

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



December 27, 2018

Advice Letter 1087

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

SUBJECT: Annual Regulatory Gas Account Balance Update for Rates Effective January 1, 2019

Dear Mr. Brown:

Advice Letter 1087 is effective as of January 1, 2019. All balances in the accounts authorized for recovery are subject to audit, verification and adjustment.

Sincerely,

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

Edward Randolph
Director, Energy Division



SOUTHWEST GAS CORPORATION

November 30, 2018

ATTN: Tariff Unit, Energy Division
California Public Utilities Commission
505 Van Ness Avenue, Room 4005
San Francisco, CA 94102

Subject: Southwest Gas Corporation (U 905 G)
Advice Letter No. 1087

Enclosed herewith is one (1) copy of Southwest Gas Corporation's Advice Letter No. 1087, together with California Gas Tariff Sheet Nos. 65-73.

Sincerely,

Valerie J. Ontiveroz
Regulatory Manager/California

VJO:jjp
Enclosures



SOUTHWEST GAS CORPORATION

Advice Letter No. 1087

November 30, 2018

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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

Cal. P.U.C. Sheet No.	California Gas Tariff Title of Sheet	Canceling Cal. P.U.C. Sheet No.
117th Revised Sheet No. 65	Statement of Rates - Rates Applicable to Southern California Service Area	114th Revised Sheet No. 65
118th Revised Sheet No. 66	Statement of Rates - Rates Applicable to Southern California Service Area	115th Revised Sheet No. 66
59th Revised Sheet No. 67	Statement of Rates - Rates Applicable to Southern California Service Area	57th Revised Sheet No. 67
114th Revised Sheet No. 68	Statement of Rates - Rates Applicable to Northern California Service Area	111th Revised Sheet No. 68
116th Revised Sheet No. 69	Statement of Rates - Rates Applicable to Northern California Service Area	113th Revised Sheet No. 69
74th Revised Sheet No. 70	Statement of Rates - Rates Applicable to Northern California Service Area	72nd Revised Sheet No. 70
116th Revised Sheet No. 71	Statement of Rates - Rates Applicable to South Lake Tahoe Service Area	113th Revised Sheet No. 71
53rd Revised Sheet No. 72	Statement of Rates - Rates Applicable to South Lake Tahoe Service Area	50th Revised Sheet No. 72
13th Revised Sheet No. 73	Statement of Rates - Rates Applicable to South Lake Tahoe Service Area	11th Revised Sheet No. 73

Purpose

The purpose of this submission is to update the following: 1) balancing account surcharges related to the Fixed Cost Adjustment Mechanism (FCAM) and the Interstate Transportation Cost Adjustment Mechanism (ITCAM); 2) transportation and storage rates (Annual Adjustments); 2) forecasts and actual Greenhouse Gas (GHG) Costs and Allowance Revenue Proceeds in accordance with Decision (D.) 15-10-032, as modified



Purpose *(Continued)*

by D.18-03-017; and 3) authorized cost forecasts related to Southwest Gas' implementation of its Natural Gas Leak Abatement Program as authorized in Ordering Paragraph (OP) 6 in Resolution G-3538.

Annual Balancing Account Updates

1) FCAM, ITCAM and Transportation and Storage Rates

The calculation of Southwest Gas' 2019 FCAM and ITCAM balancing account surcharges and upstream transportation and storage rates are contained in Schedules I and II (Attachment 1).

2) GHG Costs, Allowance Proceeds and California Climate Credit

Pursuant to OP 10 in D.18-03-017:

On a going forward basis, Pacific Gas and Electric Company, Southern California Gas Company, San Diego Gas & Electric Company and Southwest Gas Company must file forecast and actual greenhouse costs and proceeds pursuant to the templates and timeframes adopted in Decision 15-10-032.¹

In D.15-10-032, the Commission resolved Phase 2 issues in Rulemaking (R.) 14-03-003,² and directed the respondent natural gas utilities to utilize the tables provided in Appendix A to D.15-10-032 to annually forecast its GHG compliance costs and allowance proceeds³ and also include a "...narrative summary describing activities completed in the current year, including any deviations from what was forecasted for the current year, and projecting activities in the forecast year..."⁴ Accordingly, as set forth below, Southwest Gas has utilized the Tables A through E of Appendix A in D.15-10-032 (Attachment 2).

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¹ D.18-03-017, at pg. 56.

² R.14-03-003, "Order Instituting Rulemaking to Address Natural Gas Distribution Utility Cost and Revenue Issues Associated with Greenhouse Gas Emissions," adopted by the Commission on March 12, 2014

³ OP 6 in D.15-10-032 directs the natural gas utilities to utilize the calculations, methodologies and procedures adopted in Appendix A to D.15-10-032 to implement the California Climate Credit and GHG compliance costs and include the Appendix A tables in their annual natural gas true-up advice letters that set transportation rates.

⁴ D.15-10-032, at pg. 19.



Table A – Forecasted Revenue Requirement

Table A illustrates Southwest Gas' calculation of the forecasted revenue requirement associated with its recorded GHG compliance as offset by the revenue requirement for the Company's GHG compliance costs which was included in rates beginning July 1, 2018.⁵

Southwest Gas considers certain information contained in Table A confidential, including Gross Throughput (Line 1), Throughput to Covered Entities (Line 2), and is providing this information to the Energy Division confidentially under separate cover pursuant to D.15-10-032 and D.16-08-024.

Table B – Recorded GHG Costs

Southwest Gas has included recorded costs in Table B utilizing the weighted average cost methodology. Because Table B contains confidential information, it is being provided to the Energy Division confidentially under separate cover pursuant to D.15-10-032 and D.16-08-024.

Table C – GHG Allowance Proceeds

Under the Cap-and-Trade Program, the California Air Resources Board (CARB) annually allocates GHG allowances to natural gas utilities for the benefit of their ratepayers, and CARB requires the utilities to consign a minimum percentage of the allowances for sale in CARB's allowance auctions, with consignment requirements beginning at 25 percent in 2015 and increasing 5 percent annually through 2020.⁶ In D.15-10-032 and D.18-03-017, the Commission found it appropriate to return allowance proceeds received from the sale of GHG allowances to residential customers only as the on-bill California Climate Credit annually each April, with the exception of 2018, in which the California Climate Credit shall be distributed in October.⁷ The California Climate Credit is to be calculated as the GHG allowance proceeds remaining after subtracting Southwest Gas' outreach and administrative expenses from the total allowance proceeds and dividing the result by the number of residential households.⁸ Southwest Gas' administrative and outreach expenses are discussed below. Southwest Gas forecasts approximately \$4.7 million net GHG allowance proceeds available for return to customers in 2019. Southwest Gas' 2019 California Climate Credit is \$24.86.

Table D – Outreach and Administrative Expenses

Southwest Gas' Outreach and Education Plan (Plan) was approved with a total forecasted cost of \$65,500.⁹ Pursuant to OP 12 in D.18-03-17, the natural gas utilities were directed to begin their education and outreach efforts as soon as practicable after the issuance of the decision.¹⁰ Southwest Gas implemented its Plan to coincide with the distribution of its California Climate Credit on October 1, 2018.

⁵ Advice Letter No. 1072, approved June 18, 2018.

⁶ D.15-10-032, at pg. 5.

⁷ D.18-03-017, at pgs. 2 and 40; OP 8, at pg. 55.

⁸ D.15-10-032, at pg. 37.

⁹ Advice Letter No. 994, approved December 30, 2015.

¹⁰ D.18-03-017, at pg. 56.



Table D – Outreach and Administrative Expenses (Continued)

Southwest Gas' Plan consisted of the following:

- Southwest Gas Website Update
- Email blast
- Bill insert
- On-Bill messaging
- On-hold phone messaging

To date, Southwest Gas has incurred minimal costs related to its Plan (\$2,037). In 2019, Southwest Gas anticipates incurring expenses related to email blasts and bill inserts (\$8,000). Additionally, due to the timing of D.18-03-017, Southwest Gas' determined to delay its Post Phone Survey until 2019 (\$55,000). Therefore, Southwest Gas forecasts its 2019 Plan costs to be approximately \$63,000.

Table E – Compliance Obligation Over Time

Southwest Gas has included its 2015 through 2017 verified emissions in Table E.

Compliance Instrument Procurement Limit

The Commission adopted a GHG compliance instrument procurement limit formula for the natural gas utilities in D.14-12-040. Pursuant to D.15-10-032, procurement limits shall be provided to the Energy Division confidentially. As such, Southwest Gas will provide its annual GHG procurement limit to the Energy Division under separate cover.

3) Natural Gas Leak Abatement Program Costs

Resolution G-3538 approved Southwest Gas 2018 and 2019 forecasted costs and applicable rates by balancing account as set forth in Advice Letter Nos. 1055-A and 1055-B.¹¹ Pursuant to OP 6 in Resolution G-3538:

For 2019 cost recovery of the Natural Gas Leak Abatement Program Balancing Account, Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southern California Gas Company, and Southwest Gas Corporation will include the authorized cost forecast and cost limit in their gas transportation rates in connection with their consolidated rate update submittal for rates effective January 1, 2019. The balance in the two-way balancing account shall be subject to refund or recovery from customers in the following year through the Annual Gas True up advice letter filing.

¹¹ In accordance with OP 5 in Resolution G-3538, Southwest Gas submitted Advice Letter No. 1085 requesting authorization to include its 2018 forecasted costs beginning January 1, 2019.



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Page 5
November 30, 2018

Accordingly, Southwest Gas requests authorization to include its 2019 forecasted costs related to the implementation of its Natural Gas Leak Abatement Program beginning January 1, 2019 along with its 2018 forecasted costs as submitted in Advice Letter No. 1085. The proposed rates are set forth in Attachment 3.

The combined effect of the balancing account updates noted herein will result in an annual revenue increase of approximately \$13,108,220 or 10.77 percent in the Southern California Division, a decrease of \$395,077 or 1.28 percent in the Northern California Division, and a decrease of \$899,120 or 3.96 percent in the South Lake Tahoe District.

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 GO 96-B. Southwest Gas respectfully requests the adjustments to balancing account surcharges, as well as updates to the upstream pipeline transportation and storage rates, proposed herein be approved December 30, 2018, which is thirty (30) calendar days from the date of submission, with rates effective January 1, 2019.

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 submission 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
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
Senior Vice President/General Counsel
Southwest Gas Corporation
P.O. Box 98510
Las Vegas, NV 89193-8510
Email: justin.brown@swgas.com
Facsimile: 702-364-3452



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Notice

Pursuant to Energy Industry Rule 3.1(1), Southwest Gas is exempt from the notice requirements set forth in General Rule 4.2 in GO 96-B since the adjustments proposed herein are being submitted pursuant to Southwest Gas' approved California gas tariff, D.15-10-032, D.18-03-017 and Resolution G-3538.

Service

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

Communications regarding this submission 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
Email: valerie.ontiveroz@swgas.com

Respectfully submitted,

SOUTHWEST GAS CORPORATION

By: _____

Justin Lee Brown

Attachments

Distribution List

Advice Letter No. 1087

In conformance with GO 96-B, General Rule 4.3

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

Elizabeth Echols, Director
Public Advocates Office
California Public Utilities Commission
elizabeth.echols@cpuc.ca.gov

Pacific Gas & Electric Company
PGETariffs@pge.com

Southern California Gas Company
ROrtiz@SemptraUtilities.com

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

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

Robert M. Pocta
Public Advocates Office
California Public Utilities Commission
robert.pocta@cpuc.ca.gov

Nathaniel Skinner
Public Advocates Office
California Public Utilities Commission
nathaniel.skinner@cpuc.ca.gov

Pearlie Sabino
Public Advocates Office
California Public Utilities Commission
pearlie.sabino@cpuc.ca.gov



ADVICE LETTER 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 ☐ WATER
☐ PLC ☐ HEAT

Contact Person: Valerie J. Ontiveroz

Phone #: 702 876-7323

E-mail: valerie.ontiveroz@swgas.com

E-mail Disposition Notice to: valerie.ontiveroz@swgas.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 1087

Tier Designation: Tier 1

Subject of AL: Update balancing account surcharges, adjust transportation and storage rates, update forecasts and actual GHG Costs and Allowance Revenue Proceeds, and include the 2019 authorized cost forecasts related to SWG' implementation of its Natural Gas Leak Abatement Program, with all rates effective January 1, 2019.

Keywords (choose from CPUC listing): Preliminary Statement

AL Type: ☐ Monthly ☐ Quarterly ☒ Annual ☐ One-Time ☐ Other:

If AL submitted 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: Not Applicable

Confidential treatment requested? ☐ Yes ☒ No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☒ No

Requested effective date: 1/1/19

No. of tariff sheets: 9

Estimated system annual revenue effect (%): 10.77% SCA, (1.28)% NCA, (3.96)% SLT

Estimated system average rate effect (%): 10.77% SCA, (1.28)% NCA, (3.96)% SLT

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: Not applicable

Service affected and changes proposed¹: See 'Subject of AL' above

Pending advice letters that revise the same tariff sheets: AL 1085, AL 1086

¹Discuss in AL if more space is needed.

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

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Mr. Justin Lee Brown
Title: Senior Vice-President/General Counsel
Utility Name: Southwest Gas Corporation
Address: P. O. Box 98510
City: Las Vegas State: Nevada
Telephone (xxx) xxx-xxxx: 702-876-7183
Facsimile (xxx) xxx-xxxx: 702-364-3452
Email: justin.brown@swgas.com

Name:
Title:
Utility Name:
Address:
City: State: Nevada
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Clear Form

SOUTHWEST GAS CORPORATION

P.O. Box 98510

Las Vegas, Nevada 89193-8510

California Gas Tariff

Canceling

117th Revised Cal. P.U.C. Sheet No. 65

114th Revised Cal. P.U.C. Sheet No. 65

STATEMENT OF RATES

RATES APPLICABLE TO SOUTHERN CALIFORNIA SERVICE AREA [1]

Schedule No. and Type of Charge	Margin	Charges [2] and		Subtotal Gas Usage Rate	Other Surcharges		Gas Cost	Effective Sales Rate
		Adjustments			CPUC	PPP		
<u>GS-10-Residential Gas Service</u>								
Basic Service Charge	\$5.00							\$5.00
Cost per Therm								
Baseline Quantities	\$.71361	\$.32078	\$ 1.03439	\$.00166	\$.11505	\$.27564	\$ 1.42674	I
Tier II	\$.88488	.32078	1.20566	.00166	.11505	.27564	1.59801	I
<u>GS-11-Residential Air-Conditioning Gas Service</u>								
Basic Service Charge	\$5.00							\$5.00
Cost per Therm								
Tier I	\$.71361	\$.32078	\$ 1.03439	\$.00166	\$.11505	\$.27564	\$ 1.42674	I
Tier II	.88488	.32078	1.20566	.00166	.11505	.27564	1.59801	I
Air-Conditioning	\$.35681	.32078	.67759	.00166	.11505	.27564	1.06994	I
<u>GS-12-CARE Residential Gas Service</u>								
Basic Service Charge	\$4.00							\$4.00
Cost per Therm								
Baseline Quantities	\$.45160	\$.32078	\$.77238	\$.00166	\$.01587	\$.27564	\$ 1.06555	I
Tier II	.58862	.32078	.90940	.00166	.01587	.27564	\$ 1.20257	I
<u>GS-15-Secondary Residential Gas Service</u>								
Basic Service Charge	\$6.00							\$6.00
Cost per Therm	\$1.09366	\$.32078	\$ 1.41444	\$.00166	\$.11505	\$.27564	\$ 1.80679	I
<u>GS-20-Multi-Family Master-Metered Gas Service</u>								
Basic Service Charge	\$25.00							\$25.00
Cost per Therm								
Baseline Quantities	\$.71361	\$.32078	\$ 1.03439	\$.00166	\$.11505	\$.27564	\$ 1.42674	I
Tier II	.88488	.32078	1.20566	.00166	.11505	.27564	1.59801	I
<u>GS-25-Multi-Family Master-Metered Gas Service-Submetered</u>								
Basic Service Charge	\$25.00							\$25.00
Cost per Therm								
Baseline Quantities	\$.71361	\$.32078	\$ 1.03439	\$.00166	\$.11505	\$.27564	\$ 1.42674	I
Tier II	.88488	.32078	1.20566	.00166	.11505	.27564	1.59801	I
Submetered Discount per Occupied Space	(\$7.69)						(\$7.69)	
<u>GS-35-Agriculture Employee Housing & Nonprofit Group Living Facility Gas Service</u>								
Basic Service Charge	\$8.80							\$8.80
Cost per Therm								
First 100	\$.38944	\$.32078	\$.71022	\$.00166	\$.01587	\$.27564	\$ 1.00339	I
Next 500	.25568	.32078	.57646	.00166	.01587	.27564	.86963	I
Next 2,400	.14868	.32078	.46946	.00166	.01587	.27564	.76263	I
Over 3,000	.02277	.32078	.34355	.00166	.01587	.27564	.63672	I
<u>GS-40-Core General Gas Service (non-Covered Entities)</u>								
Basic Service Charge	\$11.00							\$11.00
Transportation Service Charge	\$780.00							\$780.00
Cost per Therm								
First 100	\$.63590	\$.32078	\$.95668	\$.00166	\$.11505	\$.27564	\$ 1.34903	I
Next 500	\$.46871	.32078	.78949	.00166	.11505	.27564	1.18184	I
Next 2,400	\$.33496	.32078	.65574	.00166	.11505	.27564	1.04809	I
Over 3,000	\$.17757	.32078	.49835	.00166	.11505	.27564	.89070	I

Advice Letter No. 1087
Decision No. _____Issued by
Justin Lee Brown
Senior Vice PresidentDate Filed November 30, 2018
Effective _____
Resolution No. _____

STATEMENT OF RATES
RATES APPLICABLE TO SOUTHERN CALIFORNIA SERVICE AREA [1]

Schedule No. and Type of Charge	Margin	Charges [2]	Subtotal Gas Usage Rate	Other Surcharges		Gas Cost	Effective Sales Rate	
		and Adjustments		CPUC	PPP			
<u>GS-40-Core General Gas Service (Covered Entities)</u>								
Basic Service Charge	\$11.00						\$11.00	
Transportation Service Charge	\$780.00						\$780.00	
Cost per Therm								
First 100	\$.63590	\$.26801	\$.90391	\$.00166	\$.11505	\$.27564	\$ 1.29626	I
Next 500	\$.46871	.26801	.73672	.00166	.11505	.27564	1.12907	I
Next 2,400	\$.33496	.26801	.60297	.00166	.11505	.27564	.99532	I
Over 3,000	\$.17757	.26801	.44558	.00166	.11505	.27564	.83793	I
<u>GS-50-Core Natural Gas Service for Motor Vehicles</u>								
Basic Service Charge	\$25.00						\$25.00	
Cost per Therm	\$.12468	\$.32078	\$.44546	\$.00166	\$.11505	\$.27564	\$.83781	I
<u>GS-60-Core Internal Combustion Engine Gas Service</u>								
Basic Service Charge	\$25.00						\$25.00	
Cost per Therm	\$.18581	\$.32078	\$.50659	\$.00166	\$.11505	\$.27564	\$.89894	I
<u>GS-LUZ-Solar Electric Generation Gas Service</u>								
Basic Service Charge	\$50.00						\$50.00	
Cost per Therm	\$.05338	\$.10612	\$.15950	\$.00166			\$.16116	I
<u>GS-66-Core Small Electric Power Generation Gas Service</u>								
Basic Service Charge	\$25.00						\$25.00	
Cost per Therm	\$.26781	\$.32078	\$.58859	\$.00166		\$.27564	\$.86589	I
<u>GS-70-Noncore General Gas Transportation Service</u>								
Basic Service Charge	\$100.00						\$100.00	
Transportation Service Charge	\$780.00						\$780.00	
Cost per Therm	\$.13597	\$.24536	\$.38133	\$.00166	\$.11505		\$.49804	I
<u>GS-VIC City of Victorville Gas Service</u>								
Basic Service Charge	\$11.00						\$ 11.00	
Transportation Service Charge	\$780.00						\$780.00	
Cost per Therm	\$.37960	\$.32078	\$.70038	\$.00166		\$.27564	\$.97768	I
<u>TFF-Transportation Franchise Fee Surcharge Provision</u>								
TFF Surcharge per Therm							\$.00340	
<u>TDS – Transportation Distribution System Shrinkage Charge</u>								
TDS Charge per Therm							\$.00209	
<u>MHPS-Master-Metered Mobile Home Park Safety Inspection Provision</u>								
MHPS Surcharge per Space per Month							\$.21000	

SOUTHWEST GAS CORPORATION

P.O. Box 98510

Las Vegas, Nevada 89193-8510

California Gas Tariff

Canceling

59th Revised

Cal. P.U.C. Sheet No.

67

57th Revised

Cal. P.U.C. Sheet No.

67

STATEMENT OF RATES
RATES APPLICABLE TO SOUTHERN CALIFORNIA DIVISION SCHEDULES [1]

[1] Customers taking only transportation service will pay the Effective Sales Rate less the Interstate Reservation and Gas Cost components of the Effective Sales Rate, plus a Transportation Service Charge of \$780 per month and an amount for distribution shrinkage calculated by multiplying the currently effective Gas Cost rate per therm by the Lost and Unaccounted For Gas percentage of 0.76%. The PGA Balancing Account Adjustment is applicable to customers converting from sales service to transportation service for a period of 12 months. The volume charge for customer-secured natural gas transportation will also be subject to the TFF Surcharge.

[2] The Charges and Adjustments applicable to each tariff rate schedule includes the following components:

Charges and Adjustments Description	GS-10, GS-11, GS-12, GS-15, GS-20, GS-25, GS-35,	GS-40 (non- Covered Entities), GS-50, GS-60, GS-66	GS-40, (Covered Entities)	GS-70	GS-VIC	GS-LUZ
Upstream Intrastate Charges						
Storage	\$.01586		\$.01586		\$.01586	
Variable	.07520		.07520	\$.07520	.07520	
Upstream Interstate Reservation Charges	.05394		.05394		.05394	
IRRAM Surcharge	.00000		.00000	.00000		
Balancing Account Adjustments						
FCAM*	.11098		.11098	.10536	.11098	\$.10536
ITCAM	.00890		.00890	.00890	.00890	
GHGBA**						
Non-Covered Entities [a]	.05353			.05353	.05353	
Covered Entities [a]			.00076			.00076
NERBA	.00057		.00057	.00057	.00057	
NGLAPBA	.00180		.00180	.00180	.00180	
Total Rate Adjustment	\$.32078		\$.26801	\$.24536	\$.32078	\$.10612

* The FCAM surcharge includes an amount of \$.10536 per therm related to the difference between Southwest Gas' authorized margin and recorded revenues intended to recover these costs.

** Pursuant to D.15-10-032, Company costs incurred to comply with the California Air Resources Board (ARB) natural gas supplier Cap-and-Trade Program are to be included in transportation rates and recovered from Non-Covered Entities. Covered Entities, who are directly regulated by the ARB, are only responsible for paying for emission costs related to lost and unaccounted for gas (LUAF).

[a] Pursuant to D.18-03-017, Covered and non-Covered entities have a component to recover the 2015-2017 net compliance costs and proceeds amortized over a twelve month period. Also included are the 2018 GHG costs which are amortized over an eighteen month period.

Advice Letter No. 1087

Decision No. _____

Issued by
Justin Lee Brown
Senior Vice President

Date Filed November 30, 2018

Effective _____

Resolution No. _____

SOUTHWEST GAS CORPORATION

P.O. Box 98510

Las Vegas, Nevada 89193-8510

California Gas Tariff

Canceling

114th Revised

111th Revised

Cal. P.U.C. Sheet No. 68

Cal. P.U.C. Sheet No. 68

STATEMENT OF RATES

RATES APPLICABLE TO NORTHERN CALIFORNIA SERVICE AREA [1] [2]

Schedule No. and Type of Charge	Margin	Charges [3] and Adjustments		Subtotal Gas Usage Rate	Other Surcharges		Gas Cost	Effective Sales Rate	
					CPUC	PPP			
<u>GN-10-Residential Gas Service</u>									
Basic Service Charge	\$ 5.00							\$ 5.00	
Cost per Therm									
Baseline Quantities	\$.75614	\$.14419	\$.90033	\$.00166	\$.02841	\$.28918	\$ 1.21958	R	
Tier II	.86695	.14419	1.01114	.00166	.02841	.28918	1.33039	R	
<u>GN-12-CARE Residential Gas Service</u>									
Basic Service Charge	\$ 4.00							\$ 4.00	
Cost per Therm									
Baseline Quantities	\$.51824	\$.14419	\$.66243	\$.00166	\$.01587	\$.28918	\$.96914	R	
Tier II	.60689	.14419	.75108	.00166	.01587	.28918	1.05779	R	
<u>GN-15-Secondary Residential Gas Service</u>									
Basic Service Charge	\$ 6.00							\$ 6.00	
Cost per Therm	\$.90881	\$.14419	\$ 1.05300	\$.00166	\$.02841	\$.28918	\$ 1.37225	R	
<u>GN-20-Multi-Family Master-Metered Gas Service</u>									
Basic Service Charge	\$25.00							\$25.00	
Cost per Therm									
Baseline Quantities	\$.75614	\$.14419	\$.90033	\$.00166	\$.02841	\$.28918	\$ 1.21958	R	
Tier II	.86695	.14419	1.01114	.00166	.02841	.28918	1.33039	R	
<u>GN-25-Multi-Family Master-Metered Gas Service-Submetered</u>									
Basic Service Charge	\$25.00							\$25.00	
Cost per Therm									
Baseline Quantities	\$.75614	\$.14419	\$.90033	\$.00166	\$.02841	\$.28918	\$ 1.21958	R	
Tier II	.86695	.14419	1.01114	.00166	.02841	.28918	1.33039	R	
Submetered Discount per Occupied Space	(\$11.01)						(\$11.01)		
<u>GN-35-Agriculture Employee Housing & Nonprofit Group Living Facility Gas Service</u>									
Basic Service Charge	\$ 8.80							\$ 8.80	
Cost per Therm									
First 100	\$.41268	\$.14419	\$.55687	\$.00166	\$.01587	\$.28918	\$.86358	R	
Next 500	.31192	.14419	.45611	.00166	.01587	.28918	.76282	R	
Next 2,400	.21383	.14419	.35802	.00166	.01587	.28918	.66473	R	
Over 3,000	.06647	.14419	.21066	.00166	.01587	.28918	.51737	R	
<u>GN-40-Core General Gas Service (non-Covered Entities)</u>									
Basic Service Charge	\$11.00							\$11.00	
Transportation Service Charge	\$780.00							\$780.00	
Cost per Therm									
First 100	\$.62419	\$.14419	\$.76838	\$.00166	\$.02841	\$.28918	\$ 1.08763	R	
Next 500	.49824	.14419	.64243	.00166	.02841	.28918	.96168	R	
Next 2,400	.37563	.14419	.51982	.00166	.02841	.28918	.83907	R	
Over 3,000	.19143	.14419	.33562	.00166	.02841	.28918	.65487	R	

Advice Letter No. 1087
Decision No. _____Issued by
Justin Lee Brown
Senior Vice PresidentDate Filed November 30, 2018
Effective _____
Resolution No. _____

STATEMENT OF RATES
RATES APPLICABLE TO NORTHERN CALIFORNIA SERVICE AREA [1] [2]

Schedule No. and Type of Charge	Margin	Charges [3] and Adjustments	Subtotal Gas Usage Rate	Other Surcharges		Gas Cost	Effective Sales Rate	
				CPUC	PPP			
GN-40-Core General Gas Service (Covered Entities)								
Basic Service Charge	\$ 11.00						\$ 11.00	
Transportation Service Charge	\$780.00						\$780.00	
Cost per Therm								
First 100	\$.62419	\$.09142	\$.71561	\$.00166	\$.02841	\$.28918	\$ 1.03486	R
Next 500	.49824	.09142	.58966	.00166	.02841	.28918	.90891	R
Next 2,400	.37563	.09142	.46705	.00166	.02841	.28918	.78630	R
Over 3,000	.19143	.09142	.28285	.00166	.02841	.28918	.60210	R
GN-50-Core Natural Gas Service for Motor Vehicles								
Basic Service Charge	\$ 25.00						\$ 25.00	
Cost per Therm	\$.10425	\$.14419	\$.24844	\$.00166	\$.02841	\$.28918	\$.56769	R
GN-60-Core Internal Combustion Engine Gas Service								
Basic Service Charge	\$ 25.00						\$ 25.00	
Cost per Therm	\$.29193	\$.14419	\$.43612	\$.00166	\$.02841	\$.28918	\$.75537	R
GN-66-Core Small Electric Power Generation Gas Service								
Basic Service Charge	\$ 25.00						\$ 25.00	
Cost per Therm	\$.28373	\$.14419	\$.42792	\$.00166		\$.28918	\$.71876	R
GN-70-Noncore General Gas Transportation Service								
Basic Service Charge	\$ 100.00						\$ 100.00	
Transportation Service Charge	\$ 780.00						\$ 780.00	
Cost per Therm	\$.17550	(\$.01576)	\$.15974	\$.00166	\$.02841		\$.18981	I
TFF-Transportation Franchise Fee Surcharge Provision								
TFF Surcharge per Therm							\$.00398	
TDS – Transportation Distribution System Shrinkage Charge								
TDS Charge per Therm							\$.00162	
MHPS-Master-Metered Mobile Home Park Safety Inspection Provision								
MHPS Surcharge per Space per Month							\$.21000	

STATEMENT OF RATES

RATES APPLICABLE TO NORTHERN CALIFORNIA SERVICE AREA [1] [2]

[1] Customers taking only transportation service will pay the Effective Sales Rate less the Interstate Reservation and Gas Cost components of the Effective Sales Rate, plus a Transportation Service Charge of \$780 per month and an amount for distribution shrinkage calculated by multiplying the currently effective Gas Cost rate per therm by the Lost and Unaccounted For Gas percentage of 0.56%. The PGA Balancing Account Adjustment is applicable to customers converting from sales service to transportation service for a period of 12 months. The volume charge for customer-secured natural gas transportation will also be subject to the TFF Surcharge.

[2] A Franchise Fee differential of 2.5% will be applied to monthly billings calculated for all rate schedules for all customers within the limits of the Town of Truckee.

[3] The Charges and Adjustments applicable to each tariff rate schedule includes the following components:

Charges and Adjustments Description	GN-10, GN-12, GN-15, GN-20, GN-25, GN-35,	GN-40 (non- Covered Entities), GN-50, GN-60, GN-66	GN-40, (Covered Entities)	GN-70
Upstream Intrastate Charges				
Storage	\$.02174		\$.02174	
Variable	.20533		.20533	
IRRAM Surcharge	.00000		.00000	\$.00000
Balancing Account Adjustments				
FCAM*	(.13851)		(.13851)	(.07139)
GHGBA**				
Non-Covered Entities [a]	.05353			.05353
Covered Entities [a]			.00076	
NERBA	.00051		.00051	.00051
NGLAPBA	.00159		.00159	.00159
Total Rate Adjustment	\$.14419		\$.09142	(\$.01576)

* The FCAM surcharge includes an amount of (\$.07139) per therm related to the difference between Southwest Gas' authorized margin and recorded revenues intended to recover these costs.

** Pursuant to D.15-10-032, Company costs incurred to comply with the California Air Resources Board (ARB) natural gas supplier Cap- and-Trade Program are to be included in transportation rates and recovered from Non-Covered Entities. Covered Entities, who are directly regulated by the ARB, are only responsible for paying for emission costs related to lost and unaccounted for gas (LUAF).

[a] Pursuant to D.18-03-017, Covered and non-Covered entities have a component to recover the 2015-2017 net compliance costs and proceeds amortized over a twelve month period. Also included are the 2018 GHG costs which are amortized over an eighteen month period.

STATEMENT OF RATES
RATES APPLICABLE TO SOUTH LAKE TAHOE SERVICE AREA [1]

Schedule No. and Type of Charge	Margin	Charges [2] and Adjustments	Subtotal Gas Usage Rate	Other Surcharges CPUC	PPP	Gas Cost	Effective Sales Rate	
SLT-10-Residential Gas Service								
Basic Service Charge	\$5.00						\$5.00	
Cost per Therm								
Baseline Quantities	\$.33324	\$.22546	\$.55870	\$.00166	\$.02841	\$.28918	\$.87795	R
Tier II	.42078	.22546	.64624	.00166	.02841	.28918	.96549	R
SLT-12-CARE Residential Gas Service								
Basic Service Charge	\$4.00						\$4.00	
Cost per Therm								
Baseline Quantities	\$.16366	\$.22546	\$.38912	\$.00166	\$.01587	\$.28918	\$.69583	R
Tier II	.23370	.22546	.45916	.00166	.01587	.28918	.76587	R
SLT-15-Secondary Residential Gas Service								
Basic Service Charge	\$6.00						\$6.00	
Cost per Therm	\$.46121	\$.22546	\$.68667	\$.00166	\$.02841	\$.28918	\$ 1.00592	R
SLT-20-Multi-Family Master-Metered Gas Service								
Basic Service Charge	\$11.00						\$11.00	
Cost per Therm								
Baseline Quantities	\$.33324	\$.22546	\$.55870	\$.00166	\$.02841	\$.28918	\$.87795	R
Tier II	.42078	.22546	.64624	.00166	.02841	.28918	.96549	R
SLT-25-Multi-Family Master-Metered Gas Service-Submetered								
Basic Service Charge	\$11.00						\$11.00	
Cost per Therm								
Baseline Quantities	\$.33324	\$.22546	\$.55870	\$.00166	\$.02841	\$.28918	\$.87795	R
Tier II	.42078	.22546	.64624	.00166	.02841	.28918	.96549	R
Submetered Discount per Occupied Space	(\$7.69)						(\$ 7.69)	
SLT-35-Agriculture Employee Housing & Nonprofit Group Living Facility Gas Service								
Basic Service Charge	\$ 8.80						\$ 8.80	
Cost per Therm								
First 100	\$.25375	\$.22546	\$.47921	\$.00166	\$.01587	\$.28918	\$.78592	R
Next 500	.20025	.22546	.42571	.00166	.01587	.28918	.73242	R
Next 2,400	.14674	.22546	.37220	.00166	.01587	.28918	.67891	R
Over 3,000	.05256	.22546	.27802	.00166	.01587	.28918	.58473	R
SLT-40-Core General Gas Service (non-Covered Entities)								
Basic Service Charge	\$11.00						\$11.00	
Transportation Service Charge	\$780.00						\$780.00	
Cost per Therm								
First 100	\$.44585	\$.22546	\$.67131	\$.00166	\$.02841	\$.28918	\$.99056	R
Next 500	.37897	.22546	.60443	.00166	.02841	.28918	.92368	R
Next 2,400	.31209	.22546	.53755	.00166	.02841	.28918	.85680	R
Over 3,000	.19436	.22546	.41982	.00166	.02841	.28918	.73907	R

STATEMENT OF RATES
RATES APPLICABLE TO SOUTH LAKE TAHOE SERVICE AREA [1]

STATEMENT OF RATES							
RATES APPLICABLE TO SOUTH LAKE TAHOE SERVICE AREA [1]							
Schedule No. and Type of Charge	Margin	Charges [2] and Adjustments	Subtotal Gas Usage Rate	Other Surcharges CPUC PPP		Gas Cost	Effective Sales Rate
SLT-40-Core General Gas Service (Covered Entities)							
Basic Service Charge	\$11.00						\$11.00
Transportation Service Charge	\$780.00						\$780.00
Cost per Therm							
First 100	\$.44585	\$.17269	\$.61854	\$.00166	\$.02841	\$.28918	\$.93779
Next 500	.37897	.17269	.55166	.00166	.02841	.28918	.87091
Next 2,400	.31209	.17269	.48478	.00166	.02841	.28918	.80403
Over 3,000	.19436	.17269	.36705	.00166	.02841	.28918	.68630
SLT-50-Core Natural Gas Service for Motor Vehicles							
Basic Service Charge	\$11.00						\$11.00
Cost per Therm	\$.21501	\$.22546	\$.44047	\$.00166	\$.02841	\$.28918	\$.75972
SLT-60-Core Internal Combustion Engine Gas Service							
Basic Service Charge	\$ 11.00						\$ 11.00
Cost per Therm	\$.24467	\$.22546	\$.47013	\$.00166	\$.02841	\$.28918	\$.78938
SLT-66-Core Small Electric Power Generation Gas Service							
Basic Service Charge	\$ 11.00						\$ 11.00
Cost per Therm	\$.24467	\$.22546	\$.47013	\$.00166		\$.28918	\$.76097
SLT-70-Noncore General Gas Transportation Service							
Basic Service Charge	\$ 100.00						\$ 100.00
Transportation Service Charge	\$ 780.00						\$ 780.00
Cost per Therm	\$.17842	\$.06551	\$.24393	\$.00166	\$.02841		\$.27400
TFF-Transportation Franchise Fee Surcharge Provision							
TFF Surcharge per Therm							\$.00398
TDS-Transportation Distribution System Shrinkage Charge							
TDS Charge per Therm							\$.00162
MHPS-Master-Metered Mobile Home Park Safety Inspection Provision							
MHPS Surcharge per Space per Month							\$.21000

STATEMENT OF RATES

RATES APPLICABLE TO SOUTH LAKE TAHOE SERVICE AREA [1]

[1] Customers taking only transportation service will pay the Effective Sales Rate less the Interstate Reservation and Gas Cost components of the Effective Sales Rate, plus a Transportation Service Charge of \$780 per month and an amount for distribution shrinkage calculated by multiplying the currently effective Gas Cost rate per therm by the Lost and Unaccounted For Gas percentage of 0.56%. The PGA Balancing Account Adjustment is applicable to customers converting from sales service to transportation service for a period of 12 months. The volume charge for customer-secured natural gas transportation service will also be subject to the TFF Surcharge.

[2] The Charges and Adjustments applicable to each tariff rate schedule includes the following components:

Charges and Adjustments Description	SLT-10, SLT-12, SLT-15, SLT-20, SLT-25, SLT-35,	SLT-40 (non- Covered Entities), SLT-50, SLT-60, SLT-66	SLT-40, (Covered Entities)	SLT-70
Upstream Interstate Charges				
Storage	\$.02174		\$.02174	
Reservation	.20533		.20533	
IRRAM Surcharge	.00000		.00000	\$.00000
Balancing Account Adjustments				
FCAM*	(.05694)		(.05694)	.01018
GHGBA**				
Non-Covered Entities [a]	.05353			.05353
Covered Entities [a]			.00076	
NERBA	.00062		.00062	.00062
NGLAPBA	.00118		.00118	.00118
Total Rate Adjustment	\$.22546		\$.17269	\$.06551

* The FCAM surcharge includes an amount of \$.01018 per therm related to the difference between Southwest Gas' authorized margin and recorded revenues intended to recover these costs.

** Pursuant to D.15-10-032, Company costs incurred to comply with the California Air Resources Board (ARB) natural gas supplier Cap- and-Trade Program are to be included in transportation rates and recovered from Non-Covered Entities. Covered Entities, who are directly regulated by the ARB, are only responsible for paying for emission costs related to lost and unaccounted for gas (LUAF).

[a] Pursuant to D.18-03-017, Covered and non-Covered entities have a component to recover the 2015-2017 net compliance costs and proceeds amortized over a twelve month period. Also included are the 2018 GHG costs which are amortized over an eighteen month period.

Advice Letter No. 1087
Attachment 1

FCAM, ITCAM and Transportation and Storage Rates
Schedules

**SOUTHWEST GAS CORPORATION
SOUTHERN CALIFORNIA DIVISION
BALANCING ACCOUNT SURCHARGE RATES
TWELVE-MONTHS ENDING OCTOBER 31, 2019**

Line No.	Description (a)	Amount (b)	Rate per Therm (c)	Line No.
1	Franchises & Uncollectibles Rate [1]	1.630%		1
	<u>Fixed Cost Adjustment Mechanism (FCAM)</u>			
2	Upstream Fixed Charges Balance [2]	\$ 420,038		2
3	Total Core Volumes (Therms) [3]	76,007,207		3
4	Upstream Fixed Charges Included in Rates (Ln. 2/Ln.3)*(1+Ln.1)		<u>\$ 0.00562</u>	4
5	Margin Balance [2]	\$ 9,252,036		5
6	Total Throughput Less Special Contract Volumes (Therms) [4]	89,245,236		6
7	Margin Balance Amount Included in Rates (Ln. 5/Ln.6)*(1+Ln.1)		<u>\$ 0.10536</u>	7
8	Total FCAM Surcharge Rate (Ln. 4 + Ln. 7)		<u><u>\$ 0.11098</u></u>	8
	<u>Intrastate Transportation Account Mechanism (ITCAM)</u>			
9	Upstream Variable Charges [2]	\$ 742,923		9
10	Total Throughput Less GS-LUZ Volumes (Therms) [5]	84,850,376		10
11	ITCAM Surcharge Rate (Ln. 9/Ln. 10)*(1+Ln.1)		<u><u>\$ 0.00890</u></u>	11

[1] Authorized by Commission in D.14-06-028.

[2] Ending account balances at October 31, 2018.

[3] Core volumes for twelve-month forecast period ended December 31, 2019.

[4] Total throughput, excluding special contract volumes for twelve-month forecast period ended December 31, 2019.

[5] Total throughput, excluding GS-LUZ volumes for twelve-month forecast period ended December 31, 2019.

**SOUTHWEST GAS CORPORATION
NORTHERN CALIFORNIA DIVISION
BALANCING ACCOUNT SURCHARGE RATES
TWELVE-MONTHS ENDING OCTOBER 31, 2019**

Line No.	Description (a)	Amount (b)	Rate per Therm (c)	Line No.
1	Franchises & Uncollectibles Rate [1]	1.459%		1
	<u>Fixed Cost Account Mechanism (FCAM)</u>			
2	Upstream Fixed Charges Balance [2]	\$(3,022,325)		2
3	Total Core Volumes (Therms) [3]	45,683,924		3
4	Upstream Fixed Charges Included in Rates (Ln. 2/Ln.3)*(1+Ln.1)		<u>\$ (0.06712)</u>	4
5	Margin Balance [2]	\$(1,824,959)		5
6	Total Throughput (Therms) [4]	25,935,902		6
7	Margin Balance Amount Included in Rates (Ln. 5/Ln.6)*(1+Ln.1)		<u>\$ (0.07139)</u>	7
8	Total FCAM Surcharge Rate (Ln. 4 + Ln. 7)		<u><u>\$ (0.13851)</u></u>	8

[1] Authorized by Commission in D.14-06-028.

[2] Ending account balances at October 31, 2018.

[3] Core volumes for Northern California & South Lake Tahoe Jurisdictions for twelve-month forecast period ended December 31, 2019.

[4] Northern California throughput for twelve-month forecast period ended December 31, 2019.

**SOUTHWEST GAS CORPORATION
SOUTH LAKE TAHOE DIVISION
BALANCING ACCOUNT SURCHARGE RATES
TWELVE-MONTHS ENDING OCTOBER 31, 2019**

Line No.	Description (a)	Amount (b)	Rate per Therm (c)	Line No.
1	Franchises & Uncollectibles Rate [1]	1.459%		1
	<u>Fixed Cost Adjustment Mechanism (FCAM)</u>			
2	Upstream Fixed Charges Balance [2]	\$(3,022,325)		2
3	Total Core Volumes (Therms) [3]	45,683,924		3
4	Upstream Fixed Charges Included in Rates (Ln. 2/Ln.3)*(1+Ln.1)		<u>\$ (0.06712)</u>	4
5	Margin Balance [2]	\$ 214,474		5
6	Total Throughput (Therms) [4]	21,385,852		6
7	Margin Balance Amount Included in Rates (Ln. 5/Ln.6)*(1+Ln.1)		<u>\$ 0.01018</u>	7
8	Total FCAM Surcharge Rate (Ln. 4 + Ln. 7)		<u><u>\$ (0.05694)</u></u>	8

[1] Authorized by Commission in D.14-06-028.

[2] Ending account balances at October 31, 2018.

[3] Core volumes for Northern California & South Lake Tahoe Jurisdictions for twelve-month forecast period ended December 31, 2019.

[4] South Lake Tahoe throughput for twelve-month forecasted period ended December 31, 2019.

**SOUTHWEST GAS CORPORATION
SOUTHERN CALIFORNIA
UPSTREAM PIPELINE CHARGES AND STORAGE COSTS**

Line No.	Description (a)	Annual Volumes (b)	Rate (c)	Annual Amount (d)=(b)*(c)	Rate per Therm (e)	Line No.
1	Franchise & Uncollectible Rate [1]		1.62990%			1
	<u>Upstream Interstate Reservation Charges</u>					
2	Kern River Transmission Company (Kern) (Dth/Day)	9,125,000	\$ 0.19510	\$ 1,780,288		2
3	G-BTS2 Southern California Gas Company (SoCal) Backbone Transportation Service (Dth/Day)	9,125,000	\$ 0.21082	\$ 1,923,733		3
4	GT-SWGX SoCal Pisgah Meter Station (Months)	12	\$ 27,505	\$ 330,060		4
5	Total Annual Reservation Cost			<u>\$ 4,034,080</u>		5
6	Total Core Sales Volumes (Therms) [2]	76,007,207				6
7	Reservation Rate (Ln.5/Ln.6)*(1+Ln.1)				<u>\$ 0.05394</u>	7
	<u>Upstream Intrastate Storage Charges</u>					
8	G-TBS SoCal Transaction Based Storage Service - Inventory Storage Reservation Charge (Dth/Day)	617,836,230	\$ 0.00192	\$ 1,186,246		8
9	Total Annual Storage Cost			<u>\$ 1,186,246</u>		9
10	Total Core Throughput (Therms) [3]	76,007,207				10
11	Storage Rate (Ln.9/Ln.10)*(1+Ln.1)				<u>\$ 0.01586</u>	11
	<u>Upstream Intrastate Variable Charges</u>					
12	GT-TLS (GT-9CA) SoCal Intrastate Transportation Service (Therms)	89,928,694	\$ 0.02028	\$ 1,823,754		12
13	GT-SWGX SoCal Exchange Wholesale Natural Gas Service (Therms)	22,482,174	\$ 0.21082	\$ 4,739,692		13
14	Kern Transmission Service (Therms)	91,243,032	\$ 0.00044	\$ 40,147		14
15	Total Annual Variable Cost			<u>\$ 6,603,593</u>		15
16	Total Throughput (Therms) [4]	89,245,236				16
17	Variable Rate (Ln.15/Ln.16)*(1+Ln.1)				<u>\$ 0.07520</u>	17

[1] Authorized by Commission in Order D.14-06-028.

[2] Core sales volumes for twelve-month forecast period ended December 31, 2019.

[3] Total core throughput for twelve-month forecast period ended December 31, 2019.

[4] Total throughput, less exempt volumes for twelve-month forecast period ended December 31, 2019.

SOUTHWEST GAS CORPORATION
NORTHERN CALIFORNIA RATE JURISDICTION AND SOUTH LAKE TAHOE RATE JURISDICTION
UPSTREAM PIPELINE AND STORAGE COSTS

Line No.	Description (a)	Annual Volumes (b)	Rate (c)	Annual Amount (d)=(b)*(c)	Rate per Therm (e)	Line No.
1	Franchise & Uncollectible Rate [1]		1.45890%			1
2	Total Core Throughput (Therms) [2]	45,197,824				2
<u>Upstream Interstate Reservation Charges</u>						
3	Northwest Pipeline	2,284,920	\$ 1.18725	\$ 2,712,780		3
4	Paiute Pipeline FT-1 (F47, F50, F51)	4,498,870	\$ 1.02286	4,601,714		4
5	Paiute Pipeline 2010 Incremental Expansion (F45)	198,840	\$ 1.74114	346,208		5
6	Tuscarora Pipeline	1,674,120	\$ 0.83615	1,399,815		6
7	Ruby Pipeline	570,000	\$ 0.15208	86,686		7
8	Total Reservation Cost			<u>\$ 9,147,203</u>		8
9	Reservation Rate (Ln.8/Ln.2)*(1+Ln.1)				<u>\$ 0.20533</u>	9
<u>Upstream Interstate Storage Charges</u>						
Paiute Pipeline Company						
LGS-1 Liquefied Gas Storage Service						
10	Storage Charge	1,504,860	\$ 0.02748	\$ 496,243		10
11	Delivery Charge	114,000	\$ 0.36275	496,242		11
12	Total Storage Cost			<u>\$ 992,485</u>		12
13	Total Core Throughput (Therms) [3]	46,308,264				13
14	Total Storage Rate (Ln.12/Ln.2)*(1+Ln.1)				<u>\$ 0.02174</u>	14

[1] Authorized by Commission in Order D.14-06-028.

[2] Combined volumes for Northern California & South Lake Tahoe Jurisdictions for twelve-month forecast period ended December 31, 2019.

[3] Combined volumes including Core Aggregators, for Northern California & South Lake Tahoe Jurisdictions for twelve-month forecast period ended December 31, 2019.

Advice Letter No. 1087
Attachment 2

GHG Costs, Allowance Proceeds and California Climate Credit

Tables A - E

SOUTHWEST GAS CORPORATION
Advice Letter No. 1087
D.15-10-032 - Appendix A
Table A: Forecast Revenue Requirement

Line	Description	2018		2019	
		Forecast	Recorded	Forecast	Recorded
1	Gross Throughput (MMcf)				
2	Throughput to Covered Entities (MMcf)				
3	Net Throughput to End Users (MMcf) (Line 1 + Line 2)	13,952		14,071	
4	Lost and Unaccounted for Gas ¹ (MMcf)	98		99	
5	Total Supplied Gas (MMcf) (Line 3 + Line 4)	14,050		14,170	
6	Emissions Conversion Factor (MTCO ₂ e/MMcf)	54.64437		54.64437	
7	Compliance Obligation for End Users and LUAF (MTCO ₂ e) (Line 5 * Line 6)	767,749		774,289	
8	Compliance Obligation for Company Facilities (MTCO ₂ e)	0		0	
9	Gross Compliance Obligation (MTCO₂e) (Line 7 + Line 8)	767,749		774,289	
10	Directly Allocated Allowances	(685,378)		(670,714)	
11	Percentage Consigned to Auction	40%		45%	
12	Consigned Allowances (Line 10 * Line 11)	274,151		301,821	
13	Net Compliance Obligation (MTCO₂e) (Line 9 + Line 10+ Line 12)	356,522		405,396	
14	Proxy GHG Allowance Price ^{2,3}	\$ 15.08	14.73 \$	15.66	
15	Compliance Instrument Cost	\$ 5,376,350	\$ 4,066,475	\$ 6,348,501	
16	Interest		162,822		
17	Franchise Fees & Uncollectibles ⁴	\$ 87,634	\$ 66,284	\$ 103,481	
18	Revenue Requirement (Line 15 + Line 16 + Line 17)	\$ 5,463,984	\$ 4,295,580	\$ 6,451,981	
19	Previous Year's Cost Balancing Subaccount Balance ⁵		(25,872)		
20	Revenue Requirement to be Included in Rates (Line 18 + Line 19)	\$ 5,463,984	\$ 4,269,708	\$ 6,451,981	
21	Covered Entity Rate Impact (\$/therm)	\$ 0.00061	\$	0.00063	
22	Non-Covered Entity Rate Impact (\$/therm)	\$ 0.03809	\$	0.04460	

Footnotes

- 1 Lost and unaccounted for gas percentages were authorized in Southwest Gas' last General Rate Case (GRC) Decision 14-06-028
- 2 The forecasted proxy price is the April 23, 2018, futures settlement price for vintage year 2018 allowances for delivery in December. The future settlements price was obtained from the Intercontinental Exchange dated April 23, 2018, Futures Daily Market Report for Physical Environmental, "CAW-California Carbon Allowance Future-Vintage 2018 - California Carbon Allowance Vintage 2018." This methodology is consistent with Southwest Gas' methodology for forecasting gas supply prices.
- 3 The forecasted proxy price is the April 23, 2018, futures settlement price for vintage year 2019 allowances for delivery in December. The future settlements price was obtained from the Intercontinental Exchange dated April 23, 2018, Futures Daily Market Report for Physical Environmental, "CAW-California Carbon Allowance Future-Vintage 2019 - California Carbon Allowance Vintage 2019." This methodology is consistent with Southwest Gas' methodology for forecasting gas supply prices.
- 4 The F&U Rate was authorized in Southwest Gas' last General Rate Case (GRC) Decision 14-06-028
- 5 Previous Year's Cost Balancing Subaccount Balance of \$602,115 (due to netting 2015-2017 costs, revenues and admin expense) less recovery revenues through September 30, 2018 of \$(627,987).
- 6 Calculation of GHGBA Non-Covered and Covered Entity Rates Effective January 1, 2019:

Previous Year's Cost Balancing Subaccount Balance (Beginning Balance)	\$ (25,872)
2018 Revenue Requirement	\$ 5,463,984
Less 2018 Recored Revenue Requirement	\$ 4,269,708
Plus 2019 Revenue Requirement	\$ 6,451,981
	\$ 7,620,385
Franchise Fees & Uncollectibles	\$ 124,212
	\$ 7,744,597
Covered Entity Rate Impact (\$/therm)	\$ 0.00076
Non-Covered Entity Rate Impact (\$/therm)	\$ 0.05353

SOUTHWEST GAS CORPORATION
Advice Letter No. 1087
D.15-10-032 - Appendix A
Table C: GHG Allowance Proceeds

Line	Description	2018		2019	
		Forecast	Recorded	Forecast	Recorded
1	Proxy GHG Allowance Price (\$/MT) ^{1,2}	\$ 15.08		\$ 15.66	
2	Directly Allocated Allowances	685,378		670,714	
3	Percentage Consigned to Auction	40%		45%	
4	Consigned Allowances	274,151		301,821	
5	Allowance Proceeds	\$ (4,134,197)	\$ (4,049,210)	\$ (4,726,522)	
6	Previous Year's Revenue Balancing Subaccount Balance		\$ -		
7	Interest		\$ 132,110		
8	Subtotal Allowance Proceeds (\$) (Line 5 + Line 6 + Line 7)	\$ (4,134,197)	\$ (4,049,210)	\$ (4,726,522)	\$ -
9	Outreach and Admin Expenses (\$) (from Table D)	\$ 11,220	\$ 2,049	\$ 64,260	\$ -
10	Net GHG Proceeds Available for Customer Returns (\$) (Line 8 + Line 9)	\$ (4,122,977)	\$ (4,047,161)	\$ (4,662,262)	\$ -
11	Number of Residential Households	184,203		187,558	
12	Per Household California Climate Credit (\$) (Line 10 / Line 11)	\$ 22.38		\$ 24.86	

Footnotes

1 The forecasted proxy price is the April 23, 2018, futures settlement price for vintage year 2018 allowances for delivery in December. The future settlements price was obtained from the Intercontinental Exchange dated April 23, 2018, Futures Daily Market Report for Physical Environmental, "CAW-California Carbon Allowance Future-Vintage 2018 - California Carbon Allowance Vintage 2018." This methodology is consistent with Southwest Gas' methodology for forecasting gas supply prices.

2 The forecasted proxy price is the April 23, 2018, futures settlement price for vintage year 2018 allowances for delivery in December. The future settlements price was obtained from the Intercontinental Exchange dated April 23, 2018, Futures Daily Market Report for Physical Environmental, "CAX-California Carbon Allowance Future-Vintage 2019 - California Carbon Allowance Vintage 2019." This methodology is consistent with Southwest Gas' methodology for forecasting gas supply prices.

SOUTHWEST GAS CORPORATION**Advice Letter No. 1087****D.15-10-032 - Appendix A****Table D: GHG Outreach and Administrative Expenses**

Line	Description	2018		2019	
		Forecast	Recorded	Forecast	Recorded
1	Outreach Expenses				
2	Detail of Outreach Activity (\$)				
3	Website Page	\$ 2,000			
4	E-Blasts	\$ 5,000	\$ 2,037	\$ 5,000	
5	Bill Insert	\$ 3,000		\$ 3,000	
6	On-Bill Message	\$ -			
7	On-Hold Phone Message	\$ 1,000			
8	Post Phone Survey	\$ -		\$ 55,000	
9	Subtotal Outreach (\$)	\$ 11,000	\$ 2,037	\$ 63,000	\$ -
10	Administrative Expenses				
11	Detail of Administrative Activity (\$)				
12	Programming	\$ -			
13	Testing	\$ -			
14	Subtotal Administrative (\$)	\$ -	\$ -	\$ -	\$ -
15	Subtotal Outreach and Administrative (\$)	\$ 11,000	\$ 2,037	\$ 63,000	\$ -
16	Interest (\$)	\$ 220	\$ 12	\$ 1,260	\$ -
17	Total (\$)	\$ 11,220	\$ 2,049	\$ 64,260	\$ -

SOUTHWEST GAS CORPORATION

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Table E: Compliance Obligation Over Time

	2015	2016 ¹	2017	2018	2019	2020
Natural Gas Fuel Supplier Compliance Obligation (MTCO ₂ e)	668,077	695,026	718,067			
Company Facility Compliance Obligation (MTCO ₂ e)	0	0	0			

¹In Advice Letter No. 1072, Southwest Gas' Compliance Obligation was inadvertently noted as 695,462.

Advice Letter No. 1087
Attachment 3

Natural Gas Leak Abatement Program Costs

**SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NEW ENVIRONMENTAL REGULATORY BALANCING ACCOUNT (NERBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
SOUTHERN CALIFORNIA SERVICE TERRITORY**

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	"Find it/Fix it"	21		\$ 265,000	0	265,000	1
2	Minimize Emissions from Operations, Maintenance and Other Activities	23		31,000	31,000	62,000	2
3	Total Dollars			\$ 296,000	31,000	327,000	3
4	Pre-Tax Return			10.80%	10.80%	10.80%	4
5	Financing Cost			\$ 31,972	3,348	35,320	5
6	Depreciation		3.61%	\$ 10,686	1,119	11,805	6
7	Property Tax		1.20%	\$ 3,542	371	3,913	7
8	Revenue Requirement Before Franchise			\$ 46,199	4,838	51,038	8
9	Franchise Rate		1.15%	\$ 532	56	587	9
10	Revenue Requirement After Franchise			\$ 46,731	4,894	51,625	10
11	Applicable Volumes (therms)			90,085,988	90,085,988	90,085,988	11
12	NERBA Rate Applicable to all Rate Schedules Except GS-LUZ			\$ 0.00052	\$ 0.00005	\$ 0.00057	12

[1] Filed in Advice Letter No. 1085

SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NATURAL GAS LEAK ABATEMENT PROGRAM BALANCING ACCOUNT (NGLAPBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
SOUTHERN CALIFORNIA SERVICE AREA

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	Stationary Methane Detectors (Capital)	18		\$ 150,000	300,000	450,000	1
2	Stationary Methane Detectors (O&M)	18		363,590	487,366	850,956	2
3	Pipe Fitting Specifications (O&M)	22		13,216	0	13,216	3
4	Total Dollars			\$ 526,806	787,366	1,314,172	4
5	Pre-Tax Return			10.80%	10.80%	10.80%	5
6	Financing Cost			\$ 56,901	85,045	141,946	6
7	Depreciation [2]		2.86%	\$ 4,290	8,580	12,870	7
8	Property Tax [3]		1.20%	\$ 1,795	3,590	5,385	8
9	Revenue Requirement Before Franchise			\$ 62,986	97,215	160,201	9
10	Franchise Rate		1.15%	\$ 725	1,119	1,843	10
11	Revenue Requirement After Franchise			\$ 63,711	98,333	162,044	11
12	Applicable Volumes (therms)			90,085,988	90,085,988	90,085,988	12
13	NGLAPBA Rate Applicable to all Rate Schedules Except GS-LUZ			\$ 0.00071	\$ 0.00109	\$ 0.00180	13

[1] Filed in Advice Letter No. 1085

[2] Applicable only to Capital expenses. Depreciation is not applied to O & M expenses.

[3] Applicable only to Capital expenses. Property Tax is not applied to O & M expenses.

**SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NEW ENVIRONMENTAL REGULATORY BALANCING ACCOUNT (NERBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
NORTHERN CALIFORNIA SERVICE AREA**

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	Minimize Emissions from Operations, Maintenance and Other Activities	23		\$ 55,000	24,000	79,000	1
2	Total Dollars			\$ 55,000	24,000	79,000	2
3	Pre-Tax Return			12.14%	12.14%	12.14%	3
4	Financing Cost			\$ 6,677	2,914	9,590	4
5	Depreciation		3.82%	\$ 2,101	917	3,018	5
6	Property Tax		1.33%	\$ 731	319	1,050	6
7	Revenue Requirement Before Franchise			\$ 9,509	4,149	13,658	7
8	Franchise Rate		1.29%	\$ 123	54	176	8
9	Revenue Requirement After Franchise			\$ 9,632	4,203	13,835	9
10	Applicable Volumes (therms)			27,182,452	27,182,452	27,182,452	10
11	NERBA Rate Applicable to all Rate Schedules			\$ 0.00035	\$ 0.00015	\$ 0.00051	11

[1] Filed in Advice Letter No. 1085

SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NATURAL GAS LEAK ABATEMENT PROGRAM BALANCING ACCOUNT (NGLAPBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
NORTHERN CALIFORNIA SERVICE AREA

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	Stationary Methane Detectors	18		\$ 109,709	147,057	256,767	1
2	Pipe Fitting Specifications (O&M)	22		3,988	0	3,988	2
3	Total Dollars			\$ 113,697	147,057	260,754	3
4	Pre-Tax Return			12.14%	12.14%	12.14%	4
5	Financing Cost			\$ 13,802	17,852	31,655	5
6	Depreciation [2]		2.97%	\$ 3,258	4,368	7,744	6
7	Property Tax [3]		1.33%	\$ 1,458	1,954	3,413	7
8	Revenue Requirement Before Franchise			\$ 18,519	24,174	42,812	8
9	Franchise Rate		1.29%	\$ 239	312	553	9
10	Revenue Requirement After Franchise			\$ 18,758	24,487	43,365	10
11	Applicable Volumes (therms)			27,182,452	27,182,452	27,182,452	11
12	NGLAPBA Rate Applicable to all Rate Schedules			\$ 0.00069	\$ 0.00090	\$ 0.00159	12

[1] Filed in Advice Letter No. 1085

[2] Applicable only to Capital expenses. Depreciation is not applied to O & M expenses.

[3] Applicable only to Capital expenses. Property Tax is not applied to O & M expenses.

**SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NEW ENVIRONMENTAL REGULATORY BALANCING ACCOUNT (NERBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
SOUTH LAKE TAHOE SERVICE AREA**

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	Minimize Emissions from Operations, Maintenance and Other Activities	23		24,000	55,000	79,000	1
2	Total Dollars			\$ 24,000	55,000	79,000	2
3	Pre-Tax Return			12.14%	12.14%	12.14%	3
4	Financing Cost			\$ 2,914	6,677	9,590	4
5	Depreciation		3.82%	\$ 917	2,101	3,018	5
6	Property Tax		1.40%	\$ 337	771	1,108	6
7	Revenue Requirement Before Franchise			\$ 4,167	9,549	13,716	7
8	Franchise Rate		1.29%	\$ 54	123	177	8
9	Revenue Requirement After Franchise			\$ 4,221	9,673	13,893	9
10	Applicable Volumes (therms)			22,472,566	22,472,566	22,472,566	10
11	NERBA Rate Applicable to all Rate Schedules			\$ 0.00019	\$ 0.00043	\$ 0.00062	11

[1] Filed in Advice Letter No. 1085

**SOUTHWEST GAS CORPORATION
NATURAL GAS LEAK ABATEMENT PROGRAM BEST PRACTICES IMPLEMENTATION
NATURAL GAS LEAK ABATEMENT PROGRAM BALANCING ACCOUNT (NGLAPBA)
2018 AND 2019 INCREMENTAL FORECASTED COSTS
REVENUE REQUIREMENT AND RATES
SOUTH LAKE TAHOE SERVICE AREA**

Line							Line
No.	Description	Best Practice	Percent	2018 Forecasted Costs [1]	2019 Forecasted Costs	Total Rate Effective January 1, 2019	No.
	(a)	(b)	(c)	(d)	(e)	(d) + (e)	
1	Stationary Methane Detectors (Capital)	18		\$ 0	0	0	1
2	Stationary Methane Detectors (O&M)	18		90,700	121,577	212,277	2
3	Pipe Fitting Specifications (O&M)	22		3,297	0	3,297	
4	Total Dollars			\$ 93,997	121,577	215,574	4
5	Pre-Tax Return			12.14%	12.14%	12.14%	5
6	Financing Cost			\$ 11,411	14,759	26,170	6
7	Depreciation [2]		2.97%	\$ 0	0	0	7
8	Property Tax [3]		1.40%	\$ 0	0	0	8
9	Revenue Requirement Before Franchise			\$ 11,411	14,759	26,170	9
10	Franchise Rate		1.29%	\$ 147	191	338	10
11	Revenue Requirement After Franchise			\$ 11,558	14,950	26,508	11
12	Applicable Volumes (therms)			22,472,566	22,472,566	22,472,566	12
13	NGLAPBA Rate Applicable to all Rate Schedules			\$ 0.00051	\$ 0.00067	\$ 0.00118	13

[1] Filed in Advice Letter No. 1085

[2] Applicable only to Capital expenses. Depreciation is not applied to O & M expenses.

[3] Applicable only to Capital expenses. Property Tax is not applied to O & M expenses.