



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

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Order Instituting Rulemaking on the Commission's  
Own Motion to Revise General Order 58A to Comply  
with Decision 14-01-034.

Rulemaking 16-07-006

(Filed July 20, 2016)

**OPENING COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY  
(U 902 M), SOUTHERN CALIFORNIA GAS COMPANY (U 904 G), PACIFIC GAS AND  
ELECTRIC COMPANY (U 39 G) AND SOUTHWEST GAS CORPORATION (U 905 G)  
ON ORDER INSTITUTING RULEMAKING ON THE COMMISSION'S OWN MOTION  
TO REVISE GENERAL ORDER 58A TO COMPLY WITH DECISION 15-01-034**

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**Dated:** August 15, 2016

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

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ON ORDER INSTITUTING RULEMAKING ON THE COMMISSION'S OWN MOTION  
TO REVISE GENERAL ORDER 58A TO COMPLY WITH DECISION 15-01-034**

Pursuant to Ordering Paragraph 7 of the Order Instituting Rulemaking On The Commission's Own Motion To Revise General Order 58A To Comply With Decision 15-01-034 (the OIR),<sup>1</sup> San Diego Gas & Electric Company (SDG&E), Southern California Gas Company (SoCalGas), Pacific Gas and Electric Company (PG&E) and Southwest Gas Corporation (Southwest Gas) (collectively, the Joint Utilities) respectfully submit these opening comments to the OIR. The Joint Utilities appreciate this opportunity to comment on the Commission's continued efforts to promote biomethane in California and protect human health and pipeline and pipeline facility integrity and safety. In this OIR the Commission is determining whether and how to modify General Order (GO) 58A to comply with Decision (D.)14-01-034. As explained in greater detail below, the Commission should (1) limit the applicability of the modification to biomethane and biogas; and (2) modify General Order 58A in such a way that promotes certainty and clarity for biomethane producers and the California utilities. To assist in illustrating the Joint Utilities' proposed changes, the Joint Utilities have attached an Attachment A that indicates a simplified approach and an alternative Attachment B that proposes more limited changes.

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<sup>1</sup> The Joint Utilities note and suggest that the OIR heading on page 1 should be retitled to unambiguously indicate that the OIR is addressing compliance with D.14-01-034 – Decision Regarding the Biomethane Implementation Tasks in Assembly Bill 1900. The heading appears to be typographical in nature as this wording only appears in the heading. The Joint Utilities respectfully request that the Commission correct the typographical reference to D.15-01-034.

## **I. INTRODUCTION**

On February 13, 2013, the Commission issued Rulemaking (R.) 13-02-008 to address Assembly Bill (AB) 1900 and adopt biomethane standards and requirements, access rules, and related enforcement provisions.<sup>2</sup> Subsequently, on January 22, 2014, Decision (D.) 14-01-034 adopted biomethane testing requirements and concentration limits for 17 constituents of concern that may be found in biomethane and provides that, if biomethane meets the utility’s existing gas quality requirements and the incremental biomethane requirements, the biomethane may be accepted into the utilities’ natural gas pipelines.

As it relates to this OIR, and as required by AB1900,<sup>3</sup> D.14-01-034 acknowledged that “The vinyl chloride provision in section 7.e of General Order 58A needs to be revised in light of the repeal and replacement of former Health and Safety Code Section 25421 by AB 1900, and the adoption of a trigger level of 0.33 ppm.”<sup>4</sup> As such, the Commission concluded that it should institute a rulemaking to revise General Order 58A.<sup>5</sup> On July 20, 2016, the Commission issued this OIR to address these modifications.

## **II. JOINT UTILITIES’ RECOMMENDATIONS**

As stated in the OIR, “[t]he scope of this proceeding is to amend Section 2 and Section 7, only, of GO 58A to conform to the requirements of D.14-01-034 and to address any safety issues which may be identified due to these amendments.”<sup>6</sup> To accomplish this, the OIR identified three proposed issues:

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<sup>2</sup> AB1900 amended and added several code sections to the California Public Utilities Code pertaining to biogas and biomethane and required the Commission, with the assistance of other state agencies, to develop a new framework for the injection of biomethane into the natural gas pipeline systems of the California natural gas utilities.

<sup>3</sup> AB1900 repealed and replaced former Health and Safety Code Section 25421, which formerly limited the sale and transport of landfill gas containing vinyl chloride.

<sup>4</sup> D.14-01-034, mimeo., at 142 (Finding of Fact 30).

<sup>5</sup> See D.14-01-034, mimeo., at 149 (Conclusion of Law 18) and 156 (Ordering Paragraph 15).

<sup>6</sup> OIR at 7.

- Do the proposed amendments to section 2 and section 7 of General Order 58A conform to the requirements of Decision 14-01-034?
- Are there any additional amendments which should be made to conform General Order 58A to the requirements of D.14-01-034 at this time, and if so, why?
- Are there any safety issues implicated by the proposed amendments to General Order 58A?

The Joint Utilities support the OIR’s position that these three issues frame the scope of the OIR. Further, generally, the Joint Utilities are supportive of the intent of the proposed changes to GO 58A. While the Joint Utilities have not identified other potential issues that should be addressed as part of the OIR, the Joint Utilities note areas that could be simplified, clarified, or modified for the benefit of ease of compliance and consistency with AB1900 and D.14-01-34. Below, the Joint Utilities address the proposed changes to GO 58A and provide some suggested edits to improve clarity or consistency with earlier legislation and prior Commission decisions.

**A. Proposed Amendments to Section 2 (Definitions)**

In Section 2 (Definitions), the OIR proposes the addition of a definition for biomethane. The proposed definition for biomethane, contained in Section 2(b), reads: “Biomethane is interchangeable with natural gas and is produced by processing or upgrading biogas to increase the percentage of methane in the gas by removing carbon dioxide and other trace components to meet the standards for injection into a common carrier pipeline. Biomethane does not include biogas collected from a hazardous waste landfill, as defined in Health & Safety Code § 25117.1.” In order to enhance the precision of this definition and more closely align with D.14-01-034, the Joint Utilities propose removal of “is interchangeable with natural gas and” from the definition.

In D.14-01-034, the Commission found: “The terms ‘biogas’ and ‘biomethane’ as used in AB 1900 are defined in Health and Safety Code § 25420.”<sup>7</sup> California Health and Safety Code § 25420 defines biomethane as “biogas that meets the standards adopted pursuant to subdivisions (c) and (d) of Section 25421 for injection into a common carrier pipeline.” In other words, biomethane is suitable for injection into a common carrier pipeline when it meets all applicable gas and biomethane quality standards. This definition or understanding of biomethane is more accurate than stating that biomethane is simply “interchangeable” with natural gas because gas interchangeability has a particular meaning relative to a gas supply’s Wobbe Index and American Gas Association (AGA) Interchangeability Indices. As such, statements regarding interchangeability are unnecessary to comply with D.14-01-034, may lead to confusion regarding an industry term of art, and should be removed. These proposed revisions are illustrated in Attachments A and B.

**B. Proposed Amendments to Section 5 (Testing Equipment and Facilities)**

In response to the OIR’s second inquiry about other sections of GO 58A that might require modification to conform to the requirements of D.14-01-034, the Joint Utilities suggest a minor modification to Section 5 (Testing Equipment and Facilities). Section 5 requires the utility to provide, or make arrangements for testing equipment and facilities required to, “...perform the tests required by these rules or other orders of the Commission.” However, D.14-01-034 specifies that, “[w]hen the biomethane is tested prior to the interconnection, the testing entity is the supplier of the gas, and when the testing takes place at the utility’s interconnect, the testing entity is the utility”.<sup>8</sup> Consequently, in certain circumstances, an entity other than the utility will be performing tests in accordance with D.14-01-034 – a scenario that likely was not contemplated when the current version of Section 5 was drafted.

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<sup>7</sup> D.14-01-034, mimeo., at 139 (Finding of Fact 5).

<sup>8</sup> D.14-01-034, mimeo., at 146 (Finding of Fact 59).

In order to add clarity, the Joint Utilities suggest that Section 5 be revised to state that gas utilities will provide or make arrangements for testing equipment and facilities required to, “...perform the tests required **of the gas utility** by these rules or other orders of the Commission.” This proposed revision is reflected in Attachments A and B.

**C. Proposed Amendments to Section 7 (Purity of Gas)**

a. Sections 7(a) and 7(b)

The proposed revisions to Section 7(a) – Hydrogen Sulfide – and Section 7(b) – Total Sulfur – propose providing additional conversion data; however, additional language is necessary to clarify the conversion values and units. The OIR proposes revising Section 7(a) to indicate that “one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet” converts to “4 parts per million of hydrogen sulfide” and Section 7(b) to indicate that “five (5) grains of total sulfur per one hundred (100) standard cubic feet” converts to “80 parts per million of total sulfur.” To enhance clarity, the addition to Section 7(a) should indicate: “4 parts per million **by volume** of hydrogen sulfide.” For Section 7(b), the conversion should read “**no greater than 85** parts per million **by volume** of total sulfur.” These proposed revisions are illustrated in Attachments A and B.

b. Section 7(e)

The OIR proposes amending Section 7 (Purity of Gas) in order to “revise GO 58A to reference current measurements, to conform biomethane concentration standards for constituents of concern to standards adopted by D.14-01-034, and to eliminate references to former California Health and Safety Code Section 25421 (repealed by Assembly Bill 1900 enacted into law by Chapter 602 of the Statutes of 2012).”<sup>9</sup> To accomplish this, however, the OIR proposes amending Section 7(e) by removing the prior version, which limited the sale and transport of

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<sup>9</sup> OIR at 4.

landfill gas containing Vinyl Chloride, and inserting the current biomethane gas quality standards. Thus, in lieu of the landfill gas Vinyl Chloride restriction, the OIR is proposing to incorporate the biomethane-specific standards developed in D.14-01-034. However, doing so is unnecessary and likely to lead to complications in the future.

The revisions, as drafted, are potentially problematic because GO 58A is generally applicable to fuel gas within the jurisdiction of the Commission. As stated in GO 58A, it applies to “any person, firm or corporation now or hereafter engaged as a public utility in the business of furnishing gas (fuel gas) for domestic, commercial, industrial or other purposes within the State of California where gas service is subject to the jurisdiction of the Public Utilities Commission of the State of California.”<sup>10</sup> However, the OIR proposes incorporating detailed gas quality requirements and standards that are specific to a subset of gas – biomethane. Section 7(e), could therefore be easily misconstrued as being applicable to all gas within the jurisdiction of the Commission. This interpretation would also be inconsistent with AB1900, which called for the development of biomethane-specific requirements and standards<sup>11</sup> and D.14-01-034, which adopted those biomethane-specific requirements and standards. As further support, the biomethane-specific standards proposed to be included in Section 7(e) are standards that have been adopted as tariff rules for each of the California utilities: SoCalGas Rule 30, SDG&E Gas Rule 30, PG&E Gas Rule 21, and Southwest Gas Rule 22.

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<sup>10</sup> GO 58A at 1.

<sup>11</sup> See 2012 Cal ALS 602 (“The bill would further require the PUC to adopt, by rule or order, (1) standards for biomethane that specify the concentrations of constituents of concern that are reasonably necessary to protect public health and ensure pipeline integrity and safety, as specified, and (2) requirements for monitoring, testing, reporting, and recordkeeping, as specified.”)

Instead of reproducing the biomethane-specific standards developed in D.14-01-034, the Joint Utilities propose that GO 58A be revised to reflect the language contained in D.14-01-034's Conclusion of Law 16, which states: "In order for a biomethane supplier to interconnect with a utility's gas pipeline system, and consistent with Health and Safety Code § 25421(f)(1), the biomethane supplier must meet the gas quality requirements in the utility's existing tariff, as well as the incremental biomethane constituent specifications listed in Table 1 of section 4.4.3.3 of this decision." This Conclusion of Law could be simplified and incorporated into GO 58A as: "In order for biomethane to be transported in a utility's gas pipeline system, the biomethane must meet the existing gas quality requirements and the incremental biomethane constituent specifications in the utility's tariff."

Additionally, the standards proposed to be included in Section 7(e) remain in development. In fact, proposed Sections 7(f) and 7(g) acknowledge the need for future applications to review and update the standards for the protection of human health and pipeline integrity and safety, including considering proposals to amend the list of constituents of concern and concentration limits found in biomethane. Likewise, California Health and Safety Code Section 25421(e) regarding biomethane supplies requires the Commission to "review and update the standards for the protection of human health and pipeline integrity and safety adopted pursuant to subdivision (c), as well as the monitoring, testing, reporting, and recordkeeping requirements adopted pursuant to subdivision (d)." D.14-01-034 directs as follows: "Pursuant to Health and Safety Code § 25241(e), Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Gas Company, and Southwest Gas Corporation, either individually or collectively, shall file an application within five years from the effective date of this decision, or earlier if new information becomes available, or as directed by the Commission

in the future, for the Commission to carry out its review and update responsibilities under that code section.”<sup>12</sup>

Also, technological developments may allow for creation of various energy-related gases (such as synthesis gas) that might be developed via aerobic processes and safely injected into jurisdictional pipelines, requiring additional updates to GO 58A.

In other words, these standards will likely continue to evolve, which will – if the OIR’s proposed amendments are adopted – require future amendments to GO 58A. Future similar Commission rulemakings to address future amendments to GO 58A would be an inefficient use of Commission resources. In contrast, the utility tariff rules could, as necessary, be amended or modified through a simpler process than amending GO 58A. GO 58A could be simplified, but still achieve consistency with D.14-01-034, through reference to the California utility tariffs. This simplified approach is illustrated in Attachment A.

As an alternative, if the Commission believes additional detail is necessary to include in GO 58A, the Joint Utilities propose more limited revisions to clarify the additions and align Section 7 more closely with D.14-01-034.

First, the revisions to GO 58A should be limited to biogas/biomethane. As discussed above, the standards developed in D.14-01-034 were biomethane-specific.<sup>13</sup> As such, to conform to D.14-01-034, the amendments to GO 58A should be biomethane specific.

Second, the use of “monitoring” should be clarified. The proposed amendment to Section 7(e) states: “Operators shall monitor, as set forth by this Section 7 and the following

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<sup>12</sup> D.14-01-034, mimeo., at 154 (Ordering Paragraph 7).

<sup>13</sup> D.14-01-034, mimeo., at 153 (Ordering Paragraph 3) (“Consistent with Health and Safety Code § 25421(f)(1), in order for a biomethane supplier to interconnect with a utility’s gas pipeline system, the processed biomethane must meet the gas quality requirements in the utility’s existing tariff, **as well as the incremental biomethane constituent specifications adopted in today’s decision**, and which are listed in Table 1 of section 4.4.3.3 of this decision. In addition, the biomethane supplier is to adhere to the adopted monitoring, testing, reporting, and recordkeeping protocols.”) (emphasis added).

table, the levels of the constituents of concern above the trigger levels to verify that the total potential cancer and noncancer risks for the constituents of concern continue to stay within the trigger level and the lower and upper action levels.”<sup>14</sup> So as to provide greater clarity as to the sort of “monitoring” being engaged in, the word “monitor” should be replaced with “test.” The utilities are not expected to be continuously monitoring biomethane constituent levels (though continuous monitoring of other constituents does occur and could be imposed on biomethane constituents if necessary to protect safety), rather the utilities are periodically testing biomethane to determine its quality and constituent level. As drafted, the use of “monitor” could imply continuous monitoring, whereas D.14-01-034 discusses monitoring and testing in the context of startup testing and periodic testing.<sup>15</sup> Replacing “monitor” with “test” clarifies the requirement.

Third, the Joint Utilities propose a modification to the biomethane quality standards table. In the OIR’s proposed table, the trigger level for Biologicals is identified as “4x10<sup>4</sup>/scf (qPCR per group) and free of <0.2 micron filter.”<sup>16</sup> This is consistent with D.14-01-034,<sup>17</sup> however, in the Joint Utilities’ Tariff Rules the trigger level is identified as “4 x 10<sup>4</sup>/scf (qPCR per APB, SRB, IOB<sup>[fn]</sup><sup>18</sup> group) and commercially free of bacteria of >0.2 microns.”<sup>19</sup> These Biological trigger levels mean the same thing, but are stated differently. The OIR proposes a trigger level

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<sup>14</sup> GO 58A at 7.

<sup>15</sup> D.14-01-034, mimeo., at 127 (“The adopted monitoring and testing protocol consists of both the startup testing and the periodic testing as summarized in this section of the decision, and more fully detailed in the Joint Report.”).

<sup>16</sup> See OIR at 6.

<sup>17</sup> See D.14-01-034, mimeo., at 86-87.

<sup>18</sup> Each utility’s rules contain a footnote that explains the initials “APB,” “SRB” and “IOB.” The footnote number or reference differs for each utility depending on context.

<sup>19</sup> SoCalGas Rule 30, Section J.5, *available at* <https://www.socalgas.com/regulatory/tariffs/tm2/pdf/30.pdf>; SDG&E Gas Rule 30, Section J.5 *available at* [http://regarchive.sdge.com/tm2/pdf/GAS\\_GAS-RULES\\_GRULE30.pdf](http://regarchive.sdge.com/tm2/pdf/GAS_GAS-RULES_GRULE30.pdf); PG&E Gas Rule 21, Section C.13.b, *available at* [http://www.pge.com/notes/rates/tariffs/tm2/pdf/GAS\\_RULES\\_21.pdf](http://www.pge.com/notes/rates/tariffs/tm2/pdf/GAS_RULES_21.pdf); and Southwest Gas Rule 22, Section B.4, *available at* [https://www.swgas.com/1409181853334/RULE\\_22--Biomethane-Gas---effective-June-12.pdf](https://www.swgas.com/1409181853334/RULE_22--Biomethane-Gas---effective-June-12.pdf). Southwest Gas will file to amend its Rule No. 22 to incorporate the above language for additional clarity.

that identifies the necessary filter size to remove biologicals of a certain size. The Joint Utilities propose a trigger that is focused on the size of the bacteria to be removed. The intent of the trigger level is to restrict larger particulate matter from entering the utility pipeline system. As such, the revision is appropriate from a pipeline integrity perspective and to more clearly indicate the intent of the trigger level and level of processing required of biomethane.

Fourth, if the proposed Constituent of Concern table at Section 7(e) is included in the revised GO 58A, the following explanatory information at footnote 1 should be modified to address all of the constituents listed in the table: “The constituents listed from ‘arsenic’ to ‘vinyl chloride’ are carcinogenic constituents of concern. The constituents listed from ‘antimony’ to ‘toluene’ are non-carcinogenic constituents of concern.” Footnote 1 does not categorize the remaining constituents of concern in the table: ammonia, biologicals, hydrogen, mercury and siloxanes. The Joint Utilities recommend that the Commission include similar explanatory information for these five constituents of concern in Section 7(e), footnote 1, by describing them as “pipeline integrity protective constituents of concern.”

These alternative revisions are illustrated in Attachment B.

### **III. OTHER PROCEDURAL ISSUES**

The OIR preliminarily determines that formal hearings will not be necessary and that workshops may be convened to discuss issues raised through comments.<sup>20</sup> The Joint Utilities support the OIR’s preliminary determination that formal hearings will not be necessary and support the holding of workshops if deemed necessary to address issues raised in comments.

### **IV. CONCLUSION**

The Joint Utilities again thank the Commission for its attention to this matter. The Joint Utilities support the intent of the Commission’s proposed amendments to GO 58A, but propose

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<sup>20</sup> OIR at 8.



## ATTACHMENT A

### PROPOSED AMENDMENTS TO GENERAL ORDER 58A

(OIR proposed additions are underlined and proposed deletions are ~~struck~~; the Joint Utilities' proposed additions are **underlined and bold** and proposed deletions are ~~**struck and bold**~~)

#### Section 2. Definitions

##### a. Biogas

Biogas is created when organic waste decomposes anaerobically (without oxygen). Biogas may be obtained from landfills, dairies, sewage treatment plants, and other organic sources.

##### b. Biomethane

Biomethane ~~is interchangeable with natural gas and~~ is produced by processing or upgrading biogas to increase the percentage of methane in the gas by removing carbon dioxide and other trace components to meet the standards for injection into a common carrier pipeline. Biomethane does not include biogas collected from a hazardous waste landfill, as defined in Health and Safety Code Section 25117.1.

[re-lettering existing subsections 2.a-k]

##### f. Gas (Fuel Gas)

Gas or Fuel Gas, as used in these rules, shall mean any combustible gas or vapor, or combustible mixture of gaseous constituents, used to produce heat by burning. It shall include, but shall not be limited to, natural gas, gas manufactured from coal or oil, ~~gas obtained from biomass or from a land fill,~~ biomethane, or a mixture of any or all of the above.

#### Section 5. Testing Equipment and Facilities

- a. Each gas utility shall provide, or make arrangements for, meter testing equipment and facilities and other testing equipment and facilities as needed to perform the tests required **of the gas utility** by these rules or other orders of the Commission. The apparatus and equipment used shall be state-of-the-art, meeting industry standards, and shall be available at all times for inspection by any authorized representative of the Commission. The equipment shall be of a type and form approved by the Commission.

#### Section 7. Purity of Gas

- a. Hydrogen Sulfide

No gas supplied by any gas utility for domestic, commercial or industrial purposes in this state shall contain more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet (4 parts per million by volume of hydrogen sulfide).

b. Total Sulfur

No gas supplied by any gas utility for domestic, commercial or industrial purposes shall contain more than five (5) grains of total sulfur per one hundred (100) standard cubic feet (**80 no greater than 85 parts per million by volume of total sulfur**).

c. Test procedures used to determine the amounts of hydrogen sulfide and total sulfur shall be in accordance with accepted gas industry standards and practices.

d. When hydrogen sulfide, or total sulfur, exceeds the limits set forth in Section 7.a and Section 7.b, the gas utility shall notify the Commission and commence remedial action immediately. The Commission shall be notified when the level of hydrogen sulfide, or total sulfur, has been reduced to allowable limits.

e. [former section “e- Vinyl Chloride” deleted.]

**In order for biomethane to be transported in a utility’s gas pipeline system, the biomethane must meet the existing gas quality requirements and the incremental biomethane constituent specifications in the utility’s tariff.**

f. Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Gas Company, and Southwest Gas Corporation, either individually or collectively, shall file an application every five years, or earlier if new information becomes available, or as directed by the Commission in the future, commencing no later than January 22, 2019, for the Commission to review and update the standards for the protection of human health and pipeline integrity and safety, including considering proposals to amend the list of constituents of concern and concentration limits found in biomethane.

g. If the Office of Environmental Health Hazard Assessment (OEHHA) or the California Air Resources Board (CARB) believes that an update proceeding should occur before the five-year period, OEHHA or the CARB may notify the Commission’s Executive Director and the Energy Division Director that an update proceeding should be conducted.

## ATTACHMENT B

### ALTERNATIVE PROPOSED AMENDMENTS TO GENERAL ORDER 58A

(proposed additions from the OIR are underlined and proposed deletions are ~~struck~~; proposed SoCalGas and SDG&E additions are **underlined and bold** and proposed deletions are ~~**struck and bold**~~)

#### Section 2. Definitions

##### a. Biogas

Biogas is created when organic waste decomposes anaerobically (without oxygen). Biogas may be obtained from landfills, dairies, sewage treatment plants, and other organic sources.

##### b. Biomethane

Biomethane ~~is interchangeable with natural gas and~~ is produced by processing or upgrading biogas to increase the percentage of methane in the gas by removing carbon dioxide and other trace components to meet the standards for injection into a common carrier pipeline. Biomethane does not include biogas collected from a hazardous waste landfill, as defined in Health and Safety Code Section 25117.1.

[re-lettering existing subsections 2.a-k]

##### f. Gas (Fuel Gas)

Gas or Fuel Gas, as used in these rules, shall mean any combustible gas or vapor, or combustible mixture of gaseous constituents, used to produce heat by burning. It shall include, but shall not be limited to, natural gas, gas manufactured from coal or oil, ~~gas obtained from biomass or from a land fill,~~ biomethane, or a mixture of any or all of the above.

#### Section 5. Testing Equipment and Facilities

- a. Each gas utility shall provide, or make arrangements for, meter testing equipment and facilities and other testing equipment and facilities as needed to perform the tests required **of the gas utility** by these rules or other orders of the Commission. The apparatus and equipment used shall be state-of-the-art, meeting industry standards, and shall be available at all times for inspection by any authorized representative of the Commission. The equipment shall be of a type and form approved by the Commission.

#### Section 7. Purity of Gas

a. Hydrogen Sulfide

No gas supplied by any gas utility for domestic, commercial or industrial purposes in this state shall contain more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet (4 parts per million by volume of hydrogen sulfide).

b. Total Sulfur

No gas supplied by any gas utility for domestic, commercial or industrial purposes shall contain more than five (5) grains of total sulfur per one hundred (100) standard cubic feet (**80 no greater than 85 parts per million by volume of total sulfur**).

c. Test procedures used to determine the amounts of hydrogen sulfide and total sulfur shall be in accordance with accepted gas industry standards and practices.

d. When hydrogen sulfide, or total sulfur, exceeds the limits set forth in Section 7.a and Section 7.b, the gas utility shall notify the Commission and commence remedial action immediately. The Commission shall be notified when the level of hydrogen sulfide, or total sulfur, has been reduced to allowable limits.

e. [former section “e- Vinyl Chloride” deleted.]

Operators shall **test biomethane monitor**, as set forth by this Section 7 and the following table, the levels of the constituents of concern above the trigger levels to verify that the total potential cancer and non-cancer risks for the constituents of concern continue to stay within the trigger level and the lower and upper action levels. To the extent this section or existing gas quality requirements of the utility’s tariff specify stricter concentrations for a constituent of concern the stricter concentration limit will apply.

Constituent of Concern <sup>1</sup>	Trigger Level mg/m <sup>3</sup> (ppmv)	Lower Action Level mg/m <sup>3</sup> (ppmv)	Upper Action Level mg/m <sup>3</sup> (ppmv)
Arsenic	0.019 (0.006)	0.19 (0.06)	0.48 (0.15)
p-Dichlorobenzene	5.7 (0.95)	57 (9.5)	140 (24)
Ethylbenzene	26 (6.0)	260 (60)	650 (150)
n-Nitroso-di-n-propylamine	0.033 (0.006)	0.33 (0.06)	0.81 (0.15)
Vinyl Chloride	0.84 (0.33)	8.4 (3.3)	21 (8.3)
Antimony	0.60 (0.12)	6.0 (1.2)	30 (6.1)
Copper	0.060 (0.02)	0.60 (0.23)	3.0 (1.2)
Hydrogen Sulfide	30 (22)	300 (216)	1,500 (1,080)
Lead	0.075 (0.009)	0.75 (0.09)	3.8 (0.44)
Methacrolein	1.1 (0.37)	11 (3.7)	53 (18)
Alkyl Thiols (Mercaptans)	n/a (12)	n/a (120)	n/a (610)
Toluene	904 (240)	9,000 (2,400)	45,000 (12,000)
Ammonia	0.001%	--	--
Biologicals	<u>4 x 10<sup>4</sup>/scf (qPCR)</u>	--	--

	<b>per APB, SRB, IOB group) and commercially free of bacteria of &lt; &gt;0.2 micron filter microns</b>		
Hydrogen	0.1%	--	--
Mercury	0.08 mg/m <sup>3</sup>	--	--
Siloxanes	0.01 mg Si/m <sup>3</sup>	0.1 mg Si/m <sup>3</sup>	--
<p><sup>1</sup>The constituents listed from “arsenic” to “vinyl chloride” are carcinogenic constituents of concern. The constituents listed from “antimony” to “toluene” are non-carcinogenic constituents of concern. <b><u>The constituents listed from “ammonia” to “siloxanes” are pipeline integrity protective constituents of concern.</u></b></p>			

The action levels set by the foregoing table act as a warning or alarm. The lower action level is used to screen **biomethane gas** suppliers during the initial **biomethane gas** quality review and as an ongoing screening level during the periodic testing. The upper action level results in an immediate shutoff, and the **biomethane gas** supplier is denied access to the utilities’ pipeline systems until the supplier can demonstrate compliance with the **biomethane gas** quality and constituent requirements.

f. Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Gas Company, and Southwest Gas Corporation, either individually or collectively, shall file an application every five years, or earlier if new information becomes available, or as directed by the Commission in the future, commencing no later than January 22, 2019, for the Commission to review and update the standards for the protection of human health and pipeline integrity and safety, including considering proposals to amend the list of constituents of concern and concentration limits found in biomethane.

g. If the Office of Environmental Health Hazard Assessment (OEHHA) or the California Air Resources Board (CARB) believes that an update proceeding should occur before the five-year period, OEHHA or the CARB may notify the Commission’s Executive Director and the Energy Division Director that an update proceeding should be conducted.