risks (i.e., SCG shareholders, SCG ratepayers, customers of the biogas conditioning and upgrading service)?

b. Are there any risks associated with stranded assets that would occur during construction of the biogas conditioning and upgrading service facilities or after the facilities are built? For example, the customer cancels service prior to the specified termination date, or the customer defaults on the contract, or the customer sells the site? Who takes on those risks (i.e., SCG shareholders, SCG ratepayers, customers of the biogas conditioning and upgrading service)?

RESPONSE 10:

Once initial contact is made between the potential tariff customer and SoCalGas, a dialogue will transpire regarding customer requirements at a high level, and will usually involve SoCalGas providing a budgetary quote. This enables the customer to evaluate their service options in the future.

As described in Ron Goodman’s testimony (Chapter II, Section II, p. 3-4), if the customer seeks additional support from SoCalGas and requires a firm bid relative to meeting their detailed requirements, SoCalGas would then collect a Feasibility Services Fee from the customer and conduct a feasibility analysis (Included as Appendix B in the Application) to determine the technical and economic feasibility of the design, equipment procurement, construction, and the operation and maintenance of gas conditioning equipment as necessary to treat the customer owned biogas for use as pipeline quality gas or to other specifications as defined by the customer. The Feasibility Services Fee would cover all intended SoCalGas costs relative to providing the customer with a firm bid, including administering the bid process. If at any time after the fee is collected, prior to the customer signing a Services Agreement with SoCalGas, the customer decides to not accept the terms of the Agreement, the customer would forfeit this fee. At this point, the collected funds have been intended to cover any booked time spent on the project and will be reconciled through SoCalGas' miscellaneous revenues account for later distribution back to ratepayers.
If at any time after the Services Agreement is signed by the customer, and the customer decides not to move forward with the project, SoCalGas would seek additional ‘out of pocket’ expenses if applicable, from the customer in the form of a letter of credit. The level of protection afforded by the letter of credit would be evaluated prior to the execution of a Services Agreement between the customer and SoCalGas.

If the EPC fails to meet the project requirements after the Services Agreement is executed, SoCalGas would seek liquidated damages from the EPC in order to remedy the problem such that the project scope and timeline would not be compromised. This form of protection would insulate SoCalGas, its shareholders, and ratepayers from any cost exposure. The liquidated damages level of protection from the EPC would be evaluated prior to an executed agreement between SoCalGas and the EPC.

A typical project will take 12-18 months to complete, once the Services Agreement is executed. If a pipeline interconnection is not required, this time may be reduced. Following the construction period, SoCalGas would contract with an Operation and Maintenance service provider (O&M), who would contract as a 3rd party vendor to SoCalGas for the purposes of maintaining the BCS plant for the term set forth in the Services Agreement.

As with any other tariff service, the infrastructure assets used in providing that service are ratebase assets and any customer specific charges are treated as miscellaneous revenues. If SoCalGas constructs and places into operation a biogas conditioning/upgrading facility on behalf of a customer, that specific customer will be charged the full cost of service including capital, O&M and all applicable overheads for the specific project. Those assets will be incorporated into ratebase and the associated customer revenues will become part of miscellaneous revenues in the next GRC proceeding. If a customer files for bankruptcy, cancels service, or is ultimately unable to pay for any reason for the infrastructure installed on its behalf, SoCalGas will first exhaust all commercial and legal remedies to collect the remaining balance due and the required costs to remove and redeploy the asset from the customer premises. If the asset cannot be redeployed it will be retired. SoCalGas shareholders bear the economic loss between GRC’s until the remaining undepreciated capital invested is rolled-in to ratebase along with miscellaneous revenues forecasts associated with Biogas Conditioning/Upgrading Services Tariff for approval in the subsequent GRC.
QUESTION 18:

SGC claims to be able to accurately pre-calculate costs over the life of service of biogas facilities, and to use these calculations in setting tariff rates. Please provide an overview of the methodology used for this pre-calculation. In addition, please provide a year over year breakdown of costs and obligations for a sample biogas services project over the full life of the facility. Include a cost breakdown for all phases of the project including customer outreach, contract development, engineering and cost estimation, engineering oversight, procurement and construction, operations and servicing and/or all other appropriate project phases. Please estimate a timeframe for each phase. For each phase of the project, indicate costs and revenues, and indicate whether these costs and revenues accrue to ratepayers, tariff customers, or shareholders. Please specify the specific point in time at which ratepayers are made whole (i.e., tariff revenues credited >= ratepayer funded revenues in rates for the facility). Also include the estimated total service life of the project and typical contract duration for the tariff customers.

A sample table is included below, which breaks down the project into phases and clearly delineates responsibilities.

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RESPONSE 18:

Pre-calculation of capital costs involves definition of the project scope, specifications and layout followed by estimation of costs for engineering, equipment and site construction. These estimates are generally provided by outside engineering consultants or internal engineering staff. Operations and maintenance costs are estimated using historical cost information and analysis provided by qualified consulting engineers and/or internal resources. For both capital and O&M, SoCalGas will, as a general practice, seek supplier bids prior to finalization of contract price in order to ensure accurate cost estimation. As appropriate, a contingency will be added to cost estimates in order to reach a high level of confidence that revenues will cover or exceed project costs. Once the base capital and O&M costs have been developed, standard utility overheads are added according to the procedures described in detail in the testimony of Ms. Joscelyne.

<table>
<thead>
<tr>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years 1-3: Embedded costs returned to ratepayer from revenue collected from customer via balancing account</td>
</tr>
<tr>
<td>Years 4-20: Net cost to ratepayer is $0</td>
</tr>
<tr>
<td>Years 1-20: Shareholder net revenue is equal to authorized ROE of 10.82%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Term of 15 years</td>
</tr>
<tr>
<td>Book Life of 15 years</td>
</tr>
<tr>
<td>Salvage Value Included</td>
</tr>
<tr>
<td>Cost Escalation Included</td>
</tr>
<tr>
<td>Overhead Loading Included</td>
</tr>
<tr>
<td>Federal Tax rate of 35.00%</td>
</tr>
<tr>
<td>State Tax rate of 8.84%</td>
</tr>
<tr>
<td>Year 4 is beginning of next GRC cycle</td>
</tr>
<tr>
<td>3rd Party Maintenance provided over the entire contract length</td>
</tr>
<tr>
<td>3rd Party Maintenance escalated yearly over the contract length</td>
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</tbody>
</table>
Please see attached workbook for year-by-year calculations.

<table>
<thead>
<tr>
<th>Cost Assumptions</th>
<th>Total</th>
<th>O&amp;M</th>
<th>Capital</th>
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<tbody>
<tr>
<td><strong>Total Fully Loaded Cost (Labor)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Outreach</td>
<td>546</td>
<td>-</td>
<td>546</td>
</tr>
<tr>
<td>Contract Development</td>
<td>58,192</td>
<td>-</td>
<td>58,192</td>
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<tr>
<td>Engineering and Cost Estimation</td>
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<td>Procurement and Construction</td>
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<tr>
<td>Operations and Servicing</td>
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<td>-</td>
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<td><strong>Total Labor</strong></td>
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<tr>
<td><strong>Total Fully Loaded Cost (Non-Labor)</strong></td>
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<td>Customer Outreach</td>
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<td>Procurement and Construction</td>
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<td>Operations and Servicing</td>
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<tr>
<td><strong>Total Non-Labor</strong></td>
<td>$13,199,552</td>
<td>$5,591,760</td>
<td>$7,607,792</td>
</tr>
</tbody>
</table>
QUESTION 19:

What was SCG’s reasoning behind the choice of a 12 year term for biogas conditioning/upgrading contracts?

RESPONSE 19:

SoCalGas is unsure as to why DRA believes SoCalGas selected a 12 year agreement term. As stated in Chapter II, page 3, line 9, “SoCalGas will provide the biogas conditioning/upgrading service tariff under a long term (10 to 15 year) service agreement”. The biogas conditioning/upgrading equipment can generally last 15 years without any significant rebuild costs. Contract term length is negotiated with the customer; however, despite the contract term length, the full capital cost will be recovered from the BCS customer.
QUESTION 21:

How will SCG respond if cost of service differs from pre-calculated estimates? If SCG collects more from tariff customers than the cost of service, who receives the excess funds? If SCG collects less from tariff customers than cost of service who makes up for the shortfall? Is there any instance in which ratepayers would be responsible for such a shortfall? Is there a mechanism in place to raise or lower tariff obligations to ensure that tariff collections match cost of service over the life of the contract? If so, please describe.

RESPONSE 21:

In the case where SoCalGas collects more from tariff customers than the cost of service, SoCalGas shareholders will receive the benefits in between general rate case cycles. In the next general rate case, the undepreciated capital investment will be rolled into ratebase along with the miscellaneous revenues forecast, for commission approval. A reduction to base margin was designed to keep rates neutral to this transaction; however, in this case ratepayers will now benefit from the excess tariff revenues. The opposite will be true in the case where SoCalGas collects less from tariff customers than the cost of service.

This cash flow structure creates a strong incentive for SoCalGas to be conservative in cost estimation and contingency calculations—uneconomic projects will jeopardize shareholder earnings. Therefore, while no formal mechanism exists to readjust tariff obligations when cost of service differs from pre-calculated estimates, it seems more likely that projects will be priced in a conservative manner and the net result will be ratepayer and shareholder benefits as tariff revenues are higher than pre-calculated estimates.

SoCalGas has the ability to unilaterally re-price the contract under three situations: 1) when there is a change in the quality or quantity of untreated biogas from the agreed upon specifications, 2) when the biogas producer fails to meet any of its responsibilities under the agreement, or 3) a suspension or change in the services as a result of a change in law or some latent site defect. The biogas producer can request a change in pricing, but only subject to SoCalGas’ approval.
1 ATTACHMENT 2 – DRA DATA REQUEST 2
QUESTION 2:

In DRA Data Request 1, question 1, SoCalGas, asked to quantify all benefits to ratepayers from the proposed tariff offering, states that the benefits are “qualitative and quantifiable environmental benefits to ratepayers”. Are any of these benefits unique to SoCalGas’ tariff offering? Would these same benefits occur if an unregulated affiliate were to provide this service? A market participant?

RESPONSE 2:

These benefits are not solely unique to SoCalGas’ tariff offering. Any customer or third party service provider who is interested in conditioning/upgrading biogas may realize the same environmental benefits including greenhouse gas reduction and an increase in alternative fuel sources.
QUESTION 3:

In response to DRA Data Request 1, question 2, SoCalGas states that “no incremental costs will accrue to ratepayers as a result of this application.”

a. Please explain how staff time and any other costs incurred in drafting this tariff were funded, and if that staff time did in fact cause no incremental costs to accrue to ratepayers.

b. Is there any possibility that as a result of the default of a contract holder under this tariff, a cost will accrue to ratepayers?

c. Is there any possibility that SoCalGas’ insurance liability for projects constructed under this tariff would result in a cost to ratepayers?

d. Please explain how, at the point at which an asset constructed under this potential tariff is rolled into ratebase, the resulting increase in rates amounts to no incremental cost to ratepayers.

RESPONSE 3:

a. Developing a tariff application is part of the utility’s normal course of business; so as a result, all funding necessary to support the composition of the tariff has been justified through previous general rate case filings.

b. In the event of a default, SoCalGas will first exhaust all commercial and legal remedies to collect the remaining balance due and the required costs to remove and redeploy the asset. If the asset cannot be redeployed, it will be retired. SoCalGas shareholders bear the economic loss between General Rate Cases until the remaining undepreciated capital invested is rolled-in to ratebase along with miscellaneous revenues forecasts associated with Biogas Conditioning/Upgrading Services (“BCS”) Tariff for approval in the subsequent General Rate Case.

c. SoCalGas does not foresee insurance liability for projects constructed under this tariff resulting in additional costs to ratepayers, but such increases are theoretically possible. SoCalGas is currently self-insured for $4 million. The cost of claims within our self-insured retention and the cost of insurance are both presented in our general rate cases (GRCs) and recovered on a forecast basis. To the extent that biogas-related claims increase our self-insured retention costs or insurance costs, there could be a related change to the cost forecasts we present to the CPUC in future GRCs.
d. Rates paid by ratepayers are calculated based on the base margin amount authorized in the GRC. In the case of the BCS tariff, the customer payments are recorded into the miscellaneous revenue account while the asset is included in ratebase. As these two costs offset, there is no increase to base margin.
QUESTION 6:

SoCalGas stated in response to DRA Data Request 1 question 15 that “the pending General Rate Case requests no incremental revenue to cover services proposed under the Biogas Conditioning/Upgrading Service Tariff.” SoCalGas further states, in response to question 16 that “the utility groups needed to implement the Biogas Conditioning/Upgrading Services do not have any extra resources.” SoCalGas states in response to question 15 that if “existing resources are not adequate to meet the number of requests for service under the proposed tariff, work will be contracted out or utility staff will be added.”

If this tariff were approved and adopted by producers at the conservative rate of 2 projects per year, according to the numbers given in DRA Data Request 1 question 15, in year 3, 4.14 FTE employees would be working on the biogas tariff.

a. As these groups have no excess resources, and as they are tasked nonetheless with extra work for 4.14 FTE employees, will the proposed tariff result in some portion of the work approved and funded in the pending GRC not being completed?

b. How will SoCalGas make the determination when deciding between using existing staff for the excess work and with adding new staff or contracting out?

c. In the event utility staff are added due to a lack of existing resources, who will accrue the costs incurred in recruiting, hiring, training, and in benefits and salaries for the new staff? Would this be considered an incremental cost to ratepayers?

RESPONSE 6:

a. If approved, the proposed tariff will not compromise work planned for completion as described in the pending GRC. As previously stated in SoCalGas’ response to DRA-A1204024-SCG-MK3-1, Question 15, the workload and staff availability in the relevant departments will depend upon other forms of the project activity and new service requests. In the event that existing resources are not adequate to meet the number of requests for service under the proposed tariff, work will be contracted out or utility staff will be added.

b. See response to Question 6a.

c. Costs associated with recruiting and hiring, customarily performed by the Human Resources department, has been captured in the Administrative and General overhead – this “overhead represents cost of administrative and general support provided by functional areas such as, Accounting and Finance, Human Resources, Information Technology and Tax” (Chapter III, page 7). Training
would be handled within the Biofuels team and no additional personnel will be required or hired to train a new employee; there are no incremental costs associated with this activity. Salaries would be an incremental cost and would be direct charged to the project; factored into the pricing of the contract and paid for by the specific customer. Additionally the benefits of the new employees would be an incremental overhead cost and, similar to Administrative and General overhead above, and will be captured in the total project cost. Chapter III, Section B details the incremental overheads applicable to the project costs. Incremental labor costs and overheads that are considered incremental will be captured and charged to the customer.
ATTACHMENT 3 – DRA DATA REQUEST 3
QUESTION 20:

Does SoCalGas have any experience upgrading and processing biogas? Identify any efforts proposed or initiated by SoCalGas to upgrade or condition biogas, along with the following information:

a. What was the nature of the proposed or implemented program?

b. How much ratepayer funding was requested for each proposal?

c. How much ratepayer funding did each proposal ultimately receive?

d. What were the benefits to ratepayers of each proposal?

e. How long did each project continue?

f. If project has been discontinued, please indicate the reason SoCalGas chose to discontinue the program.

g. If the project has been discontinued, were there ratepayer costs associated with the discontinuation of the project? Please quantify those costs.

RESPONSE 20:

SoCalGas' Experience Upgrading and Processing Biogas
In response to California's environmental policies\(^1\) that support and promote the development of bioenergy resources, SoCalGas has developed a biogas upgrading demonstration project at a wastewater treatment plant. Initial work on this demonstration project began in 2009 and the Hale Avenue Resource Recovery Facility (HARRF), a wastewater treatment plant in Escondido, was selected as the site for the demonstration project. Plant design, construction and installation were completed in 2010.

The biogas upgrading plant has operated from February 2011 to the present. During this time the plant has consistently produced biomethane that meets SoCalGas' Rule 30 gas quality specifications

\(^1\) Environmental policies as stated in Witness Snyder's Testimony
Proposed Program #1 – Biogas Conditioning and Production Facility Services (SoCalGas AL 4172)

a) See Witness Lucas’ Supplemental Testimony and SoCalGas AL 4172 below.

b) No ratepayer funding was requested
c) No ratepayer funding was received
d) Please see response to question (a).
e) Not applicable
f) Not applicable
g) Not applicable

Propose Program #2 – Sustainable SoCal Program (SoCalGas’ General Rate Case, A.10-12-006)

a) See link to Witness Wrights Testimony (below), starting on page GAW-89
   http://socalgas.com/regulatory/documents/a-10-12-006/Testimony/Exh%20SCG-09%20G_Wright_Cust_Serv_Info.pdf
b) TY 2012 - $11.2 Capital, $606K O&M
c) As of the date of this data request response, a proposed decision for SoCalGas’ 2012 GRC has not been issued.
d) Please see response to question (a)
e) Not applicable
f) Not applicable

Remainder of original response is REDACTED because it was marked as confidential and is not relied on in DRA Report
ATTACHMENT 4 – EXCERPT FROM A.11.11.011, Exhibit DRA-01, p.11-13
facility and those offered by other non-utility market participants to help determine if
SoCalGas is undercutting the market.\textsuperscript{30} AL 4337 Confidential Attachment D shows
SoCalGas’ LAUSD Service Fee Calculation though it is unclear to DRA how any of the
numbers in Attachment D are arrived at. SoCalGas should be required to develop and
distribute workpapers which clearly and transparently demonstrate the translation of the
proposed LAUSD facility requirements to the monthly service fee that SoCalGas will charge
LAUSD in order to recover all costs. SoCalGas should also be required to provide
workpapers which transparently divulge all SoCalGas costs and resources utilized to-date in
the development of the LAUSD facility design/proposed tariff/compression service
agreement, construction of the facility, and administration of the project. SoCalGas should
also explain the funding source for the project (i.e., ratepayers, embedded resources,
shareholders).

F) THERE ARE NO SUBSTANTIAL, TANGIBLE RATEPAYER BENEFITS
ASSOCIATED WITH THE APPLICATION YET RATEPAYERS TAKE ON ALL
OF THE DOWNSIDE RISK OF THE APPLICATION

SoCalGas claims that ratepayers receive financial and environmental benefits from
the proposed tariff.\textsuperscript{31} But SoCalGas has not demonstrated in the application that ratepayers
indeed will receive any substantial or tangible financial benefits. However, the ratepayers
will bear substantial financial downside risk.

DRA’s analysis of SoCalGas A.11-11-01 has shows there is no financial upside for
ratepayers, only substantial downside risk. SoCalGas claims that any resources or costs
incurred in providing the gas compression service will be properly tracked and ratepayers
will be credited for any embedded costs already included in general rates.\textsuperscript{32} Essentially,

\textsuperscript{30} Per the April 27, 2012 meeting between DRA, SoCalGas, and LAUSD it is DRA’s understanding that
LAUSD solicited bids (but did not hold a competitive Request for Offers (RFO)) from at least two non-utility
market participants, one or both of which are intervenors in this proceeding.

\textsuperscript{31} Lines 5 to 6, Page 4, Chapter I, Policy Support, Prepared Direct Testimony of Jeffrey G. Reed, A.11-11-011, November 3, 2011.

\textsuperscript{32} Lines 17 to 23, Page 2, Chapter III, Prepared Direct Testimony of Edward J. Reyes, A.11-11-011,
(continued on next page)
SoCalGas proposes that ratepayers float the funds and resources needed to implement the service and at a later date (which is undefined) SoCalGas will credit ratepayers back the equivalent amount so that ratepayers remain “square.” One obvious problem with this plan is that if SoCalGas does not properly track and account for every cost and do so diligently for the life of the program, then ratepayers may not be fully repaid. Along these lines it is also unclear how long it will take for ratepayers to be fully paid back. Does this occur before the gas compression facility goes into production or at the end of the 12-20 year life of the facility or later? SoCalGas does not appear to be offering ratepayers any interest on the costs and resources used to front service. These are only a couple of the many risks that ratepayers would take on under SoCalGas’ proposal.

Another substantial risk ratepayers take on is in the event that a customer of the gas compression service for one reason or another, abandons the property, goes bankrupt, cancels the project midstream, stops paying the monthly service fee, or sells the property to a new owner who does not want the service. SoCalGas claims it will first exhaust all commercial and legal remedies to collect the remaining balance due or costs to try and redeploy the assets.\textsuperscript{33} But if the asset cannot be redeployed it will be retired and the underdepreciated capital invested is rolled-in to ratebase along with the revenue forecasts associated with the services. That means that ratepayers would end up ultimately paying so that SoCalGas suffers no loss. SoCalGas claims that parties such as DRA could fight to keep those losses and revenues from being rolled into ratebase but the onus would be on intervenors to stop that from happening. Again, no upside, only potential downside risk.

Another substantial risk is in the event that SoCalGas decides to or is ordered to sell existing gas compression facilities.\textsuperscript{34} If this would occur, there could be more losses that SoCalGas would try to recover in the next GRC. In 1995, D.95-11-035 removed the authority for SoCalGas to recover costs for NGV refueling facilities. The facilities that

\textsuperscript{33} SoCalGas response to DRA data request SCGA1111011-DRA-DBP-1(see attachment A), question 3b.
\textsuperscript{34} SoCalGas response to DRA data request SCGA1111011-DRA-DBP-1(see attachment A), question 13.
SoCalGas sold originally cost $40 Million but only sold for $2.7 Million.\textsuperscript{35} Again, in this event, SoCalGas would be expected to try and recover the loss from ratepayers in the next GRC. More downside, no upside for ratepayers.

Another risk ratepayers would take on is liability during the construction and operation of the gas compression facility. There could be an accident or explosion of some sort. DRA understands that the insurance policies that SoCalGas currently carries would be used in this case.\textsuperscript{36} This appears to be a cross subsidy in that the gas compression services would now be piggybacking on the insurance policy that ratepayers are funding for other purposes. In the end, ratepayers would be taking on additional liability risk from the gas compression services program. More downside for ratepayers, no upside.

All of these examples show some of the substantial risks that SoCalGas’ ratepayers would take on under A.11-11-011. As stated earlier, the best that ratepayers can do financially under the A.11-11-011 is to break even.\textsuperscript{37} Decision D.93-07-054 gave clear direction that recovery of costs associated compressed natural gas fueling facilities is to be limited to programs are substantially in the ratepayers long-term interests. There is nothing in A.11-11-011 that is in the ratepayers long-term interest, only downside risk.

In regard to the environmental benefits, the current application lacks measurements to determine the extent that environmental benefits are accrued. The Commission has already established numerous programs to further environmental policies to benefit the general public. Ratepayer money would be more effectively spent by enhancing already established and known programs that lack uncertainty, do not involve startup costs, and are less risky for ratepayers.

\textsuperscript{35} White Paper: What is the Appropriate Role of Natural Gas Utilities in the Natural Gas Vehicle Refueling Market?, Covington & Burling LLP, November 1, 2011, p. 14 (see Attachment 2).

\textsuperscript{36} SoCalGas response to DRA data request SCGA1111011-DRA-DBP-1(see attachment A), question 3a.

\textsuperscript{37} Page 456, CALIFORNIA PUB. UTIL. COMM’N – 50 CPUC 2d.
ATTACHMENT 5 – REVISED DRA DATA REQUEST 3
QUESTION 19:

Is SoCalGas aware of any previous incidents whereby contaminants were introduced into SoCalGas' natural gas distribution system through pipeline injection of improperly treated gas? If so, list all such incidents including at least the date, location and incident report number [if any], and description of the incident and outcome.

RESPONSE 19:

With consideration of SoCalGas' Rule 30 the following is a list of incidents and constituents that may have potential human health or pipeline integrity impacts that were introduced into SoCalGas' natural gas distribution system through a suppliers' improperly treated gas, and the resulting measures taken by SoCalGas.

- 1989, 1991, 1993, 1994 internal corrosion and operational problems with regulator due to poor quality producer gas. The outcome was that we enforced gas quality limits and added on-line GCs.
- 1990s employee exposure in Los Angeles and damage to customer appliances due to trace contaminants in Ventura. SoCalGas tested for trace contaminants that caused the problems. The supplier no longer uses or produces the contaminant.
- 1984 H₂S in Santa Barbara County. H₂S analyzers with automatic shut offs have been installed at producer sites with H₂S in their gas.
- 1987 Arsenic from out of state supplier. The well with the arsenic is no longer flowing.
- 1985 Formaldehyde. The producer no longer uses formaldehyde as a treatment chemical.
- 1989-91 Radon in various locations. It has not resulted in an employee exposure problem.
- 1982 PCBs first found in pipeline liquids. However PCBs were never detected in the gas.
- Benzene in various supplies. Supplies are tested for that trace contaminant. It has not resulted in an employee exposure problem.
The following are incidents that had impacted pipeline operations due to the major or common natural gas compounds:

- 2000, 2008 outages due to high CO2 in Los Angeles. After the first incident, a GC was installed and after the second incident, access denial was set up after the first alarm and a continuous CO2 analyzer.
IV Rulemaking record

EPA has established a record for this rulemaking (docket number OPTS-42094B). This record includes all information considered in the development of the proposed rule and appropriate Federal Register notices. EPA will continue to supplement the record with additional information as it is received.

The record includes all information referenced in support of the May 20, 1987 proposal and the following information:

References

(1) Notice of Proposed Rulemaking, Cyclohexane (52 FR 19096; May 20, 1987).

V Other Regulatory Requirements

EPA discussed Executive Order 12291, The Regulatory Flexibility Act, and the Paperwork Reduction Act in detail in the May 20, 1987 proposal; and no changes are indicated for this notice.

List of Subjects in 40 CFR Parts 795 and 799

Testing, Environmental protection, Hazardous substances, Chemicals, Recordkeeping and reporting requirements.

Dwain Winters,
Acting Director, Office of Toxic Substances.
[FR Doc. 89-13477 Filed 6-6-89; 8:45 am]
BILLING CODE 6560-50-M

DEPARTMENT OF TRANSPORTATION
Research and Special Programs Administration

49 CFR Part 192
[Docket No. 106; Notice 1]

Transportation of Hydrogen Sulfide by Pipeline

AGENCY: Research and Special Programs Administration (RSPA), U.S. Department of Transportation (DOT).

ACTION: Advance notice of proposed rulemaking (ANPRM).

SUMMARY: This notice requests information to determine the need for regulations to control the concentration of hydrogen sulfide (H₂S) in natural gas pipeline systems. There have been several instances in which H₂S has entered pipeline inadvertently. High concentrations may be extremely toxic if released and H₂S is detrimental to steel pipe.

DATES: Interested parties are invited to submit comments by September 5, 1989.

ADDRESSES: Send comments in duplicate to the Dockets Unit, Room 4117, Office of Pipeline Safety, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590. Identify the docket and notice numbers stated in the heading of this notice. All comments and docketed material will be available for inspection and copying in Room 4117 between 8:30 a.m. and 5:00 p.m. each business day.

FOR FURTHER INFORMATION CONTACT: Cesar De Leon, (202) 366-4583, regarding the subject matter of this document, or the Dockets Unit, (202) 366-5048, for copies of this document or other material in the docket.

SUPPLEMENTARY INFORMATION:

Background

Natural gas produced from some gas production wells has significant concentrations of toxic H₂S. This gas, commonly called "sour gas" is "sweetened" by removing the H₂S from the natural gas in treatment plants before the natural gas is introduced into the transmission pipelines. The Mary Ann Field in Mobile Bay in Alabama produces natural gas averaging 7% percent or 75,000 parts per million (PPM) of H₂S.

At present, the federal gas pipeline safety regulations, 49 CFR Part 192, do not specifically address all the safety risks associated with the presence of H₂S in natural gas, such as those involving sulfide stress cracking and toxicity effects. Hydrogen sulfide is a toxic, colorless, flammable gas which is poisonous, if inhaled, especially at concentrations in excess of 300 PPM (½% of 1 percent). Persons will lose consciousness after 5 minutes of breathing H₂S at concentrations of 100 PPM and death results very quickly thereafter.

Considerable research has been conducted to determine the effects of H₂S on the sulfide stress cracking of line pipe and to additionally describe the effects of stress corrosion cracking mechanisms in line pipe [1]. Research has shown a substantial increase in threshold stress (stress below which H₂S has no effect on sulfide stress cracking) with decreasing H₂S concentration [2]. For H₂S concentrations of 5 PPM or less there is no measurable effect on the sulfide stress cracking potential for high strength steel pipe. For high concentration of H₂S (>3,000 PPM) and applied stress levels above 70 percent of the yield stress, the time to failure decreases dramatically [2, 3].

Recent Incidents Reported by NTSB

Involving Releases of H₂S Into Gas Pipeline Systems

California: One incident [4] arose on December 28, 1985, when the Pacific Offshore Pipeline Company's (POPCO) Las Flores Canyon Gas Treatment Plant was placed in service. Impurities, including H₂S, were to be removed from producing wells in the Santa Ynez Unit (an offshore field in the Santa Barbara Channel). The cleaned gas would be delivered by pipeline to the Las Flores Canyon Gas Treatment Plant where POPCO would then deliver it to the Southern California Gas Company (SCC) system for distribution to its natural gas customers.

Due to the failure of an automatic gas analyzer, gas was contaminated by 200 PPM of H₂S and entered the SCC distribution system. The analyzer was repaired following the interruption of gas flow. After the gas flow was reinitiated, further analyses indicated 18 PPM H₂S in the gas stream and flow was again stopped. The Occupational Safety and Health Administration (OSHA) regulations limit long term exposure levels of people to H₂S at 10 PPM. This introduction of H₂S into the SCC distribution system resulted in a notification of evacuation for over 20,000 people.

A second incident [4] involving H₂S entering the SCC system occurred on May 12, 1984, at the Wilmington, California, gas delivery point. Following this incident, the California Public Utilities Commission (PUC) requested that all SCC locations that could receive contaminated gas be equipped with automatic H₂S analyzers and shut-off equipment. The shut-off concentration would be set at between 4 PPM and 10 PPM.

As a result of these incidents in California, the California PUC has required that its previously determined upper limit be monitored by automatic equipment on a daily basis at gas supply points.

Texas: On August 11, 1987 automatic H₂S monitoring equipment at the KG Gas Processors, Limited, gas processing plant near Winters, Texas, indicated that an excessive amount of H₂S was entering the gas stream being delivered to Lone Star Gas Company [4].
QUALIFICATIONS AND PREPARED TESTIMONY OF
MATTHEW A. KARLE

Q.1 Please state your name and address.
A.1 My name is Matthew A. Karle. My business address is 505 Van Ness Avenue, San Francisco, California.

Q.2 By whom are you employed and in what capacity?
A.2 I am employed by the California Public Utilities Commission as a Public Utilities Regulatory Analyst in the Division of Ratepayer Advocates’ Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.
A.3 I hold a Master of Arts Degree in Government from California State University Sacramento, as well as a dual Bachelor of Arts in Political Science and English from San Francisco State University. Since joining the Commission in 2012, I have conducted research and analysis in a number of natural gas related proceedings. I have previously sponsored testimony before the Commission in the ongoing rulemaking on the transfer of master-metered mobile home parks to direct utility service.

Q.4 What is your area of responsibility in this proceeding?
A.4 I am responsible for Exhibit DRA-01.

Q.5 Does that complete your prepared testimony?
A.5 Yes, it does.