

Application No: A.15-07-014
Exhibit No.: _____
Witness: Sharim Chaudhury

Application of Southern California Gas Company
(U 904 G) and San Diego Gas & Electric Company
(U 902 G) for Authority to Revise their Natural Gas
Rates Effective January 1, 2017 in this Triennial
Cost Allocation Proceeding Phase 2

A.15-07-014
(Filed July 8, 2015)

PREPARED REBUTTAL TESTIMONY OF
SHARIM CHAUDHURY
SOUTHERN CALIFORNIA GAS COMPANY
SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

April 11, 2016

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1 **I. PURPOSE**

2 The purpose of my prepared rebuttal testimony on behalf of Southern California Gas
3 Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) is to address the
4 testimony of The Utility Reform Network (TURN) and The Office of Ratepayer Advocates
5 (ORA) as they pertain to the appropriate long run marginal cost (LRMC) method for calculating
6 customer-related marginal cost; various changes in marginal cost studies and cost allocation
7 process proposed by TURN; and ORA’s attempt to split customer-related cost into fixed and
8 variable categories.

9 **II. THE COMMISSION SHOULD REJECT TURN AND ORA’S PROPOSED NCO**
10 **METHOD FOR CALCULATING CUSTOMER-RELATED MARGINAL**
11 **CAPITAL COST**

12 SoCalGas and SDG&E proposed the Rental method for calculating customer-related
13 marginal capital cost (for capital equipment such as meter, regulator and service line). Both
14 ORA¹ and TURN² recommend the use of the New Customer Only (NCO) method. For the
15 reasons described below, the Commission should reject the NCO method.

16 The Commission adopted the Long Run Marginal Cost (LRMC) methodologies in D.92-
17 12-058. In defining LRMC, the Decision noted:

18 When a marginal cost is defined, it is often described as the cost of
19 an additional unit of goods or services. Implicit in the description
20 is that it is the cost of the next unit in an efficient production
21 process. There may be a number of feasible ways of expanding a
22 utility system to meet additional customer load, but marginal cost
23 pricing reflects efficient expansion of the system.³

24 Marginal cost pricing requires that a utility first derive the marginal cost of a service and
25 then charge all customers, for that service, the same price set at marginal cost. The annual

¹ Testimony of Pearlie Sabino at 5.

² Prepared testimony of William Perea Marcus at 1. TURN recommends the NCO method with Replacement.

³ D.92-12-058, mimeo., at 11.

1 customer-related marginal capital cost is the annualized capital cost of hooking up an additional
2 customer to the gas delivery system so that the customer has access to gas service. Marginal cost
3 pricing dictates that *all* customers should be charged this cost of hooking up an additional
4 customer. For cost allocation, the Rental method does precisely that by applying the marginal
5 capital cost to hook up an additional customer to all customers, both existing and new customers.

6 The NCO method multiplies the total capital cost in a new hookup by the number of new
7 customers added to the gas system. It then spreads the total capital costs in new hookups
8 attributable to new customers to all customers, both existing and new. The resulting cost is
9 considered customer-related marginal capital cost according to the NCO method. This cost
10 reflects the average cost increase to all customers, both existing and new, when the total hookup
11 costs associated with all new customers are spread across all customers.

12 The NCO method violates the concept of marginal cost pricing. If one were to assume
13 that the number of new customers added to the gas system is zero, the NCO method would
14 suggest that the marginal customer-related capital cost is zero dollars. Clearly, this is a
15 nonsensical result. One should be able to define the customer-related marginal capital cost of
16 hooking up an additional customer even in a zero customer growth scenario, and it is certainly
17 not zero dollars. ORA is therefore not correct that under this zero customer growth scenario “the
18 Rental method goes against the very essence of the LRMC concept because the Rental method is
19 capable of producing customer-related capital cost when there should be none associated with
20 zero new demand.”⁴ The definition of customer-related LRMC remains the same irrespective of
21 whether the customer growth is zero or non-zero; namely, the cost of hooking up an additional
22 customer. The LRMC should never be zero.

⁴ Testimony of Pearlie Sabino at 41.

1 TURN makes the following claims regarding the Rental method:

2 The “rental” method for calculating customer facility costs is based
3 on a peculiar theoretical framework at variance with conventional
4 economic theory. The theory is based on an environment where a
5 competitive rental market for customer access equipment exists but
6 where purchase or up-front payment for that equipment is
7 prohibited. Instead of being a competitive market, this is a market
8 with extreme barriers to entry by relevant participants in that
9 market (a prohibition against purchasing equipment or paying for it
10 up front in hookup charges).⁵

11 This conclusion by TURN is not accurate because the market for customer excess
12 equipment is indeed not competitive. For the safety of the gas customers and the integrity and
13 reliability of the gas delivery system, the Commission mandates that the gas utilities own and
14 maintain the customer access equipment. Had the customer access market been competitive,
15 market forces most likely would have ensured the marginal cost pricing outcome and the
16 Commission would have had no role to play to ensure a competitive outcome. The Commission
17 has a role to play in this particular cost allocation area because of the fact that the customer
18 access equipment market is not competitive, and this role is to adopt methodologies that mimic
19 what would likely prevail in a competitive market. The Rental method provides the appropriate
20 marginal cost pricing outcome.

21 Both ORA and TURN support the methodology that SoCalGas and SDG&E used in
22 estimating Distribution-related marginal capital cost and marginal cost revenue.⁶ Distribution-
23 related marginal capital cost captures additional annualized capital investment required to serve
24 additional demand (peak day demand for Medium Pressure Distribution system and peak month
25 demand for High Pressure Distribution system). Distribution-related marginal cost revenue for
26 capital equipment is then derived by multiplying the distribution-related marginal capital cost by

⁵ Prepared testimony of William Perea Marcus at 21.

⁶ Testimony of Pearlie Sabino at 5; Prepared testimony of William Marcus at 33.

1 the total demand, both new and existing demand. The Rental method is consistent with the
2 methodology used in estimating distribution-related marginal capital cost. The Rental method
3 first estimates the customer-related marginal capital cost as the cost of hooking up an additional
4 customer. It then derives customer-related marginal cost revenue for access equipment by
5 multiplying the customer-related marginal capital cost by the total number of customers, both
6 new and existing customers. The Commission should maintain the consistency in the application
7 of the concept of LRMC across customer-related and distribution-related functions and adopt the
8 Rental method.

9 Finally, TURN and ORA contend that the NCO method is the long-standing approach
10 adopted by the Commission. This contention does not capture the long and somewhat
11 complicated history of the methodology used to develop the marginal unit costs for customer-
12 related facilities. In the original LRMC decision, the Commission adopted the rental method.⁷
13 In subsequent Biennial Cost Allocation Proceedings (BCAP), the Commission has stated a
14 “preference” for the NCO methodology. However, for SoCalGas and SDG&E, the use of the
15 Rental or NCO method has not been fully litigated over the last five times the Commission has
16 heard this issue due to settlement agreements by parties. SoCalGas and SDG&E entered into
17 these settlement agreements with the understanding that the acceptance of a particular approach
18 was not precedential for future proceedings. Therefore, the Commission should not adopt the
19 NCO method simply because the Commission had stated a “preference” for it. In light of the
20 arguments made above and in SoCalGas and SDG&E’s direct testimony, the Commission should
21 adopt the Rental method instead.

⁷ D.92-12-058, mimeo., Conclusions of Law #5.

1 **III. THE COMMISSION SHOULD REJECT THE SERVICE LINE REPLACEMENT**
2 **RATE PROPOSED BY TURN**

3 For estimating customer-related marginal capital cost, TURN proposed the NCO method
4 with Replacement.⁸ If the Commission rejects the NCO method in favor of the Rental method,
5 then the discussion of service line replacement rate becomes irrelevant as the Rental method does
6 not require the use of any service line replacement rate. If the Commission, however, adopts the
7 NCO method with Replacement, as explained below, it should adopt the service line replacement
8 methodology used in SoCalGas and SDG&E's workpapers and reject the rates proposed by
9 TURN.

10 While SoCalGas and SDG&E proposed the Rental method for calculating customer-
11 related marginal capital cost, in their workpapers, they also estimated what such cost would be
12 under the NCO method with Replacement. TURN disagrees with the service line replacement
13 rates used by SoCalGas and SDG&E, and proposes replacement rates that are significantly
14 lower.

15 With the Commission's stated preference for the application of marginal cost
16 methodology in the long run, it is appropriate to consider what equipment replacement rates are
17 consistent with the concept of LRMC. SoCalGas and SDG&E think that a replacement rate
18 based on a service line's depreciation life is the reasonable number to use in calculating service
19 line replacement cost. For this TCAP application, based on SoCalGas and SDG&E's 2008
20 General Rate Case (GRC) decision, SoCalGas and SDG&E assumed a 48-year service life with
21 proposed replacement occurring at the end of that 48 year service life, resulting in a service line
22 replacement rate of about 2.1%.⁹ In the 2016 GRC, SoCalGas and SG&E have proposed a

⁸ Prepared testimony of William Perea Marcus at 27.

⁹ Replacement rate is the inverse of the depreciation life (2.1% = 1/48).

1 service book life of 67 years and 65 years, respectively,¹⁰ which would result in replacement
2 rates of 1.49% and 1.54%, respectively. SoCalGas and SDG&E recommend that, should the
3 Commission adopt the NCO with replacement method rather than the Rental method, it should
4 also adopt these service line replacement rates.

5 TURN instead contends that replacement costs are more appropriately understood as a
6 “pay-as-you-go concept based on costs that the utility actually incurs, rather than a theoretical
7 amount based on equipment depreciation rates.”¹¹ TURN’s focus is apparently then on the *short*
8 *run* and may not be consistent with the *long term* replacement rate consistent with LRMC.

9 TURN proposes a replacement rate of 0.175% for SoCalGas by multiplying SoCalGas-proposed
10 replacement rate of 2.08% by 8.395%.¹² TURN’s proposed replacement rate, however, would
11 imply a service life of 571 years, (1/0.175%) for SoCalGas’ services. This high service life is
12 unrealistic. TURN proposes an even lower service replacement rate of 0.1% for SDG&E.¹³
13 This method results in a calculation of an implied service life of 1,000 years, (1/0.1%) for
14 SDG&E’s service lines, even higher than the implied 571-year service life for SoCalGas
15 facilities.

16 TURN asserts that “SDG&E’s cost of replacing residential services was \$13,551 per
17 residential customer, compared to about \$3,100 for SoCalGas. Why the two Sempra Utilities
18 have such different costs was never explained. We also reduce the service replacement costs to

¹⁰ A.14-11-004 Direct Testimony of Flora Ngai at FN-A-1, proposing a 67 year service life for SoCalGas.
A.14-11-003 Direct Testimony of Bob J. Wiczorek at BJW-58, proposing a 65 year service life for
SDG&E.

¹¹ Prepared testimony of William Perea Marcus at 28.

¹² *Id.* at 29. 8.395% represents the 2013-2015 actual average replacement cost divided by theoretical
replacement cost.

¹³ *Id.* at 30.

1 be 3.4 times the cost of a new service (SoCalGas' finding for the residential class) instead of 7.4
2 times as expensive."¹⁴

3 SDG&E has reasons for the high service replacement costs, and the rate should not be
4 reduced. The principal reason for SDG&E's high service replacement cost is the change in the
5 standard service pipe size requirements for a residential customer from ½ to 1 inch poly pipe.
6 This change was brought on by two factors: (1) the increase in gas demand from new gas
7 appliances requiring more gas flow, such as the popularity of the new tank-less on-demand water
8 heaters; and (2) the need for larger pipe size to accommodate the proper operation of the
9 emergency flow valve for standard service pipeline lengths. The typical replacement
10 construction process before was to insert into the old ¾ inch steel pipe service a ½ inch poly
11 pipe, requiring only two holes to be dug at both ends of the service pipe. The pipe was then
12 inserted all the way from the main to the service riser, requiring no expensive open trench and
13 landscaping and surface paving replacement. SDG&E's new service replacement construction
14 process to accommodate 1 inch pipe now requires either a third hole to be dug at the property
15 line with open trenching from the main to the new hole or open trenching from the main over the
16 entire service pipe length to replace the entire service with 1 inch pipe. The additional landscape
17 and surface paving replacement and the additional material cost for 1 inch pipe and fittings (over
18 the cost of ½ inch pipe and fittings) also add to the cost of SDG&E's replacement projects.

19 For SoCalGas, the 2011-2013 unit cost data generally appeared high compared to prior
20 TCAP fillings. Instead of using the 2011-2013 high unit costs, SoCalGas decided to develop the
21 service line unit costs in this TCAP, for both new business and replacement, by escalating unit
22 costs from the last TCAP. The escalated unit costs were lower than those using the newer 2011-
23 2013 service line data. The use of the new unit cost data for SDG&E versus the use of escalated

¹⁴ *Id.* at 29 and 30.

1 old unit cost data for SoCalGas has contributed to the difference in replacement unit costs
2 between the two utilities.

3 **IV. OTHER TURN PROPOSALS PERTAINING TO MARGINAL COST STUDIES**

4 **A. Limit Service Line Marginal Capital Cost to Line Extension Allowance**

5 TURN proposes that marginal capital-related service line costs should be limited to the
6 line extension allowances in instances where service line costs exceed the allowances.¹⁵

7 SoCalGas and SDG&E agree with this recommendation.

8 **B. Reduce Cost of Replacement Meters**

9 TURN proposes that the labor costs associated with meter replacements should be
10 removed from the replaced meter costs, since such labor costs are included in O&M expenses.¹⁶

11 SoCalGas and SDG&E agree with this recommendation.

12 **C. Change Customer Service and Information Cost Allocation**

13 TURN proposes two changes to allocating Customer Service and Information (CSI)
14 costs, allocating these costs: (1) as a separate part of base margin not subject to LRMC scaling,
15 and (2) to large core and noncore commercial and industrial customers. SoCalGas disagrees
16 with first proposed change while agreeing with the second one.

17 TURN proposes to allocate the CSI costs “outside of the marginal cost study as a separate
18 part of allocation of base margin (not subject to long-run marginal cost scaling) because these
19 costs are policy-driven, not necessarily marginal costs, and not directly related to the number of
20 customers. This is similar to their treatment in the 2009 BCAP.”¹⁷ First, SoCalGas believes that
21 the CSI costs are indeed part of marginal customer costs. CSI activities “include account

¹⁵ *Id.* at 26.

¹⁶ *Id.* at 31.

¹⁷ *Id.* at 31- 32.

1 management services to nonresidential and residential customers; products and services for
2 homebuilders and developers; services for capacity, pipeline, and storage; gas scheduling; gas
3 transmission planning; and customer research, outreach, communication, and education.
4 Generally, these customer-centric activities help ensure timely and effective customer
5 communications regarding safety, reliability, conservation, and various other programs and
6 services.”¹⁸ These activities are directly related to the number of customers. Therefore,
7 SoCalGas is correct in including these costs as part of marginal customer cost. Second, TURN’s
8 proposed change is not similar to the treatment of CSI costs in the 2009 BCAP. CSI costs were
9 identified in separate line items and subject to scaling in both the 2009 BCAP and 2013 Triennial
10 Cost Allocation Proceeding (TCAP). In this TCAP, SoCalGas included the CSI costs as part of
11 the Customer Costs O&M. SoCalGas’ proposed treatment of CSI costs in this TCAP is no
12 different than those in the 2009 BCAP and 2013 TCAP.

13 As stated above, SoCalGas agrees with TURN’s second proposed change to allocate CSI
14 costs to only large core and noncore commercial and industrial customers.

15 **D. Change Public Purpose Program (PPP) Pension & Benefit Allocation**

16 TURN proposes to remove the pensions and benefits associated with the PPP as it
17 contends that “these costs are not marginal costs associated with distribution labor, but rather are
18 costs associated with PPP labor.”¹⁹ SoCalGas and SDG&E disagree.

19 The direct labor costs and payroll taxes for the PPP are collected through the PPP
20 surcharge and not through the base margin. The pensions and benefits associated with the PPP,
21 on the other hand, are recovered through the base margin. The PPP costs, including its pension
22 and benefits, are marginal costs as they vary with the number of customers. Though marginal in

¹⁸ A.14-11-004 (SoCalGas 2016 General Rate Case) Direct Testimony of Anne Ayres at ADA-iii.

¹⁹ Prepared testimony of William Perea Marcus at 16.

1 nature, SoCalGas and SDG&E do not include PPP direct labor and payroll taxes in their
2 marginal costs as these costs are already recovered through the PPP surcharge. Since the pension
3 and benefits associated with the PPP are not recovered through the PPP surcharge, SoCalGas and
4 SDG&E should recover these expenses as proposed through the A&G loader and they should not
5 be allocated separately in the cost allocation process.

6 **E. Remove Pensions, Benefits and Payroll Taxes for Non-Marginal A&G Labor**

7 TURN Proposes to remove from marginal cost the pensions, benefits and payroll taxes
8 associated with A&G labor considered non-marginal.²⁰ SoCalGas and SDG&E agree with this
9 recommendation.

10 **IV. THE COMMISSION SHOULD REJECT ORA'S PROPOSED SPLIT OF**
11 **CUSTOMER-RELATED MARGINAL COST INTO FIXED AND VARIABLE**
12 **COST**

13 In its discussion of residential customer charges, ORA states:

14 The SoCalGas fully allocated annual customer cost of \$224 or
15 \$18.67 per month is not purely fixed costs. SoCalGas annual
16 residential customer marginal customer-related unit cost based on
17 the Rental method of approximately \$224 per customer (shown in
18 Table PZS2 col (A) at line 1) consists of approximately 54.6
19 percent fixed costs and approximately 45.4 percent variable costs.
20 This is based on the assumption that the capital-related cost for the
21 SRM are all unavoidable fixed costs associated with a new
22 customer and the O&M costs are all variable costs. On the basis of
23 the Rental method, there are \$10 per month in fixed costs (i.e.,
24 \$223.6 x 54.6%, then divide by 12 months).²¹

25 ORA's assumption that the capital-related cost for the service, regulator and meter
26 (SRM) are unavoidable fixed costs associated with a new customer and O&M costs are all
27 variable costs is flawed. Since its 1992 LRMC decision, for cost allocation purposes, the
28 Commission has mandated calculating customer-related costs using marginal cost principles.

²⁰ *Id.* at 16.

²¹ Testimony of Pearlie Sabino at 63.

1 The Commission had determined that the cost driver (or marginal demand measure) for
2 customer-related cost, including both capital and O&M, is the number of customers.²² This
3 means that the customer-related cost, both capital and O&M, vary with the number of customers.
4 In other words, customer-related cost, both capital and O&M, is variable with respect to the
5 number of customers. However, customer-related cost, both capital and O&M, do not vary with
6 variation in gas consumption. In other words, customer-related cost, both capital and O&M, is
7 fixed with respect to variation in gas consumption. Therefore, ORA's claim that customer-
8 related capital cost is somehow fixed while customer-related O&M cost is variable is flawed.
9 The residential rate structure generally has a fixed customer charge (non-volume-sensitive)
10 component and a volumetric (volume-sensitive) component. The fixed customer charge should
11 reflect the customer-related cost which is non-volume-sensitive.

12 This concludes my prepared rebuttal testimony.

²² D.92-12-058, mimeo., at Appendix C, page 3.