

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE



March 27, 2020

Advice Letter 4162-G

Erik Jacobson
Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Actual Cost Overruns Associated with Vintage Pipeline Replacement in Compliance with Ordering Paragraph 94 of Decision 19-09-025

Dear Mr. Jacobson:

Advice Letter 4162-G is effective as of March 20, 2020.

Sincerely,

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

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division

October 18, 2019

Advice 4162-G

(Pacific Gas and Electric Company ID U 39 G)

Public Utilities Commission of the State of California

Subject: Actual Cost Overruns Associated with Vintage Pipeline Replacement in Compliance with Ordering Paragraph 94 of Decision 19-09-025**Purpose**

This advice letter complies with Ordering Paragraph (OP) 94 in Pacific Gas and Electric's (PG&E) 2019 Gas Transmission and Storage (GT&S) Decision (D.) 19-09-025 (the Decision).

Background

On November 17, 2017, PG&E filed an application at the California Public Utilities Commission (CPUC or Commission) requesting that the Commission adopt its gas transmission and storage (GT&S) revenue requirement, cost allocation, and rate design for the period of 2019-2022. On September 12, 2019, the CPUC voted to adopt the Decision and address the issues before the Commission related to PG&E's application.¹ PG&E submits this Advice Letter in compliance with OP 94 which directed PG&E to "submit a Tier 2 Advice Letter that provides the actual amount of cost overruns associated with pipe replacement in lieu of hydrostatic testing projects² from 2015-2018," within 30 days of the date of D.19-09-025.

Actual Vintage Pipeline Replacement Program Cost Overruns

Based on PG&E's 2016 and 2017 recorded, and 2018 forecasts for the Vintage Pipeline Replacement Program, the Commission decided that PG&E should remove approximately \$304 million in costs for this program (over the 2015-2018 period) as insufficiently justified "cost overruns" relative to the forecast the Commission adopted in

¹ The CPUC issued the decision on September 23, 2019.

² While the OP refers to "pipe replacements in lieu of performing hydrostatic testing," the disallowance adopted is in fact for PG&E's Vintage Pipeline Replacement Program.

D.16-06-056.³ However, that amount was calculated based on a forecast for 2018 work, not on actual recorded costs. PG&E provides herein the actual amount of cost overruns associated with the Vintage Pipeline Replacement Program for 2015-2018.

Accordingly, PG&E has updated the data set provided to The Utility Reform Network (TURN) in TURN_015-Q01Atch01 upon which TURN's calculation of the recommended disallowance for 2016-2018, adopted by the Commission in D.19-09-025, was based. Consistent with the requirement of OP 94, PG&E has also included data related to 2015,⁴ resulting in total cost overruns from 2015-2018 of \$237.3 million for the Vintage Pipeline Replacement Program. See Attachment A to support the calculation of the \$237.3 million. For completeness and to illustrate that PG&E's actual cost overrun calculation is consistent with TURN's calculation (with the exception of PG&E's use of recorded costs provided in nominal dollars as the "authorized" unit costs relied upon by TURN were escalated), Attachment A also includes tabs supporting the calculation of the forecast \$304.2 million.

This submittal would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile or E-mail, no later than November 7, 2019, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

³ D.19-09-025, pp. 158-159.

⁴ The disallowance adopted by the Commission was based on TURN's recommendation reflected in Exhibit TURN-19 (Supporting Attachments to Chapter 5B) that only reflected 2016-2018. PG&E's calculation reflects Vintage Pipeline Replacement projects that became operative from 2015-2018.

Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

Pursuant to General Order (GO) 96-B, Rule 5.2, and OP 94 of D.19-09-025, this advice letter is submitted with a Tier 2 designation. PG&E requests that this Tier 2 advice submittal become effective on regular notice, November 17, 2019, which is 30 calendar days after the date of submittal.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to the parties shown on the attached list and on the service list for A.17-11-009. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

_____/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service List A.17-11-009



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39G)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Kimberly Loo

Phone #: (415)973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: KELM@pge.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4162-G

Tier Designation: 2

Subject of AL: Actual Costs Overruns Associated with Vintage Pipeline Replacement in Compliance with Ordering Paragraph 94 of Decision 19-09-025

Keywords (choose from CPUC listing): Compliance

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D. 19-09-025

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

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: 11/17/19

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

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: N/A

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

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: Erik Jacobson, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Advice 4162-G
October 18, 2019

Attachment A

PG&E Actual Vintage Pipeline Replacement Cost Overrun Calculation Based on TURN's Approach in Exhibit TURN-19 (Supporting Attachments to Ch. 5B)

From "Vintage Pipe 2015-2018 Data" Tab				= C * D	From "Vintage Pipe 2015-2018 Data" Tab			= E11, E16, E21, E26	= J11, J16, J21, J26	= M-N-O		
"Authorized" per TURN					Recorded			Recalculated TURN Disallowance				
	Diameter	Miles	Cost/Mile	Total		Diameter	Miles	Recorded Cost (Nominal \$)		Authorized	Recorded	Disallowance
2015	<12"	0.14	\$5,131,898	\$728,730	2015	<12"	0.14	\$6,272,790	2015	\$27.3	\$66.6	(\$39.4)
	12-22"	3.05	\$4,176,068	\$12,737,007		12-22"	3.05	\$16,071,444	2016	\$53.0	\$111.3	(\$58.2)
	>24"	1.67	\$8,249,726	\$13,785,291		>24"	1.67	\$44,293,103	2017	\$25.4	\$79.3	(\$53.9)
	4.863			\$27,251,028		4.863		\$66,637,336	2018	\$153.5	\$252.1	(\$98.6)
										\$259.2	\$509.3	(\$250.1)
2016	<12"	2.69	\$5,249,932	\$14,122,317	2016	<12"	2.69	\$41,493,626	Commission Decision (D.19-09-025)			
	12-22"	1.18	\$4,272,118	\$5,041,099		12-22"	1.18	\$5,117,538				= O12
	>24"	4.01	\$8,439,469	\$33,842,271		>24"	4.01	\$64,639,000	TURN Recommendation (based on actual completed miles)			(\$250.1)
	7.88			\$53,005,687		7.88		\$111,250,165	Less: Supported Project Overruns in 2016 (R-503)			\$12.8
2017	<12"	0.00	\$5,386,430	\$0	2017	<12"	0	\$401,465	Disallowance			(\$237.3)
	12-22"	1.13	\$4,383,193	\$4,931,092		12-22"	1.13	\$23,146,988				
	>24"	2.37	\$8,658,895	\$20,504,263		>24"	2.37	\$55,756,775				
	3.493			\$25,435,355		3.493		\$79,305,229				
2018	<12"	1.35	\$5,526,477	\$7,460,744	2018	<12"	1.35	\$15,855,376				
	12-22"	5.69	\$4,497,156	\$25,588,818		12-22"	5.69	\$87,006,324				
	>24"	13.56	\$8,884,027	\$120,467,406		>24"	13.56	\$149,219,563				
	20.6			\$153,516,968		20.6		\$252,081,263				
Total	36.836			\$259,209,039	Total	36.836		\$509,273,992				

ID	Project Description	Route	Project Length (mi)	Diameter (in)	Recorded Cost 2016\$, NCM	Recorded Cost Nominal \$	Completed / Closed Year	Notes
R-009	R-009 108 MP 40.27-43.46 REPLACE	108	3.05	16	\$16,145,747	\$16,071,444	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-016	R-016 L-108 3 2.55MI MP 63.49-65.96 REPL	108	1.46	24	\$21,621,767	\$21,733,247	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-292	L-132 MP41.83-42.95 REPLACE 3431-FT	132	0.18	30	\$16,689,245	\$16,689,628	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-318	R-318 L-126A&B 0.68 MI MP 10.40-10.89 RE	126A	0.11	8.63	\$5,221,482	\$5,253,105	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-332	L-132 SSF MP 43.63-MLV HILLSIDE & HOLLY	132	0.03	30	\$5,912,060	\$5,870,228	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-634	R-634 1305-01 8.58 REPLACE 500 FEET	1305-01	0.03	6.63	\$1,015,697	\$1,019,685	2015	New Project (2015 projects not included in PGE-TURN 015-Q01Atch01)
R-008B	R-008B L-108 0.8MI MP 39.47-40.27 Replace	108	0.80	24	\$4,596,197	\$4,601,140	2016	
R-303	R-303 L-132 0.34MI MP 0.93-1.87 VTA Replace	132	0.34	24	\$4,739,086	\$4,747,178	2016	
R-309A	R-309A L-107 1.15MI MP 31.22-32.37 Replace BALIF	107	2.10	24	\$43,040,468	\$43,119,446	2016	Updated project length
R-350B	R-350B L-131 0.25MI MP 35.05-35.30 Betterment Replace	131	0.25	24	\$2,216,929	\$2,218,408	2016	
R-502	R-502 L-050A 1 0.87MI MP 11.03-11.9 Replace 8" Pipe	050A	0.87	8.625	\$9,500,184	\$9,505,241	2016	
R-503	R-503 L-050A 2 1.82MI MP 16.81-18.41 Replace 8" Pipe	050A	1.82	8.625	\$31,998,761	\$31,988,385	2016	
R-824	R-824 L-153 0.52MI MP 25.96-26.48 Replace	153	0.52	24	\$9,942,534	\$9,952,828	2016	
R-498	R-498 L-103 1.27MI MP 17.99-19.26 REPLAC	103	1.18	12.75	\$5,122,813	\$5,117,538	2016	New Project
R-149	R-149 L-153 0.12MI MP 3.45-3.57 Replace	153	0.16	30	\$13,714,882	\$14,077,858	2017	
R-310	R-310 0.03MI MP 0 Rebuild Walnut Crossover BALIF	131	0.03	24	\$3,213,774	\$3,254,885	2017	
R-349B	R-349B L-101 0.54MI MP 12.33-12.87 Vintage	101	0.61	20	\$9,438,984	\$9,766,216	2017	
R-414	R-414 L-109 2.21MI MP 46.00-48.21 Replace 26" Line	109	1.99	26	\$30,075,598	\$31,058,158	2017	
R-501	R-501 L-153 0.05MI MP 7.34-9.18 Replace 30" Pipe	153	0.05	30	\$3,891,480	\$4,002,815	2017	
R-504	R-504 L-153 4 0.14MI MP 5.32-5.46 Replace 30" Pipe	153	0.14	30	\$3,262,711	\$3,363,058	2017	
R-514	R-514 L-100 1 MP 138.43-138.46	100	0.03	20	\$4,256,265	\$4,380,741	2017	Updated project name/length (previous copy/paste error from R-504)
R-517	R-517 DFM 1818-01, MP 2.49-2.69	1818-01	0.49	12.75	\$8,711,871	\$9,000,032	2017	Updated project name/length (previous copy/paste error from R-504)
R-588	R-588 1816-05 MP 0.08 MAOP VALIDATION	1816-05	0.00	3.5	\$401,208	\$401,465	2017	New Project (3 feet rounds to 0.0 miles)
R-1050	R-1050 DFM-1818-01 0.06MI MP 0.0-0.12 Replace PB-3E	1818-01	0.05	16	\$1,213,410	\$1,283,500	2018	
R-188C	R-188C L-220 0.29MI MP 19.37-19.69 Replace	220	0.29	10.75	\$1,984,067	\$2,074,217	2018	
R-309B	R-309B L-107 1.18MI MP 32.37-33.55 Replace BALIF	107	1.30	22	\$23,469,338	\$24,748,827	2018	
R-361	R-361 DFM-3001-01 1.09MI MP 2.05-3.11 Capacity	3001-01	1.06	4.5	\$13,039,729	\$13,781,159	2018	
R-361B	R-361B DFM-3001-01 1.09MI MP 2.02-2.05 Capacity	3001-01	0.03	4.5	N/A	N/A	2018	Moved to 2020; Excluded from calculation
R-506	R-506 DFM-0401-01 1.28MI MP 2.27-3.55 Replace	0401-01	1.35	16	\$25,998,165	\$27,485,720	2018	
R-508	R-508 L-105N 0.28MI MP 28.13-30.27 Replace 24" Pipe PB-2E	105N	0.53	34	\$8,519,776	\$8,975,121	2018	
R-510	R-510 L-153 2.28MI MP 23.77-26.05 Replace Vintage Pipe PB-2E	153	2.28	24	\$39,731,784	\$41,969,623	2018	
R-511	R-511 L-153 1.26MI MP 26.62-27.88 Replace Vintage Pipe PB-2E	153	1.26	24	\$37,498,697	\$39,561,250	2018	
R-515	R-515 L-108 3.95MI MP 45.95-49.19 Replace 24" Pipe	108	3.87	24	\$24,174,661	\$25,510,710	2018	
R-612	R-612 L-210B 0.68MI MP 13.75-14.53 Replace 3600ft	210B	0.68	16	\$5,352,275	\$5,631,234	2018	
R-649	R-649 L-131 0.14MI MP 31.83-32.38 Replace	131	0.13	24	\$1,768,666	\$1,852,471	2018	
R-700	R-700 L-131 3.83MI MP 28.00-31.83 Replace 24" Vintage PB-27	131	4.07	24	\$15,453,172	\$16,309,443	2018	
R-707	R-707 L-131 0.966MI MP 27.02-28.00 Replace 5100ft of 24" PB-27	131	0.80	24	\$4,643,841	\$4,898,078	2018	
R-917	R-917 DFM-1817-01 1.44MI MP 1.25-2.0 Replace PB-40E	1817-01	1.52	12.75	\$13,833,600	\$14,644,711	2018	
R-964	R-964 DFM-1818-01 0.59MI MP 0.17-0.48 Replace PB-3E	1818-01	0.59	12.75	\$9,896,937	\$10,471,314	2018	
R-966	R-966 L-101 1.76MI MP 27.07-28.85 Replace PB-3E	101	1.76	20	N/A	N/A	2018	Moved to 2019; Excluded from calculation
R-967	R-967 L-101 0.62MI MP 33.06-33.68 Replace PB-3E	101	0.62	30	\$9,582,785	\$10,142,867	2018	
RT-969	RT-969 DFM-3012-01 0.1515MI MP 0.027-0.172 Replace	3012-01	0.20	12.75	\$2,595,281	\$2,741,017	2018	

Total 36.836 \$493,485,932 \$509,273,992

D.19-09-025 - \$304.2M Disallowance Calculation Based on TURN's Approach in Exhibit TURN-19 (Supporting Attachments to Ch. 5B)

From "PGE-TURN_015-Q01Atch01" Tab				= TURN unit cost (Exhibit TURN-19)		= C * D		= C		From "PGE-TURN_015-Q01Atch01" Tab	
"Authorized" per TURN				Recorded		Recorded/ Forecast Cost (2016 \$)					
Diameter	Miles	Cost/Mile	Total	Diameter	Miles						
2015 Not included in TURN's calculation of the recommended disallowance											
2016	<12"	2.69	\$5,249,932	\$14,122,317	2016	<12"	2.69	\$41,362,365			
	12-22"	0.00	\$4,272,118	\$0		12-22"	0.00	\$0			
	>24"	3.06	\$8,439,469	\$25,824,775		>24"	3.06	\$66,000,870			
	5.75		\$39,947,092			5.75		\$107,363,235			
2017	<12"	0.00	\$5,386,430	\$0	2017	<12"	0.00	\$0			
	12-22"	0.89	\$4,383,193	\$3,901,042		12-22"	0.89	\$19,969,631			
	>24"	2.37	\$8,658,895	\$20,504,263		>24"	2.37	\$52,303,511			
	3.258		\$24,405,305			3.258		\$72,273,142			
2018	<12"	2.90	\$5,526,477	\$16,026,783	2018	<12"	2.90	\$43,940,728			
	12-22"	6.37	\$4,497,156	\$28,646,884		12-22"	6.37	\$128,111,278			
	>24"	12.98	\$8,884,027	\$115,314,670		>24"	12.98	\$189,727,077			
	22.25		\$159,988,337			22.25		\$361,779,083			
Total	31.258		\$224,340,735		Total	31.258		\$541,415,460			

TURN Recommended Disallowance (Opening Brief, Table 18 and 19)

	Authorized	Recorded	Disallowance
2015	<i>Not included in TURN's calculation of the recommended disallowance</i>		
2016	\$39.9	\$107.4	(\$67.4)
2017	\$24.4	\$72.3	(\$47.9)
2018	\$160.0	\$361.8	(\$201.8)
	\$224.3	\$541.4	(\$317.1)

Commission Decision (D.19-09-025)

TURN Recommendation*	(\$317.0)
Less: Supported Project Overruns in 2016 (R-503)	\$12.8
Disallowance	(\$304.2)

* Rounded by Commission to \$317.0M in decision

ID	Project Description	Route	Begin Station	End Station	Project Length (ft)	Project Length (mi)	Driver Tier	Diameter (in)	IOC	TIMP Risk	HCA?	Land Movement Threat	L (mi) X D (in)	Engineering Job Estimate 2016\$, NCM	Recorded Cost 2016\$, NCM	Completed / Closed Year
R-008B	R-008B L-108 0.8MI MP 39.47-40.27 Replace	108	93,233	98,521	5,288	0.80	1	24	16	33,054	Yes	Low	19.20	\$6,448,167	\$5,767,822	2016
R-303	R-303 L-132 0.34MI MP 0.93-1.87 VTA Replace	132	5,018	6,807	1,789	0.34	1	24	15	39,788	Yes	Medium	8.16	\$4,127,753	\$4,697,897	2016
R-309A	R-309A L-107 1.15MI MP 31.22-32.37 Replace BALIP	107	164,780	170,236	5,445	1.15	1	24	199	46,868	Yes	Low	27.60	\$35,356,511	\$43,433,176	2016
R-350B	R-350B L-131 0.25MI MP 35.05-35.30 Betterment Replace	131	184,500	187,467	2,967	0.25	1	24	59	43,016	Yes	Low	6.00	\$1,216,246	\$2,198,763	2016
R-502	R-502 L-050A 1 0.87MI MP 11.03-11.9 Replace 8" Pipe	050A	46,764	51,758	4,993	0.87	1	8.625	335	44,135	Yes	Low	7.50	\$10,203,693	\$9,495,628	2016
R-503	R-503 L-050A 2 1.82MI MP 16.81-18.41 Replace 8" Pipe	050A	79,227	87,227	8,000	1.82	1	8.625	998	43,661	Yes	Low	15.70	\$44,950,000	\$31,866,737	2016
R-824	R-824 L-153 0.52MI MP 25.96-26.48 Replace	153	139,760	142,159	2,399	0.52	1	24	44	63,822	Yes	Medium	12.48	\$11,224,378	\$9,903,213	2016
R-149	R-149 L-153 0.12MI MP 3.45-3.57 Replace	153	18,649	19,337	1,259	0.16	1	30	70	56,344	Yes	Low	4.80	\$12,477,375	\$13,332,414	2017
R-310	R-310 0.03MI MP 0 Rebuild Walnut Crossover BALIP	131	22,025	110,765	114	0.03	1	24	0	24,961	No	Medium	0.72	\$4,253,970	\$3,249,234	2017
R-349B	R-349B L-101 0.54MI MP 12.33-12.87 Vintage	101	68,281	71,332	3,050	0.61	1	20	226	46,392	Yes	Medium	12.20	\$19,337,043	\$6,501,361	2017
R-414	R-414 L-109 2.21MI MP 46.00-48.21 Replace 26" Liner	109	244,610	255,980	11,370	1.99	1	26	5,058	51,532	Yes	Low	51.69	\$56,246,371	\$29,102,655	2017
R-501	R-501 L-153 0.05MI MP 7.34-9.18 Replace 30" Pipe	153	38,724	39,227	503	0.05	1	30	142	55,378	Yes	Medium	1.50	\$3,849,871	\$3,064,926	2017
R-504	R-504 L-153 4 0.14MI MP 5.32-5.46 Replace 30" Pipe	153	28,606	29,363	757	0.14	1	30	6	47,690	Yes	Medium	4.20	\$2,266,216	\$3,554,281	2017
R-514	R-504 L-153 4 0.14MI MP 5.32-5.46 Replace 30" Pipe	100	730,914	731,060	147	0.14	1	20	38	55,150	Yes	Medium	2.80	\$3,431,536	\$4,756,359	2017
R-517	R-504 L-153 4 0.14MI MP 5.32-5.46 Replace 30" Pipe	1818-01	13,612	14,820	1,208	0.14	1	12.75	141	47,795	Yes	High	1.79	\$10,227,746	\$8,711,911	2017
R-1050	R-1050 DFM-1818-01 0.06MI MP 0.0-0.12 Replace PB-39	1818-01	0	347	344	0.06	3	12.75	30	24,238	Yes	Medium	0.77	\$1,321,457	N/A	2018
R-188C	R-188C L-220 0.29MI MP 19.37-19.69 Replace	220	101,019	103,576	2,558	0.29	1	10.75	20	47,462	Yes	Medium	3.12	\$3,658,831	N/A	2018
R-309B	R-309B L-107 1.18MI MP 32.37-33.55 Replace BALIP	107	172,316	174,887	2,571	1.18	1	22	18	47,250	Yes	Medium	25.96	\$42,595,309	N/A	2018
R-361	R-361 DFM-3001-01 1.09MI MP 2.05-3.11 Capacity	3001-01	11,254	16,343	4,810	1.06	1	4.5	19	49,054	No	Medium	4.77	\$18,139,256	N/A	2018
R-361B	R-361B DFM-3001-01 1.09MI MP 2.02-2.05 Capacity	3001-01	10,768	11,254	486	0.03	1	4.5	0	45,114	No	Low	0.14	\$377,615	N/A	2018
R-506	R-506 DFM-0401-01 1.28MI MP 2.27-3.55 Replace	0401-01	11,860	18,836	6,975	1.28	1	16	1,051	50,375	Yes	Medium	20.48	\$24,341,970	N/A	2018
R-508	R-508 L-105N 0.28MI MP 28.13-30.27 Replace 24" Pipe PB-28	105N	159,308	162,136	2,808	0.28	1	30	161	56,474	Yes	Low	8.40	\$10,647,850	N/A	2018
R-510	R-510 L-153 2.28MI MP 23.77-26.05 Replace Vintage Pipe PB-28	153	127,092	140,314	13,222	2.22	1	24	2,199	72,257	Yes	Low	53.28	\$55,024,270	N/A	2018
R-511	R-511 L-153 1.26MI MP 26.62-27.88 Replace Vintage Pipe PB-28	153	142,775	148,744	5,932	1.61	1	24	1,443	54,141	Yes	Low	38.64	\$67,746,437	N/A	2018
R-515	R-515 L-108 3.95MI MP 45.95-49.19 Replace 24" Pipe	108	133,898	151,449	17,550	3.95	1	24	40	51,743	Yes	High	94.80	\$28,205,153	N/A	2018
R-612	R-612 L-210B 0.68MI MP 13.75-14.53 Replace 3600ft	210B	77,039	81,014	3,975	0.68	1	16	63	47,664	Yes	Low	10.88	\$6,263,624	N/A	2018
R-649	R-649 L-131 0.14MI MP 31.83-32.38 Replace	131	169,879	169,962	83	0.12	1	24	0	27,930	Yes	Medium	2.88	\$1,841,395	N/A	2018
R-700	R-700 L-131 3.83MI MP 28.00-31.83 Replace 24" Vintage PB-27	131	148,144	168,309	20,165	3.83	1	24	16	23,178	No	Medium	91.92	\$19,545,018	N/A	2018
R-707	R-707 L-131 0.96MI MP 27.02-28.00 Replace 5100ft of 24" PB-27	131	143,470	148,144	4,674	0.97	1	24	2	19,087	No	Medium	23.28	\$6,716,954	N/A	2018
R-917	R-917 DFM-1817-01 1.44MI MP 1.25-2.0 Replace PB-40B	1817-01	6,453	10,618	4,152	1.52	1	10.75	319	46,450	Yes	Low	16.34	\$21,765,026	N/A	2018
R-964	R-964 DFM-1818-01 0.59MI MP 0.17-0.48 Replace PB-39	1818-01	1,212	1,940	728	0.59	1	12.75	76	43,930	Yes	Medium	7.52	\$11,332,629	N/A	2018
R-966	R-966 L-101 1.76MI MP 27.07-28.85 Replace PB-38	101	148,409	157,729	8,615	1.76	1	20	1,545	47,361	Yes	Low	35.20	\$25,721,160	N/A	2018
R-967	R-967 L-101 0.62MI MP 33.06-33.68 Replace PB-38	101	181,676	185,483	3,668	0.62	1	20	185	48,208	Yes	Low	12.40	\$12,450,891	N/A	2018
RT-969	RT-969 DFM-3012-01 0.1515MI MP 0.027-0.172 Replace	3012-01	110	950	841	0.20	3	12.75	91	31,139	Yes	Low	2.55	\$4,084,239	N/A	2018

**PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV**

AT&T	Downey & Brand	Pioneer Community Energy
Albion Power Company	East Bay Community Energy	Praxair
Alcantar & Kahl LLP	Ellison Schneider & Harris LLP	
	Energy Management Service	
Alta Power Group, LLC	Engineers and Scientists of California	Redwood Coast Energy Authority
Anderson & Poole	Evaluation + Strategy for Social Innovation	Regulatory & Cogeneration Service, Inc.
	GenOn Energy, Inc.	SCD Energy Solutions
Atlas ReFuel	Goodin, MacBride, Squeri, Schlotz & Ritchie	
BART	Green Charge Networks	SCE
	Green Power Institute	SDG&E and SoCalGas
Barkovich & Yap, Inc.	Hanna & Morton	
P.C. CalCom Solar	ICF	SPURR
California Cotton Ginners & Growers Assn	International Power Technology	San Francisco Water Power and Sewer
California Energy Commission	Intestate Gas Services, Inc.	Seattle City Light
California Public Utilities Commission	Kelly Group	Sempra Utilities
California State Association of Counties	Ken Bohn Consulting	Southern California Edison Company
Calpine	Keyes & Fox LLP	Southern California Gas Company
	Leviton Manufacturing Co., Inc. Linde	Spark Energy
Cameron-Daniel, P.C.	Los Angeles County Integrated Waste Management Task Force	Sun Light & Power
Casner, Steve	Los Angeles Dept of Water & Power	Sunshine Design
Cenergy Power	MRW & Associates	Tecogen, Inc.
Center for Biological Diversity	Manatt Phelps Phillips	TerraVerde Renewable Partners
City of Palo Alto	Marin Energy Authority	Tiger Natural Gas, Inc.
	McKenzie & Associates	
City of San Jose	Modesto Irrigation District	TransCanada
Clean Power Research	Morgan Stanley	Troutman Sanders LLP
Coast Economic Consulting	NLine Energy, Inc.	Utility Cost Management
Commercial Energy	NRG Solar	Utility Power Solutions
County of Tehama - Department of Public Works		Utility Specialists
Crossborder Energy	Office of Ratepayer Advocates	
Crown Road Energy, LLC	OnGrid Solar	Verizon
Davis Wright Tremaine LLP	Pacific Gas and Electric Company	Water and Energy Consulting Wellhead Electric Company
Day Carter Murphy	Peninsula Clean Energy	Western Manufactured Housing Communities Association (WMA)
		Yep Energy
Dept of General Services		
Don Pickett & Associates, Inc.		
Douglass & Liddell		