

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 16, 2018

**Advice Letter 1049-G
1049-G-A**

Justin Lee Brown
Vice-President/Regulatory Affairs
Southwest Gas Corporation
PO Box 98510
Las Vegas, NV 89193-8510

SUBJECT: Modify Rule No. 22 - Biomethane Gas

Dear Mr. Brown:

Advice Letter 1049-G and supplemental 1049-G-A are effective as of October 8, 2017.

Sincerely,

A handwritten signature in cursive script that reads "Edward Randolph".

Edward Randolph
Director, Energy Division



SOUTHWEST GAS CORPORATION

December 5, 2017

ATTN: Tariff Unit, Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Subject: Southwest Gas Corporation (U 905 G)
Advice Letter No. 1049-A

Enclosed herewith is an original and one (1) copy of Southwest Gas Corporation's Advice Letter No. 1049-A, together with California Gas Tariff Sheet No. 279.

Sincerely,


Valerie J. Ontiveroz
Regulatory Manager/California

VJO:dm

Enclosure



SOUTHWEST GAS CORPORATION

Advice Letter No. 1049-A

December 5, 2017

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Southwest Gas Corporation (Southwest Gas or Company) (U 905 G) tenders herewith for filing the following tariff sheets:

Cal. P.U.C. Sheet No.	California Gas Tariff Title of Sheet	Canceling Cal. P.U.C. Sheet No.
3rd Revised ¹ Sheet No. 279	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 279

Purpose

The purpose of this filing is to supplement in part Advice Letter No. 1049, which was filed on September 8, 2017, to modify Rule No 22 – *Biomethane Gas* in Southwest Gas’ California Gas Tariff, in accordance with Decision (D.) 16-11-008. D.16-11-008 revised General Order (GO) 58-A – *Standards for Gas Service in the State of California* to comply with D.14-01-034. This supplemental filing addresses various revisions to Advice Letter No. 1049 pursuant to the directives of Energy Division Staff. Specifically, this filing revises:

1. “Notice” and “Service” sections on Page 3;
2. Advice Letter Summary Sheet; and
3. Total Sulfur gas specification contained on Sheet No. 279.

The attached modified pages (Attachment 1) replace the corresponding original pages in Advice Letter No. 1049, while all other aspects of the original Advice Letter remain unchanged.² Therefore, Southwest Gas respectfully requests that this partial supplemental filing be approved along with Advice Letter No. 1049.

Effective Date

Southwest Gas respectfully requests that this Advice Letter be made effective October 8, 2017, which is the originally requested effective date for Advice Letter No. 1049.

Protest

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based with specificity. The protest must be sent no later than 20 days after the date of this Advice Letter filing and shall be sent by letter via U.S. Mail, facsimile, or electronically mailed. The address for mailing or delivering a protest to the Commission is:

¹ 2nd Revised Sheet No. 279 was submitted in Advice Letter No. 1049 and will not be issued.

² A copy of Advice Letter No. 1049 is included as Attachment 2.



Advice Letter No. 1049-A
Page 3
December 5, 2017

Protest (continued)

ATTN: Tariff Unit
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
Email: edtariffunit@cpuc.ca.gov
Facsimile: 415-703-2200

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004, at the same address as above and mailed, emailed or faxed to:

Mr. Justin Lee Brown
Vice President/Regulation & Public Affairs
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Email: justin.brown@swgas.com
Facsimile: 702-364-3452

Notice

In accordance with GO 96-B, General Rule 4, a copy of this Advice Letter is being sent either electronically or via overnight express mail delivery to parties shown on the attached distribution list. A copy of the Advice Letter is also being served to the parties on the service list in R.16-07-006 (Attachment 3). Address changes to the GO 96-B distribution list should be directed to Southwest Gas at email address RRA@swgas.com. For changes to the service list in R.16-07-006, please contact the Commission's Process Office at (415) 703-2021 or at ProcessOffice@cpuc.ca.gov. Southwest Gas Advice Letter filings may also be accessed electronically at: <https://www.swgas.com/en/california-rates-and-regulation>.

Communications regarding this filing should be directed to:

Valerie J. Ontiveroz
Regulatory Manager/California
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Telephone: 702-876-7323
E-mail: valerie.ontiveroz@swgas.com

Respectfully submitted,

SOUTHWEST GAS CORPORATION

By: 

Justin Lee Brown

Attachments



Distribution List

Advice Letter No. 1049-A

In conformance with GO 96-B, General Rule 4.3

The following individual has been served by regular, first-class mail:

Elizabeth Echols, Director
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94105

The following individuals or entities have been served by electronic mail:

Pacific Gas & Electric Company
PGETariffs@pge.com

Southern California Gas Company
ROrtiz@SempraUtilities.com

San Diego Gas & Electric Company
SDG&ETariffs@SempraUtilities.com

Belinda Gatti
Energy Division
California Public Utilities Commission
belinda.gatti@cpuc.ca.gov

Robert M. Pocta
Office of Ratepayer Advocates
California Public Utilities Commission
rmp@cpuc.ca.gov

Nathaniel Skinner
Office of Ratepayer Advocates
California Public Utilities Commission
nws@cpuc.ca.gov

Pearlie Sabino
Office of Ratepayer Advocates
California Public Utilities Commission
pzs@cpuc.ca.gov

ADVICE LETTER NO. 1049-A
ATTACHMENT 1

Advice Letter No. 1049
Page 3
September 8, 2017

Protest (continued)

days after the date of this Advice Letter filing and shall be sent by letter via U.S. Mail, facsimile, or electronically mailed. The address for mailing or delivering a protest to the Commission is:

ATTN: Tariff Unit
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
E-mail: edtariffunit@cpuc.ca.gov
Facsimile: 415-703-2200

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004, at the same address as above and mailed or faxed to:

Mr. Justin Lee Brown
Vice President/Regulation & Public Affairs
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Facsimile: 702-364-3452

Notice

In accordance with GO 96-B, General Rule 4, a copy of this Advice Letter is being sent either electronically or via overnight express mail delivery to parties shown on the attached distribution list. A copy of the Advice Letter is also being served to the parties on the service list in R.16-07-006. Address changes to the GO 96-B distribution list should be directed to Southwest Gas at email address RRA@swgas.com. For changes to the service list in R.16-07-006, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Southwest Gas Advice Letter filings may also be accessed electronically at: <https://www.swgas.com/en/california-rates-and-regulation>.

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RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS (Continued)

- g. Total Sulfur: Biomethane Gas shall not contain more than 5 grains of total sulfur compounds, measured as sulfur, per 100 standard cubic feet or 85 ppm by volume of total sulfur.
 - h. Liquids: Biomethane Gas shall contain no liquids at, or immediately downstream of the receipt point(s).
 - i. Hydrocarbon Dew Point for Biomethane Gas is not to exceed 20 degrees Fahrenheit.
 - j. Water Content: Biomethane Gas received into the Company's system shall have a water content of less than 7 pounds per million standard cubic feet.
3. Biomethane Gas must not contain any hazardous substances at concentration levels which would prevent or unduly impact the merchantability of Biomethane Gas, be injurious to Company facilities, or which would present a health and/or safety hazard to Company employees, customers, and/or the public.
4. In addition to conforming to the specifications identified above, Biomethane Gas must also conform at the time of delivery to the following limits set forth in Table 1, which are specifically related to Biomethane Gas, and which may be adopted and periodically updated by the Commission:

N/T/L
N/T/L

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ADVICE LETTER NO. 1049-A
ATTACHMENT 2



SOUTHWEST GAS CORPORATION

September 8, 2017

ATTN: Tariff Unit, Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Subject: Southwest Gas Corporation (U 905 G)
Advice Letter No. 1049

Enclosed herewith is an original and one (1) copy of Southwest Gas Corporation's Advice Letter No. 1049, together with California Gas Tariff Sheet Nos. 276, 278, and 279-279.2.

Sincerely,

Valerie J. Ontiveroz
Regulatory Manager/California

VJO:jjp
Enclosures



SOUTHWEST GAS CORPORATION

Advice Letter No. 1049

September 8, 2017

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Southwest Gas Corporation (Southwest Gas or Company) (U 905 G) tenders herewith for filing the following tariff sheets:

Cal. P.U.C. Sheet No.	California Gas Tariff Title of Sheet	Canceling Cal. P.U.C. Sheet No.
2nd Revised Sheet No. 276	Rule No. 22 – Biomethane Gas	1st Revised Sheet No. 276
2nd Revised Sheet No. 278	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 278
2nd Revised Sheet No. 279	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 279
3rd Revised Sheet No. 279.1	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	2nd Revised Sheet No. 279.1
2nd Revised Sheet No. 279.2	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 279.2

Purpose

The purpose of this filing is to modify Rule No 22 – *Biomethane Gas* in Southwest Gas' California Gas Tariff, in accordance with Decision (D.) 16-11-008. D.16-11-008 revised General Order (GO) 58-A – *Standards for Gas Service in the State of California* to comply with D.14-01-034.

Background

Assembly Bill (AB) 1900 required the Commission to approve standards and requirements for health, safety, and pipeline integrity for biomethane injected into utility pipelines and to adopt rules ensuring nondiscriminatory open access. Per D.14-01-034, issued on January 22, 2014, the Commission identified 17 constituents of concern related to biomethane, and adopted the monitoring, testing, reporting, and recordkeeping protocols recommended in the May 15, 2013, *Recommendations to the California Public Utilities Commission Regarding Health Protective Standards for the Injection of Biomethane into*



Background (continued)

the Common Carrier Pipeline. Additionally, Ordering Paragraph (OP) 15 in D.14-01-034 states:

After consulting with the Energy Division, the Gas Safety and Reliability Branch of the Safety and Enforcement Division, and the Administrative Law Judge Division, the Commission shall draft a new rulemaking to revise General Order 58A.¹

In July 2016, the Commission issued Rulemaking (R.) 16-07-006 to revise GO 58-A to adopt standards for constituents of concern found in Biomethane Gas pursuant to D.14-01-034 and California Health and Safety Code § 25421. The revisions to GO 58-A were subsequently adopted in D.16-11-008.²

Thus, in accordance with the modifications to GO 58-A, Southwest Gas has revised its Rule No. 22 – *Biomethane Gas* as follows:

- Definitions for Biogas and Biomethane Gas have been revised to conform with the definitions found in GO 58-A;
- Hydrogen Sulfide has been added to the Biomethane Gas quality specifications in Section B.2. consistent with GO 58-A; and
- In Section B.2., Sulfur has been revised to Total Sulfur and the specifications have been revised consistent with GO 58-A.

This Advice Letter will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

Effective Date

Southwest Gas believes this Advice Letter is subject to Energy Division disposition and should be classified as Tier 2, effective after Energy Division Approval, pursuant to General Order (GO) 96-B. Southwest Gas respectfully requests this Advice Letter be approved October 8, 2017, which is thirty (30) calendar days after the date filed.

Protest

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based with specificity. The protest must be sent no later than 20

¹ D.14-01-034, at pg. 156.

² D.16-11-008, OP 1, at pgs. 14-15.



Advice Letter No. 1049
Page 3
September 8, 2017

Protest *(continued)*

days after the date of this Advice Letter filing and shall be sent by letter via U.S. Mail, facsimile, or electronically mailed. The address for mailing or delivering a protest to the Commission is:

ATTN: Tariff Unit
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
E-mail: edtariffunit@cpuc.ca.gov
Facsimile: 415-703-2200

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004, at the same address as above and mailed or faxed to:

Mr. Justin Lee Brown
Vice President/Regulation & Public Affairs
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Facsimile: 702-364-3452

Notice

Southwest Gas believes it is exempt from the notice requirements set forth in GO 96-B, General Rule 4.2, since the tariff revisions proposed herein are being filed in accordance with D.16-11-008.

Service

In accordance with GO 96-B, General Rule 7.2, Southwest Gas is serving this Advice Letter and related tariff sheet to the utilities and interested parties shown on the attached list.



Advice Letter No. 1049
Page 4
September 8, 2017

Service (continued)

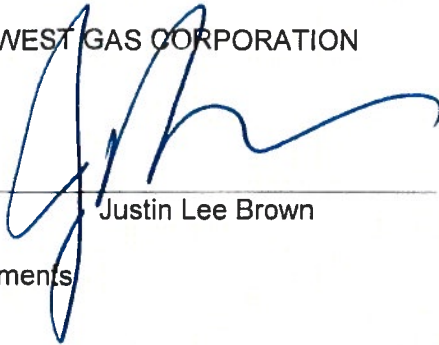
Communications regarding this filing should be directed to:

Valerie J. Ontiveroz
Regulatory Manager/California
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Telephone: 702-876-7323
E-mail: valerie.ontiveroz@swgas.com

Respectfully submitted,

SOUTHWEST GAS CORPORATION

By:



Justin Lee Brown

Attachments

Distribution List

Advice Letter No. 1049

In conformance with GO 96-B, General Rule 4.3

The following individual has been served by regular, first-class mail:

Elizabeth Echols, Director
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94105

The following individuals or entities have been served by electronic mail:

Pacific Gas & Electric Company
PGETariffs@pge.com

Southern California Gas Company
ROrtiz@SempraUtilities.com

San Diego Gas & Electric Company
SDG&ETariffs@SempraUtilities.com

Belinda Gatti
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California Public Utilities Commission
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Robert M. Pocta
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Nathaniel Skinner
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California Public Utilities Commission
nws@cpuc.ca.gov

Pearlie Sabino
Office of Ratepayer Advocates
California Public Utilities Commission
pzs@cpuc.ca.gov

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)	
Company name/CPUC Utility No. Southwest Gas Corporation (U 905 G)	
Utility type: <input type="checkbox"/> ELC <input checked="" type="checkbox"/> GAS <input type="checkbox"/> PLC <input type="checkbox"/> HEAT <input type="checkbox"/> WATER	Contact Person: Valerie J. Ontiveroz Phone #: (702) 876-7323 E-mail: valerie.ontiveroz@swgas.com
EXPLANATION OF UTILITY TYPE ELC = Electric GAS = Gas PLC = Pipeline HEAT = Heat WATER = Water	(Date Filed/ Received Stamp by CPUC)
Advice Letter (AL) #: 1049	
Subject of AL: Modify Rule No. 22 – Biomethane Gas.	
Keywords (choose from CPUC listing): Imbalance Trades	
AL filing type: <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Annual <input type="checkbox"/> One-Time <input checked="" type="checkbox"/> Other	
If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:	
Does AL replace a withdrawn or rejected AL? If so, identify the prior AL Not applicable	
Summarize differences between the AL and the prior withdrawn or rejected AL ¹ : Not applicable	
Resolution Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Requested effective date: October 8, 2017	No. of tariff sheets: 5
Estimated system annual revenue effect (%): Not applicable	
Estimated system average rate effect (%): Not applicable	
When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).	
Tariff schedules affected: None	
Service affected and changes proposed ³ : Not applicable	
Pending advice letters that revise the same tariff sheets: Not applicable	
Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:	
CPUC, Energy Division Attention: Tariff Unit 505 Van Ness Ave. San Francisco, CA 94102 E-mail: edtariffunit@cpuc.ca.gov	Mr. Justin Lee Brown, Vice-President/Regulation & Public Affairs Southwest Gas Corporation P. O. Box 98510 Las Vegas, NV 89193-8510 E-mail: justin.brown@swgas.com Facsimile: 702-364-3452

³ Discuss in AL if more space is needed.

RULE NO. 22
BIOMETHANE GAS

APPLICABILITY

This Rule applies to suppliers of Biomethane Gas and provides the general terms and conditions that apply to the interconnection between a Biomethane Gas supplier's facilities and the Company's facilities and the Company's receipt of Biomethane Gas into its system from such interconnection point(s). This Rule is intended to implement Decision (D.) 14-01-034, including rules regarding Constituent concentration standards, monitoring and testing requirements, and reporting and recordkeeping requirements.

A. DEFINITIONS

ARB: Air Resources Board of the California Environmental Protection Agency.

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.

Biomethane Gas: Biomethane Gas 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 Gas does not include Biogas collected from a hazardous waste landfill, as defined in Health & Safety Code § 25117.1 and pursuant to the parameters set forth in Section D of this Rule.

CARB/OEHHA Report: *Recommendations to the California Public Utilities Commission Regarding Health Protective Standards for the Injection of Biomethane into the Common Carrier Pipeline*, prepared by Staff of the California Air Resources Board and the Office of Health Hazard Assessment. The CARB/OEHHA Report was submitted in Rulemaking 13-02-008 and adopted in D.14-01-034.

Constituent of Concern (Constituent): A chemical or compound that may impact the merchantability of Biomethane Gas.

(a) Health Protective Constituents include:

1. Carcinogenic (cancer risk): arsenic, p-Dichlorobenzene, ethylbenzene, n-Nitroso-di-n-propylamine, and vinyl chloride.

RULE NO. 22

BIOMETHANE GAS

(Continued)

B. BIOMETHANE GAS SPECIFICATIONS

1. Biomethane Gas must meet the gas quality specifications identified in this Rule and the Company's Rule No. 21, Transportation of Customer-Secured Natural Gas, of this California Gas Tariff, as adopted and periodically updated by the Commission.
2. Biomethane Gas received into the Company's system shall conform to the following quality specifications at the time of receipt:
 - a. Biomethane Gas must be free from bacteria, pathogens, dust, sand, dirt, gums, oils, and/or any other substances at levels that would be injurious to the Company's facilities, and/or to render the gas unmerchantable.
 - b. Biomethane Gas delivered into the Company's system at the point(s) of receipt shall be at a pressure that can be integrated into the Company's system.
 - c. Delivery Temperature: Biomethane Gas delivery temperature is not to be below 40 degrees Fahrenheit or above 120 degrees Fahrenheit.
 - d. Biomethane Gas Interchangeability: Biomethane Gas shall be interchangeable with the gas in the Company's receiving pipeline. Biomethane Gas shall have a minimum Wobbe Number of 1280. Biomethane Gas shall meet American Gas Association's Lifting Index, Flashback Index and Yellow Tip Index interchangeability indices for high methane gas relative to a typical composition of gas in the Company's system serving the area. Acceptable specification ranges are: * Lifting Index (IL); $IL \leq 1.06$; * Flashback Index (IF); $IF \leq 1.2$; * Yellow Tip Index (IY); $IY \geq 0.8$.
 - e. Inert gases: Biomethane Gas supplied shall not contain greater than 4% of total combined inert compounds, which includes maximums of 0.2% oxygen, 3% nitrogen; 2% carbon dioxide, and any other inert gas by total volume.
 - f. Hydrogen Sulfide: Biomethane Gas shall contain no more than 0.25 grains of hydrogen sulfide, measured as hydrogen sulfide, per 100 standard cubic feet (4 parts per million (ppm) by volume of hydrogen sulfide).

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RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS (Continued)

- g. Total Sulfur: Biomethane Gas shall not contain more than 5 grains of total sulfur compounds, measured as sulfur, per 100 standard cubic feet or 80 ppm by volume of total sulfur. This includes COS and CS₂, hydrogen sulfide, mercaptans, and mono di and poly sulfides.
 - h. Liquids: Biomethane Gas shall contain no liquids at, or immediately downstream of the receipt point(s).
 - i. Hydrocarbon Dew Point for Biomethane Gas is not to exceed 20 degrees Fahrenheit.
 - j. Water Content: Biomethane Gas received into the Company's system shall have a water content of less than 7 pounds per million standard cubic feet.
3. Biomethane Gas must not contain any hazardous substances at concentration levels which would prevent or unduly impact the merchantability of Biomethane Gas, be injurious to Company facilities, or which would present a health and/or safety hazard to Company employees, customers, and/or the public.
4. In addition to conforming to the specifications identified above, Biomethane Gas must also conform at the time of delivery to the following limits set forth in Table 1, which are specifically related to Biomethane Gas, and which may be adopted and periodically updated by the Commission:

N/T/L
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RULE NO. 22

BIOMETHANE GAS
(Continued)

B. **BIOMETHANE GAS SPECIFICATIONS** (Continued)

Table 1 Concentration Standards for Biomethane Gas Constituents			
Constituent	Trigger Level	Lower Action Level	Upper Action Level
Health Protective Constituents¹			
Carcinogenic			
Arsenic	0.019 (0.006)	0.19 (0.06)	0.48 (0.15)
p-Dichlorobenzenes	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)
Non-Carcinogenic			
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 ²	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) ²	N/A (12)	N/A (120)	N/A (610)
Toluene	904 (240)	9,000 (2,400)	45,000 (12,000)
Pipeline Integrity Protective Constituents³			
Siloxanes	0.01 mg Si/m ³	0.1 mg Si/m ³	-
Ammonia	0.001%	-	-
Hydrogen	0.1%	-	-
Mercury	0.08 mg/m ³	-	-
Biologicals	4 x 10 ⁴ /scf (qPCR per APB, SRB, IOB group ⁴) and commercially free of bacteria of >0.2 micron	-	-

¹ The first number in Table 1, Health Protective Constituents, are in mg/m³, while the second number in () is in ppmv.

² Testing requirement will be the lower of stated Biomethane Gas values or other requirements in this Rule.

³ The Pipeline Integrity Protective Constituent Lower and Upper Action Level limits will be established in the Commission's next update proceeding. Until that time, Biomethane Gas that contains Pipeline Integrity Protective Constituents exceeding the Trigger Level, but lacking a Lower or Upper Action Level, will be analyzed and addressed on a case-by-case basis based on the Biomethane Gas' potential impact on the Company's pipeline system integrity. The Lower Action Level may be set at concentration levels equal or greater than the Trigger Level.

⁴ Acid-producing Bacteria [APB], Sulfate-reducing Bacteria [SRB], and Iron-oxidizing Bacteria [IOB]

RULE NO. 22

BIOMETHANE GAS

(Continued)

B. BIOMETHANE GAS SPECIFICATIONS *(Continued)*

5. Biomethane Gas must conform to the requirements listed in Table 2 below:

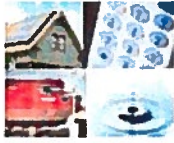
Table 2 Collective Risk from Carcinogenic and Non-Carcinogenic Health Protective Constituents			
Risk Management Levels	Risk from Carcinogenic Constituents (chances in a million)	Hazard Index from Non-Carcinogenic Constituents	Action
Trigger Level ^[1]	≥1.0	≥0.1	Periodic Testing Required
Lower Action Level ^[2]	≥10.0	≥1.0	Biomethane Gas supply shut-in after three exceedances in 12 months
Upper Action Level ^[3]	≥25.0	≥5.0	Immediate Biomethane Gas supply shut-in
^[1] Applies to individual Constituent concentrations ^[2] Applies to the sum of all Constituent concentrations over the Trigger Level. ^[3] Applies to individual Constituent concentrations or to the sum of all Constituent concentrations over the Trigger Level.			

6. Source-specific Biomethane Gas Testing shall vary based on the source of the Biomethane Gas:

- a. Biomethane Gas supplied by landfills shall be tested for all 17 Health and Pipeline Integrity Protective Constituents.
- b. Biomethane Gas supplied by dairies shall be tested for Ethylbenzene, Hydrogen Sulfide, n-Nitroso-di-n-propylamine, Mercaptans, Toluene and all Pipeline Integrity Protective Constituents.
- c. Biomethane Gas supplied by publicly owned treatment works (water and sewage treatment plants) and other sources of Biomethane Gas shall be tested for p-Dichlorobenzene, Ethylbenzene, Hydrogen Sulfide, Mercaptans, Toluene, Vinyl Chloride, and all Pipeline Integrity Protective Constituents.

T

ADVICE LETTER NO. 1049-A
ATTACHMENT 3



California
Public Utilities
Commission



CPUC Home

CALIFORNIA PUBLIC UTILITIES COMMISSION Service Lists

PROCEEDING: R1607006 - CPUC - OIR TO REVISE
FILER: CPUC
LIST NAME: LIST
LAST CHANGED: NOVEMBER 8, 2017

[Download the Comma-delimited File](#)
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[Back to Service Lists Index](#)

Parties

DAVID COX
 DIRECTOR - OPERATIONS
 COALITION FOR RENEWABLE NATURAL GAS
 EMAIL ONLY
 EMAIL ONLY, CA 00000
 FOR: COALITION FOR RENEWABLE NATURAL
 GAS, INC.

GREG KESTER
 CALIF. ASSN. OF SANITATION AGENCIES
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 EMAIL ONLY, CA 00000
 FOR: CALIFORNIA ASSOCIATION OF
 SANITATION AGENCIES (CASA)

JOHN BOEHME
 MANAGER-REGULATORY AFFAIRS
 AGL RESOURCES
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 EMAIL ONLY, IL 00000
 FOR: CENTRAL VALLEY GAS STORAGE, LLC

WILLIAM HELD
 VICE PRESIDENT
 CIVIL & ENVIRONMENTAL CONSULTANTS, INC
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 EMAIL ONLY, OH 00000
 FOR: CIVIL & ENVIRONMENTAL CONSULTANTS,
 INC.

LAURA WISLAND
 UNION OF CONCERNED SCIENTISTS
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San Francisco, CA 94102

Subject: Southwest Gas Corporation (U 905 G)
Advice Letter No. 1049

Enclosed herewith is an original and one (1) copy of Southwest Gas Corporation's Advice Letter No. 1049, together with California Gas Tariff Sheet Nos. 276, 278, and 279-279.2.

Sincerely,

Valerie J. Ontiveroz
Regulatory Manager/California

VJO:jjp
Enclosures



SOUTHWEST GAS CORPORATION

Advice Letter No. 1049

September 8, 2017

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Southwest Gas Corporation (Southwest Gas or Company) (U 905 G) tenders herewith for filing the following tariff sheets:

Cal. P.U.C. Sheet No.	California Gas Tariff Title of Sheet	Canceling Cal. P.U.C. Sheet No.
2nd Revised Sheet No. 276	Rule No. 22 – Biomethane Gas	1st Revised Sheet No. 276
2nd Revised Sheet No. 278	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 278
2nd Revised Sheet No. 279	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 279
3rd Revised Sheet No. 279.1	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	2nd Revised Sheet No. 279.1
2nd Revised Sheet No. 279.2	Rule No. 22 – Biomethane Gas (<i>Continued</i>)	1st Revised Sheet No. 279.2

Purpose

The purpose of this filing is to modify Rule No 22 – *Biomethane Gas* in Southwest Gas' California Gas Tariff, in accordance with Decision (D.) 16-11-008. D.16-11-008 revised General Order (GO) 58-A – *Standards for Gas Service in the State of California* to comply with D.14-01-034.

Background

Assembly Bill (AB) 1900 required the Commission to approve standards and requirements for health, safety, and pipeline integrity for biomethane injected into utility pipelines and to adopt rules ensuring nondiscriminatory open access. Per D.14-01-034, issued on January 22, 2014, the Commission identified 17 constituents of concern related to biomethane, and adopted the monitoring, testing, reporting, and recordkeeping protocols recommended in the May 15, 2013, *Recommendations to the California Public Utilities Commission Regarding Health Protective Standards for the Injection of Biomethane into*



Background *(continued)*

the Common Carrier Pipeline. Additionally, Ordering Paragraph (OP) 15 in D.14-01-034 states:

After consulting with the Energy Division, the Gas Safety and Reliability Branch of the Safety and Enforcement Division, and the Administrative Law Judge Division, the Commission shall draft a new rulemaking to revise General Order 58A.¹

In July 2016, the Commission issued Rulemaking (R.) 16-07-006 to revise GO 58-A to adopt standards for constituents of concern found in Biomethane Gas pursuant to D.14-01-034 and California Health and Safety Code § 25421. The revisions to GO 58-A were subsequently adopted in D.16-11-008.²

Thus, in accordance with the modifications to GO 58-A, Southwest Gas has revised its Rule No. 22 – *Biomethane Gas* as follows:

- Definitions for Biogas and Biomethane Gas have been revised to conform with the definitions found in GO 58-A;
- Hydrogen Sulfide has been added to the Biomethane Gas quality specifications in Section B.2. consistent with GO 58-A; and
- In Section B.2., Sulfur has been revised to Total Sulfur and the specifications have been revised consistent with GO 58-A.

This Advice Letter will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

Effective Date

Southwest Gas believes this Advice Letter is subject to Energy Division disposition and should be classified as Tier 2, effective after Energy Division Approval, pursuant to General Order (GO) 96-B. Southwest Gas respectfully requests this Advice Letter be approved October 8, 2017, which is thirty (30) calendar days after the date filed.

Protest

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based with specificity. The protest must be sent no later than 20

¹ D.14-01-034, at pg. 156.

² D.16-11-008, OP 1, at pgs. 14-15.



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Page 3
September 8, 2017

Protest *(continued)*

days after the date of this Advice Letter filing and shall be sent by letter via U.S. Mail, facsimile, or electronically mailed. The address for mailing or delivering a protest to the Commission is:

ATTN: Tariff Unit
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
E-mail: edtariffunit@cpuc.ca.gov
Facsimile: 415-703-2200

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004, at the same address as above and mailed or faxed to:

Mr. Justin Lee Brown
Vice President/Regulation & Public Affairs
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Facsimile: 702-364-3452

Notice

Southwest Gas believes it is exempt from the notice requirements set forth in GO 96-B, General Rule 4.2, since the tariff revisions proposed herein are being filed in accordance with D.16-11-008.

Service

In accordance with GO 96-B, General Rule 7.2, Southwest Gas is serving this Advice Letter and related tariff sheet to the utilities and interested parties shown on the attached list.



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September 8, 2017

Service *(continued)*

Communications regarding this filing should be directed to:

Valerie J. Ontiveroz
Regulatory Manager/California
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Telephone: 702-876-7323
E-mail: valerie.ontiveroz@swgas.com

Respectfully submitted,

SOUTHWEST GAS CORPORATION

By:

A handwritten signature in blue ink, appearing to read "Justin Lee Brown", written over a horizontal line.

Justin Lee Brown

Attachments

Distribution List

Advice Letter No. 1049

In conformance with GO 96-B, General Rule 4.3

The following individual has been served by regular, first-class mail:

Elizabeth Echols, Director
Office of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94105

The following individuals or entities have been served by electronic mail:

Pacific Gas & Electric Company
PGETariffs@pge.com

Southern California Gas Company
ROrtiz@SempraUtilities.com

San Diego Gas & Electric Company
SDG&ETariffs@SempraUtilities.com

Belinda Gatti
Energy Division
California Public Utilities Commission
belinda.gatti@cpuc.ca.gov

Robert M. Pocta
Office of Ratepayer Advocates
California Public Utilities Commission
rmp@cpuc.ca.gov

Nathaniel Skinner
Office of Ratepayer Advocates
California Public Utilities Commission
nws@cpuc.ca.gov

Pearlie Sabino
Office of Ratepayer Advocates
California Public Utilities Commission
pzs@cpuc.ca.gov

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Southwest Gas Corporation (U 905 G)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: **Valerie J. Ontiveroz**

Phone #: **(702) 876-7323**

E-mail: **valerie.ontiveroz@swgas.com**

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
 PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **1049**

Subject of AL: **Modify Rule No. 22 – Biomethane Gas.**

Keywords (choose from CPUC listing): **Imbalance Trades**

AL filing type: Monthly Quarterly Annual One-Time Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL **Not applicable**

Summarize differences between the AL and the prior withdrawn or rejected AL¹: **Not applicable**

Resolution Required? Yes No

Requested effective date: **October 8, 2017**

No. of tariff sheets: **5**

Estimated system annual revenue effect (%): **Not applicable**

Estimated system average rate effect (%): **Not applicable**

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: **None**

Service affected and changes proposed³: **Not applicable**

Pending advice letters that revise the same tariff sheets: **Not applicable**

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Ave.
San Francisco, CA 94102
E-mail: edtariffunit@cpuc.ca.gov

Mr. Justin Lee Brown,
Vice-President/Regulation & Public Affairs
Southwest Gas Corporation
P. O. Box 98510
Las Vegas, NV 89193-8510
E-mail: justin.brown@swgas.com
Facsimile: 702-364-3452

³ Discuss in AL if more space is needed.

RULE NO. 22

BIOMETHANE GAS

APPLICABILITY

This Rule applies to suppliers of Biomethane Gas and provides the general terms and conditions that apply to the interconnection between a Biomethane Gas supplier's facilities and the Company's facilities and the Company's receipt of Biomethane Gas into its system from such interconnection point(s). This Rule is intended to implement Decision (D.) 14-01-034, including rules regarding Constituent concentration standards, monitoring and testing requirements, and reporting and recordkeeping requirements.

A. DEFINITIONS

ARB: Air Resources Board of the California Environmental Protection Agency.

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.

Biomethane Gas: Biomethane Gas 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 Gas does not include Biogas collected from a hazardous waste landfill, as defined in Health & Safety Code § 25117.1 and pursuant to the parameters set forth in Section D of this Rule.

CARB/OEHHA Report: *Recommendations to the California Public Utilities Commission Regarding Health Protective Standards for the Injection of Biomethane into the Common Carrier Pipeline*, prepared by Staff of the California Air Resources Board and the Office of Health Hazard Assessment. The CARB/OEHHA Report was submitted in Rulemaking 13-02-008 and adopted in D.14-01-034.

Constituent of Concern (Constituent): A chemical or compound that may impact the merchantability of Biomethane Gas.

(a) Health Protective Constituents include:

1. Carcinogenic (cancer risk): arsenic, p-Dichlorobenzene, ethylbenzene, n-Nitroso-di-n-propylamine, and vinyl chloride.

RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS

1. Biomethane Gas must meet the gas quality specifications identified in this Rule and the Company's Rule No. 21, Transportation of Customer-Secured Natural Gas, of this California Gas Tariff, as adopted and periodically updated by the Commission.
2. Biomethane Gas received into the Company's system shall conform to the following quality specifications at the time of receipt:
 - a. Biomethane Gas must be free from bacteria, pathogens, dust, sand, dirt, gums, oils, and/or any other substances at levels that would be injurious to the Company's facilities, and/or to render the gas unmerchantable.
 - b. Biomethane Gas delivered into the Company's system at the point(s) of receipt shall be at a pressure that can be integrated into the Company's system.
 - c. Delivery Temperature: Biomethane Gas delivery temperature is not to be below 40 degrees Fahrenheit or above 120 degrees Fahrenheit.
 - d. Biomethane Gas Interchangeability: Biomethane Gas shall be interchangeable with the gas in the Company's receiving pipeline. Biomethane Gas shall have a minimum Wobbe Number of 1280. Biomethane Gas shall meet American Gas Association's Lifting Index, Flashback Index and Yellow Tip Index interchangeability indices for high methane gas relative to a typical composition of gas in the Company's system serving the area. Acceptable specification ranges are: * Lifting Index (IL); $IL \leq 1.06$; * Flashback Index (IF); $IF \leq 1.2$; * Yellow Tip Index (IY); $IY \geq 0.8$.
 - e. Inert gases: Biomethane Gas supplied shall not contain greater than 4% of total combined inert compounds, which includes maximums of 0.2% oxygen, 3% nitrogen; 2% carbon dioxide, and any other inert gas by total volume.
 - f. Hydrogen Sulfide: Biomethane Gas shall contain no more than 0.25 grains of hydrogen sulfide, measured as hydrogen sulfide, per 100 standard cubic feet (4 parts per million (ppm) by volume of hydrogen sulfide).

RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS (Continued)

- g. Total Sulfur: Biomethane Gas shall not contain more than 5 grains of total sulfur compounds, measured as sulfur, per 100 standard cubic feet or 80 ppm by volume of total sulfur. This includes COS and CS₂, hydrogen sulfide, mercaptans, and mono di and poly sulfides.
- h. Liquids: Biomethane Gas shall contain no liquids at, or immediately downstream of the receipt point(s).
- i. Hydrocarbon Dew Point for Biomethane Gas is not to exceed 20 degrees Fahrenheit.
- j. Water Content: Biomethane Gas received into the Company's system shall have a water content of less than 7 pounds per million standard cubic feet.
3. Biomethane Gas must not contain any hazardous substances at concentration levels which would prevent or unduly impact the merchantability of Biomethane Gas, be injurious to Company facilities, or which would present a health and/or safety hazard to Company employees, customers, and/or the public.
4. In addition to conforming to the specifications identified above, Biomethane Gas must also conform at the time of delivery to the following limits set forth in Table 1, which are specifically related to Biomethane Gas, and which may be adopted and periodically updated by the Commission:

N/T/L
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N/T/L
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RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS (Continued)

Table 1 Concentration Standards for Biomethane Gas Constituents			
Constituent	Trigger Level	Lower Action Level	Upper Action Level
Health Protective Constituents¹			
<u>Carcinogenic</u>			
Arsenic	0.019 (0.006)	0.19 (0.06)	0.48 (0.15)
p-Dichlorobenzenes	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)
<u>Non-Carcinogenic</u>			
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 ²	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) ²	N/A (12)	N/A (120)	N/A (610)
Toluene	904 (240)	9,000 (2,400)	45,000 (12,000)
<u>Pipeline Integrity Protective Constituents³</u>			
Siloxanes	0.01 mg Si/m ³	0.1 mg Si/m ³	-
Ammonia	0.001%	-	-
Hydrogen	0.1%	-	-
Mercury	0.08 mg/m ³	-	-
Biologicals	4 x 10 ⁴ /scf (qPCR per APB, SRB, IOB group ⁴) and commercially free of bacteria of >0.2 micron	-	-
¹ The first number in Table 1, Health Protective Constituents, are in mg/m ³ , while the second number in () is in ppmv. ² Testing requirement will be the lower of stated Biomethane Gas values or other requirements in this Rule. ³ The Pipeline Integrity Protective Constituent Lower and Upper Action Level limits will be established in the Commission's next update proceeding. Until that time, Biomethane Gas that contains Pipeline Integrity Protective Constituents exceeding the Trigger Level, but lacking a Lower or Upper Action Level, will be analyzed and addressed on a case-by-case basis based on the Biomethane Gas' potential impact on the Company's pipeline system integrity. The Lower Action Level may be set at concentration levels equal or greater than the Trigger Level. ⁴ Acid-producing Bacteria [APB], Sulfate-reducing Bacteria [SRB], and Iron-oxidizing Bacteria [IOB]			

RULE NO. 22

BIOMETHANE GAS
(Continued)

B. BIOMETHANE GAS SPECIFICATIONS (Continued)

5. Biomethane Gas must conform to the requirements listed in Table 2 below:

Table 2 Collective Risk from Carcinogenic and Non-Carcinogenic Health Protective Constituents			
Risk Management Levels	Risk from Carcinogenic Constituents (chances in a million)	Hazard Index from Non-Carcinogenic Constituents	Action
Trigger Level ^[1]	≥1.0	≥0.1	Periodic Testing Required
Lower Action Level ^[2]	≥10.0	≥1.0	Biomethane Gas supply shut-in after three exceedances in 12 months
Upper Action Level ^[3]	≥25.0	≥5.0	Immediate Biomethane Gas supply shut-in
^[1] Applies to individual Constituent concentrations ^[2] Applies to the sum of all Constituent concentrations over the Trigger Level. ^[3] Applies to individual Constituent concentrations or to the sum of all Constituent concentrations over the Trigger Level.			

6. Source-specific Biomethane Gas Testing shall vary based on the source of the Biomethane Gas:
- a. Biomethane Gas supplied by landfills shall be tested for all 17 Health and Pipeline Integrity Protective Constituents.
 - b. Biomethane Gas supplied by dairies shall be tested for Ethylbenzene, Hydrogen Sulfide, n-Nitroso-di-n-propylamine, Mercaptans, Toluene and all Pipeline Integrity Protective Constituents.
 - c. Biomethane Gas supplied by publicly owned treatment works (water and sewage treatment plants) and other sources of Biomethane Gas shall be tested for p-Dichlorobenzene, Ethylbenzene, Hydrogen Sulfide, Mercaptans, Toluene, Vinyl Chloride, and all Pipeline Integrity Protective Constituents.