

Application No: A.16-12-
Exhibit No.: _____
Witness: T. Nguyen

In the Matter of the Application of Southern
California Gas Company (U 904 G) Requesting
Reauthorization of the Customer Incentive Program.

Application 16-12-_____
(Filed December 21, 2016)

CHAPTER II
PROGRAM MECHANICS
PREPARED DIRECT TESTIMONY OF
TUAN NGUYEN

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

December 21, 2016

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	DESCRIPTION OF THE CUSTOMER INCENTIVE PROGRAM	1
	A. Customer Eligibility Components	2
	B. Criteria Explained.....	3
	C. Incentives to Customers.....	5
III.	PROGRAM CONTROLS	7
	A. Funds Must Be a Material Factor	7
	B. Minimum Annual Quantities	7
	C. Failure to Meet MAQ Will Lead to Adjustments to the Incentive	8
	D. Contract and Contract Term	8
	E. Ratepayer Protection.....	9
IV.	THE CIP HAS MULTIPLE BENEFITS	9
	A. Environmental Benefits	9
	B. The CIP Is Designed to Assist in Filling a Gap for Customers Seeking Incentives to Lower Operations Costs While Enhancing Their Capabilities .	10
	C. Benefits for Ratepayers.....	10
	D. Customer Choice and Industry Growth	11
V.	REGULATORY PROCEDURES AND PROCESS.....	11
VI.	CONCLUSION	11
VII.	WITNESS QUALIFICATIONS	12

1 **I. INTRODUCTION**

2 The purpose of this testimony is to provide a description of Southern California Gas
3 Company's (SoCalGas) proposed Customer Incentive Program (CIP); including a summary of
4 the two incentive options being offered; the eligibility criteria to receive the incentive; the
5 standards for energy efficiency or clean technologies that will be eligible for the incentive;
6 Renewable Natural Gas (RNG) adder incentive; and a description of the intended benefits for
7 potential customers and the marketplace. A description of how the CIP fits into California's
8 efficiency and environmental policy goals is described in Chapter I, Testimony of Rasha Prince.

9 SoCalGas' proposed CIP would provide shareholder funded incentives for customers to
10 install new or replace to energy efficient or emissions reducing natural-gas technology. The
11 program is designed to encourage customers to install cleaner more energy efficient technology
12 in favor of cheaper, dirtier, less efficient technology. The CIP is intended to give customers an
13 incentive to choose to install new¹, cleaner or more efficient technology that may have otherwise
14 proven to be cost prohibitive or uncompetitive to do so. In effect, the CIP seeks to bridge the
15 gap between customers' desire to improve their facilities and to decrease emissions or to increase
16 efficiency, on the one hand; and the costs to do so, on the other. By providing this incentive, the
17 CIP is designed to support California's ambitious energy efficiency and environmental goals and
18 targets.

19 **II. DESCRIPTION OF THE CUSTOMER INCENTIVE PROGRAM**

20 As discussed in greater detail below, the proposed CIP will contain the following
21 components.

¹ New technology refers to new technology or underutilized technology that has been refurbished, which qualifies under Section II.A.

1 **A. Customer Eligibility Components**

2 SoCalGas proposes to offer the CIP incentive² to customers who meet and provide proof
3 of compliance with the following criteria:

- 4 1) Customer must either (a) have an active core or non-core gas account or
5 (b) concurrently apply for new service with SoCalGas;
- 6 2) Customer must demonstrate the intent to install new, or to refurbish underutilized
7 technology that utilizes natural gas. Customer must demonstrate this intent
8 through an application process, including a Purchase Order;
- 9 3) The technology must either (a) be more energy efficient than what the customer
10 would have otherwise installed or (b) reduce greenhouse gas emissions and/or
11 criteria air pollutants. A customer can meet the preceding criterion through one of
12 four ways;
- 13 i. The technology must achieve GHG emissions or criteria air pollutant
14 reductions;
- 15 ii. Onsite generation or Combined Heat and Power (CHP)³ system must meet
16 the Federal Energy Regulatory Commission (FERC) efficiency standards;⁴
- 17 iii. Technology must qualify for a Leadership in Energy and Environmental
18 Design (LEED) point;⁵ or,

² The two incentive options are discussed in Section B, below.

³ Department of Energy Definition: The concurrent production of electricity or mechanical power and useful thermal energy (heating and/or cooling) from a single source of energy; *Available at* <http://www.energy.gov/eere/amo/combined-heat-and-power-basics>.

⁴ *See* Title 18 of the Code of Federal Regulation, Section 292.205; *Available at* http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=5517216c22de672592192e81dcc97726&rqn=div5&view=text&node=18:1.0.1.11.58&idno=18#se18.1.292_1205.

⁵ *See* <http://www.usgbc.org/leed>.

1 iv. Technology must be at least 10% more efficient than the lower cost
2 alternative.

3 4) Customer must demonstrate that the CIP incentive was a material factor for
4 installing the technology through a payback analysis and affidavit. This
5 component is discussed in Section III.B.; or

6 5) Customer must commit to a utilization level with SoCalGas through the execution
7 of a contract and an established Minimum Annual Quantity (“MAQ”), described
8 in Section III.D and III.B, respectively.

9 **B. Criteria Explained**

10 SoCalGas chose the criteria, specified in Section II.A., above, because these criteria
11 provide objective measures to demonstrate that the technology chosen is suitable to help promote
12 California’s goals of emissions and energy reduction.

- 13 • Data obtained from the Energy Information Administration (“EIA”)⁶ shows
14 that natural gas is a fuel that emits the lowest GHGs. As discussed later in the
15 testimony, there are many customers still using fuels such as diesel. Since
16 natural gas is a cleaner fuel than diesel, emission reductions can occur simply
17 by customers converting their fuel usage from diesel to natural gas.⁷ The CIP
18 can encourage conversion to natural gas supporting the reduction in emissions
19 from the new natural gas load.
- 20 • The FERC efficiency standard is 42.5%, calculated by comparing the energy
21 input to the useful heat and electricity output of a system. The FERC number

⁶ See Carbon Dioxide Emissions Coefficient by Fuel. Available at https://www.eia.gov/environment/emissions/co2_vol_mass.cfm.

⁷ See, e.g. Game Changer Technical White Paper - “Next Generation Heavy-Duty Natural Gas Engines Fueled By Renewable Natural Gas”, Gladstein, Neandross and Associates, page 9, May 3, 2016.

1 should ensure that onsite generation and/or CHP systems would operate more
2 efficiently than separately purchasing electricity and natural gas. Therefore,
3 both CHP and other potential onsite generation should be included as the new
4 load should be more efficient than the customer's current operation.

- 5 • LEED has been recognized as a way to provide “independent verification of a
6 building or neighborhood's green features, allowing for the design,
7 construction, operations and maintenance of a resource-efficient, high
8 performing, healthy, cost effective buildings.”⁸ Therefore, a customer who
9 chooses a LEED approved technology over a standard accepted technology
10 should have savings compared to what they could have purchased. Providing
11 financial support for technology regulated by LEED will help California move
12 towards its goals.
- 13 • In many instances, industry standards for efficiency may not exist for specific
14 end-use cases. Accordingly, SoCalGas proposes a 10% increase in efficiency
15 as an alternative standard in which a technology would qualify for CIP.
16 SoCalGas proposes this criterion in order to cast a reasonably wide net for
17 qualifying technology while supporting the State's energy efficiency goals.
18 This should give a customer an opportunity to demonstrate that the technology
19 is more efficient than what they would have purchased.⁹ In addition,
20 SoCalGas recognizes that energy efficiency technology improvements may
21 evolve quickly, and that established standards may not easily apply to that

⁸ See <http://leed.usgbc.org/leed.html>.

⁹ Since the customer will be comparing two types of equipment, the more efficient or cleaner equipment has to be more expensive, otherwise the customer would have no reason to consider the less efficient or cleaner equipment.

1 technology. This criterion should provide greater flexibility to accommodate
2 future technology developments.

3 **C. Incentives to Customers**

4 Once the customer meets the eligibility requirements, specified in Section II.A., above,
5 SoCalGas proposes to offer two incentive options, either: (1) a One-Time Payment Incentive; or
6 (2) a rate discount applied through the term of the contract (“Rate Discount”). Eligible
7 customers will have the two options available to them. In addition, SoCalGas proposes a RNG
8 adder on top of the two incentive options. Proposed incentives would be funded by SoCalGas’
9 shareholders and recovered over the course of the contract term. These incentives and the
10 contract’s terms are discussed in greater detail below.

11 **1. General Mechanics for Determining Incentive Amount**

12 The maximum One-Time Payment Incentive or Rate Discount will be determined by:

- 13 • Establishing the customer’s baseline load by calculating the customer’s average
14 consumption for the previous 24 months;
- 15 • Estimating the net incremental load (above the baseline load) given the
16 customer’s usage history and planned future activities and needs;
- 17 • Determining the incremental revenue based on the net incremental load; and,
- 18 • Calculating the maximum incentive/discount based on the amount of incremental
19 revenue.

20 **a. Calculation Specific to the One-Time Payment Incentive**

21 The One-Time Payment Incentive option is offered to customers who typically prefer to
22 offset initial capital investments; it is funded by shareholders, and paid upon the completion of
23 the project. As discussed above, the amount of the incentive will be based on the expected
24 incremental transmission revenue resulting from the operation of the new technology.

1 Incremental transmission revenue is the revenue above the customer's baseline load, which is the
2 customer's average consumption for the previous 24 months. The final amount of the one-time
3 incentive will be negotiated with a customer and will not exceed maximum calculated
4 incremental revenue. See Example 2 in Attachment 1 to my testimony provides an example of
5 this calculation.

6 **b. Calculation Specific to Rate Discount**

7 The Rate Discount option is offered to customers who prefer to offset operational
8 expenses. Similar to the One-time Payment Incentive, the Rate Discount is based on the
9 expected incremental transmission revenue resulting from the operation of the new technology.
10 The incremental transmission revenue is the net revenue above the customer's baseline, which is
11 the customer's average consumption for the previous 24 months. Each case will be different as
12 the economics of the new load will be weighed against the cost of providing the discount. The
13 discount will only apply to the usage over the baseload. See Example 2 in Attachment 1 to my
14 testimony provides an example of this calculation.

15 **c. RNG Adder**

16 SoCalGas also proposes a RNG adder that will be completely funded by shareholders and
17 will be in addition to the Rate Discount or One-Time Payment incentive. As pipeline RNG is not
18 readily available, SoCalGas sees the CIP as a vehicle that can be used to stimulate the RNG
19 market, allowing for more renewable fuel to flow into California. As such, SoCalGas proposes
20 that a customer qualifies for the RNG adder only if they meet the MAQ. If and only if a
21 customer meets the MAQ, the adder will apply to the RNG procured and used by load qualified
22 under the CIP and will be a 5% discount off the transmission charge for every therm of RNG

1 used above the baseline. Customers will be required annually to provide evidence of the amount
2 of RNG used.¹⁰ Example 3 in Attachment 1 provides an example of this calculation.

3 **III. PROGRAM CONTROLS**

4 SoCalGas also proposes the following program controls to protect against free riders,
5 ensure that the customers meet program requirements, and protect the ratepayers from risk.

6 There are four components to this oversight.

7 **A. Funds Must Be a Material Factor**

8 Customers must also show that the proposed incentive/discount is a material factor for
9 completing the project. SoCalGas will, prior to providing a contract for an incentive, perform an
10 economic analysis on each project to determine its simple payback time. According to a report
11 done by ICF International, Inc.¹¹ projects exceeding a three (3) year payback are 60% less likely
12 to come to fruition. As such, SoCalGas will consider offering incentives/discounts to projects
13 whose payback exceeds three (3) years, since those projects are likely to require additional
14 funding to move forward. SoCalGas believes that the CHP focused report is representative of
15 the broader market we are trying to serve, as it is reflective of customer's hesitation to use
16 expensive, energy saving technology. If the project meets the payback standard, SoCalGas will
17 require all participating customers to sign an affidavit attesting to the fact that the incentive was a
18 material factor in committing to the project.

19 **B. Minimum Annual Quantities**

20 Once the incentive is approved, the customer must agree to specify in the contract a
21 minimum of natural-gas that they must consume. This minimum amount is referred to as

¹⁰ Since SoCalGas will only know how much RNG is used at the end of the year, the rate discount will come in a one-time payment, after the proof is received.

¹¹ CEC-200-2012-002 Report, February 2012, at A-7. Available at <http://www.energy.ca.gov/2012publications/CEC-200-2012-002/CEC-200-2012-002-REV.pdf>.

1 Minimum Annual Quantities (MAQ). The MAQ of gas consumption is the amount of therms
2 that an eligible customer must consume each year of the contract. The following calculation is
3 how the MAQs will be derived:

- 4 • SoCalGas will take the costs of the contract plus the authorized rate of return and
5 prorate that amount for the contract period to determine an annual dollar value.
- 6 • That annual dollar value will be converted into therms, using the current gas rates
7 at the time that calculation is made to get to an annual therm number.
- 8 • The annual therm number will be the MAQ the customer must use each year of
9 the contract.

10 See Attachment 1.

11 **C. Failure to Meet MAQ Will Lead to Adjustments to the Incentive**

12 In the event a customer fails to meet its MAQ obligation, an adjustment to the incentive
13 will be made. The adjustment will be based on the difference between the MAQ and the actual
14 usage of the customer. SoCalGas proposes this adjustment to be calculated using the rates at the
15 time the shortfall is calculated, and the amount will be paid to SoCalGas through a line item on
16 the customer's bill. However, SoCalGas proposes to cap the adjustment at an amount equal to a
17 prorated portion of the costs incurred plus the rate of return. This way customers will have their
18 liability limited and not be exposed to the risk of rates increasing. See Attachment 1 to my
19 testimony for an example of how the MAQ will operate.

20 **D. Contract and Contract Term**

21 In order to benefit from the CIP, SoCalGas will require customers to enter into a contract
22 with a term up to but not exceeding 59 months. Customers and SoCalGas will negotiate a
23 contractual term period that allows both parties to benefit from the program. During this contract

1 term, SoCalGas' shareholders will recover their investment by collecting 100% of the
2 incremental transmission revenues from the project. At the end of the contract, the incremental
3 transmission revenues will revert to ratepayers for the remaining life of the equipment, which is
4 expected to be on average 20 years.¹² See Example 1 of Attachment 1 for a graphical
5 representation of the mechanics.

6 **E. Ratepayer Protection**

7 In addition, SoCalGas will commit to make whole the Public Purpose Program (PPP)
8 surcharge¹³ resulting from the expected incremental gas load. As SoCalGas is only discounting
9 and receiving the transmission revenue during the length of the contract, ratepayers are expected
10 to benefit from increased PPP surcharge revenue. Any shortfall from the contracted expected
11 PPP surcharge growth will be funded by SoCalGas Shareholders. See Attachment 1, Example 4
12 for an example.

13 In summary, the oversight component of the CIP will ensure customers meet program
14 eligibility requirements, meet expected consumption, and deter free ridership.

15 **IV. THE CIP HAS MULTIPLE BENEFITS**

16 The CIP provides environmental, customer, and ratepayer benefits.

17 **A. Environmental Benefits**

18 As discussed in Chapter I, California has set ambitious goals for energy efficiency,
19 emission reductions, and renewable energy. The CIP's eligibility criteria, of requiring

¹² ASHRAE Equipment Life Expectancy Chart.

¹³ AB 1002 directed California Utilities to collect revenue from their customers for the purpose of funding certain low-income assistance programs, cost-effective energy efficiency and conservation activities, and public interest research and development. These programs have an annual budget that the utilities are required to fund. *Available* at ftp://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_1001-1050/ab_1002_bill_20000930_chaptered.html.

1 technology that is energy efficient and cleaner, can enhance California’s ambitious goals, while
2 the RNG adder may stimulate the amount of RNG being produced.

3 **B. The CIP Is Designed to Assist in Filling a Gap for Customers Seeking**
4 **Incentives to Lower Operations Costs While Enhancing Their**
5 **Capabilities**

6 Customers desire the types of incentives proposed through the CIP. Customers, in for
7 example, the San Joaquin Valley can face limited options due to costs, available incentive funds,
8 and/or access to cleaner options. These customers may choose a dirtier option (e.g. diesel fuel)
9 to power their equipment, like water pumps. Without any assistance, customers may maintain
10 the status quo by using diesel fuel. SoCalGas’ CIP program may be used to provide incentives
11 for customers to switch to natural gas in these types of situations.

12 **C. Benefits for Ratepayers**

13 In addition to the benefits discussed above, the CIP program can also benefit ratepayers
14 in several ways. The first benefit comes through additional PPP surcharge funds (discussed
15 above), which supports energy efficiency and low income programs. Since SoCalGas only
16 collects the transmission revenue, the incremental PPP surcharge funds will be credited to
17 ratepayers, further supporting energy efficiency programs and disadvantaged communities. The
18 second benefit comes at the completion of the contracts. SoCalGas only collects transmission
19 revenue for up to 59 months, which means at the completion of the contract, ratepayers will
20 benefit from the additional transmission revenue during the remaining 75% of the equipment
21 life.¹⁴ The additional revenue should translate to overall lower rates for all SoCalGas customers.
22 Lastly, as CIP is completely funded by shareholders and any indirect resource costs for the

¹⁴ Natural gas equipment life is about 20 years, according to the ASHRAE Equipment Life Expectancy Chart.

1 development of the CIP will be credited to ratepayers (discussed in greater detail in Chapter III),
2 the CIP will give businesses the opportunity to install needed equipment, which should have net
3 emission reductions, without having to tax ratepayers with the costs of increased subsidies.

4 **D. Customer Choice and Industry Growth**

5 The CIP is designed to promote customer choice and support the innovation and industry
6 growth of energy efficient and clean technology. First, as the program is technology agnostic,
7 there is no limit as to what the customer can choose as long as it fits the eligibility criteria.
8 Second, industry or technological innovation and advances can grow as the manufacturers
9 recognize that customers are seeking new efficient and clean technologies to install on site.
10 Lastly, the new technology can also increase production for the customer and enable future job
11 growth.

12 **V. REGULATORY PROCEDURES AND PROCESS**

13 SoCalGas will provide periodic reporting to the Commission to provide them with the
14 information needed for ongoing oversight and to direct any adjustments the Commission may
15 deem necessary. Currently, in compliance with D.97-07-054 and D.00-04-060, SoCalGas
16 submits a Tier 2 advice letter in May reporting on the annual results of the Core Pricing
17 Flexibility Program and Noncore Competitive Load Growth Opportunities Program. SoCalGas
18 proposes to continue the annual reporting process via a Tier 2 advice letter and will work with
19 Commission staff in identifying any processes that may assist in their review process.

20 **VI. CONCLUSION**

21 SoCalGas has proposed a program that incents customers to install clean or energy
22 efficient technology, while isolating ratepayers from financial risk. This program will help
23 California achieve its clean air and energy efficiency goals, while helping customers to be more

1 competitive in the marketplace and fostering technological advances towards cleaner and more
2 energy efficient equipment. This program is mutually beneficial to all parties, and as such
3 should be implemented in order for customers and California to move towards a cleaner and
4 more productive future.

5 **VII. WITNESS QUALIFICATIONS**

6 My name is Tuan Nguyen. My business address is 555 West 5th Street, Los Angeles,
7 California 90013-1011. I received a Bachelor's Degree in Mechanical Engineering from Cal
8 Poly Pomona, and a Master's Degree in Business Administration from the University of
9 Southern California. I have worked in Customer Services since joining SoCalGas in 2002. I am
10 currently Commercial and Industrial Markets Staff Manager, responsible for implementing
11 business processes such as contract renewals, constrained open seasons, curtailments, as well as
12 market analysis and implementation of nonresidential communication, outreach, and education
13 efforts.

14 I have previously submitted testimony to the Commission.

15 This concludes my prepared testimony.

Chapter II
Program Mechanics

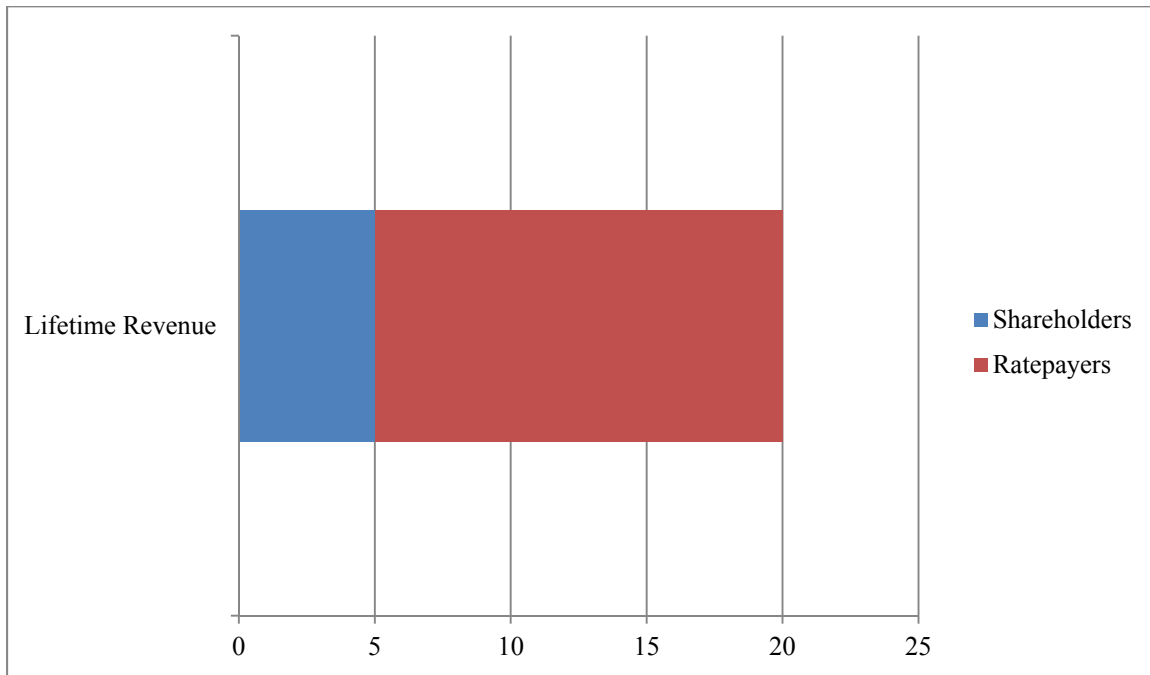
Attachment 1

Attachment 1

Example 1: Revenue Split between Shareholders and Ratepayers

Assuming a 20-year useful life of technology, shareholders earn 100% revenue for first 59 months

Ratepayers earn 100% revenue for remaining 15 years.



Example 2: One-Time Payment Incentive and Rate Discount Incentive Calculation

Customer is considering purchasing a new technology. The customer is considering two basic options; an energy efficient but more expensive version versus a standard less expensive version. The energy efficient (EE) version costs an additional \$4,000 and the savings would put the payback at 4 years, which is outside of the customer's acceptable period.

Gas Transmission costs = \$0.10/therm

Public Purpose Program (PPP) surcharge costs = \$0.01/therm

New Load Standard Version = 5000 therms

New Load EE Version = 4000 therms

SoCalGas calculates with the new EE load, they will make \$400 annually and assumes a contract length of 59 months.

One-Time Payment Incentive

SoCalGas offers an upfront incentive of \$1000, which would reduce the payback period to an acceptable level according to the customer. The Minimum Annual Quantity (MAQ) for the customer would be determined by the following:

Prorated Incentive + rate of return (8%) + expected PPP surcharge =
 $\$200 + \$80 + \$40 = \320

Yearly MAQ = $\$320 / \0.10 per therm = 3,200 therms

Rate Discount Incentive

SoCalGas could also offer a rate discount if the customer prefers operational savings compared to capital cost reductions.

Discounted Gas savings = \$0.03/therm (50% discount)

New Load EE Version = 4000 therms

Yearly savings = \$200

Under a rate discount, the MAQ is smaller because it only accounts for the PPP surcharge.

Incentive + Rate of Return + PPP surcharge =
 $\$0 + \$0 + \$200 = \200

Prorated (over 5 years) = \$40

MAQ = $\$40 / \0.05 per therm = 800 therms

Example 3: RNG Adder

As in Example 2, the customer expects to use 4,000 therms with a new EE technology and has an MAQ of 3,200 therms. If the customer uses 4,000 therms, the customer exceeds its MAQ and is eligible for the RNG Adder incentive.

If customer purchases 100% biogas, then the adder is calculated as follows:

$$\mathbf{RNG\ Adder = (4,000 \times 100\%) \times \$0.10 \times 5\% = \$20}$$

If the customer purchases 50% biogas, then the adder is calculated as follows:

$$\mathbf{RNG\ Adder = (4,000 \times 50\%) \times \$0.10 \times 5\% = \$10}$$

Example 4: PPP Surcharge

As in the examples above, the customer expects to use 4,000 therms with a new EE technology. SoCalGas shareholders will guarantee that the ratepayers receive the PPP surcharge expected with the new load.

New Load = 4,000 therms

PPP surcharge cost = \$0.01/therm

PPP surcharge Revenue = \$40

If the customer uses less than the expected amount, SoCalGas shareholders will fund the difference

Expected Load = 4,000 therms

Actual Load = 3,950 therms

Difference = 50 therms

Shareholders owe $50 \times \$0.01 = \5 to the PPP surcharge