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Nancy Carrell Lawrence

Application of SOUTHERN CALIFORNIA GAS
COMPANY (U 904 G) to Establish a Demand
Response Program

Application 18-11-005
(Filed November 6, 2018)

REVISED

CHAPTER 5

SOUTHERN CALIFORNIA GAS COMPANY DEMAND RESPONSE PROGRAM

PREPARED CONSOLIDATED SUPPLEMENTAL TESTIMONY OF

DARREN HANWAY AND NANCY CARRELL LAWRENCE

ON BEHALF OF

SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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1 **REVISED PREPARED CONSOLIDATED SUPPLEMENTAL TESTIMONY**

2 **I. INTRODUCTION**

3 Pursuant to the Assigned Commissioner’s Scoping Memo and Ruling issued on February
4 15, 2019, Southern California Gas Company (SoCalGas) hereby submits supplemental testimony
5 to provide additional information on the following issues identified in the scoping ruling relating
6 to SoCalGas’ proposed Demand Response (DR) Program filed in Application (A.) 18-11-005.¹

7 SoCalGas’ proposed 2019-2021 DR Program portfolio represents an innovative way to
8 test a potential tool in demand side management to achieve energy load reductions during times
9 when the natural gas system is stressed. In the 2016-2017 and 2017-2018 winter seasons,
10 SoCalGas launched limited DR Programs at the request of the Director of the Commission’s
11 Energy Division. In 2018, the Director of the Commission’s Energy Division again requested
12 that SoCalGas propose long-term natural gas DR Programs that would help reduce energy
13 consumption in times of system stress.

14 **II. THE CURRENT DESIGN OF DR PILOT PROGRAMS ARE APPROPRIATE**

15 **A. The Pilot Designs are Appropriate Given the Infancy of Natural Gas**
16 **DR**

17 Natural gas DR is a new field that is being implemented by only a handful of utilities in
18 the United States.² Therefore, there is very limited data currently available to determine the type
19 of programs to run, the technologies that should be included, and the incentive levels that would
20 attract customers to participate while being cost-effective. The current SoCalGas DR Pilot
21 Program, which is scheduled to end on March 31, 2019, in addition to other current natural gas

¹ Sections II, III, IV, and VIII are sponsored by Darren Hanway and Sections V, VI, and VII are sponsored by Nancy Carrell Lawrence.

² On August 9, 2018, the New York State Public Service Commission approved a \$5 million program for Consolidated Edison Company of New York, Inc. to reduce residential and commercial customer demand for natural gas. National Grid in New York has implemented a commercial natural gas DR program aimed at boilers and furnaces.

1 DR utility pilots, as well as the California electric utilities' overall structure of their DR
2 programs informed SoCalGas in developing these natural gas DR proposals.

3 In its Application, SoCalGas proposes a series of pilots that will utilize a test and learn
4 approach, focused on collecting data to determine the long-term viability of natural gas DR in the
5 southern California region. This piloting approach will also allow SoCalGas to pivot away from
6 unsuccessful programs determined through these pilots after each winter season, while focusing
7 on those programs or program elements that are proven to be more successful through evaluation
8 within the three-year timeframe from 2019-2022.³ The suite of DR Pilot Programs proposed
9 covers a wide variety of customer classes including residential, commercial, and industrial
10 customers to test acceptance, participation, incentive levels, and resulting usage reduction to
11 potentially alleviate system stress during periods of high demand. The DR Pilot Programs will
12 also make sure that disadvantaged communities can participate and be targeted for load reduction
13 in capacity constrained areas.

14 **B. Potential for Load Reduction**

15 The DR Pilot Programs proposed by SoCalGas are designed to reduce natural gas usage
16 for residential and non-residential customers through the use of space heating equipment, water
17 heating equipment, and behavioral messaging. The comprehensive suite of programs proposed
18 by SoCalGas are appropriate because they address the key equipment that makes up the majority
19 of gas usage. Between December 2017 and March 2018, an average residential customer used

³ Given this three-year timeframe and the need to determine the viability of natural gas DR for the long-term, it is critical for the Commission to approve this Application before Q4 2019 to make sure that SoCalGas can launch its DR Pilot Programs in time for the 2019-2020 winter season beginning on December 1, 2019.

1 166 therms and 84% of that was used for space heating and water heating.⁴ In 2017, SoCalGas’
2 core commercial and industrial customers⁵ used 5,438 therms on average and based on the 2006
3 California Commercial End-Use Survey, approximately 70% of commercial usage is typically
4 for space and water heating.⁶ In the previous 2017-2018 winter season DR Program, SoCalGas
5 activated 13 Smart Thermostat Load Control events during the two-week period from February
6 20, 2018 to March 2, 2018. During this time, therm usage consisted of approximately 1,725
7 MMcf for core customers on average. SoCalGas’ Space Heating Load Control (SHLC) Pilot and
8 Water Heating Load Control (WHLC) Pilot are designed to target these areas. Only by testing
9 the pilot designs and load impacts can SoCalGas determine if these natural gas DR Pilot
10 Programs are viable options in the long-term to reduce therm usage when the system is stressed.

11 **C. Technology-Based Pilots are Designed Appropriately**

12 The SHLC and WHLC will have residential and non-residential customer components.
13 The technologies and incentives will differ, but the premise of the pilots is to adjust usage of
14 space and water heating equipment during specific peak demand hours. Both residential and
15 non-residential customers will be incentivized for enrolling in the pilots with their control
16 devices. Residential customers will be provided with a flat fee per winter season if they
17 participate in over 50% of the events. The incentives are designed this way to limit “free riders”
18 and promote participation in events.⁷ Inversely, participation incentives for non-residential

⁴ Percentage based on 2009 Residential Appliance Saturation Study (RASS),
<https://www.energy.ca.gov/2010publications/CEC-200-2010-004/CEC-200-2010-004-V2.PDF>.

⁵ Per SoCalGas Rule 23, core customer is defined as all residential usage regardless of size. All nonresidential usage less than 20,800 therms per active month, excluding usage reclassified to noncore service pursuant to customer request. All electric generation, refinery and enhanced oil recovery (EOR) usage less than 20,800 therms per active month electing core service.

⁶ 2006 California Commercial End-Use Survey (CEUS),
<https://www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF>.

⁷ Free riders are defined as program participants who would have participated in the absence of the program and the incentives.

1 customers will be performance-based but will only be received if these customers participate in
2 at least 50% of the events.

3 SoCalGas is currently in its second season of calling DR events for the smart thermostat
4 DR program, which will be continuing and expanding under SHLC. The 2017-2018 winter
5 season and ongoing 2018-2019 winter season have provided SoCalGas with best practices
6 regarding customer support and incentive design but not enough data on different control
7 strategies that could yield higher (or lower) load reductions. SoCalGas will continue to test
8 different approaches with smart thermostat manufacturers and will do the same with commercial
9 space heating and water heating pilots to attempt to refine the most optimal load reduction
10 strategies.

11 The pilot designs of SHLC and WHLC are appropriate given the limited experience on
12 natural gas DR around the country. Only by testing, gathering data, and altering less successful
13 pilots will SoCalGas be able to develop more appropriate designs. Customer uptake and
14 increasing the number of Wi-Fi and DR enabled devices are two other aspects that are extremely
15 critical to success.

16 **D. The Load Reduction Pilot (LRP) Provides Customers with Choices**

17 While the SHLC and WHLC are technology-based pilots that rely on specific control
18 devices, LRP gives participants the flexibility to conserve and reduce natural gas usage by
19 methods or strategies that fit their particular facility and business. Participants can utilize
20 technologies to achieve their reservation reductions or merely shift production and operating
21 hours to another day. SoCalGas based the LRP design after Consolidated Edison's Commercial
22 and Industrial gas DR program approved in August 2018 by the New York State Public Service
23 Commission.

1 The LRP is designed to provide customers with maximum control over their participation
2 in the pilot, including how much to receive in incentives and choosing the time during the DR
3 event day to perform. By requiring a reservation and using it to develop the financial incentives,
4 the pilot allows participants to know ahead of time how much they can expect to receive if they
5 meet 100% of their target as well as 50% or 10%. Customers can reduce consumption based on
6 or during their operating hours because the events for the LRP are 24-hour day long events. This
7 program design was developed to entice customers with its flexibility while providing the
8 opportunity to earn substantial incentives. SoCalGas requests the ability to modify the incentive
9 amounts should they need to be adjusted for customer uptake and participation.

10 **E. Behavioral Messaging Pilot has the Ability to Reach More Customers**

11 As of February 19, 2019, SoCalGas' residential DR smart thermostat program has over
12 38,000 smart thermostats enrolled in the program. That represents less than 1% of the total
13 number of customer meters and accounts that SoCalGas serves. Furthermore, SoCalGas
14 estimates that there is a limited number of DR capable water heaters and devices within
15 SoCalGas' service territory. It is highly impractical to assume that all residential customers will
16 install smart thermostats and DR capable water heaters and devices for SoCalGas to control
17 during times of system stress. In order to broaden the opportunity for meaningful participation in
18 DR programs, SoCalGas proposes to find an effective way to reach customers who do not have
19 these devices and offer appropriate incentives to encourage customers to conserve natural gas.

20 The Behavioral Messaging Pilot is intended to act as an outreach function to prompt
21 customers to reduce natural gas usage during times of system stress. Many third-party
22 organizations currently have the capabilities and platforms to send out behavioral messaging via
23 text messages, alerts, emails, and mobile applications. The messages can be sent to many
24 customers in a short period of time and theoretically help provide relief to the gas system.

1 Should the Behavioral Messaging Pilot prove to be impactful through customer reach, therm
2 usage reduction, and cost-effectiveness, this type of program could be an efficient way to reach
3 SoCalGas customers effectively.

4 **F. Disadvantaged Communities will be Targeted to Participate in DR**
5 **Pilot Programs**

6 SoCalGas understands the importance of providing disadvantaged communities with the
7 opportunity to participate in different customer programs. SoCalGas' current Smart Thermostat
8 DR program events are activated service territory wide, including disadvantaged communities,
9 and not targeted to specific locations. SoCalGas' proposed SHLC, WHLC, and Behavioral
10 Messaging Pilot will rely on outreach and marketing efforts to make sure that disadvantaged
11 communities understand the DR Program offerings. The DR Pilot Programs will provide these
12 disadvantaged communities with the ability to participate and receive financial incentives and
13 also be measured for demand reduction during DR events. SoCalGas hopes to learn the
14 propensity for disadvantaged communities in its service territory to enroll and participate in DR
15 events.

16 **III. COST-EFFECTIVENESS OF NATURAL GAS DEMAND RESPONSE PILOT**
17 **PROGRAMS**

18 **A. Appropriate Cost-Effectiveness Methodologies to Measure the Cost**
19 **and Benefits of Natural Gas DR Pilot Programs**

20 As stated in Chapter 1, SoCalGas did not propose a cost-effectiveness methodology for
21 the DR Pilot Programs because data on demand response and program cost are not known at this
22 time. Information on program costs and benefits and stakeholder input are necessary to establish
23 protocols relating to the existing and possible future demand response activities. This is

1 consistent with the approach taken with the initial electric DR Programs.⁸ It would be premature
2 to determine cost-effectiveness methodologies of natural gas DR Pilot Programs that have never
3 been implemented (or that have run on a very limited scale) in SoCalGas' service territory to
4 predetermine if they should be implemented in the first place. Instead, SoCalGas proposes
5 developing a methodology during the DR pilot programs through Energy Division-led
6 workshops where SoCalGas and other parties would be able to develop and submit proposals on
7 cost-effectiveness for consideration in the proceeding. Any such methodology should evaluate
8 each of the pilots' ability to cost-effectively decrease natural gas demand by reducing or
9 curtailing load during peak periods. Natural gas demand response is a relatively unproven
10 concept with implementation challenges that need to be explored to be understood.

11 **B. Other Cost-Effective Methodologies for Natural Gas DR Pilot**
12 **Programs.**

13 As described above, natural gas DR programs are in their infancy. The cost-effectiveness
14 of these approaches has not been tested and warrants further assessment and stakeholder
15 collaboration. Additionally, the approaches themselves require testing and evaluation to
16 understand which approach is most viable and can more appropriately reflect the natural gas
17 system. SoCalGas has proposed its suite of DR pilots based on its own experience over the past
18 two winter seasons, as well as information gained from National Grid and Consolidated Edison
19 on their new DR program designs. The proposed pilot programs in A.18-11-005 should be given
20 the opportunity for assessment of program potential and cost-effectiveness.

⁸ In July 16, 2007 parties to Rulemaking (R.) 07-01-041 submitted proposal on calculating cost-effectiveness. In April 2008, the assigned ALJ issued a ruling requesting comments on cost-effectiveness protocols developed and proposed by Commission Staff.

1 **IV. THE COMMISSION SHOULD APPROVE SOCALGAS' DEMAND RESPONSE**
2 **PILOT PROGRAMS**

3 **A. What needs is the DR Pilot Programs attempting to address?**

4 The potential long-term need for natural gas demand response will depend on pipeline
5 and storage facility maintenances currently in place and expected in the future, the reduced
6 capacity on natural gas transmission pipelines and storage facilities, and the operating limitations
7 of the Aliso Canyon Storage Field that have been imposed by the Commission.

8 In the near term, reliability challenges continue as the operating status of the SoCalGas
9 system is mostly unchanged from last winter except for the additional gas stored at Aliso
10 Canyon. Accordingly, the risk of gas service curtailment is largely unchanged. Should the
11 System Operator deem it necessary to curtail service, SoCalGas currently initiates a seven-step
12 process.⁹ The need for the System Operator to issue curtailments will depend on the weather,
13 daily winter gas demand, the availability of pipeline and storage capacity to manage storage
14 levels through the winter to maintain peak day capacity, and how effectively consumers reduce
15 gas demand if and when requested on the days the Aliso Withdrawal Protocol is exercised.

16 SoCalGas believes that the DR Pilot Programs proposed in Chapter 1: The Prepared
17 Direct Testimony of Darren Hanway, could have the potential to assist these management efforts
18 by providing relief on the demand for SoCalGas' storage inventory during times of system stress.
19 The DR Pilot Program could potentially help reduce system demand by activating the DR pilots
20 during Emergency Flow Order, voluntary curtailment, and non-voluntary curtailment events.

21 The proposed natural gas DR Pilot Programs are envisioned to be a demand-side tool in
22 reducing use, similar to Energy Efficiency Programs, which have proven to be successful. For
23 example, SoCalGas' Seasonal Savings Energy Efficiency program for residential customers with

⁹ See SoCalGas Rule No. 23, Section C.1 <https://socalgas.com/regulatory/tariffs/tm2/pdf/23.pdf>.

1 a smart thermostat resulted in 8% gas heating savings during the winter of 2016-2017. The DR
2 Programs are distinct from Energy Efficiency programs, however, in that they are intended to
3 provide time-of-need energy savings rather than annual energy savings.

4 **B. Demand Response's Potential to Address System Needs**

5 It is unknown at this time the level to which natural gas demand response can provide
6 support to reducing demand. It is also unknown at this time whether the reductions attributable
7 to DR pilot Programs can have a significant impact on reducing gas use on the system, which is
8 why these DR pilots must be tested to obtain data and experience to adequately assess their ability
9 to impact usage and their potential to scale up.

10 Natural gas demand response is new, so determining its potential to address any demand
11 reduction will require time to develop. For instance, using lessons learned from prior winter DR
12 seasons,¹⁰ SoCalGas refined its Smart Savings Program (proposed within this application as the
13 SHLCP) to improve the effectiveness of the program. On the other hand, approaches focused on
14 large non-residential customers and technology-based non-residential programs have not yet
15 been tested in SoCalGas' service territory.

16 The Application proposes a suite of DR programs as pilots to explore innovative
17 approaches and their associated potential in an effort to reduce demand during times of system
18 stress. Another example of natural gas DR's nascent stage, is Senate Bill (SB) 2649 that was
19 introduced by Senator Sheldon Whitehouse in April 2018, which directed the Department of
20 Energy to: (1) Study the potential for natural gas demand response in the United States; and (2)
21 establish a pilot program allowing participants to develop natural gas DR programs. Like many

¹⁰ The prior two winter DR programs resulted in minimal savings from a gas system perspective. The 2016-2017 program was a voluntary based program focused on a limited number of customers, and the 2017-2018 program targeted only residential customers within SoCalGas' service territory.

1 other energy-related efforts, California has the potential to explore natural gas demand response
2 programs further and establish any successes as long-term programs.

3 The suite of DR Pilot Programs targeting residential and non-residential customers will
4 help determine how effective different approaches to natural gas demand response can be on
5 reducing system demand and the eventual potential for a longer term natural gas DR Program.
6 Current estimates show that the DR pilots may help reduce a total of 463,520 therms throughout
7 the pilot timeframe.¹¹ SoCalGas plans to refine pilot designs season by season with the learnings
8 from prior winter seasons to improve the effectiveness of demand response on the system. The
9 results of these pilots should help determine which program, if any, has the greatest potential to
10 impact the natural gas system, and how to scale the approach(es) for the future. This
11 determination cannot be made before implementing pilots and understanding customer
12 participation, behavior, and system impact.

13 **V. THE COMMISSION SHOULD AUTHORIZE SOCALGAS TO DEVELOP,**
14 **IMPLEMENT AND RECOVER THE COSTS ASSOCIATED WITH THE EDSP**
15 **PRESENTED WITHIN THIS APPLICATION**

16 SoCalGas' application and direct prepared testimony discuss the purpose and overview of
17 the proposed Energy Data Sharing Platform (EDSP), system components and capabilities, and
18 associated requested budget. The following supplemental testimony further addresses issues
19 outlined within the Scoping Ruling that relate to SoCalGas' request to recover the costs
20 associated with building, implementing and operating an energy data sharing technology
21 platform for the primary purposes of enabling and supporting future winter gas DR programs
22 facilitated by third-party vendors under contract to SoCalGas.

¹¹ Chapter 1 Prepared Direct Testimony of Darren Hanway, Table 1-9 at 23.

1 As outlined in Chapter 2,¹² the proposed EDSP information technology platform and
2 services would directly support both the program implementation and evaluation of SoCalGas’
3 proposed natural gas DR Pilot Programs.¹³ Specifically, the Behavioral Messaging Pilot
4 proposed in Chapter 1 would rely on third-party implementers, similar to some electric DR
5 programs offered in California. Third-party programs of this nature (for both electric and gas
6 DR) are dependent on the utility to facilitate the automated and secure sharing of customer
7 advanced meter usage through a data sharing platform with capabilities such as those proposed
8 for SoCalGas’ EDSP. The EDSP is also critical to facilitate the data transfers to DR program
9 evaluators required to conduct the Evaluation, Measurement, and Verification (EM&V)
10 discussed in Chapter 1 and becomes even more critical to support the quick turnaround post
11 program load impact analysis required to evaluate program effectiveness and adjust program
12 approaches prior to the next winter season.¹⁴

13 Commission policy and precedent in both Energy Efficiency and Demand Response
14 proceedings support SoCalGas’ request to authorize costs to establish an EDSP. The EDSP
15 provides an essential information technology (IT) platform that supports SoCalGas’ DR program
16 operations and timely post-program evaluation, as well as protecting the security and
17 confidentiality of customer data. IT infrastructure, software and associated system support and
18 maintenance are a standard and critical foundational element supporting the operation of both
19 Energy Efficiency and DR programs and are recognized as such in Commission policy and
20 decisions. The Commission’s *Energy Efficiency Policy Manual* (EE Policy Manual) states that
21 “[EE] Administrative costs include the following: 1. Overhead (G&A Labor/Materials):

¹² Chapter 2 Prepared Direct Testimony of Nancy Carrell Lawrence at 20.

¹³ For more details on the proposed DR programs, refer to Chapter 1 Prepared Direct Testimony of Darren Hanway.

¹⁴ Chapter 2 Prepared Direct Testimony of Nancy Carrell Lawrence at 20-21.

1 administrative labor, accounting support, *IT services and support, reporting databases*, data
2 request responses, Commission financial audits, regulatory filings support *and other ad-hoc*
3 *support required across all programs.*¹⁵ With respect to Direct Implementation Non-Incentive
4 (DINI) costs (e.g., those associated with program delivery, or non-rebates and non-incentives),
5 the EE Policy manual states that “Activities charged to cost category subject to the DINI target
6 include: ... Licensing fees or IT development cost for program specific applications for
7 implementation...” and “Direct-implementation specific IT costs (e.g., licensing fees or IT
8 development costs for program specific applications).”¹⁶

9 IT infrastructure, services and support associated with DR program implementation are
10 also a significant element within the three California electric IOUs’ DR program applications. In
11 D.17-12-003, that adopts DR activities and budgets for 2018 through 2022,¹⁷ the Commission
12 authorized the three electric IOUs to recover costs associated with "Demand Response System
13 Support” for which it states, “The Utilities use this category of funding to support improvements
14 in the information technology systems, software and infrastructure and other system
15 maintenance.”¹⁸ The decision authorized a budget for the electric utilities ranging from \$8
16 million to \$55 million for this category of DR IT system support costs.¹⁹

17 The Commission has also expressed its support and directives to the investor-owned
18 utilities (IOUs) to build out their respective energy data sharing platforms through multiple and
19 ongoing proceedings. As discussed in Chapter 2,²⁰ in the context of the Smart Grid proceeding

¹⁵ Energy Efficiency Policy Manual, v. 5, at 88
(http://www.cpuc.ca.gov/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/eepolicymanualv5forpdf.pdf).

¹⁶ *Id.* at 91.

¹⁷ <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M202/K275/202275258.PDF>.

¹⁸ D.17-12-003 at 111.

¹⁹ D.17-12-003 at 112-116.

²⁰ Chapter 2 Prepared Direct Testimony of Nancy Carrell Lawrence at 4.

1 and following on the coat-tails of the three electric IOUs’ smart meter deployments, the
2 Commission ordered and authorized the three electric IOUs to build out their initial energy data
3 sharing platforms. And as noted on page 9, in D.13-09-025, “Decision Authorizing Provision of
4 Customer Energy Data to Third Parties Upon Customer Request,” the Commission noted that it
5 “would welcome considering applications that would provide gas usage data as well.” EDSP
6 capabilities were not authorized or funded as part of SoCalGas’ Advanced Meter Decision
7 (D.10-04-027), which was authorized prior to the launch of the Green Button Initiative in 2012
8 and prior to the Commission’s authorization of similar capabilities for the three California
9 electric IOUs.

10 With regards to the concern that the EDSP information technology system provides
11 potential benefits outside of DR programs: the fact that the EDSP proposed in SoCalGas’ DR
12 application provides benefits that are potentially beyond those required to operate its DR
13 programs should be viewed as *an added benefit, enhancing its overall cost-effectiveness*, rather
14 than a detriment to the EDSP proposal. The numerous prior Commission proceedings outlined
15 in SoCalGas’ Chapter 2 prepared direct testimony also involved the build out of smart meter-
16 enabled customer data sharing capabilities that spanned multiple different proceedings but shared
17 the common denominator that these capabilities ultimately supported the State’s Energy Action
18 Plans, goals for “Integrated Demand Side Management,” and broader energy policy goals and
19 directives.²¹ Though the scope of the EDSP proposed in this application is specifically linked to
20 capabilities required to support implementation of its DR programs, the platform will be

²¹ Chapter 2 Prepared Direct Testimony of Nancy Carrell Lawrence at 4-9.

1 designed, architected and “future-proofed”²² such that its capabilities can be further expanded as
2 merited through other appropriate proceedings and funding mechanisms.

3 Finally, not only is it appropriate for SoCalGas to include its EDSP funding proposal in
4 this Application for all the reasons outlined above, it is a more efficient use of ratepayer funds to
5 consider the proposal in this forum rather than in an entirely separate proceeding, which would
6 focus solely on SoCalGas’ foundational data sharing capabilities, and essentially be playing
7 “catch-up” with the initial and ongoing proceedings pertaining to these capabilities primarily in
8 the context of Demand Response programs associated with the three California electric IOUs.
9 As noted in Chapter 2, “Now that SoCalGas’ AMI build-out is 99% complete, it is appropriate
10 and vital that the Commission authorize SoCalGas to establish energy data sharing capabilities
11 similar to those it has ordered the three other California IOUs to build out through the “Smart
12 Grid Phase II” and subsequent proceedings.”²³

13 **VI. PERFORMANCE METRICS PERTAINING TO THE “CLICK-THROUGH**
14 **AUTHORIZATION PROCESS” ARE NOT RELEVANT TO THIS**
15 **PROCEEDING**

16 Performance Metrics outlined in the Commission’s Resolution (Res.) E-4868²⁴ pertaining
17 specifically to electric IOU “Click-Through Authorization Process” webpage performance
18 analytics are not relevant to the EDSP proposed in this Application.

19 The structure of SoCalGas’ proposed DR “Behavioral Messaging Pilot,” as well as the
20 post-program load impact evaluation across all of the natural gas DR programs proposed are
21 different than the structure the Commission set forth in D.12-11-025 (later amended by D.13-12-

²² The Commission introduced the concept of “future-proofing” in Res. E-4868 which “Approves, with modifications, the Utilities’ Click-Through Authorization Process which releases Customer Data to Third-Party Demand Response Providers.” It states on page 68 that ““Future-proofing” the solution(s) will ensure an efficient use of ratepayer funds by preventing expensive re-architecture of systems.”

²³ Chapter 2 Prepared Direct Testimony of Nancy Carrell Lawrence at 9.

²⁴ Res. E-4868, pages 54-57.

1 029) for third-party Demand Response Providers (DRPs) or aggregators who ‘bid’ into
2 wholesale energy markets operated by the California Independent System Operator (CAISO).
3 This primarily derives from the notion that for SoCalGas DR programs, SoCalGas is the “Utility
4 System Operator”²⁵ and also the administrator to implement its proposed DR programs to reduce
5 natural gas use during times of anticipated system stress.

6 In the case of third-party electric DRPs, CAISO is the electric grid “System Operator.”
7 The rules for electric Direct Participation DR contained in Electric Rule 24 (for Pacific Gas and
8 Electric & Southern California Edison) and Electric Rule 32 (for San Diego Gas & Electric)
9 govern access to customer energy-related data by DRPs. As summarized by the Commission:
10 “Accessing customer’s meter data is a critical requirement for direct participation DR. All
11 DRPs/aggregators must obtain customer approval in order to access the customer’s electric usage
12 data and other personal information regarding the customer’s service account. The customer’s
13 consent is provided through its utility’s Authorization or Revocation of Authorization to Disclose
14 Customer Information to a Demand Response Provider under Rule 24/32 (CISR-DRP) form or
15 other electronic means, if available.”²⁶ The “Click-Through Authorization Process” and
16 associated web page “Performance Metrics” the electric utilities were directed to implement by
17 the Commission in Res. E-4868 were initiated specifically to support this third-party DRP model
18 and the associated processes for releases of customer data to third-party demand response
19 providers.

²⁵ SoCalGas’ Rule No. 1 defines the “Utility System Operator” as: “The applicable departments within Southern California Gas Company and San Diego Gas & Electric Company that are responsible for the physical and commercial operation of the pipeline and storage systems specifically excluding the Utility Gas Procurement Department.”

²⁶ <http://www.cpuc.ca.gov/general.aspx?id=8314>.

1 The EDSP and DR pilot programs proposed in this Application do not require or include
2 a similar “Click-Through Authorization Process” (Click-Through) or capability, thus many of the
3 metrics pertaining to Res. E-4868 and the subsequent electric IOU’s applications would not
4 apply. Currently the Demand Response behavioral messaging pilot SoCalGas is proposing
5 would be administered by third-party implementers under contract to SoCalGas. As outlined in
6 Chapter 2, the data sharing and framework required for the SoCalGas DR pilots are a “Primary
7 Purpose” in accordance with Commission Privacy regulations and SoCalGas Rule 42.²⁷ Thus,
8 the EDSP capabilities will include functionality, specifically the “Vendor (Third Party)
9 Certification Capability” described in Chapter 2,²⁸ to make sure that the third parties with which
10 SoCalGas shares customer usage and other data for purposes of program implementation or
11 evaluation protect customer information by following policies and practices no less protective
12 than SoCalGas’ policies.²⁹ That said, SoCalGas plans to build the EDSP with an IT architecture
13 that would be flexible and supportive of adding on Click-Through authorization capabilities at a
14 future time.

15 Although customer-facing web page based “Click-through” capabilities are not part of
16 the proposed scope of the EDSP, data delivery and quality performance metrics of the nature the
17 Commission describes in Res. E-4868 would be applicable to the EDSP: “In addition to metrics
18 related to the performance of OAuth Solution 3, we find it reasonable to monitor other aspects of

²⁷ Chapter 2, Prepared Direct Testimony of Nancy Carrell Lawrence, at p. 2.

²⁸ Id. at p. 11.

²⁹ To protect and ensure customer privacy, the CPUC issued “Rules Regarding Privacy and Security Protections for Energy Usage Data.” These rules are described in SoCalGas’ Tariff Rule No. 42. As noted on SoCalGas’s Privacy Notice posted at <https://www.socalgas.com/privacy-notice>, Third Parties with whom SoCalGas shares customer energy usage data are required to protect customer information by following policies and practices no less protective than SoCalGas’ policies. Third-party DR providers under contract to SoCalGas are a “covered entity” according to Rule No. 42 and will be required to comply with the provisions of this Rule when implementing DR programs for SoCalGas.

1 Rule 24/32 operations such as delivery time for the full data set, the frequency of ongoing data
2 delivery, and delivery time for missing or gaps in data, among other aspects.”³⁰ As outlined in
3 Chapter 2, the budget associated with the ongoing operations of the EDSP will support funding
4 of SoCalGas staff participation in the joint IOU “Customer Data Access Committee,” as well to
5 support SoCalGas staff involvement in ongoing energy data-sharing-related industry dialogues,
6 forums and working groups, and “other standards and regulatory forums associated with
7 verifying that the EDSP operates in a manner that is consistent with utility data standards and
8 best practices.”³¹

9 **VII. SOCALGAS’ EDSP PROPOSAL IS STRUCTURED TO SUPPORT COST-**
10 **EFFICIENCY IN TERMS OF ITS DESIGN, IMPLEMENTATION AND**
11 **“FUTURE-PROOFING.”**

12 SoCalGas has proposed a high-level approach and conceptual system architecture for
13 purposes of estimating IT resources required to build the EDSP.³² Any major implementation of
14 a new IT system/infrastructure project begins first with very detailed functional and technical
15 requirements definition and documentation, followed by IT architecture and design
16 specifications to meet those requirements in the most cost-effective manner. Thus, the final IT
17 architecture, design and technical specifications for the EDSP will be developed once the project
18 is authorized and commenced. It is SoCalGas’ intent to incorporate best practices and learnings
19 from the other IOU’s implementations, where applicable, into this data sharing platform.

20 This approach appears to align with the Commission desires as well. Much of the
21 Commission’s discussion in Res. E-4868 addresses issues and facts pertaining to the various
22 parties’ concerns that the electric IOUs’ current data sharing platforms are not designed in a

³⁰ Res. E-4868, at p. 57.

³¹ Chapter 2, Prepared Direct Testimony of Nancy Carrell Lawrence, at p. 19.

³² Chapter 2, Prepared Direct Testimony of Nancy Carrell Lawrence, at p. 10 – 15.

1 manner that supports the full breadth of current and future use cases, business and technical
2 requirements considered in the proceeding. As noted previously, the Commission expressed its
3 support for “future-proofing.”³³ The resolution refers to a few instances in which significant and
4 very costly re-architecting would be required of the IOUs’ back-end systems to accommodate
5 some of the potential requirements outlined in the resolution and discussed in working groups.
6 Thus, while SoCalGas intends to incorporate best practices and, where feasible and practical, the
7 same or similar software components as the three other IOUs, it intends to design the EDSP in a
8 manner that leverages existing, enhanced and/or potentially new IT infrastructure, systems and
9 approaches with the goal of optimizing both cost-efficiency and “future-proofing.”³⁴

10 The scoping ruling states that one of the issues to be determined is “Whether [the] EDSP
11 proposed in the Application is appropriately designed to be cost effective when it does not utilize
12 San Diego Gas & Electric Company’s (Applicants’ sister utility) preexisting EDSP
13 platform/resources or any other preexisting platform to drive down cost?”³⁵ SoCalGas never
14 stated in its direct testimony that it *did not plan* to use or leverage existing San Diego Gas &
15 Electric (SDG&E) data sharing IT infrastructure components. As outlined in the “Detailed
16 Description” section of Chapter 2, the EDSP architecture and system consists of several key
17 components that support the five primary capabilities described.

18 For some of the capabilities, such as the “Front-End” Vendor Certification and Request
19 and Permission capabilities, SoCalGas did in fact base its cost estimate for these EDSP

³³ As referenced previously on page 4, the Commission introduced the concept of “future-proofing” in Res. E-4868 which “Approves, with modifications, the Utilities’ Click-Through Authorization Process which releases Customer Data to Third-Party Demand Response Providers.” It states on page 68 that ““Future-proofing’ the solution(s) will ensure an efficient use of ratepayer funds by preventing expensive re-architecture of systems.”

³⁴ Res. E-4868, pages 49 and 68.

³⁵ Scoping Memo and Ruling, issue number 4 at page 2.

1 components utilizing the assumption that it would leverage the same workflow management
2 software that SDG&E is using for similar purposes. In the case of the “Back Office” or “Back
3 end” components, some of the data repositories and systems from which the EDSP will pull data
4 are unique to SoCalGas, thus not all of SDG&E’s data sharing IT architecture or components
5 would be re-usable. Upon commencement of the project, SoCalGas’ goal is to design and
6 architect the EDSP in manner that utilizes existing IT enterprise software and infrastructure
7 components to the maximum extent possible to meet the EDSP business and technical
8 requirements necessary to support the DR programs outlined in this Application.

9 As discussed in the prior section regarding performance metrics, the scope of the EDSP
10 included in this application is limited to features and capabilities required to directly support the
11 DR programs SoCalGas’ outlines in Chapter 1. That said, to provide maximum future ratepayer
12 benefits, the platform will be architected, from an IT perspective, such that it can be expanded
13 upon in the future to support broader use cases, including future customer-authorization of
14 automated data sharing to third parties.

15 The purpose of the SoCalGas EDSP proposal in Chapter 2 is to request cost recovery to
16 establish an EDSP that is built and operated in accordance with current applicable standards,
17 precedence and best practices to support SoCalGas’ DR program implementation and evaluation.
18 Absent Commission funding for these resources, these objectives cannot be met.

19 In conclusion, as requested in the application and associated direct and supplemental
20 testimony, SoCalGas urges the commission to authorize the development, implementation, and

1 recovery of costs associated with the EDSP, as it will align with supporting program
2 implementation and associated evaluation of the natural gas DR programs.

3 **VIII. COST RECOVERY FOR PRIOR YEAR PROGRAMS IS APPROPRIATE**

4 SoCalGas also seeks cost recovery for developing and implementing previous and current
5 winter DR programs and activities to address system reliability as directed and authorized by the
6 Commission and its staff. These program costs relate to the 2016-2017, 2017-2018, and 2018-
7 2019 winter seasons upon which the pilots and winter marketing campaign proposed in the
8 Application are based. The prior winter season programs had a similar purpose and need to test
9 innovative approaches aimed at reducing demand and promoting natural gas conservation.
10 These winter DR activities were implemented to help address system reliability issues because of
11 multiple, complex factors, including the system capacity limitations due to the restricted use of
12 Aliso Canyon and pipeline outages, and thus costs associated with these DR efforts cannot be
13 attributed to one singular factor.

14 One of those factors – the ongoing restrictions on using Aliso Canyon – does not stem
15 from the safety or integrity of the facility and therefore is not the direct result of the Aliso
16 Canyon leak. As requested by the Scoping Memo in Scoping Issue No. 6, cost recovery review
17 need not be delayed until the Commission determines responsibility for the Aliso Canyon leak
18 because that determination is irrelevant for purposes of assessing these DR costs. Responsibility
19 for the conditions related to the safety of the field and well integrity have no bearing on DR costs
20 incurred pursuant to a Commission-directed program and activities to help support broader
21 system reliability.

22 Pursuant to the Division of Oil, Gas, and Geothermal Resources (DOGGR) and the
23 Commission’s request in their October 21, 2016 letter, SoCalGas validated that the facility is fit
24 for service and safe to resume injection operations in SoCalGas’ November 1, 2016 letter

1 requesting authorization to resume injections.³⁶ This fitness for service predates most of the DR
2 costs incurred during the last three winter seasons. In response to that letter, DOGGR and the
3 Commission officially determined that well integrity has been verified and risk of failure has
4 been addressed at the Aliso Canyon facility.³⁷ Moreover, the Commission already determined
5 that “the Aliso Canyon Storage Field has been continuously in service since the October 2015
6 leak of that facility pursuant to the applicable provisions of Public Utilities Code Section
7 455.5.”³⁸

8 Furthermore, during the winter seasons at issue in this Application, Aliso Canyon was
9 available for withdrawals to support reliability and remained an available reliability tool. For
10 instance, entering the 2016-17 winter season, the Commission’s Energy Division issued a Winter
11 2016-17 Aliso Canyon Winter Withdrawal Protocol, which allowed withdrawals from Aliso
12 Canyon to enable SoCalGas to “safely and reliably operate the SoCalGas natural gas pipeline
13 system for the winter 2016/2017 operating season.”³⁹ Accordingly, the fact that Aliso Canyon’s
14 use has been restricted during the three winter seasons at issue does not mean it was unavailable
15 to support reliability.

³⁶ SoCalGas Letter dated Nov. 1, 2016, *available at*
http://cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/110116%20SCG%20Cover%20Letter%20to%20DOGGR%20and%20CPUC.PDF.

³⁷ Joint DOGGR and CPUC Letter dated July 19, 2017 *available at*
http://cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/Open_LettertoSoCalGasandPublic.pdf; *see also*
http://cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/7-19-17_CPUC_LtrtoKenHarrisDOGGRreSB380Concurrence.pdf. On January 17, 2017, DOGGR determined that SoCalGas had completed the SB 380 requirements necessary prior to requesting authorization to resume injection, including the gas storage well Comprehensive Safety Review. *See* DOGGR letter to SoCalGas (dated January 17, 2017) at:
http://www.conservation.ca.gov/dog/Documents/Aliso/2017.1.17_DOGGR_Letter_of_Findings_regarding_Aliso_Canyon_Storage_Facility.pdf.

³⁸ *See Id.*

³⁹

http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/Winter_2016-17_Protocol.pdf.

1 Similarly, the winter DR activities were implemented to address system reliability issues
2 because of another major factor, the system capacity limitations attributable to pipeline outages.
3 For instance, the letter from the Director of the Energy Division dated November 16, 2017
4 requesting SoCalGas to implement DR programs in the 2017-218 and 2018-2019 winter seasons
5 noted the major pipelines that remain out of service as justification for implementing the
6 programs. In addition, D.18-07-008, which directed SoCalGas to make up to \$5 million
7 available for a winter time messaging campaign on gas conservation, acknowledged the limited
8 availability of the Aliso Canyon Storage facility as well as certain pipeline outages affecting
9 system reliability.⁴⁰ Accordingly, the systemwide reliability issues that the previous winter DR
10 programs were implemented to address are related to a broad set of complex factors and should
11 not be seen as solely related to the restricted use of Aliso Canyon.

12 This concludes our supplemental testimony.

⁴⁰ D.18-07-008, Ordering Paragraph 2, Finding of Fact 7.