

Company: Southern California Gas Company (U904G)
Proceeding: 2019 General Rate Case
Application: A.17-10-007/008 (cons.)
Exhibit: SCG-207

SOCALGAS

JOINT REBUTTAL TESTIMONY OF MICHAEL A. BERMEL AND BETH MUSICH

(GAS TRANSMISSION)

JUNE 18, 2018

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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**SOCALGAS REBUTTAL TESTIMONY OF MICHAEL A. BERMEL AND BETH
MUSICH
GAS TRANSMISSION**

I. SUMMARY OF DIFFERENCES

TOTAL O&M (Constant 2016 \$ 000)			
	Base Year 2016	Test Year 2016	Change
SoCalGas	0	\$7,162	\$7,162
ORA	0	0	0
SCGC/TURN	0	0	0

TOTAL CAPITAL (Constant 2016 \$ 000)					
	2017	2018	2019	Total	Variance
SoCalGas	\$135,413	\$181,837	\$178,776	\$496,026	--
ORA	\$114,433	\$166,571	\$162,229	\$443,233	(\$52,793)

II. INTRODUCTION

This rebuttal testimony regarding SoCalGas’ request for Gas Transmission Capital addresses the following testimony from other parties:

- The Office of Ratepayer Advocates (ORA) as submitted by Ms. Oge Enyinwa (Exhibit ORA-12), dated April 13, 2018.
- Indicated Shippers (IS), as submitted by Mr. Michael P. Gorman (Exhibit IS-1), dated May 14, 2018.
- The Utility Reform Network (TURN) and Southern California Generation Coalition (SCGC) as submitted by Ms. Catherine E. Yap (Exhibit TURN-SCGC-*unnumbered*), dated May 14, 2018.

As a preliminary matter, the absence of a response to any particular issue in this rebuttal testimony does not imply or constitute agreement by SoCalGas with the proposal or contention made by these or other parties. The forecasts contained in SoCalGas’ direct testimony, performed at the project level, are based on sound estimates of its revenue requirements at the time of testimony preparation.

1 SoCalGas requests the Commission to adopt its forecast for capital expenditures in 2017,
2 2018, and 2019 of \$135,413,000, \$181,837,000, and \$178,776,000, respectively, in furtherance
3 of promoting the safety and reliability of delivering natural gas on its transmission system.
4 Approval of the forecasts in this testimony will further SoCalGas' continued objective of
5 providing safe and reliable delivery of natural gas to customers at a reasonable cost.

6 **A. Office of Ratepayer Advocates**

7 ORA issued its report on Gas System Integrity, Gas Transmission Operation, and Gas
8 Transmission on April 13, 2018.¹ ORA supports many of the projects to enhance safety and
9 system reliability, such as in the areas of new pipeline construction, pipeline replacements,
10 measurement and regulation (M&R) station enhancements, cathodic protection, pipeline
11 relocations, and compressor station modernization. The following is a summary of ORA's
12 positions:

- 13 • ORA opposes the entire \$7.1 million per year O&M requested regarding
14 SoCalGas' recovery proposal for the North-South Project²
- 15 • ORA recommends additional capital beyond SoCalGas' 2017 forecasts in
16 the New Construction Pipeline, Pipeline Replacement, Cathodic
17 Protection, and M&R Stations budget categories³
- 18 • ORA recommends a reduction of \$6.4 million in the Pipeline Relocation
19 budget category⁴
- 20 • ORA recommends a reduction of \$45 million in the Compressor Stations
21 budget category⁵

¹ April 13, 2018, ORA Report on SCG – Gas System Integrity, Gas Transmission Operation, and Gas Transmission, Exhibit ORA-12 (Oge Enyinwa).

² *Id.* at 4.

³ *Id.* at 6.

⁴ *Id.*

⁵ *Id.*

- 1 • ORA opposes SoCalGas’ requested capital blanket budget associated with
2 Physical Security and Operational Resiliency as identified in SoCalGas’
3 Risk Assessment Mitigation Phase (RAMP) Report⁶

4 **B. Indicated Shippers**

5 Indicated Shippers’ submitted testimony on May 14, 2018⁷ contends that SoCalGas does
6 not justify a substantial increase in 2019 capital expenditures (total Non-Ramp Capital) relative
7 to the increase in 2017 and 2018. Indicated Shippers states that SoCalGas did not provide
8 enough support regarding the costs of the Blythe Compressor Modernization project and that
9 SoCalGas did not provide enough supporting evidence regarding the specific safety issues that
10 the project is addressing.⁸

11 **C. TURN/SCGC Joint Testimony**

12 TURN/SCGC submitted joint testimony on May 14, 2018 recommending the Commission
13 deny SoCalGas’ request to recover the preconstruction costs associated with the North-South
14 Pipeline Project.⁹

15 **III. SOCALGAS’ REBUTTAL TO PARTIES’ POSITION ON NORTH SOUTH**
16 **PROJECT COST RECOVERY**

17 In our direct testimony, we requested that the Commission approve costs associated with
18 the North-South project as just and reasonable.¹⁰ SoCalGas proposes that it be authorized cost
19 recovery spread evenly across the three-year GRC period, i.e., \$7,162,000 annually.

⁶ *Id.* at 22.

⁷ May 14, 2018, Public Direct Testimony and Schedules of Michael P. Gorman Addressing Application of Southern California Gas Company (U904G) for Authority, Among Other Things, to Update its Gas Revenue Requirement and Base Rates Effective on January 1, 2019, on behalf of Indicated Shippers [IS], Exhibit IS-1 (Gorman).

⁸ *Id.* at 23.

⁹ May 14, 2018, Prepared Testimony of Catherine E. Yap Addressing the Proposals of San Diego Gas & Electric Company and Southern California Gas Company in Their Test Year 2019 General Rate Case Related to Pipeline Safety Enhancement Program, Other Gas Transmission Costs, and Third Attrition Year, on behalf of The Utility Reform Network [TURN] and Southern California Generation Coalition [SCGC], Exhibit TURN-SCGC (Yap) at 1.

¹⁰ October 6, 2017, SoCalGas Joint Direct Testimony of Michael A. Bermel and Beth Musich on Gas Transmission, Exhibit SCG-07 (Bermel and Musich) at 30-32.

1 **Table MAB-1**

2 **Summary of Parties' O&M (Expense) Proposal for North-South Project Cost Recovery**

	Base Year 2016	Test Year 2019	Change
SoCalGas	0	\$ 7,162	\$ 7,162
ORA	0	0	0
SCGC/TURN	0	0	0

3
4 **A. ORA's Position**

5 ORA's arguments regarding SoCalGas' request are summarized as follows¹¹

- 6 • The Commission correctly determined in Decision (D.)16-07-015 that:
- 7 a. ratepayers should not fund the North-South Project;
 - 8 b. almost all of the premises behind the project were found to be spurious;
 - 9 c. SoCalGas failed to meet the threshold requirement to demonstrate the
10 need for the project;
 - 11 d. alternate physical solutions could provide the same redundant pipeline
12 capacity at a significantly lower cost than the North-South pipeline; and
 - 13 e. There was never a need for the project.
- 14 • Based on the foregoing, ORA recommends that this request be denied in its
15 entirety.

16 **B. TURN/SCGC's Joint Position**

17 TURN/SCGC's arguments regarding SoCalGas' request are summarized as follows:

- 18 • SoCalGas has failed to demonstrate the reasonableness of the costs for which rate
19 recovery is sought.¹²

¹¹ Ex. ORA-12 at 16-17.

¹² Ex. TURN-SCGC at 2-3.

- 1 • The North-South project fails to meet any of the standards stated in previous
2 Commission decisions regarding whether preconstruction costs of abandoned
3 projects should be included in rates.¹³
- 4 • SoCalGas’ proposal for allowing recovery of the North-South project costs would
5 violate GRC principles.¹⁴

6 **C. SoCalGas’ Rebuttal**

7 Neither ORA nor TURN/SCGC offer evidence (in the form of expert testimony or
8 otherwise) to support their positions that SoCalGas should not recover in rates costs incurred by
9 it in pursuing the North-South project and following the Commission’s related directives.
10 Rather, ORA and TURN/SCGC offer their interpretations of Commission decisions. These legal
11 arguments, and replies thereto, are more appropriately the subject of legal briefing and therefore
12 are not refuted at length herein. However, there are several facts that ORA and TURN/SCGC do
13 not account for in their analyses which weigh in favor of approving SoCalGas’ request.

14 First, the premise behind the North-South project was hardly “spurious,” as ORA
15 contends. In fact, and as TURN/SCGC acknowledge,¹⁵ the Commission explicitly found in
16 D.16-07-015 that SoCalGas (and SDG&E) demonstrated there is a need for enhanced reliability
17 in the Southern System¹⁶ – the precise problem the North-South project was designed to address.

18 Second, the majority of costs incurred on the North-South project were at the explicit
19 direction of the Commission. ORA and TURN/SCGC’s arguments fail to acknowledge this
20 salient fact.

21 Third, while it was foreseeable that many costs would be incurred as part of the North-
22 South project, the costs were not anticipated to be accelerated to the extent they were by the
23 Commission’s May 5, 2014 ruling.

24 SoCalGas/SDG&E filed an application (A.13-12-013) for authority to recover in
25 customer rates the revenue requirement associated with the contemplated North-South project

¹³ *Id.* at 3-9.

¹⁴ *Id.* at 9-10.

¹⁵ *Id.* at 2.

¹⁶ D.16-07-015 at 24 (Conclusion of Law 1).

1 and for approval of related cost allocation and rate design proposals (Application). SoCalGas’
2 Application costs and schedule contemplated that compliance with California Environmental
3 Quality Act (CEQA) (or the federal National Environmental Policy Act (NEPA)) would take
4 place as part of the permitting process for the pipeline and compressor station, as is customary.¹⁷

5 At the pre-hearing conference in the proceeding, Administrative Law Judge Douglas M.
6 Long and ORA raised the issue of whether the Application constituted a “project” under CEQA
7 such that SoCalGas and SDG&E would have to file a Proponent’s Environmental Assessment
8 (PEA) and complete an environmental review as part of considering the Application.¹⁸ In
9 response, SoCalGas and SDG&E were clear that they did not yet have a fully formed project
10 description that would be suitable for meaningful CEQA evaluation.¹⁹ Moreover, SoCalGas and
11 SDG&E asked that, in the event the Commission did find the Application required a review
12 pursuant to CEQA, the Commission delay the Rule 2.4²⁰ requirement for a PEA, and instead
13 allow the ratemaking and rate design aspects of the proceeding to continue while a PEA was
14 underway.²¹ Both ORA and SCGC submitted briefs arguing that a review under CEQA was
15 required.

16 Thereafter, the Scoping Memorandum and Ruling issued on May 5, 2014 ordered a
17 review pursuant to CEQA and preparation of a PEA.²² The effect of this ruling was that
18 development activities and related spending for the North-South project were driven not by
19 SoCalGas (and SDG&E), but rather by efforts to comply with the Commission’s directives. This

¹⁷ A.13-12-013, Application of Southern California Gas Company (U 904G) and San Diego Gas & Electric Company (U 902 G) for Authority to Recover North-South Project Revenue Requirement in Customer Rates and for Approval of Related Cost Allocation and Rate Design Proposals (filed Dec. 20, 2013) at 17.

¹⁸ A.13-12-013, Prehearing Conference Transcript (March 13, 2014) at 12:13-12:21; 14:8-14:9.

¹⁹ A.13-12-013, Opening Brief of Southern California Gas Company and San Diego Gas & Electric Company on CEQA and CPCN Issues (Dec. 20, 2013) at 5 & n.14 (“But until the project is developed further, SoCalGas and SDG&E do not have the sufficient project detail for an agency to effectively evaluate the scope of discretionary permits necessary to construct the North-South Project.”).

²⁰ California Public Utilities Commission’s Rules of Practice and Procedure, Rule 2.4 – CEQA Compliance.

²¹ A.13-12-013, Reply Brief of Southern California Gas Company and San Diego Gas & Electric Company on CEQA Issues (April 4, 2014) at 14.

²² A.13-12-013, Assigned Commissioner’s Scoping Memo and Ruling (May 5, 2014) at 11.

1 continued until the proposed decision denying the project was issued in April 2016 – even before
 2 the PEA was finalized and the CEQA review was complete.

3 The following table shows the breakdown of costs incurred in developing the North-
 4 South project:

5 **Table MAB-2**
 6 **Costs Incurred for the Development of the North-South Project by Cost Category**

Major Activity	Costs (\$millions)
Environmental/Permitting	\$ 6.7
Engineering, Survey & Geotechnical	\$ 7.2
Legal Services / Public Relations	\$ 1.1
Subtotal Non-Labor	\$ 14.9
Company Labor	\$ 2.4
Total Direct Costs	\$ 17.3
Indirects	\$ 4.2
Total Project Costs	\$ 21.5

7
 8 The following table shows the breakdown of costs incurred before and after the
 9 Commission’s May 5, 2014 ruling:

10 **Table MAB-3**
 11 **North-South Project Cost Incurrence Prior to and After Assigned Commissioner’s May**
 12 **2014 Scoping Memorandum and Ruling**

	Through May 5, 2014	After May 5, 2014
Company Labor and Expense	\$172,736	\$2,235,356
Preliminary Scoping & Project Dev., Eng., Design & Ministerial Permitting	\$236,038	\$6,311,882
Environmental Planning & Permitting	\$625	\$7,058,245
Public Outreach and Agency Notifications	\$0	\$738,345
Land and ROW Acquisition	\$0	\$506,362
Indirects	\$199,454	\$4,032,995
Directs Total	\$409,399	\$16,850,189
Directs + Indirects Total	\$608,853	\$20,883,184

1 The cost to develop and file the Application and supporting information was
2 approximately \$600,000. While SoCalGas/SDG&E contemplated that CEQA and/or NEPA
3 compliance costs would be incurred in the future, the majority of such compliance activities were
4 planned to begin *after* the Commission issued a decision authorizing the Application. (In the
5 alternative, if the Application was denied, then the compliance activities would not be
6 undertaken.) After the Commission ordered a CEQA review, determined it would serve as lead
7 agency for the review, and appointed the Commission’s Energy Division to administer the
8 review, Energy Division’s CEQA review drove costs. Energy Division’s CEQA review
9 necessitated the following, which in turn resulted in incurring the costs presented herein:

- 10 • Engineering activities that were preliminary in nature had to proceed to the
11 detailed planning stage in order to conduct a CEQA review (sooner than these
12 activities had been planned to occur).
- 13 • In order to allow for the CEQA review, environmental work was accelerated and
14 had to be expanded to wider corridors with multiple assessments of alternatives
15 because the proposed pipeline route alignment had not been finalized (due to the
16 preliminary engineering stage) before starting CEQA.
- 17 • Land Services and Project Outreach activities were accelerated by 1 to 2 years.
- 18 • CEQA Lead Agency Costs totaling \$2 million (about \$1.5 million for CPUC
19 consultants and \$.5 million for other agencies) were accelerated.

20 Over \$20 million was spent as a result of the CEQA review commencing before the
21 project was developed to the stage required for such a review. SoCalGas could not have
22 anticipated at the time the previous rate case application was prepared that such costs would be
23 required to be undertaken at that point in the project’s lifecycle. The costs that were incurred
24 were required to comply with the Commission’s/Energy Division’s directives. At the time the
25 costs were incurred, SoCalGas and SDG&E reasonably believed the North-South project was the
26 best solution to address the Southern System reliability problem. For this reason, and because
27 utilities are required to follow the Commission’s orders, SoCalGas and SDG&E undertook the
28 activities directed by the Commission and Energy Division and incurred the related costs.

1 It is also important to note that, as far as we are aware, none of “the alternate physical
2 solutions proposed by Trans-Canada, Transwestern and EPNG”²³ are in development.

3 **1. Testimony Stipulation with TURN/SCGC**

4 Following a meet-and-confer on March 19, 2018 with Hayley Goodson on behalf of
5 TURN and SCGC with respect to TURN/SCGC Data Request-01 Question 3, SoCalGas, TURN,
6 and SCGC stipulated to delete the following sentence from Exhibit SCG-07 (Bermel and
7 Musich) at page MAB-32: “The Commission has permitted cost recovery of this time under
8 similar circumstances under the abandoned project theory and when equity so requires.”²⁴

9 **IV. REBUTTAL TO PARTIES’ CAPITAL PROPOSALS**

10 **Table MAB-4**

11 **Summary of ORA and SoCalGas Capital Proposals**

Capital Budget Category	ORA Recommended			SCG Proposed			Variance
	2017	2018	2019	2017	2018	2019	
New Construction Pipeline	\$17,313	\$7,383	\$7,383	\$8,543	\$7,383	\$7,383	\$8,770
Pipeline Replacement	\$33,024	\$26,358	\$10,499	\$30,194	\$26,358	\$10,499	\$2,830
Pipeline Relocation	\$5,223	\$10,476	\$5,922	\$11,596	\$10,476	\$5,922	(\$6,373)
Compressor Station	\$24,979	\$92,888	\$107,168	\$50,432	\$103,351	\$116,626	(\$45,374)
Cathodic Protection	\$5,629	\$6,235	\$6,658	\$5,000	\$6,235	\$6,658	\$629
Measurement & Regulation Stations	\$22,521	\$18,938	\$18,938	\$18,938	\$18,938	\$18,938	\$3,583
Auxiliary Equipment	\$5,744	\$5,661	\$5,661	\$10,710	\$9,096	\$12,750	(\$15,490)

12 ²³ Ex. ORA-12 (Enyinwa) at 17.

²⁴ The foregoing shall not affect SoCalGas’ ability to rely upon the abandoned project theory or any other legal or equitable theories in seeking the cost recovery discussed in Ex. SCG-07 (Bermel and Musich). The deletion shall be reflected in rebuttal testimony, provided in Appendix A, to be submitted by Mr. Bermel and Ms. Musich in this proceeding.

1 **A. PIPELINE RELOCATIONS**

2 ORA did not contest the need for Pipeline Relocation projects. ORA recommends a
3 reduction in 2017, however, it did not provide a rationale for the \$6.373 million reduction in the
4 2017 forecast. SoCalGas assumes that the recommendation was based on 2017 actual expenses.

5 SoCalGas acknowledges ORA’s recommendation of a reduced forecast based on 2017
6 actual expenses, however, disagrees with the reduction because the nature of these capital
7 projects must be taken into account. Because many of the projects in this budget category
8 experienced delays in execution, the costs forecasted for 2017 will not be realized until 2018 or
9 2019. Much of this was caused by third-party delays in providing SoCalGas with necessary
10 information or deliverables required to begin the project as well as subsequent permitting issues.
11 As noted in SCG-07 CWP, page 52 of 176, the costs in this category are associated with
12 modification and relocation of transmission pipelines to accommodate planned private property
13 development, municipal public works, street improvement projects, and contract and franchise
14 requirements. The following is a list of projects specifically identified in SoCalGas’ capital
15 workpapers²⁵ that have experienced delays:

- 16 • Fullerton Road Grade Separation
- 17 • Fairway Drive Grade Separation
- 18 • Meridian West Development in the City of Riverside
- 19 • Relocation of pipelines within farmland
- 20 • Port of Long Beach Pier B Project
- 21 • Ballona Wetlands Restoration Project
- 22 • Multiple relocations for Los Angeles World Airport, Los Angeles International
23 Airport

24 Therefore, SoCalGas requests that the Commission approve the full amount requested in
25 2017 to cumulatively cover these projects that will go into service in 2018 and 2019.

²⁵ October 2017, Capital Workpapers to Prepared Direct Testimony of Elizabeth A. Musich / Michael A. Bermel, on behalf of Southern California Gas Company, Exhibit SCG-07-CWP (Musich and Bermel) at 58-69.

1 **B. COMPRESSOR STATION CAPITAL INVESTMENTS IN TY 2019 GRC**

2 **1. ORA**

3 ORA recommends a reduced forecast in this category. ORA acknowledges that there is a
4 trend of increasing spend in this category, however, ORA argues ratepayer funding for this
5 capital category should only be for specific projects.²⁶

6 SoCalGas respectfully requests the Commission adopt what was requested for 2017, 2018
7 and 2019. Ms. Enyinwa states, “In its last 2016 General Rate Case, [SoCalGas] requested
8 \$9.883 million, \$32.250 million, and \$79.639 million for years 2014 to 2016. Table 12-10
9 shows that only \$7.450 million, \$17.899 million, and \$19.063 million were actually expended for
10 years 2014 to 2016 respectively.”²⁷

11 ORA makes a comparison of SoCalGas’ request in this GRC to a similar request in its
12 prior 2016 GRC.²⁸ There are significant differences between that rate case and this one. Most
13 notably, the design refinement of the Blythe Compressor Modernization project, which was a
14 large part of the budget code forecast in the 2016 GRC. The forecast of expenses presented for
15 2017 was not realized, primarily due to continued scope and schedule refinement and the
16 progression of detailed engineering and permitting. Delays and deferrals of this type are not
17 uncommon in the management of large construction projects. SoCalGas has since increased
18 momentum on executing the Blythe Compressor Modernization project and will realize these
19 costs in 2018 through completion of the project.

20 ORA states that a reduced forecast is necessary in the compressor budget category
21 because ratepayer funding should only fund specific projects or work orders.²⁹ While SoCalGas
22 attempts to forecast specific projects in the GRC, it is difficult to provide a scope of work for all
23 capital projects two to three years in advance, particularly capital projects that are unforeseen.
24 Indeed, in the GRC process the utility is expected to plan projects as much as six years in
25 advance. For example, if a large capital project is to be completed by the end of the GRC period
26 in December of 2021, planning would start in 2015, approximately 18 months prior to the

²⁶ Ex. ORA-12 (Enyinwa) at 21.

²⁷ *Id.* (internal citation omitted).

²⁸ A.14-11-003/-004 (cons.);_D.16-06-054.

²⁹ Ex. ORA-12 (Enyinwa) at 21.

1 application filing in late 2017. As such, SoCalGas considers the volume of work being
2 conducted during the development of the forecast to provide an indication of the forward-looking
3 volume of capital compressor activities. Many of the projects that were anticipated to be
4 completed in 2017 such as the catalyst replacement at Wheeler Ridge, the replacement of the air
5 washers at Newberry Springs, and the replacement of the waterline to the South Needles
6 Compressor Station are currently in progress and will be in service in 2018.³⁰ This further
7 supports the need to have 2017 costs, which ORA recommended be disallowed, be authorized
8 because they will be realized through 2018 and 2019.

9 **2. Indicated Shippers**

10 Indicated Shippers contend that SoCalGas' proposed revenue increase for the 2019 test
11 year and the proposed three-year post-test year period is overstated and proposes a reduction:

12 "SoCalGas should follow its own objective of being transparent by identifying future
13 needed non-routine large capital projects in the PTY period, estimating their costs,
14 showing the cost/benefit of the projects, and demonstrating the inclusion of a non-routine
15 project in a PTY period is prudent and reasonable."³¹

16 Although Indicated Shippers does not question the necessity of the Blythe Compressor
17 Modernization project, it asserts that large capital projects, or "non-routine" projects, should be
18 specifically identified, along with a cost/benefit analysis and a clear description of risk mitigation
19 and safety improvements that the project will address.³²

20 In response to Indicated Shippers' position regarding SoCalGas' need for transparency of
21 "future needed non-routine large capital projects in the PTY period," SoCalGas provides
22 additional detail for these types of projects in the following section and in Appendices B, C, and
23 D of this testimony.

24 SoCalGas does not link the Blythe Compressor Modernization project to the Risk
25 Assessment Mitigation Phase (RAMP), because the project activities do not specifically tie to the
26 RAMP safety element, but rather, to SoCalGas' ability to provide reliable natural gas service to

³⁰ Ex. SCG-07 (Bermel and Musich) at MAB-20.

³¹ Ex. IS-1 (Gorman) at 25.

³² *Id.*

1 customers on the Southern System. Accordingly, the RAMP safety element is not applicable to
2 this project.

3 **C. COMPRESSOR CAPITAL ADDITIONS IN POST-TEST YEARS**

4 SoCalGas herein provides additional information to the Commission for planned major
5 projects during the post-test years of 2020, 2021 and 2022.

6 As provided in direct testimony, SoCalGas is modernizing the Blythe and Ventura
7 compressor stations.³³ In the direct testimony of Neil Navin for Gas Storage (Exhibit SCG-10-
8 R), SoCalGas provides a forecast for a compressor modernization study to be performed on
9 SoCalGas' Honor Rancho natural gas storage facility.³⁴

10 Along with SoCalGas' natural gas transmission pipelines, the availability of SoCalGas'
11 nine mainline transmission compressor stations and the compressor stations located at SoCalGas'
12 storage fields provide the foundation for the Company's continued operational reliability and
13 operational resiliency. As stated in Exhibit SCG-07, "SoCalGas is confronted with the reality
14 that many of these compressor stations and sub-systems were placed in service over 50 years
15 ago, with some placed in service almost 70 years ago."³⁵

16 SoCalGas provides the following information on these projects that are currently in
17 progress.

18 **1. Blythe Compressor Modernization**

19 The Blythe Compressor Station is a critical part of the infrastructure on SoCalGas'
20 Southern System. The compressor station currently consists of three main compressor plants.
21 Two of the plants were constructed more than 60 years ago with compressor assets still in
22 operation today. Our direct testimony provides a description of the anticipated scope of work
23 including an estimated capital investment forecast and estimated schedule. In summary, the
24 Blythe Compressor Modernization project scope includes an investment in Plant 2 to outfit the
25 existing compressor assets with clean-burn emission reduction technology. The project also
26 includes the construction of Plant 4 with 2 new turbine-driven natural gas compressors.

³³ Ex. SCG-07 (Bermel and Musich) at 21.

³⁴ December 2017, Direct Testimony of Neil P. Navin on Underground Storage, Exhibit SCG-10-R (Neil P. Navin) at 33

³⁵ Ex. SCG-07 (Bermel and Musich) at 16.

As provided in the following table, the capital expenditure forecast provided for the modernization of Plants 2 and the construction of Plant 4 has been revised and now includes capital investment in the post-test year 2020. The updated in-service date for the Blythe Compressor Modernization project is Q3 2020.

Table MAB-5

Updated Capital Forecast for the Blythe Compressor Modernization Project

<i>\$ (millions)</i>	2017	2018	2019	2020	2021	Total	In-Service Date
Direct Testimony	34	84	104	0	0	222	Q4 2019
June 2018 Update	22	62	110	107	8	309	Q3 2020

Additional detail on SoCalGas’ Blythe Modernization Project is provided in Appendix B to this testimony.

2. Ventura Compressor Modernization

The Ventura Compressor Station is critical to the continued ability of SoCalGas to serve customers in the North Coastal pipeline system, particularly with the decline in offshore gas supplies entering this region. SoCalGas’ capital workpapers provided an anticipated scope of work including the forecasted capital investment in the post-test years and estimated in-service date in Q4 2021. The anticipated scope of work includes the replacement of three existing reciprocating compressors with six new reciprocating compressors. In addition to providing reliable natural gas service to customers served from the North Coastal system, the new compressors will also move gas to SoCalGas’ La Goleta Storage Field. The following table presents the updated capital investment forecast and estimated in-service date in Q4 2022.

Table MAB-6

Updated Capital Forecast for the Ventura Compressor Modernization Project

<i>\$ (millions)</i>	2017	2018	2019	2020	2021	2022	Total	In-Service Date
Direct Testimony	8	9	16	51	51	0	134	Q4 2021
June 2018 Update	6	1	41	40	86	17	191	Q4 2022

Additional detail on SoCalGas’ Ventura Compressor Modernization project is provided in Appendix C of this testimony.

1 **3. Honor Rancho Compressor Modernization**

2 As presented in the revised direct testimony of Mr. Navin for Underground Storage,
3 SoCalGas is completing a compressor replacement study for Honor Rancho Storage Field.³⁶ Mr.
4 Navin states that “Honor Rancho compressors have reached the end of their useful life after four
5 decades of service. Replacement of obsolete DeLaval reciprocating injection compressors will
6 provide capacity for required maintenance and provide capacity needed to improve reliability
7 and availability of safely serving natural gas to our customers.”³⁷ While the feasibility study is
8 ongoing, SoCalGas anticipates execution of this project in the post-test years. The replacement
9 of the existing reciprocating compressors is not only driven by the obsolescence of the
10 compressor assets, but also by emissions compliance.³⁸

11 **Table MAB-7**

12 **Updated Capital Forecast for the Honor Rancho Compressor Modernization Project**

<i>\$ (millions)</i>	2017	2018	2019	2020	2021	2022	2023	Total	In-Service Date
June 2018 Update	0	1	13	89	77	94	17	291	Q2 2023

13
14 Additional detail on SoCalGas’ Honor Rancho Compressor Modernization project is
15 provided in Appendix D of this testimony.

16 **D. RAMP Related Capital Expenditures for Physical Security and Operational**
17 **Resiliency**

18 As discussed in the Risk Assessment and Mitigation Phase Report, chapter SCG-6,³⁹ the
19 Physical Security of Critical Infrastructure (Physical Security) risk relates to the damage to
20 critical gas infrastructure that can result from intentional acts. SoCalGas identified the following

³⁶ Ex. SCG-10-R (Navin) at 33.

³⁷ *Id.*

³⁸ California Health and Safety Code section 40920.6, subpart c(1) states, “On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for implementation of best available retrofit control technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023.”

³⁹ Investigation (I.)16-10-015, Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company, Physical Security of Critical Gas Infrastructure, Chapter SCG-6 (Nov. 30, 2016) at SCG 6-1.

1 controls: Physical Security Systems and Contract Security, Operational Resilience, and Planning,
2 Awareness and Incident Management.

3 In its testimony, ORA did not support SoCalGas' proposed capital forecast in Auxiliary
4 Equipment & Project budget category,⁴⁰ which included a forecasted capital budget for this
5 RAMP element. Instead, ORA recommends a five-year average of recorded expenditures for
6 this budget category.⁴¹ This GRC includes incremental capital budget in this category to support
7 the RAMP safety element associated with Physical Security and Operational Resiliency. In
8 direct testimony SoCalGas did not provide specific project detail because of the security
9 sensitivities for the critical gas facilities this forecast is supporting, but did provide the following
10 general project descriptions to support its request for capital.

11 Projects associated with this effort include the installation of physical security systems
12 including access control and detection capabilities. These capital investments aim to reduce the
13 risk of damage and our ability to serve customers as a result of intentional acts including theft,
14 robbery, burglary, vandalism, terrorism, and trespassing that could result in a gas leak, fire,
15 explosion and/or outage.

16 **TABLE MAB-8**

17 **Summary of ORA Recommendation and SoCalGas Forecast**

Auxiliary Equipment (Constant 2016 \$ 000)					
	2017	2018	2019	Total	Variance
SoCalGas	\$10,710	\$9,096	\$12,750	\$32,556	
ORA	\$5,744	\$5,661	\$5,661	\$17,066	(\$15,490)

18
19 Accordingly, SoCalGas respectfully requests the Commission authorize the forecasted
20 capital identified in this RAMP blanket budget category.

21
22 **V. CONCLUSION**

23 This concludes our prepared rebuttal testimony.

⁴⁰ Ex. ORA-12 (Enyinwa) at 23.

⁴¹ *Id*

1 **VI. WITNESS QUALIFICATIONS**

2 My name is Beth Musich. In March 2018, I became the Director of Major Projects &
3 Construction for SoCalGas and SDG&E. I was the Director of Gas Transmission from January
4 2015 to March 2018 for SoCalGas and SDG&E.

5 My name is Michael Bermel. As of March 2018, I am the Director of Gas Engineering
6 for SoCalGas and SDG&E. I was Director of Major Projects & Construction from January 2017
7 to March 2018.

1 SCG-207- SoCalGas – Gas Transmission
2 Witness Mike Bermel / Beth Musich

3
4 Appendix A – Testimony Revision
5

6
7 SoCalGas, TURN, and SCGC stipulated to delete the following sentence from SCG-07 (Bermel
8 and Musich) at p. MAB-32:

9 Redline version:

10 ~~The Commission has permitted cost recovery of this type under similar circumstances~~
11 ~~under the abandoned project theory and when equity so requires.~~ Therefore, we request that the
12 Commission approve the North-South Project costs as just and reasonable. SoCalGas proposes
13 that it be authorized cost recovery spread evenly across the three-year General Rate Case period,
14 i.e., \$7,162,000 annually.

15
16 Revised statement:

17 Therefore, we request that the Commission approve the North-South Project costs as just
18 and reasonable. SoCalGas proposes that it be authorized cost recovery spread evenly across the
19 three-year General Rate Case period, i.e., \$7,162,000 annually.

SCG-207- SoCalGas – Gas Transmission
 Witness Mike Bermel / Beth Musich

Appendix B – Blythe Compressor Modernization
 Forecasted Project Capital Investment – June 2018 Update

The Blythe Compressor Station is a critical part of the infrastructure on SoCalGas' Southern System. Blythe Compressor Modernization project scope includes an investment in Plant 2 to outfit the existing compressor assets with clean-burn emission reduction technology. The project also includes the construction of Plant 4 with 2 new turbine-driven natural gas compressors.

TABLE 1
Total Capital Forecast for the Blythe Compressor Modernization Project as Updated in June 2018

Updated GAS TRANSMISSION (In 2016 \$ million)							
COMPRESSOR STATION - Blythe Modernization	2017	2018	2019	New Estimate 2020	New Estimate 2021	Total	In-Service Date
Direct Testimony	34	84	104	NA	NA	222	Q4 2019
June 2018 Update	22*	62	110**	107	8	309	Q3 2020

*Includes actuals for 2015 (\$1.3MM) and 2016 (\$5.5MM)

**SoCalGas estimates \$41MM (\$16MM for Plant 2 and \$25MM for Plant 4, respectively) of capital assets will be placed into service in Q4 2019

TABLE 2
Blythe Compressor Modernization as Updated in June 2018

Updated GAS TRANSMISSION (In 2016 \$ 000's)					
COMPRESSOR STATIONS - Replacements	2017 Actual (000s)	Updated Estimate 2018(000s)	Updated Estimate 2019(000s)	New Estimate 2020(000s)	New Estimate 2021(000s)
Blythe Plant 2	1,495	14,643	20,399	17,579	6,935
*Blythe Plant 4	13,348	48,000	88,700	89,500	1,200
TOTAL	14,843	62,643	109,199	107,179	8,335

*Does not include actuals for 2015 (\$1.3MM) and 2016 (\$5.5MM)

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2
3

TABLE 3
PLANT 2 - Blythe Compressor Modernization

Updated GAS TRANSMISSION (In 2016 \$ 000's)					
COMPRESSOR STATIONS – Replacements Plant 2	2017 Actual (000s)	Updated Estimate 2018(000s)	Updated Estimate 2019(000s)	New Estimate 2020(000s)	New Estimate 2021(000s)
Materials	979	7,472	11,718	3,836	538
Construction	0	3,974	4,907	11,791	5,798
Engineering & Design	342	903	1,298	0	0
Environmental	0	250	80	240	0
Other Costs (Contingency & Closeout)	0	1,498	1,505	1,443	486
Company Labor	174	296	891	269	113
TOTAL	1,495	14,393	20,399	17,579	6,935

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PLANT 2 - Rebuild and modernize 5 existing Clark Compressors to lean burn with advanced emissions control technology.

- Install new “Emissions Retrofit” system on 5 existing Clark units that entails:
 - Demo existing inlet air scrubber, exhaust silencer/support structure
 - Install new turbocharger/stand, unit lube oil cooler, combination silencer/catalyst exhaust stack, exhaust piping, combustion air inlet system, and aftercooler.
 - Install new pre-combustion chamber power cylinder heads.
 - Install High Pressure Fuel Injection (HPFI) system, with new ignition control.
 - Install real time engine combustion auto balancing monitoring and controls.
 - New PLC and controls panel with condition and health trending.
- Integration with existing utilities (HP fuel, lube oil cooling water, starting air, fiber optics network, electric system)
- Repair existing foundations on units #13, 14 and 15

- Install new suction block, discharge block, bypass, vent and purge valves
- Install new cooling water system for aftercoolers

TABLE 4
PLANT 4 - Blythe Compressor Modernization

Updated GAS TRANSMISSION (In 2016 \$ 000's)					
*COMPRESSOR STATIONS – Replacements Plant 4	2017 Actual (000s)	Updated Estimate 2018(000s)	Updated Estimate 2019(000s)	New Estimate 2020(000s)	New Estimate 2021(000s)
Materials	4,995	24,500	36,700	3,550	0
Construction	0	1,800	35,200	61,350	0
Engineering & Design	7,680	18,800	3,600	3,200	0
Environmental	98	100	100	100	0
Other Costs (Contingency & Closeout)	0	0	10,300	18,500	900
Company Labor	575	2,800	2,800	2,800	300
TOTAL	13,348	48,000	88,700	89,500	1,200

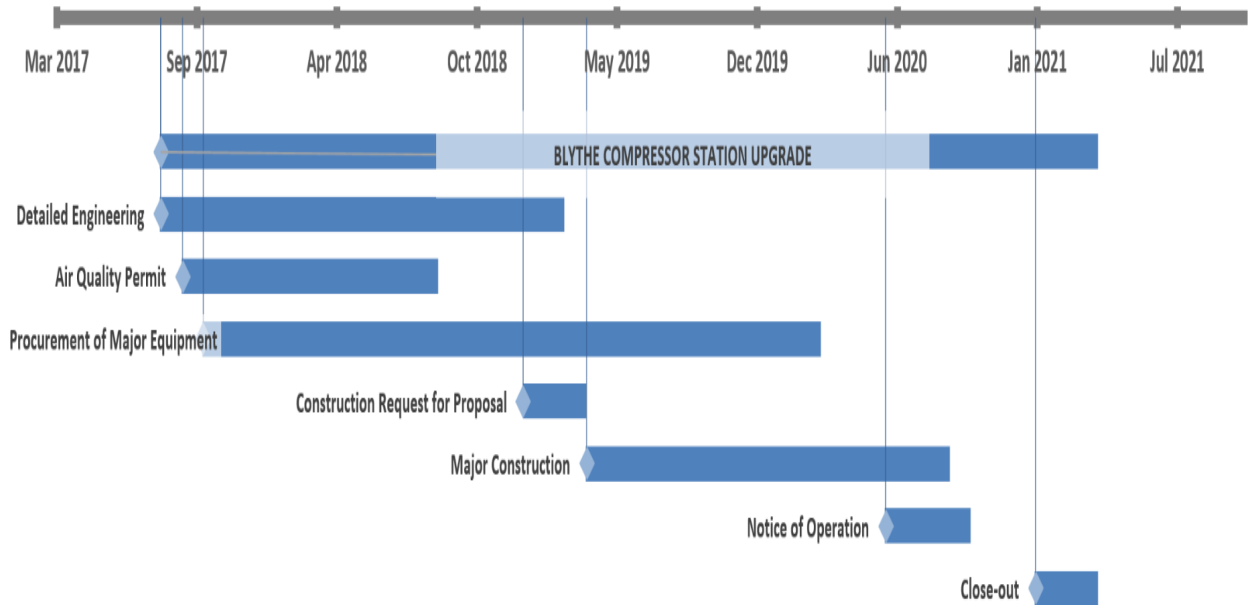
PLANT 4 – New Plant

- Two (2) new Turbo-Compressor/Driver Units (7226 HP each) and associated inlet filters and coolers (Gas & Lube Oil) with 237 dP wheel and SGR Emissions Packages in Plant 4
- Power generation building with new fuel gas-fired gensets, which includes 5 (five) new 770-kilowatt (kW) fuel gas-fired generator units Waukesha P48GSI
- Two Power Distribution Centers (“PDC”), one for plant 2 and one for Plant 4
- Continuous emissions monitoring systems (CEMS) to include shelters and foundations for both the turbine compressors and the gensets
- Two 600 MMSCFD suction filter separators and provisions for connection to a third suction filter separator, common to support trains 1 through 4
- Air coolers, air compressors, and other utilities to support the new compressors
- Two dry air receivers to support the utility air requirements

- Two lube oil tanks, 2,400 gallon each, for the gensets fresh oil and recycle oil
- Interconnecting piping, electrical, and control systems to support Plant 4
- Extension of new utilities to Plants 2 and 3
- Tie-Ins to existing piping and control systems
- Equipment foundations for new turbine/compressor trains, cooling towers, generators, air compressors, and all vessels and pumps, among others.
- Provisions for future connection to a vapor recovery system. New Operations building including new septic system (tank and leach field).

Future Blythe Compressor Modernization scope (will be included in a subsequent GRC as operationally required). In addition to the installation of two turbines in 2020, as described above, the master plan for Blythe includes a total of 4 turbine-driven compressors and associated auxiliary equipment.

Estimated Project Schedule



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1 SCG-207- SoCalGas – Gas Transmission
2 Witness Mike Bermel / Beth Musich

3
4 Appendix C – Ventura Compressor Modernization

5
6 Forecasted Project Capital Investment – June 2018 Update
7

8 The Ventura Compressor Station is critical to the continued ability of SoCalGas to serve
9 customers in the North Coastal pipeline system, particularly with the decline in offshore gas
10 supplies entering this region. SoCalGas’ capital workpapers provided an anticipated scope of
11 work including the forecasted capital investment in the post-test years and estimated in-service
12 date of Q4 2022. The anticipated scope of work includes the replacement of three existing
13 reciprocating compressors with six new reciprocating compressors. In addition to providing
14 reliable natural gas service to customers served from the North Coastal system, the new
15 compressors will also move gas to SoCalGas’ La Goleta Storage Field.
16

17 **Forecasted Project Capital Investment**
18 **(\$ in thousands)**

Description	Forecasted 2018	Forecasted 2019	Forecasted 2020	Forecasted 2021	Forecasted 2022	Project Total*
Labor	\$221	\$773	\$936	\$827	\$477	\$3,807
Non-Labor	\$515	\$40,168	\$39,149	\$84,849	\$16,929	\$186,838
Total	\$736	\$40,941	\$40,085	\$85,676	\$17,405	\$190,644

* Includes 2015-2017 Project Actuals = \$5,801

19
20 All costs are presented in direct 2016\$ in thousands. These costs do not include SCG/SDG&E
21 Overheads, Property Taxes, and/or AFUDC. Forecasted costs are preliminary and subject to
22 change.
23

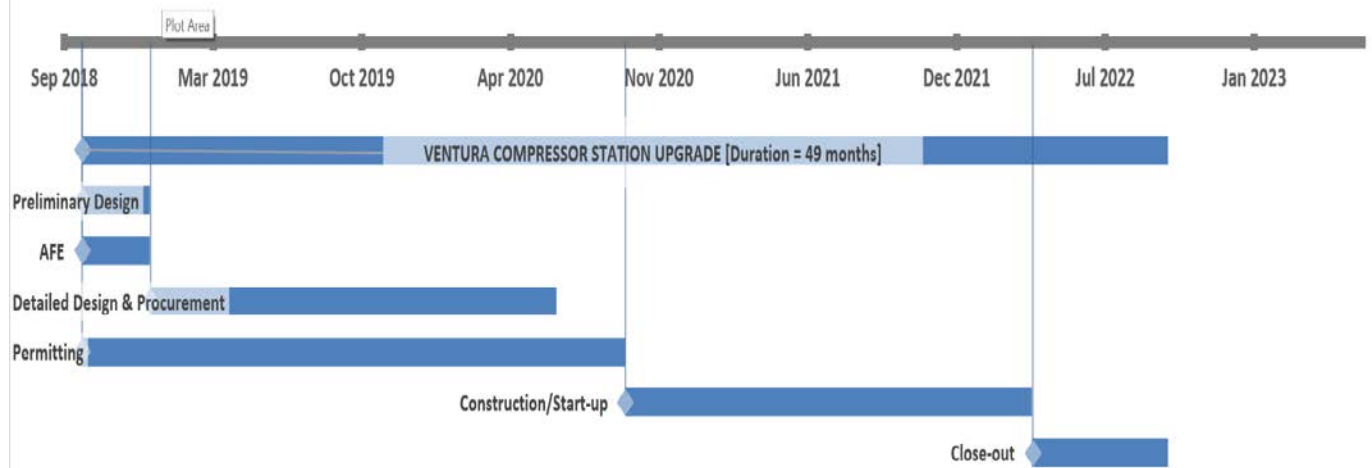
1 **Project Description:**

2 The Ventura Compressor Station consists of three (3) 1,100 HP Cooper Superior reciprocating
3 compressors. Future utilization of this station includes summer full injection capacity at
4 SoCalGas’ La Goleta Storage Field and to meet the summer load requirements on the North
5 Coastal system.

6 Current Ventura Compressor Replacement Project Scope consists of the following:

- 7
- 8 1. Install six (6) new reciprocating compressors with non-selective catalytic reduction
- 9 emissions packages in a new facility (1670 hp each)
- 10 2. Install piping to support six (6) new reciprocating compressors
- 11 3. Install auxiliary equipment including combustion air inlet system and exhaust system.
- 12 Emissions control system includes carbon monoxide catalyst, non-selective catalytic
- 13 reduction, air blowers, silencer, stack, and control panels
- 14 4. Decommission three (3) Cooper Superior reciprocating compressors (1,100 hp each)
- 15 5. Construct/relocate office and warehouse buildings
- 16 6. Install new generators, scrubbers, fire suppression system, and other auxiliary
- 17 equipment
- 18 7. Relocate spill containment area
- 19 8. Soil remediation (if needed)

20 **Estimated Schedule:**



1 SCG-207- SoCalGas – Gas Transmission
2 Witness Mike Bermel / Beth Musich

3
4 Appendix D – Honor Rancho Compressor Modernization

5
6 Forecasted Project Capital Investment – June 2018 Update
7

8 SoCalGas is completing a compressor replacement study for Honor Rancho Storage
9 Field⁴² because the compressors have reached the end of their useful life after four decades of
10 service. Replacement of obsolete DeLaval reciprocating injection compressors will provide
11 capacity for required maintenance and provide capacity needed to improve reliability and
12 availability of safely serving natural gas to our customers. SoCalGas anticipates execution of
13 this project in the post-test years. The replacement of the existing reciprocating compressors is
14 not only driven by the obsolescence of the compressor assets, but also by emissions
15 compliance.⁴³

16 Forecasted Project Capital Investment
17 (*\$ in thousands*)

Description	Forecasted 2018	Forecasted 2019	Forecasted 2020	Forecasted 2021	Forecasted 2022	Forecasted 2023	Project Total*
Labor	\$178	\$848	\$990	\$990	\$990	\$471	\$4,567
Non-Labor	\$524	\$12,102	\$88,282	\$75,663	\$93,416	\$16,344	\$286,399
Total	\$703	\$12,950	\$89,272	\$76,653	\$94,407	\$16,815	\$290,966

* Including 2017 Project Actuals = \$167,000

18 *All costs are presented in direct 2016\$ in thousands. These costs do not include*
19 *SCG/SDG&E Overheads, Property Taxes, and/or AFUDC. Forecasted costs are preliminary*
20 *and subject to change.*

⁴² SCG-10-R page 33 and SCG-10-CWP.

⁴³ Assembly Bill Number 617, Section 40920.6 of the Health and Safety Code, subpart c(1) states “On or before January 1, 2019, each district that is a nonattainment area for one or more air pollutants shall adopt an expedited schedule for implementation of best available retrofit technology (BARCT), by the earliest feasible date, but in any event not later than December 31, 2023.”

1 **Project Description:**

2 Honor Rancho is the second largest natural gas storage facility in SoCalGas' system with a
3 reservoir capacity of 28 Bcf. Honor Rancho Storage Field Station currently consists of five (5)
4 Enterprise (Delaval) reciprocating units rated at 5,500 HP each (installed in 1972). Delaval went
5 out of business in 1989 and the units operate with aging, inefficient equipment that is difficult
6 and expensive to maintain since parts availability for repairs is scarce. This current situation
7 poses a risk to SoCalGas' ability to serve our customers if any single compressor is out of
8 service for extended periods.

9
10 The new equipment will also comply with California AB 617 requirements. The assembly bill
11 mandates all compressor equipment comply with new air emission standards by 2023.

12
13 Current Honor Rancho Replacement Project Scope consists of the following:

- 14 • Install five (5) compressor-driver unit's emissions packages (6,000 Hp each)
- 15 • Install compressor station controls system and auxiliary equipment
- 16 • Central Compressor Station (CCS) building with future compressor sparing capacity
- 17 • Decommission five (5) Delaval compressors and Enterprise high speed
- 18 reciprocating engines units (5,500 Hp each)
- 19 • Demolish and abate existing compressor building, ancillary systems and equipment

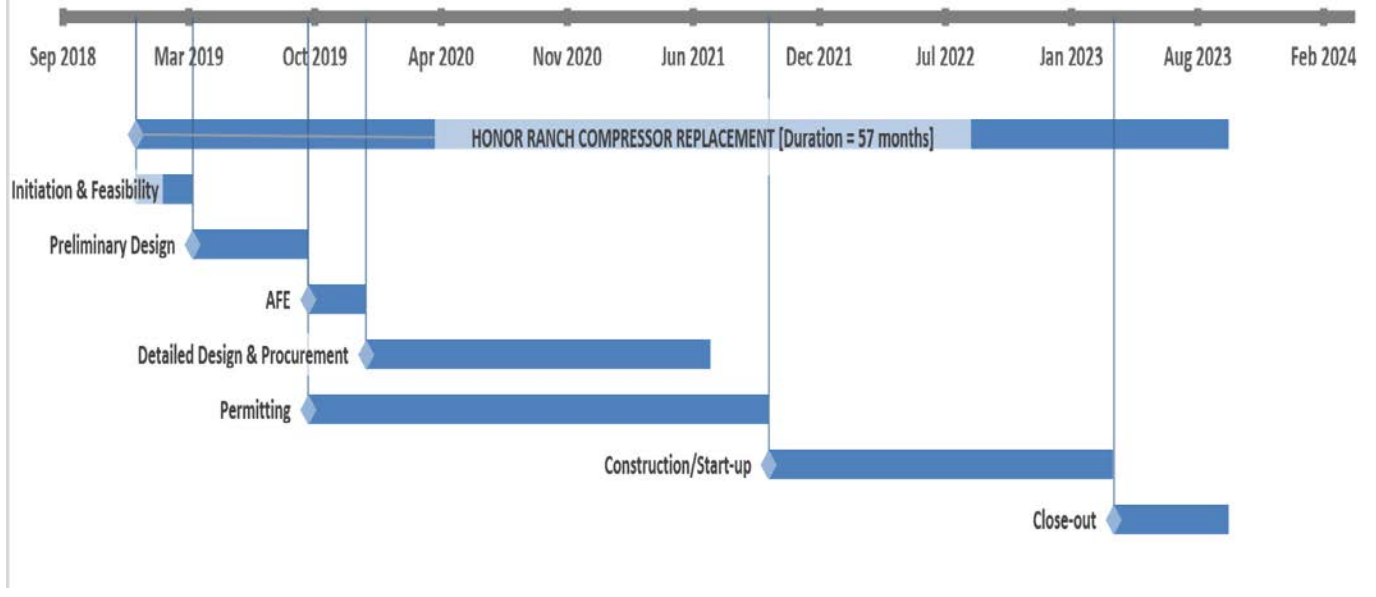
20
21 **Phase 1**

- 22 1. Commence in late 2018, preliminary front end engineering design (pre-FEED) / feasibility
- 23 study
- 24 2. Commence in early 2019, front end engineering design (FEED)

25 **Phase 2**

- 26 3. Commence in 2020, engage permitting agencies to determine permitting requirements
- 27 4. Conduct AFE board approval in January of 2020
- 28 5. Commence in 2020, detailed engineering and procurement
- 29 6. Conduct Construction activities from May 2022 to September 2023.
- 30 7. NOP / commission compressor equipment in mid-2023
- 31 8. Conduct project close out from mid-2023 to end of 2024

1 **Estimated Project Schedule**



2