

Application No. A.14-11-011

Exhibit No: _____

Witness: Aguirre, Mark / Yao, Hugh

Application of Southern California Edison Company (U 338E) for Approval of its Energy Savings Assistance and California Alternate Rates for Energy Programs and Budgets for Program Years 2015-2017.

And Related Matters.

Application 14-11-007
(Filed November 18, 2014)

Application 14-11-009
Application 14-11-010
Application 14-11-011

**PREPARED REBUTTAL TESTIMONY OF MARK AGUIRRE AND HUGH YAO ON
BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY**

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

May 22, 2015

1 **I. INTRODUCTION**

2 The purpose of this rebuttal testimony is to respond to parties' positions, proposals, and
3 observations offered in testimony relative to the Energy Savings Assistance ("ESA") Program
4 operations. SoCalGas is grateful for the detailed and thoughtful testimony of parties, and
5 appreciates that every party has offered its proposals with the intent of making ESA the most
6 beneficial and effective possible program for SoCalGas' customers.

7 In large part, parties have either been silent on, or have expressed support and agreement
8 with, most of SoCalGas' proposals. SoCalGas requests that the Commission adopt, as proposed,
9 those components of its proposal that are unopposed by any party.

10 To the extent parties have offered testimony that opposes or goes beyond SoCalGas'
11 proposals, this rebuttal testimony directly responds and provides clarification and relevant,
12 factual information in support of SoCalGas' proposals.

13 **II. SOCALGAS REQUESTS THAT THE COMMISSION GRANT SOCALGAS'**
14 **UNOPPOSED REQUESTS**

15 As noted above, several components of SoCalGas' proposal are not opposed by any party.
16 SoCalGas requests that the below unopposed requests be granted by the Commission and
17 specifically approved in the final Decision as proposed:

- 18 • Approval of SoCalGas' 2015 – 2017 ESA Program proposed plans and budgets not
19 opposed by any party, including budgets requested under Training Center, Marketing
20 and Outreach, Measurement and Evaluation Studies, Regulatory Compliance, General
21 Administration, and the California Public Utilities Commission (Commission or
22 CPUC) Energy Division categories.
- 23 • Approval to shift funds in the ESA Program consistent with fund shifting authority in
24 Decision (D.) 08-11-031 and as modified by D.10-10-008.

- 1 • Approval of the mix of measures reflected in Application Attachment A-5.
- 2 • Approval to add new measures as proposed in Section II.E.1.b. of the Direct
- 3 Testimony of Mark Aguirre and Hugh Yao.
- 4 • Approval of the marketing and outreach elements requested in the Direct Testimony
- 5 of Mark Aguirre and Hugh Yao.
- 6 • Approval to use the methodology adopted for the eligible population as revised in
- 7 Mark Aguirre and Hugh Yao, pending resolution of the “unwillingness” factor
- 8 contested by some parties.
- 9 • Approval to relax the modified 3 Measure Minimum (“3MM”) Rule in the cases of
- 10 multifamily units and measures installed in anticipation of a third measure as
- 11 proposed in the Direct Testimony of Mark Aguirre and Hugh Yao, which was
- 12 unopposed by any party.¹
- 13 • Approval to offer Energy Education to income qualified customers that do not meet
- 14 the 3MM Rule.
- 15 • Approval to continue integration and leveraging efforts.
- 16 • Approval of statewide impact evaluation, low income needs assessment, energy
- 17 education (Phase 2) and cost-effectiveness studies for the 2015-2017 program cycle.

¹ Direct Testimony of Southern California Edison (“SCE”), November 18, 2014, pp.99-100; Report of The Office of Ratepayer Advocates on The Consolidated Proceedings Regarding Energy Saving Assistance Program , April 27, 2015, K.C. Watts-Zagha and Louis Irwin, witnesses, p.42; Direct Testimony of Pacific Gas and Electric Company (“PG&E”), p.2-13; Prepared Testimony of Allan Rago on behalf the Energy Efficiency Council , p.5; Testimony of James Hodges on Behalf of The East Los Angeles Community Union (“TELACU”), the Maravilla Foundation, and the Association of California Community and Energy Services, p. 14; Testimony of Marin Clean Energy, pp.9-10.

1 **III. DISCUSSION OF PARTIES' SPECIFIC TESTIMONY**

2 **A. SoCalGas' Proposal to Perform a Limited Number of Post-2002 Re-**
3 **Enrollments in 2015-2017 Should Be Adopted**

4 The Office of Ratepayer Advocates ("ORA"), The Utility Reform Network ("TURN"),
5 and the Energy Efficiency Council ("EEC") address in their respective testimony SoCalGas'
6 proposal to perform post-2002 re-enrollments in 2015-2017. ORA recommends denial of this
7 proposal, based on a preference that the program undergo "redesign" prior to beginning any re-
8 enrollments. TURN² and EEC support the elements of SoCalGas' proposal, although TURN
9 counsels caution in ensuring the first-time enrollments are not "deprioritized," and EEC³
10 supports the more aggressive 8-year go-back rule proposed by PG&E, rather than SoCalGas' 10-
11 year proposal. This testimony will address the operational and outreach considerations
12 associated with SoCalGas' proposal and parties concerns, while the testimony of SoCalGas
13 witness Daniel Rendler will address policy-related considerations associated with providing go-
14 back services.

15 ORA in its testimony acknowledges that SoCalGas proposed to introduce elements to the
16 ESA Program that provide incremental improvements, stating that SoCalGas' proposal, "would
17 adapt its program in response to changing needs of its low income customers. SoCalGas
18 proposes multiple improvements in response to Commission guidance, studies and working
19 groups."⁴ These improvements include the tub spout measure and High Efficiency ("HE")
20 Furnace, neither of which was available 10 years ago. ORA also notes the potential value of

² "TURN supports a return to the previous 10-Year Go-Back Rule because it provides an opportunity to restore degraded measures and also to provide newer technologies and services in furtherance of additional energy savings" at p.20.

³ EEC at p.6: "The goal should be to provide customers with the necessary home improvements and we support PG&E's recommendation of using 8 years and need as the only rules for go-backs."

⁴ Report of The Office of Ratepayer Advocates on The Consolidated Proceedings Regarding Energy Saving Assistance Program (ESA) April 27, 2015, K.C. Watts-Zagha and Louis Irwin, witnesses, at p.10.

1 SoCalGas’ proposal to target high energy users for the HE Furnace.⁵ SoCalGas also proposes in
2 the early stages of implementing the 10-Year Go-Back Rule, to target customers considered high
3 energy users.⁶ This element is particularly important because, while it is projected to involve a
4 relatively small number of units, it will provide SoCalGas with practical experience in targeting
5 measures based on usage – an element not currently part of the program, and which will require
6 development of new procedures and system enhancements.

7 Similarly, the proposed gradual ramp up of go-back units side by side with an achievable
8 number of 2020-goal units provides the opportunity to develop needed procedures and systems
9 to manage the program under a scenario that is inevitable as 2020 goal units are eventually
10 depleted. The modest number of go-backs proposed would be sufficient to begin to gauge
11 response to the program among go-back customers, and to adapt the marketing message
12 accordingly. While there will be transitional challenges to any new programmatic initiatives,
13 waiting for every 2020 goal unit to be treated before beginning to seek out go-backs will
14 exacerbate these challenges, an issue that will be felt most directly by SoCalGas’ contractors,
15 and acknowledged by ORA.⁷

16 ORA states “the Commission should deny the ESA II proposals, and the associated
17 budgets of PG&E and SoCalGas.”⁸ It is important to clarify that if the Commission adopts
18 SoCalGas’ recommended annual unit goal of 110,000 treated homes, there should not be a
19 separate, incremental budget reduction associated with denial of the 10-year Go-Back Rule

⁵ “SoCalGas plans to limit HE Furnaces only to those dwellings that have furnaces at or below AFUE. Furthermore, SoCalGas ensures that HE Furnaces will go to those most in need and also those with the greatest potential to save energy.” *Id.* at p. 13.

⁶ “SoCalGas also proposes, in the early stages of implementing the Rule, to target customers considered high energy users, based on energy burden, and based on health, comfort and safety criteria.” Direct Testimony of Daniel Rendler, at p.23.

⁷ K.C. Watts-Zagha and Louis Irwin, at p. 41.

⁸ *Id.* p. 40.

1 proposal. As stated in Direct Prepared Testimony, “SoCalGas does not expect a significantly
2 different cost per treated unit whether the Commission approves, denies or alters SoCalGas’
3 proposal to include 10-year go-back units already treated since 2002. . . Removing the 10-year
4 go-back proposal altogether would not impact SoCalGas’ proposed budget, as long as total
5 treated units are maintained at 110,000 per year.”⁹ Thus, in the event the Commission does not
6 adopt the 10-year go-back proposal, but adopts SoCalGas’ proposed 110,000 treated homes goal,
7 there should be *no adjustment* from the proposed budget.

8 Although TURN supports SoCalGas’ go-back proposal, it identified a concern that go-
9 backs could result in inadequate priority to the most difficult 2020-goal units (not previously
10 treated since 2002). While noting that SoCalGas has committed to, and proposed a plan for
11 achieving the 2020 goal, these concerns and the necessary controls were also identified by
12 SoCalGas, “SoCalGas proposes to prioritize units not yet treated since 2002. In order to do so,
13 SoCalGas will need to control the outreach and enrollment activities of contractors. SoCalGas
14 believes that it can develop the needed systems and controls during 2015. These consist of
15 system enhancements to track and limit authorization of contractors to work leads on post-2002
16 re-enrollments, as well as some new program rules and contract provisions that can be designed
17 and rolled out as early as mid-2015.”¹⁰

18 The referenced contract provisions specifically will include separate goals and dollars for
19 each contractor allocated re-enrollments under the 10-year Go-Back Rule. System enhancements
20 will include providing contractors the ability to distinguish eligible previously-enrolled leads
21 from never-enrolled and ineligible customers, providing SoCalGas the ability to separately track
22 contractor production within the re-enrollment and never-enrolled categories, and providing

⁹ Prepared Direct Testimony of Mark Aguirre and Hugh Yao, dated November 18, 2014, at p. 130.

¹⁰ Prepared Direct Testimony of Mark Aguirre and Hugh Yao, dated November 18, 2014, at p. 30.

1 SoCalGas the ability to regulate contractor lead generation and billing activities specifically
2 related to re-enrollments.

3 Thus, SoCalGas' proposal to reintroduce the 10-year Go-Back Rule does not represent
4 any abandonment or reduction in emphasis on the 2020 goal. SoCalGas estimates it can achieve
5 the 2020 goal at a steady pace of 80,000 units per year.¹¹ The proposal to treat 105,000, 100,000,
6 and 90,000 units toward the 2020 goal in 2015, 2016, and 2017 respectively goes beyond this
7 level, leaving room to make adjustments in the later years, and anticipating that the last units will
8 be the most challenging to enroll.

9 Finally, the measures that will be offered to go-back customers under this proposal
10 provide significant savings. In addition to renewing measures such as air sealing measures that
11 are likely to have worn out after ten or more years, the program will offer for the first time to
12 these customers the High Efficiency Forced Air Unit (HE FAU) furnace, the HE clothes washer,
13 the thermostatic shower valve (TSV), and the thermostatic tub spout, all of which are substantial
14 contributors to SoCalGas' energy saving portfolio.¹²

15 For the above reasons SoCalGas' proposal to re-introduce the 10-year Go-Back Rule for
16 a limited number of re-enrollments should be adopted.

17 **B. SoCalGas' Proposal to Deduct 24% "Unwilling" Customers From Eligible**
18 **Population For Purposes Of Setting 2020 Goal Should Be Adopted**

19 In testimony, SoCalGas described in detail its proposal to adopt an unwillingness rate of
20 24% based on the results of the Low Income Needs Assessment ("LINA") study.¹³ Pacific Gas

¹¹ *Id.* at pp. 14 – 22.

¹² As provided in attachment to Aguirre/Yao testimony at Exhibit 2, HE FAU furnace provides first year savings of 8-65 therms depending on housing type and climate zone; HE clothes washer provides 31 therms; TSV provides 1-3 therms; and Tub Spout provides 22-35 therms.

¹³ Direct Testimony of Mark Aguirre & Hugh Yao pp.15-22.

1 & Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric
2 (SDG&E) also proposed similar revisions to willingness.¹⁴

3 In its testimony, EEC advises against making any adjustments at this time: “before the
4 IOUs lower their estimated eligible population; the Commission should wait to see if the
5 recommendations put forth in the applications for increasing participation through policy
6 changes and increased efforts actually work.”¹⁵

7 Despite minor variations among the IOUs,¹⁶ all generally support immediate adjustments
8 in program expectations based on the LINA results. Other than EEC, no party has argued that
9 the unwillingness assumption should not be revised upward. The Commission itself, in
10 maintaining the previously adopted 5% unwillingness assumption in D.12-08-044, anticipated
11 modifying this assumption for 2015-2017, “at this time the Commission still does not have
12 adequate data to modify this figure. However, the new Needs Assessment being conducted
13 pursuant to this decision in the upcoming months should inform the Commission on this issue for
14 the upcoming 2015-2017 program cycle.”¹⁷

15 Maintaining the status quo as proposed by EEC will have negative consequences. In
16 calculating remaining untreated customers in its application, SoCalGas relied on the 2013 Athens

¹⁴ SDG&E proposes 19% unwillingness (See Prepared Direct Testimony of Alex Kim p.AYK-18 “The calculation for the percentage of total eligible that are unwilling to participate was based on the research conducted in the LINA Study. The LINA Study estimated that 48% of the eligible, non-treated homes would be unwilling to participate in the ESA Program. For 2013, the year in which the research was conducted, this is analogous to 19% of the total eligible population in SDG&E’s service territory.”) PG&E proposes 48% unwilling among the untreated population, which is not converted to a percent of all eligible (see Landry/O’Drain/Smith Table 2-3 p.2-18.) This is equivalent to SoCalGas’ approach as pointed out at Aguirre/Yao p.15 “24% of the eligible population ... corresponds to the conclusion in the LINA Study that 52% of current program non-participants were willing.” SCE proposes 21.5% unwillingness (See “Energy Savings Assistance (ESA) Program Plan and Budget Proposal for the 2015-2017 Program Cycle”, Lim/Samiullah/Weber, at p.19 Table II-3.

¹⁵ EEC Prepared Testimony of Allan Rago, at p.5

¹⁶ The IOUs are SoCalGas, SDG&E, SCE, and PG&E.

¹⁷ LINA Study, stating at p. 264.

1 Research estimate to project that by the end of 2020, there will be 2.3 million income-eligible
2 homes in SoCalGas' territory.¹⁸ If the Commission instead chose to retain the unwillingness
3 factor of 5% (from the program cycle beginning in 2012) rather than a 24% unwillingness based
4 on the LINA study, it would result in an additional 19%, or 437,000 customers to be treated by
5 2020, or 73,000 additional customers per year for the remaining 6 years. Such an assumption
6 would have led to an annual goal for SoCalGas of at least 153,000 units per year before
7 accounting for 10-year go-back re-enrollments. The incremental impact on SoCalGas' proposed
8 budget would be roughly \$230 million over three years,¹⁹ with negative consequences for
9 SoCalGas' ratepayers and little corresponding benefit to SoCalGas' low-income customers who
10 are projected to be unwilling to participate.

11 **C. SoCalGas' Proposed Budget Should Be Adopted To Ensure Needed IT**
12 **Upgrades That Support Customers with Disabilities Can Be Completed**

13 In testimony, the Center for Accessible Technology ("CforAT") recommends the IOUs
14 take steps to incorporate data collected through the enrollment of customers in the ESA Program,
15 specifically information identifying persons with disabilities, into their primary customer
16 information data base. CforAT argues that "By effectively maintaining and distributing data,
17 over time the IOUs will develop a much broader information base about disabled customer
18 households than they have had to date. This is important going forward as the utilities seek to
19 provide appropriate service to households with disabled members."²⁰ SoCalGas agrees that

¹⁸ 2020 projection is based on 1% annual growth as adopted in D.08-11-031, at p.110.

¹⁹ As stated at Aguirre/Yao p.130, incremental units would result in prosed budget impact of \$998/unit in 2015, \$1,065/unit in 2016, and \$1,089/unit in 2017. Treating 73,000 additional customers per year would therefore have resulted in incremental budget of \$73 million in 2015, \$78 million in 2016, and \$79 million in 2017, for a total of \$230 million. Even if the re-enrollment units, totaling \$37 million over 3 years, are removed, all else equal the 3-year ESA budget proposal would be roughly \$568 million using the 5% unwillingness assumption, compared with \$375 million as currently proposed.

²⁰ Prepared Testimony of Dmitri Belser, Submitted on Behalf of The Center for Accessible Technology, p. 9

1 incorporating this data is beneficial, and as part of its 2015 – 2017 Low Income Programs
2 Application, proposed funding for IT enhancements to facilitate this transfer of information from
3 ESA systems. As stated at Aguirre/Yao, “SoCalGas is proposing IT enhancements, so that the
4 HEAT database can send records of ESA Program customers who are identified as having a
5 disability to SoCalGas’ main customer database (“CIS”) that also tracks special handle
6 customers...Including ESA Program disability records in CIS, will make it possible to offer ESA
7 Program customers the communication and notification benefits associated with the special
8 handle designation.”²¹ Therefore, SoCalGas respectfully requests that the Commission approve
9 its General Administration budget proposal to ensure these planned upgrades can move forward.

10 **D. SoCalGas’ Proposal To Eliminate Duct Testing and Sealing As A Measure**
11 **When Not Required For Compliance Should Be Adopted**

12 SoCalGas recommends that duct testing and sealing be retired as a Program measure
13 except when required by Title 24.²² The primary reason cited for elimination of this measure is
14 the disproportionate number of tests relative to seals, which reduces the cost effectiveness for
15 this measure. The testimony of ORA supports SoCalGas’ proposal stating that “[t]he recent
16 HVAC Impact Evaluation showed no measurable savings for Duct Testing and Sealing.”²³ The
17 testimony of The East Los Angeles Community Union (“TELACU”), the Maravilla Foundation
18 (“Maravilla”), and the Association of California Community and Energy Services (“ACCES”)
19 witness Hodges, opposes elimination of this measure and offers support for SDG&E’s
20 prescriptive duct sealing proposal.²⁴ Witness Hodges does not offer any details why the
21 prescriptive duct sealing proposal is more appropriate or preferable relative to the SoCalGas

²¹ Prepared Direct Testimony of Mark Aguirre and Hugh Yao, at p. 97.

²² Prepared Direct Testimony of Mark Aguirre and Hugh Yao, dated November 18, 2014, at p. 105.

²³ ORA Testimony (Watts-Zagha), at p.14.

²⁴ TELACU Testimony, at p. 2.

1 proposal. SoCalGas would still provide this measure when required by code. Given the cost-
2 effectiveness challenges in other installation circumstances, the Commission should approve the
3 SoCalGas proposal.

4 **E. The Commission Should Not Impose A Common Set of ESA Measures for**
5 **All IOUs, Or Require Utilities to Offer Or Eliminate Measures Without**
6 **Thorough Vetting Through Regulatory Process**

7 The testimony of NRDC, NCLC, and CHPC witness Dryden proposes that a common set
8 of core measures be adopted for all utilities, stating that the intent is to “create consistency in
9 standards and terminology where possible.”²⁵ She goes on to state that variations in climate
10 zones and the fuel source of each IOU fuel would need to be considered before establishing a
11 common core set of measures.

12 SoCalGas is generally not opposed to standardizing terminology for ease of comparison and
13 discussion, but does not believe that establishing a core set of measures is necessary or
14 beneficial. In addition to the aforementioned climate zone variations and IOU fuel source
15 variations, the housing stock across the state and across individual IOU service territories
16 necessitates an IOU-specific measure mix that takes into account measure feasibility and cost-
17 effectiveness criteria.

18 While proposing that the set of core measures to be adopted “could be defined through
19 workshops or other methods,”²⁶ witness Dryden suggests for consideration, “Interior CFL
20 lighting and linear fluorescents; interior LEDs; low flow showerheads; thermostatic
21 showerheads/ valves, faucet aerators, HVAC tune up, water heater repair/ replacement,
22 weatherization, pipe insulation and Tier 2 power strips.” It should be noted that SoCalGas
23 already offers through the ESA program all of witness Dryden’s suggested measures that are

²⁵ Testimony of Amy Dryden on behalf of NRDC, NCLC, and CHPC, at p.11.

²⁶ Testimony of Amy Dryden on behalf of NRDC, NCLC, and CHPC, at p.11.

1 appropriate to a gas utility: low flow showerheads, thermostatic shower valves, faucet aerators,
2 HVAC (furnace) tune up, water heater repair/replacement, weatherization, and pipe
3 insulation. Furthermore, SoCalGas routinely reviews and evaluates offerings of other utilities and
4 newly available technology, and shares its information with other ESA Program providers. The
5 Commission is not overly burdened by reviewing the proposals of each of the various IOUs
6 separately, to the extent their measure proposals and justifications vary. Thus, establishing a
7 common set of core measures is unnecessary.

8 Witness Dryden also proposes that a “new process be developed to allow submission of
9 new measures by stakeholders in addition to utilities for consideration and retirement of
10 measures” incorporating “some clear criteria for measure approval” to be developed by the
11 Commission.

12 SoCalGas agrees that clarity of the measure approval criteria is valuable for purposes of
13 planning, assessing measures, and developing proper showings. However, SoCalGas does not
14 agree that the current process is necessarily inadequate or that stakeholders’ proposals are not
15 given every consideration in that process. IOUs regularly hold public meetings in advance of
16 developing measure proposal as part of their budget applications, and SoCalGas evaluates the
17 merit of such proposals to the extent they are applicable to a gas-only utility. Furthermore,
18 interested parties and members of the public have direct access to the regulatory process. Parties
19 are free in this proceeding, as NRDC/NCLC/CHPC has done, to propose consideration of
20 measures.²⁷ Such proposals receive their due weight. SoCalGas is not opposed to improvements

²⁷ Witness Dryden states, “[w]e recommend the Commission evaluate the following measures as part of this proceeding or through the measure evaluation stakeholder process described above: Package terminal air conditioners and heat pumps, Energy Star Qualified cooling fans, refrigerant charge verification, bathroom exhaust fans, bathroom exhaust fan controls, window film, tub diverter with thermostatic function, LED lighting.” *ibid.* p.12. Of the measures listed, the tub diverter with thermostatic function or

1 to the process for adjusting the measure portfolio. SoCalGas' interest is in ensuring that any
2 adjustments maintain the IOUs ability to fully evaluate proposed measures and to present a
3 thorough showing as to a measure's suitability to ESA. The current process provides for this
4 opportunity.

5 Witness Dryden provides a table showing "a list of approved measures compiled to the
6 best of my ability for ESA and MFEER for the IOUs."²⁸ It should be noted that this list does not
7 appear to be correct for SoCalGas ESA. The table incorrectly indicates that SoCalGas does not
8 offer the following measures: duct sealing, air sealing / envelope / weatherization, space heating
9 equipment, furnace repair & replacement, pipe insulation, water heater repair & replacement, and
10 high efficiency clothes washers. Because this table is not complete, it should not be used as the
11 basis for any conclusion about consistency across IOUs or gaps in measure offerings.

12 **F. SoCalGas Supports Exploration of Ways To Mitigate Delays In HISR**
13 **Licensing Process Without Violating CSLB Rules**

14 The testimony of TELACU, Maravilla, and ACCES witness Hodges, states that the
15 "Commission should direct the IOU's to allow assessors to work with a temporary badge while
16 awaiting their HISR badge."²⁹ SoCalGas requires that its Outreach Specialists ("assessors")
17 obtain an Home Improvement Salesperson Registration ("HISR") before performing any
18 enrollment work for the ESA Program to comply with California State Licensing Board
19 ("CSLB") requirements. Per the Business and Professions Code, a "Home improvement
20 salesperson" ("HIS") is a person employed by a home improvement contractor licensed under
21 this chapter to solicit, sell, negotiate, or execute contracts for home improvements, for the sale,

thermostatic tub spout is proposed in SoCalGas' pending application, heat pumps are addressed further in the Rebuttal Testimony of Daniel Rendler, and no other measures are arguably applicable to a gas-only utility.

²⁸ Testimony of Amy Dryden on behalf of NRDC, NCLC, and CHPC, at p.21-23 "Appendix A"

²⁹ The testimony of TELACU, Maravilla, and ACCES witness Hodges, at p.2.

1 installation or furnishing of home improvement goods or services, or swimming pools, spas, or
2 hot tubs.”³⁰ The CSLB website states that registration of a HIS with the CSLB is required if
3 “you solicit, sell, negotiate or execute home improvement contracts for a licensed contractor
4 outside the contractor’s normal place of business (regardless of the dollar amount of those
5 contracts).”³¹ SoCalGas believes the work of its contractors’ Outreach Specialists requires HIS
6 Registration in accordance with CSLB requirements.

7 SoCalGas is generally open to working with its contractors and exploring ways to
8 mitigate HIS Registration processing delays while complying with CSLB requirements.

9 **G. The Commission Should Not Adopt Time-Consuming Procedures For New**
10 **Measure Introduction, Other Than As Dictated by Specific New Criteria**

11 ORA proposes in its testimony “The Commission should require SDG&E to develop an
12 evaluation plan for each of these [proposed new] measures, and to file a Program
13 Implementation Plan describing the evaluation, and associated budget, before introducing these
14 new measures in the program.”³² ORA recommends this additional administrative process
15 because it finds that SDG&E has “made questionable assumptions about the savings values”³³
16 for its newly proposed measures.

17 While ORA is free in its testimony, as it has done, to call into question SDG&E’s
18 assumptions or even to propose alternative estimates of savings, the introduction of Program
19 Implementation Plans (“PIPs”) that were that were applicable for pilot proposals and applied in
20 the context of proposing every new measure may inhibit beneficial program enhancements.

³⁰ California Business and Professions Code, Chapter 9, Article 10, Section 7152.

http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=BPC§ionNum=7152.

³¹ CSLB website at:

http://www.cslb.ca.gov/Contractors/Applicants/Home_Improvement_Registration/Before_Applying_For_HIS.aspx.

³² Report of The Office of Ratepayer Advocates on The Consolidated Proceedings Regarding Energy Saving Assistance Program (ESA) April 27, 2015, K.C. Watts-Zagha and Louis Irwin, witnesses, at p.37.

³³ *Id.*

1 Developing and filing detailed evaluation and PIPs, a practice more in line with Energy
2 Efficiency programs outside of the low income environment, is typically not done solely at the
3 measure level (it is done by program). PIP development, submission and approval will introduce
4 requirements that take additional time, and likely add a level of uncertainty, which can have
5 negative ramifications on measure developers and suppliers who must decide whether and how
6 to move forward with production of their products. ORA has not demonstrated that SDG&E has
7 failed to meet specific criteria, or that the current approach ought to be changed.

8 Other parties, in contrast to ORA’s recommendation, made proposals to accommodate
9 more flexibility to make changes mid-cycle. For example, TURN requested a Tier 2 Advice
10 Letter process for introducing new measures after conferring with a Mid-Cycle Working
11 Group.³⁴ On the condition the latter step can be done in a timely manner (e.g., within 30 days),
12 SoCalGas believes this to be a preferable approach for timely measure introduction, and can
13 fulfill the spirit of the ORA request. Information regarding new measures will also be available
14 following the impact evaluation to be conducted for each program cycle. SoCalGas’ support for
15 TURN’s proposal is further discussed in the testimony of witness Rendler.

16 For the above reasons, ORA’s proposal to require the development of PIPs for measure
17 introduction should not be adopted at this time.

18 **H. SoCalGas Anticipates Very Few “Standard” FAU Installations Under HE**
19 **FAU Proposal**

20 TURN “strongly supports the addition of HE FAU furnaces as a measure by
21 SoCalGas.”³⁵ SoCalGas appreciates TURN and other party support for this proposal While

³⁴ Prepared Testimony of Cynthia K. Mitchell, Submitted on Behalf of The Utility Reform Network, at p. 22.

³⁵ Prepared Testimony of Cynthia K. Mitchell, Submitted on Behalf of The Utility Reform Network, at p. 3.

1 acknowledging there are instances that the HE FAU is not feasible, but a new standard FAU
2 furnace is still desirable, TURN asks that SoCalGas be required “to provide a specific
3 justification for each instance in which a standard FAU furnace is installed for health, safety, and
4 comfort reasons, instead of a HE furnace.”³⁶

5 HE FAU furnaces have specific technical installation requirements that cannot always be
6 met. In particular, these relate to venting and condensate drain. SoCalGas anticipates these
7 cases will be very few. In general, the location of an existing FAU can be such that the PVC
8 venting or condensate drain, required for HE but not for standard FAUs, cannot be physically
9 accommodated either at all, or without incurring substantial additional costs. In such cases the
10 only way of moving forward with a new HE FAU would be to install it in a different location
11 than the existing FAU, or incur additional parts and labor costs which in most cases would be
12 prohibitively expensive. SoCalGas does not intend to offer the measure in such instances.
13 Instances involving these particular technical issues, which may be uncommon, are the only ones
14 SoCalGas foresees in which a “standard” FAU would be installed in lieu of an HE FAU. Such
15 instances would be recorded by SoCalGas with justification details, and are subject to audit by
16 the CPUC. Other than in these cases, SoCalGas’ proposal is to no longer replace furnaces with
17 standard FAUs.

18 SoCalGas believes the above discussion of the specific scenarios where a standard FAU
19 replacement would be necessary responds to TURN’s interest in justification, and provides the
20 Commission useful additional detail. If TURN’s testimony is meant to propose an ongoing
21 reporting requirement for each individual case encountered, SoCalGas opposes this proposal.
22 Such a requirement would be burdensome and unnecessary because SoCalGas’ regular monthly

³⁶ *Id.* at pp. 3 – 4.

1 and annual reports will differentiate HE FAU as a new measure from other furnace activity, and
2 because, as mentioned above, the specific cases will be recorded by SoCalGas and subject to
3 audit. For these reasons, SoCalGas' HE FAU measure proposal should be adopted as described
4 in SoCalGas' Application and testimony.

5 **I. SoCalGas Should Not Be Required To Install the Thermostatic Tub Spout In**
6 **Previously Treated Homes Other Than As Allowed Under Program Go-Back**
7 **Rules**

8 The testimony of Joint Parties witness Dryden states that SoCalGas' proposed
9 thermostatic tub spout measure should be adopted for "new and existing projects."³⁷ SoCalGas
10 interprets the Joint Parties testimony as proposing that this measure be available for all
11 previously treated homes as well as homes yet to be treated. Currently, in addition to customers
12 that have never received ESA Program services, the IOUs are required to provide measures to
13 customers not treated since 2002. In its Application, SoCalGas proposes to return to the 10-Year
14 Go-Back Rule so as to treat homes if the residence has not received measures within the previous
15 ten years (but were treated in or after 2002).³⁸ This means that SoCalGas would offer the
16 thermostatic tub spout measure to these previously treated customers in addition to all other
17 feasible measures in its Program. Although SoCalGas has outlined the significance of the energy
18 and water savings benefits of this measure in its Application,³⁹ SoCalGas disagrees that it should
19 return to homes sooner than what the Go-Back Rule allows solely to install the thermostatic tub
20 spout measure. Notwithstanding the cost effectiveness of returning to a home to provide one
21 measure, returning to these homes would divert resources away from SoCalGas meeting the
22 2020 programmatic initiative.

³⁷ Testimony of Amy Dryden on behalf of the NRDC, NCLC, and the CHPC, at p. 26.

³⁸ Prepared Direct Testimony of Daniel J. Rendler dated November 18, 2014, at pp. 10-12.

³⁹ Prepared Direct Testimony of Mark Aguirre and Hugh Yao dated November 18, 2014, at p. 108.

1 **J. THE MARIN CLEAN ENERGY PILOT APPROACH TO REACHING ITS**
2 **CUSTOMER TARGET IS NOT UNIQUE AND UNLIKELY TO RENDER**
3 **USEFUL INFORMATION**

4 Menten hypothesizes that many “low-income single-family and multifamily homes are
5 not currently served due to the resident or owner anticipating negative consequences, such as
6 enforcement of existing health and safety code violations, privacy infringements, and
7 immigration enforcement actions. The residents and owners of these homes are members of a
8 ‘hidden community’ of individuals...”⁴⁰

9 Nevertheless, the MCE Pilot does not offer unique solutions for outreach to hard-to-reach
10 or “hidden” communities. Many of the challenges that the MCE Pilot purportedly addresses are
11 challenges that SoCalGas has also identified. For example, Menten suggests that an
12 “undocumented resident may fear providing any personal or income information...”⁴¹ In the
13 current application, SoCalGas has requested funding to study this particular issue in greater
14 detail to understand the role of immigration status as a barrier to outreach. The MCE Pilot would
15 train “local trusted messengers from existing CBOs...”⁴² Yet SoCalGas also deploys trusted
16 organizations within the community. Community-Based Organizations (“CBOs”) represent a
17 large component of SoCalGas’ existing and current outreach. Moreover, the CHANGES pilot
18 (Community Help and Awareness of Natural Gas and Electricity Services) demonstrates the
19 value of using local CBO’s. Thus, the recognition and deployment of “local trusted messengers”
20 is an established part of the existing outreach approach.

21 Aside from the concerns on how to improve community outreach, Menten argues that the
22 three-measure minimum and the “rule that a single measure cannot be revised until ten years

⁴⁰ Testimony of Marin Clean Energy, at p. i.

⁴¹ *Id.*, at p. 8.

⁴² Testimony of Marin Clean Energy, at p. 15.

1 after it was installed” can “create barriers to accessing program services.”⁴³ To address this
2 concern, the MCE pilot would use “an owner or manager affidavit.”⁴⁴ SoCalGas has also
3 recommended a similar tactic in its application.

4 The MCE Pilot also proposes ideas that are widely divergent from the existing ESA
5 program and do not demonstrate a feasible way to expand to a large-scale implementation. For
6 example, the MCE pilot proposes “to alleviate” the landlord’s fear of health and safety violations
7 by leveraging “additional funding sources for health and safety upgrades where mutual program
8 eligibility exists”,⁴⁵ but the testimony provides no reasonable expectation that such a solution
9 would be scalable and workable on a statewide level. Likewise, the proposal to establish a
10 savings account for “matching” and “incentivizing the family’s own energy savings”⁴⁶ does not
11 suggest a large-scale implementation.

12 The rationale that Menten provides for the MCE Pilot reinforces much of SoCalGas’
13 testimony, but the proposed pilot, as presented, does not lend itself to assisting the ESA program
14 in achieving its objectives.

15 **K. UTILITIES SHOULD BE FREE TO WORK WITH BOTH THE**
16 **PROPERTY OWNER AND TENANT TO ACHIEVE ENROLLMENT IN**
17 **MULTIFAMILY PROPERTIES**

18 The natural resources defense council (“NRDC”), national consumer law center
19 (“NCLC”) and california housing partnership (“CHPC”) together (hereafter referred to as “joint
20 parties”) submitted testimony from the following witnesses: Maria Stamas, Project Attorney in
21 the Energy and Climate program of the NRDC; Samara Larson, Director of Sustainability for
22 LINC Housing; Lindsay Robbins, an independent consultant to the NRDC; David Hepinstall,

⁴³ *Id.*, p. 10.

⁴⁴ *Id.*, p. 10.

⁴⁵ *Id.*, p. 17.

⁴⁶ Testimony of Marin Clean Energy, at p. 21.

1 Executive Director of the Association for Energy Affordability (AEA); and John Wells, Vice
2 President of Real Estate & Energy Services at Action for Boston Community Development
3 (ABCD). Their testimony addressed different topics that impact aspects of SoCalGas’
4 Application regarding the ESA Program.

5 Joint Parties witness Stamas presented policy overview testimony. Larson testified
6 regarding multi-family enrollment and the Single Point of Contact (“SPOC”). Robbins testified
7 regarding best practices and specific ideas from the Program Design Guide: Energy Efficiency
8 Programs in Multifamily Affordable Housing; Hepinstall testified on “New York’s federal, state,
9 and utility efficiency programs . . .”,⁴⁷ and Wells testified on his work in Boston, Massachusetts
10 and the surrounding region.

11 Taken in the aggregate, SoCalGas welcomes case studies and best practices.
12 Nevertheless, SoCalGas does not believe the Joint Parties’ testimony successfully argues for any
13 radical departure from SoCalGas’ marketing outreach for the ESA Program. Where states or
14 studies have identified intriguing approaches, these can be studied by a Working Group if the
15 Commission finds value in further exploration.

16 SoCalGas diverges with Stamas’ testimony’s support for working “directly with building
17 owners as the program participant and only directly solicit tenants for in-unit measures if
18 building owners are unresponsive”.⁴⁸ Even if one were to be inclined towards Stamas’ approach,
19 she does not demonstrate that there is an existing infrastructure to market to building owners
20 exclusively. It would be needlessly disruptive to eliminate outreach to the individual tenants
21 without a demonstrated channel and capacity to reach the building owner.

⁴⁷ Direct Testimony of NRDC (Robbins), Exhibit 6, at p. 3.

⁴⁸ Direct Testimony of NRDC (Stamas), at p. 23.

1 Although SoCalGas objects to Stamas’ restriction of outreach, SoCalGas welcomes
2 increased outreach; thus, SoCalGas supports Stamas’ emphasis on marketing directly to the
3 building owner. SoCalGas is requesting resources to fund the Single Point of Contact (SPOC)
4 role to enhance outreach to building owners. The SPOC has support in Larson’s testimony,
5 where he points out, “The energy efficiency programs have different administrators and different
6 rules . . . We need the SPOC to help us sort this out, and coordinate program delivery so the
7 energy efficiency systems work together properly. An effective SPOC will maximize the energy
8 efficiency gains, and minimize the service delivery visits experienced by multifamily owners and
9 tenants” (p. 8). In addition, the SPOC will coordinate and facilitate ESA Program contractor
10 visits to minimize disruptions to building owners and tenants. SoCalGas will also leverage the
11 lessons learned and best practices from a demonstration project ⁴⁹ utilizing SPOC for multifamily
12 buildings.

13 Currently, the ESA Program is promoted to both single-family and multifamily residents.
14 Currently, SoCalGas markets to both the tenant and the building owner. In its application,
15 SoCalGas proposes to enhance marketing to the building owner by implementing a single point
16 of contact program for the building owner while also continuing its marketing to individual
17 tenants. Thus, Stamas’ testimony suggests an unnecessarily restrictive approach. Even if one
18 favors outreach to the building owner, the testimony does not prove why such outreach should be
19 to the exclusion of outreach to the individual tenant.

⁴⁹ [Low-Income Oversight Board in July 10, 2012](#) presentation on Integrated Multifamily Demonstration Project.

1 **L. SoCalGas Should Continue To Report Annual Cost-Effectiveness Results At**
2 **The Time Of The Annual Report Filing.**

3 In the testimony of TELACU, Maravilla, and ACCES, witness Hodges addresses matters
4 relating to the Cost-Effectiveness Working Group, and also recommends that the Commission
5 allow the IOUs to implement their programs and report results at the end of 2016.⁵⁰

6 SoCalGas respectfully notes that the 2016 ESA Program results, including cost-
7 effectiveness, will be available at the time of the 2016 annual report, which is May 1, 2017. The
8 timing of when final data is available, and the time required to run the cost-effectiveness models,
9 coincides with the annual report filing date. SoCalGas asks that any recommendation from the
10 Commission regarding the timing for reporting results reflects this consideration.

11 **M. SoCalGas Should Use The Next Impact Evaluation Study To Estimate And**
12 **Claim Therm Savings For HE FAU Furnaces**

13 SoCalGas proposed in its Application to replace certain furnaces with a HE FAU
14 furnace.⁵¹ Furnaces will only be eligible to receive a HE FAU furnace if the current furnace is
15 less than, or equal to an annual fuel unit efficiency (“AFUE”) rating of 65. For the SoCalGas
16 Application, the estimated annual savings per installed HE FAU furnace was calculated
17 according to the current practice -- as the incremental savings above a furnace already at code,
18 which is equal to an 80 AFUE rating. In the Energy Efficiency programs, for replace on burnout
19 furnace measures, Energy Efficiency generally claim savings above code.⁵² SoCalGas took the
20 same approach when estimating savings in its application.

⁵⁰ The Testimony of James Hodges on behalf of The East Los Angeles Community Union (TELACU), the Maravilla Foundation, and the Association of California Community and Energy Services (ACCES), page 13.

⁵¹ Prepared Direct Testimony of Mark Aguirre and Hugh Yao, dated November 18, 2014, at pp.108 – 110.

⁵² There are limited exceptions to this practice, such as savings attributed to the Codes and Standards Programs, and unique To-Code pilot programs.

1 ORA recommends this estimate should be adjusted since SoCalGas plans to limit HE
2 Furnaces only to those dwellings that have furnaces at or below 65 AFUE.⁵³ SoCalGas agrees
3 with ORA, and recommends the therm savings for HE furnaces be estimated in the next Impact
4 Evaluation study, which does a pre/post billing analysis and therefore will estimate total savings
5 from this measure.

6 **N. SoCalGas Should Claim Water Savings As A Non-Energy Benefit When**
7 **Calculating Cost-Effectiveness**

8 ORA recommends that Utilities should account for the water savings of water measures
9 in the cost-effectiveness tests.⁵⁴

10 There is a water/sewer savings participant benefit calculated in the non-energy benefits
11 model that reflects savings on water bills. This water savings estimation does not take a
12 comprehensive approach in calculating water savings and should be updated. Further, avoided
13 costs of providing water to customers is not accounted for in the current non-energy benefits
14 model.

15 SoCalGas agrees with ORA that the IOUs should be able to reflect the benefits of total
16 water savings (in the form of water conservation and energy reduction) for all measures
17 applicable; however, this is a complicated task. The Water-Energy Nexus proceeding⁵⁵ is
18 currently working on this issue of water savings, and once completed, SoCalGas will review
19 their results for applicability.

⁵³ Prepared Direct Testimony of Office of Ratepayer Advocates, dated April 27, 2015, at p. 13, lines 15-16.

⁵⁴ Prepared Direct Testimony of Office of Ratepayer Advocates, dated April 27, 2015, at p. 44, lines 8-10.

⁵⁵ Order Instituting Rulemaking into Policies to Promote a Partnership Framework between Energy Investor Owned Utilities and Water Sector to Promote Water-Energy Nexus Programs (R.13-12-011).

1 In its Application, SoCalGas proposes an Evaluation, Measurement and Verification
2 (“EM&V”) study titled “Equity Criteria and Non-Energy Benefits Evaluation Joint Study.”⁵⁶
3 SoCalGas proposes that the scope of the study address how to include water savings in the Low
4 Income Programs cost-effectiveness tests, which includes reviewing the results of the Water-
5 Energy Nexus proceeding.

6 **O. Impact Evaluation Studies Should Be Used As The Primary Source For**
7 **Energy Savings**

8 In its testimony, ORA recommends the utilities utilize a consistent range of savings per
9 measures, rather than changing savings estimates with each new program application, and ORA
10 mentions using the Database of Energy Efficient Resources (“DEER”) values as a possible
11 solution.⁵⁷

12 Although SoCalGas appreciates the sentiment expressed by ORA for seeking to remove
13 some of the instability of energy savings currently estimated through Impact Evaluations, it
14 should be understood that DEER values are updated according to the determination of
15 Commission Staff. SoCalGas is not convinced that reliance upon DEER for Low Income
16 Programs will be more stable, and may result in complexities that lead to additional
17 administrative work of unknown value. More fundamentally important, DEER estimates would
18 miss actual changes of a targeted low-income population. DEER estimates represent the general
19 population and low-income populations may have different energy uses, practices and
20 demographics (i.e., household size) that do not correspond with the general population. Further,

⁵⁶ Prepared Direct Testimony of Mark Aguirre and Hugh Yao, dated November 18, 2014, at pp. 127 – 128.

⁵⁷ Prepared Direct Testimony of Office of Ratepayer Advocates, dated April 27, 2015, at p. 45, lines 23-26.

1 a billing analysis, which is completed as part of the Impact Evaluation Studies is a more accurate
2 representation of how energy usage changes before and after participating in the ESA Program.

3 **P. Impact Evaluations Should be Improved**

4 SoCalGas largely agrees with ORA's assessment and position regarding some of the
5 issues with the prior Impact Evaluations.⁵⁸ SoCalGas recognizes limitations of the prior Impact
6 Evaluations, and will continue to provide expert technical input where possible to improve the
7 reliability, consistency and overall predictive quality of the Impact Evaluations for the ESA
8 program.

9 In particular, SoCalGas agrees that a longer time frame will be beneficial for allowing
10 consultants to collect better data, use a variety of approaches to systematically analyze data for
11 effective impact evaluations that can not only address reliability of results, but also provide
12 means to project impacts due to changes in program or changes in targeting of the program.
13 SoCalGas' proposed timeframe of initiating the study in 2015 and conducting it over a span of
14 18 months will also allow for more realistic reviews of draft results and any needed modification
15 and improvements. In its testimony, SoCalGas maintained its position that future evaluations
16 can learn from prior evaluations and would benefit from more rigorous attention to some of the
17 statistical techniques to improve our knowledge and understanding of ESA impact results.⁵⁹

18 The current process by which the utilities, the Commission and external parties provide
19 input into the studies should allow for ongoing improvements in accuracy, reliability and validity
20 of these studies, and SoCalGas welcomes these suggestions as part of developing and executing
21 the upcoming Impact Evaluation.

⁵⁸ Prepared Direct Testimony of Office of Ratepayer Advocates, dated April 27, 2015, at pp. 49-57.

⁵⁹ *Id.*, Exhibit 1, at p. 4.

1 **Q. The Energy Division And Ious Along With Public Input Should Continue To**
2 **Lead EM&V Studies**

3 In its testimony, MCE proposes a pilot program that includes a final report with EM&V
4 results.

5 The Commission’s Energy Division (“ED”) and the four IOUs have dedicated staff with
6 expertise on EM&V practices. Currently, low-income EM&V studies are managed by the ED,
7 with IOU staff involvement and public input. A consultant is hired to conduct studies to ensure
8 non-biased results. This process allows input from all relevant parties and a variety of experts
9 are involved. SoCalGas recommends this process continue for any future EM&V studies.

10 **R. Non-Energy Benefits Should Not Be Estimated Solely Through An Impact**
11 **Evaluation**

12 The testimony of Lisa Skumatz on behalf of NRDC, NCLC, and CHPC suggests that
13 program non-energy benefits (“NEBs”) be re-estimated as part of the regular impact evaluations
14 and asserts that this can be done “for a relatively small cost.” SoCalGas disagrees with this
15 approach for several reasons. The methodology for estimating NEBs is significantly different
16 from that of the impact evaluation. The NEBs study would likely involve detailed customer
17 surveys with large stratified samples, while the impact evaluation is typically a billing analysis
18 based on data already collected by the IOUs. The Impact Evaluations may be able to provide
19 information that can support the non-energy benefit estimates, but this will be dependent on
20 many factors described above, as well as time and budget. In addition, SoCalGas disagrees that
21 the cost would be “relatively small,” and in fact would likely be similar to the cost of doing the
22 impact evaluation due to the large samples required to obtain representative results.

1 **IV. STATEMENT OF QUALIFICATIONS OF MARK AGUIRRE**

2 My name is Mark Aguirre. My business address is 555 W. Fifth Street, Los Angeles,
3 California, 90013. I am employed at Southern California Gas Company (“SoCalGas”) as the
4 Customer Programs Manager for the Energy Savings Assistance Program.

5 I joined SoCalGas in 1984 and have held management positions in marketing, sales, gas
6 supply, regulatory affairs and low-income energy efficiency. My work experience has included:
7 managing marketing and sales for SoCalGas’ largest commercial and industrial customers
8 including energy efficiency program implementation; administering SoCalGas’ mid and long
9 term supply agreements; providing policy and regulatory support for SoCalGas’ energy
10 efficiency programs; and managing and directing the day-to-day activities of the Energy Savings
11 Assistance Program.

12 I assumed my current position managing the Energy Savings Assistance Program in July
13 2011. My principal responsibilities include
14 the day-to-day oversight of the Energy Savings Assistance Program for the Southern California
15 Gas Company.

16 I hold a Bachelors Degree in Chemical Engineering from the University of California,
17 Los Angeles and a Master of Business Administration in Marketing/Finance from the University
18 of Southern California.

19 I have not previously testified before the Commission.

1 **V. STATEMENT OF QUALIFICATIONS OF HUGH YAO**

2 My name is Hugh Yao. My business address is 555 W. 5th Street, Los Angeles,
3 California, 90013. I am employed at Southern California Gas Company as a Customer
4 Assistance Programs Manager. My principal responsibilities are to manage SoCalGas' Low-
5 Income Program Marketing and Outreach for the CARE and ESA Program, including integration
6 and leveraging efforts.

7 I joined SoCalGas in 1996 and have held numerous positions of increasing responsibility
8 in the following areas: Gas Engineering, Gas Storage Operations, Major Markets Strategy,
9 Commercial & Industrial Marketing and Customer Assistance. I joined Customer Assistance in
10 2009 and have been continuously involved with supporting CARE and ESA Program goals, as
11 well as other programs such as Medical Baseline and Gas Assistance Fund. I earned a Bachelor
12 of Science degree in Chemical Engineering from UCLA in 1996 and a Master of Business
13 Administration degree from USC in 2003. I am also a registered Professional Mechanical
14 Engineer in the State of California.

15 I have not previously testified before the Commission.