| | | |
|---|---|---|
| Docket | : | A.23-12-011 |
| Exhibit Number | : | CA-01 |
| Commissioner | : | Douglas |
| Admin Law Judge | : | Toy |
| Witnesses | : | Logan/Topper/Vo |

# PUBLIC ADVOCATES OFFICE
## CALIFORNIA PUBLIC UTILITIES COMMISSION

# REPORT ON

# Southern California Edison Company's Catalina Gas Utility General Rate Case Test Year 2025

**Application 23-12-011**

San Francisco, California
June 28, 2024

534824026

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# CHAPTER 1 - SUMMARY AND RECOMMENDATIONS

## 1.1 Recommendations

Based on review and analysis of the testimony supporting this Application,[1] the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) makes the following recommendations in Southern California Edison Company's (SCE) Catalina Gas Utility 2025 General Rate Case (GRC) proceeding:

- Two downward adjustments to capital project expenditure forecasts (See Sections 2.2.6 and 2.2.9, below).
- A lower rate of return on equity (ROE) and Rate of Return (ROR) used by SCE for Catalina Gas Utility ratemaking purposes (Se Section 1.3 below).
- Rejection of the request for a Catalina Electrification Transition Memorandum Account (CETMA) (See Section 1.6 below).
- Rejection of the request to make changes to the Catalina Gas Tariff Rules 3, 13, and 15, and a new advice letter process (See Section 1.7 below).
- That SCE run the Results of Operations model with the adjustments described in this report and any other updates that are adopted in this proceeding.

Cal Advocates does not oppose Southern California Edison Company's (SCE) forecasts of Operation and Maintenance (O&M) expenses, Gas Sales, Cost Escalation, Attrition, and other ratemaking proposals presented in SCE's Testimony not addressed in this report.

## 1.2 Background and Summary of Request

In SCE's most recent GRC for Catalina Gas operations, the Commission adopted a base revenue requirement of $1.451 million.[2] In the current application, SCE requests a TY 2025 base revenue requirement of $2.062 million, an approximately 42% increase over the currently authorized revenue requirement. SCE's largest gas customer—its

[1] *Direct Testimony Supporting Southern California Edison Company's Application for Authority to Increase Rates for Its Catalina Gas Utility*, December 15, 2023 (SCE Direct Testimony).

[2] Decision (D.) 09-09-034 for Test Year (TY) 2009. Prior to 2009, the Commission adopted SCE Catalina Gas rates for TYs 1979, 1987, and 2005.

own Catalina electric operations—will absorb a large portion of the revenue requirement increase.[3] Therefore, the rate impact of the increased revenue requirement on the average customer will be about 7%.

In addition to the memorandum account and gas tariff proposals discussed above, SCE requests the establishment of a Gas Base Revenue Requirement Balancing Account (GBRRBA). This mechanism will allow SCE to update any over- and under-collections from its Catalina customers on a periodic basis due to gas sales fluctuations. SCE also requests the establishment of the Catalina Gas Federal Grant Memorandum Account (CGFGMA) to record any grant monies received from the Federal government. Cal Advocates does not oppose these requests.

### 1.3 Cost of Capital and Rate of Return on Equity

SCE requests a rate of return (ROR) of 7.44% and Cal Advocates recommends an ROR of 7.03%. Cal Advocates does not oppose SCE's proposed capital structure of 52.0% common equity, 43.0% debt, and 5.0% preferred equity as consistent with the currently authorized capital structure.

SCE's proposed ROR is based on the Commission-authorized figure in D.22-12-031. SCE's Electric ROR was adjusted upward to 7.87% effective January 1, 2024, per the Cost of Capital Mechanism (CCM). Cal Advocates proposes a rate of return on equity (ROE) of 9.14% while SCE requests an ROE of 10.05%. The cost of debt and cost of preferred equity proposed by Cal Advocates are based on the CCM-adjusted and updated figures for SCE.

Table 1 compares SCE's proposed and Cal Advocates' recommended cost of capital, weighted average cost of capital (WACC), and ROR.

[3] SCE Direct Testimony, at 2.

**Table 1: Comparison of Capital Structure, Cost of Capital, and Weighted Average Cost of Capital**

| | SCE Catalina | | | Cal Advocates | | |
|---|---|---|---|---|---|---|
| | Capital Structure % | Cost % | WACC % | Capital Structure % | Cost % | WACC % |
| Debt | 43.0 | 4.39 | 1.89 | 43.0 | 4.48 | 1.93 |
| Preferred | 5.0 | 6.50 | 0.32 | 5.0 | 7.02 | 0.35 |
| Equity | 52.0 | 10.05 | 5.23 | 52.0 | 9.14 | 4.7 |
| ROR | | | 7.44 | | | 7.03 |

## 1.4 Cost of Debt and Preferred Equity

As shown in Table 1-1, within SCE's proposed 7.44% ROR is a cost of debt of 4.39% and cost of preferred equity of 6.50% based on the Commission-authorized figures in D.22-12-031. These figures were adjusted in 2024 pursuant to the CCM. For 2024, SCE projects its cost of debt to be 4.48% and its embedded cost of preferred stock to be 7.02%.[4] Cal Advocates has used these adjusted costs of long-term debt and cost of preferred equity to develop its ROR for SCE Catalina.

## 1.5 Return on Equity

SCE's proposed rate of return on equity (ROE) is 10.05% compared to Cal Advocates' recommended ROE of 9.14%. As noted above, SCE relied on the ROR as authorized in D.22-12-031, which incorporated a 10.05% ROE. However, a different ROE for SCE's Catalina gas operations is appropriate, considering the unique nature and small customer base of SCE's Catalina gas operations. SCE is considered an all-electric utility by the Commission when it develops its ROE and ROR in the Cost of Capital proceedings, but SCE's Catalina gas operation with a small number of customers is not comparable to a large electric utility. The authorized ROE should reflect Catalina's unique gas operation and small customer base.

Cal Advocates' proposed ROE is based on the national average ROE for all gas distribution companies of 9.64%,[5] with a downward adjustment of 50 basis points to

[4] SCE-Advice 5120-E, dated October 13, 2023, at 3 and 4.

[5] The most recent average annual authorized ROE is 9.64% for Gas Distribution Companies, as reported by S&P in 2023.

properly reflect the unique nature and characteristics of the Catalina gas operations: the service territory, small customer base, and need to mitigate affordability issues. Catalina is a very small and unique gas operation that cannot achieve the operational efficiencies and other benefits of gas distribution companies with greater customer bases. Thus, Cal Advocates' recommended ROE of 9.14% represents an equitable figure that better reflects the size and other characteristics of SCE's Catalina gas operation.

### 1.6 The Catalina Electrification Transition Memorandum Account

SCE requests authority to establish the Catalina Electrification Transition Memorandum Account (CETMA). A memorandum account allows a utility to record the costs of specified activities and request cost recovery for those activities in a future proceeding. For this memorandum account proposal, SCE requests authorization to use a Tier 2 advice letter process for review and approval of the recorded costs of electrification activities associated with a customer's transition from gas service to electric service. Customer electrification includes measures that switch out gas appliances, such as gas stoves, gas hot water heaters, and gas furnaces to electric stoves, electric hot water heaters, and electric heat pumps for space heating. SCE states that Phase 1 could cost as much as $830,000 for "pilot electrification" for approximately 10 residential customers and two non-residential customers.[6]

Cal Advocates recommends that the Commission reject SCE's CETMA proposal because it is costly, ill-defined, and includes a cost recovery mechanism (the Tier 2 advice letter) that is inappropriate for a memorandum account without a pre-authorized budget cap.[7] SCE provides no information about the level of customer interest and project feasibility, and minimal information about project alternatives. Throughout its testimony, SCE discusses the notion that it plans to "exit" the gas distribution business over the next 20 years, but nowhere does it present an actual framework for such an

[6] SCE Direct Testimony, at 82.

[7] Standard Practice U-27-W requires a Tier 3 advice letter for amortization of memorandum accounts.

exit.[8] The Zonal Electrification Study for Catalina contained in the Workpapers is inadequate, and there is no way for the Commission to assess the costs and benefits of a 100 percent Catalina Electrification Transition based on the scenarios presented.[9]

SCE should submit a detailed long-term plan for Catalina gas service to transition to all electric service in a separate application. The Commission should encourage SCE to engage with stakeholders and the Energy Division to receive input, while developing a comprehensive and transparent plan. Accordingly, Cal Advocates recommends that the Commission reject SCE's request for the CETMA.

### 1.7 SCE's Catalina Gas Tariff Rules

In conjunction with the CETMA proposal, SCE requests authority to change its Catalina Gas Tariff Rules 3, 13, 15, and 16 to enable SCE to deny requests for new gas service.[10] This change to the Catalina Gas Tariff Rules would be drastic, premature, and unfair. SCE has not provided analysis of the costs and benefits of such a change. Therefore, SCE's request for changes to the Gas Tariff Rules are more appropriately addressed through a separate application and should be denied in this proceeding.

[8] SCE Direct Testimony, at 3.

[9] SCE Workpapers, at 221-267.

[10] SCE Direct Testimony, at 24.

# CHAPTER 2 – CAPITAL PROJECT REVIEW

## 2.1 Capital Plant-in-Service, Not Currently Authorized (Witness: Vo)

SCE completed 10 capital projects between 2010 and 2022 that were not included in its last GRC decision (D.09-09-034).[11] Accordingly, these projects are not currently in rate base and are not reflected in the current authorized revenue requirement. For the 2025 GRC, SCE requests recovery of the capital revenue requirement of the remaining asset life of these projects:

1. LPG Storage Tank Pressure De-Rate Project
2. LPG Deluge System and Firewall
3. Gas Plant Chromatograph System
4. Tremont System Rectifier
5. Lower Terrace Rectifier and Anode Bed Replacements
6. Gas Valve Installs and Replacements
7. Wrigley Terrace Gas System Service and Replacements
8. Triana Gas System Service and Replacements
9. Mountainview Control Room Remote Workstation
10. Versify Operator Rounds and Log

Based on review of SCE's description, support, and detailed documentation for the 10 capital projects, Cal Advocates does not oppose SCE's request for capital recovery of the projects' remaining useful life.

## 2.2 Capital Project Forecast 2023-2028 (Witness: Topper)

SCE requests $2.732 million in forecasted capital project expenditures between 2023 and 2028. Table 2-1, attached to this report as Exhibit 1 for readability, compares SCE's requested and Cal Advocates' recommended capital forecast amounts.

The following sections summarize Cal Advocates' recommendations for the nine capital projects SCE forecasts for 2023-2028.

[11] SCE Testimony at 36-57.

## 2.3 Pebbly Beach Anode Bed and Anode Replacement

SCE requests $274,000 for replacement of the Pebbly Beach cathodic protection rectifier and associated anode bed.[12] This asset is currently out of service and not performing its design function.

Cal Advocates reviewed SCE's project description and supporting workpapers and does not oppose SCE's request for this project.

## 2.4 LPG Storage Tank and Permanent Catwalk

SCE requests $375,000 for a permanent catwalk at the Liquified Petroleum Gas (LPG) storage tanks. The catwalk will protect workers when accessing the pressure safety valves located on the LPG storage tanks.

Cal Advocates reviewed SCE's project description and supporting workpapers and does not oppose SCE's request for this project.

## 2.5 LPG Storage Tank PSV/Manifold Replacement Project

SCE requests $180,000 for the replacement of six pressure safety valves (PSVs) and two manifolds on each of the three LPG storage tanks. The rusted condition of the valves was deemed a safety and reliability risk by the contractors hired to ensure the mechanical integrity requirements of the PSVs with various state and Federal agencies following American Petroleum Institute (API) 510 and 571 guidelines.[13] Due to the serious consequences of potential safety failures, Cal Advocates does not oppose SCE's request of $180,000 for this project.

## 2.6 Gas Valves and Piping Relocation (Five Corners Pedestrian Project)

SCE requests $280,000 for the relocation and replacement of gas valves that have locations in conflict with the City of Avalon's Five Corners Pedestrian Project (Pedestrian Project). The city has yet to obtain the full funding necessary to complete the entire project without the need to phase the construction.[14]

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[12] See Appendix A to this Report, Exhibit 2: SCE's response to Cal Advocates Data Request #001, Question 5, attachment *PubAdv-SCE-001-ST7-EVO Q.05 Answer (1).pdf,* lines 5-6.

[13] For an explanation of API 510 and 572 guidelines, see Appendix A, Exhibit 3.

[14] The City of Avalon's website indicates that the city is currently applying for a grant that would allow construction of the Five Corners Pedestrian Project to be completed immediately,

Cal Advocates supports SCE's collaboration with the City of Avalon to mitigate safety risk when the Pedestrian Project is constructed. Although the Pedestrian Project does not directly benefit gas ratepayers, SCE's mitigation of potential pipeline and valve safety risks combined with the replacement of aging infrastructure will indirectly benefit ratepayers in the long run. Accordingly, Cal Advocates does not oppose SCE's requested forecast of $280,000 for this project.

### 2.7 Tremont Gas System Anode Bed Replacement

SCE requests $50,000 for the replacement of a depleted anode bed located near the original Tremont rectifier. The original pole-mounted Tremont rectifier was replaced with a pad-mounted rectifier, but connected to the now depleted anode bed, which requires replacement. Due to the relatively inexpensive cost and the need for corrosion protection at the Tremont location, Cal Advocates does not oppose SCE's request.

### 2.8 Gas Vaporizer Replacement

SCE forecasts $238,000 for the replacement of the Catalina Gas Triple Redundant Gas Vaporizer. SCE conducted a condition assessment of the gas vaporizer in 2023, which included physical inspections, maintenance history reviews, operational performance reviews, and an age assessment.[15] Based on the condition assessment, SCE deemed the gas vaporizer too risky to continue operation and requests funds for replacement of the entire asset. Based on review of supporting documents, Cal Advocates recommends a reduced budget of $63,427 for replacement of a critical component of gas vaporizer (the control system), rather than replacement of the entire gas vaporizer.

In response to a data request, SCE provided the Vaporizer Condition Baseline Assessment.[16] The condition assessment indicated that in both the age and

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rather than phased over time. See https://www.cityofavalon.com/195/Five-Corners-Pedestrian-Project.

[15] Attachment A, Exhibit 4, SCE response to Cal Advocates Data Request #001, Question 8: *Catalina Gas Vaporizer Baseline Condition Assessment Report 2023.pdf* (Vaporizer Condition Assessment).

[16] See Appendix A, Exhibit 4, Vaporizer Condition Assessment

maintenance history categories, the vaporizer received perfect scores from the third-party service provider, AMP Engineering. AMP Engineering's combined weighted condition score showed that complete replacement of the vaporizer is unnecessary. AMP Engineering instead recommended replacement of the vaporizer control system, due to the age of the system and to allow for incorporation of a soft start to each heating element.[17]

Accordingly, SCE's forecasted expenditure for this project is not supported by the assessment. Cal Advocates determined its recommended forecast of $63,427 based on the baseline condition score of the gas vaporizer from AMP Engineering, multiplying SCE's total gas vaporizer replacement cost of $238,000 by the percentage of the condition assessment score that deviated from a perfect score. This estimate should ensure reasonable funding for the replacement of the vaporizer control system and the incorporation of a soft start system. As shown in Table 2-2, Cal Advocates' recommended forecast expense is nearly $175,000 lower than SCE's requested amount.

[17] See Appendix A, Exhibit 4, *Vaporizer Condition Assessment*, at 3, under "Operational Performance" and 4, under "Maintenance Recommendations."

**Table 2.2: Gas Vaporizer Replacement Adjustments**

| Year | SCE Proposed | Cal Advocates Recommended | Difference |
|---|---|---|---|
| TY 2025 | $238,000 | $63,427 | -$174,573 |

## 2.9 Gas Meter Infrastructure Replacement

SCE forecasts $92,000 for the replacement of a percentage of the 1400 gas meters within the distribution system. The percentage and determination of which meters should be replaced is determined by a Statistical Base Accuracy Performance Test performed by larger utilities, namely Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E).[18] SCE will leverage data from these tests to determine the meters that need replacing within the distribution system.

Cal Advocates does not oppose SCE's forecast of $92,000 for replacement of gas meters through 2028.

## 2.10 Gas Valve Infrastructure Replacement

SCE forecasts $528,000 ($238,000 in 2025 and $290,000 in 2027) for replacement of valves needing attention within the gas distribution system. SCE operators inspect valves through the gas valve exercise program on an annual basis to determine which valves require rebuilding/replacing based on operational performance. SCE states that the only feasible option to ensure reliability once a valve becomes difficult to operate is to replace or rebuild the valve entirely.[19]

Cal Advocates does not oppose SCE's forecast for the replacement costs in 2025 and 2027 associated with this project.

[18] Workpaper – Southern California Edison / 2025 Catalina Gas GRC Exhibit No. SCE-01, Vol. 01 Bk. A, pp. 332-357: See Section V, "Capital Projects", Attachment B to AL 124-G, Titled "2002-2003 GAS METER PERFORMANCE REPORT, SANTA CATALINA ISLAND CALIFORNIA", Section 5.0 "METER PERFORMANCE RECORDS", p. 3 of attachment (SCE Workpaper, p. 349).

[19] SCE Direct Testimony at 71-72.

## 2.11 Pipeline and Other Facility Infrastructure Replacement

Cal Advocates recommends the following adjustments for Pipeline and Other Facility Infrastructure Replacement:

**Table 2.3: Pipeline and Other Facility Infrastructure Replacement Adjustments**

| | 2025 | 2026 | 2027 | 2028 | Total |
|---|---|---|---|---|---|
| SCE Proposed | $178,657 | $196,153 | $217,207 | $242,357 | **$834,373** |
| Cal Advocates Recommended | $52,047 | $57,144 | $63,277 | $70,604 | **$190,384** |
| Cal Advocates < SCE | $131,494 | $148,672 | $169,457 | $194,365 | **$643,989** |

SCE requests $834,000 for replacement and repairs of current critical Catalina Gas assets as well as forecasted costs for replacement of pipeline and other future asset costs. In response to Cal Advocates' data request, SCE provided five assessment reports of critical assets, three of which had received scores indicating replacement and/or attention.[20] SCE further stated in the response that it expects to conduct asset assessments on the gas air mixer line insulation, gas system main pipeline, and main gas valves in 2024.[21]

Cal Advocates recommends a budget of$190,384 for infrastructure and pipeline replacement. Cal Advocates asked SCE to provide cost details and any supporting reasoning behind the cost estimation of $150,000 per year plus escalation.[22] The cost estimation methodology and assumptions provided by SCE were inadequate due to heavy reliance on vague, non-measurable assumptions. For example, in the sheet labeled "Other – repair orders," SCE uses the historical repair costs of other orders not captured in other forecasted costs in developing its forecast of $150,000 per year plus

[20] See SCE's response and associated attachments referenced in Cal Advocates Data Request #001, Question 11b: *Catalina Gas Chromatograph Assessment Report.docx*, *LPG Receiving Station - Assessment Report.docx*, *Catalina Gas – Vaporizer – Assessment Report.docx*, *Catalina Gas – Heat Trace – Assessment Report.docx*, *Catalina Gas Plant ESD Assessment Report.docx*

[21] Appendix A, Exhibit 5, SCE's response to Cal Advocates Data Request #001, Question 7, attachment *PubAdv-SCE-001-ST7-EVO Q.11a-c Answer,* part (c).

[22] Appendix A, Exhibit 6, *CAL ADVOCATES CAPITAL FORECAST PROJECT 9 REASSESSMENT.*

escalation.[23] There are 13 repair orders (line items) chosen by SCE as a comparison group. SCE did not provide any reasoning as to why these repair orders should be used as a basis for developing the cost forecasts for future infrastructure and pipeline replacement. Nonetheless SCE uses the average yearly historical cost of the 13 separate line items from 2004 – 2022. SCE then takes the average of these 13 averages to develop its baseline cost in 2022 dollars. It then applies a 53% price escalation to this average. In addition, SCE uses a multiplicative factor for the age/risk assessments in which they multiply the price escalated 2022 average historical repair order cost by a factor of two. SCE fails to provide a basis or reasoning behind the calculation of the multiplicative factor. The resulting factor doubles the estimated forecasted cost per year.

In developing a recommendation, Cal Advocates took out the line item "DESIGN & INSTALL PEBBLY" which was an outlier. The costs recorded for this line item were in the first five years of the period (2004-2009), and no costs have been recorded since 2009. These costs were also significantly higher than the average line-item cost ($541,215 compared to a $46,524 average). Cal Advocates averages the remaining 12 cost items. Cal Advocates notes SCE escalated prices twice: the first escalation is on the individual line items average (escalation of 53%) and the second escalation occurs for each future forecasted year (2025-2028) based on S&P Global Capital Escalation Factors. Cal Advocates agrees with the latter price escalations but notes in the former escalation that price increases have not escalated by a factor of 1.53 (53% increase) as SCE determined. In Cal Advocates forecast, the costs associated for each line item in a given historical year are escalated to 2022 dollars first. The resulting average yearly costs are converted into 2022 dollars so that the second escalation during years 2025-2028 is accurate (using 2022 as the escalation base year). Cal Advocates forecasts $190,384 through this methodology, which is $643,989 less than SCE's proposal as shown in Table 2.3, above.

[23] SCE's response and associated attachment referenced in Cal Advocates Data Request #001, Question 11a: *Catalina Gas GRC - Piping, etc. estimate.xlsx*

# APPENIDX A

# LIST OF EXHIBITS

| Exhibit No. | Description |
|---|---|
| | |
| 1 | Table 2-1 Capital Forecast Summary |
| 2 | SCE Response to Cal Advocates Data Request #001, Question 5, attachment PubAdv-SCE-001- ST7-EVO Q.05 Answer (1) |
| 3 | Explanation of 510 and 572 Guidelines |
| 4 | Catalina Gas Vaporizer Baseline Condition Assessment Report 2023 |
| 5 | SCE Response to Cal Advocates, Data Request #001, Question 7, attachmentPubAdv-SCE-001-ST7-EVO Q.11.a-c Answer |
| 6 | Cal Advocates Capital Forecast Project 9 Reassessment |

# EXHIBIT 1

## Table 2-1: SCE Capital Expenditures Forecast vs Cal Advocates Recommended (2023-2028)

| | 2023 | | 2024 | | 2025 | | 2026 | | 2027 | | 2028 | | **Total** | | **Cal Advocates < SCE** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SCE | Cal Advocates | SCE | Cal Advocates | SCE | Cal Advocates | SCE | Cal Advocates | SCE | Cal Advocates | SCE | Cal Advocates | SCE | Cal Advocates | |
| PB Anode Bed and Anode Probe Replacement (Cathodic Protection) | $31,100 | $31,100 | $243,000 | $243,000 | | | | | | | | | **$274,000** | **$274,000** | **$0** |
| Tremont Gas System Anode Bed Replacement | | | $50,000 | $50,000 | | | | | | | | | **$50,000** | **$50,000** | **$0** |
| Gas Valves and Piping Relocation (Five Corners City | $15,800 | $15,800 | $264,000 | $264,000 | | | | | | | | | **$280,000** | **$280,000** | **$0** |
| Gas Vaporizer Replacement | | | | | $238,000 | $63,427 | | | | | | | **$238,000** | **$63,427** | **$174,573** |
| LPG Storage Tank Permanent Catwalk | $55,500 | $55,500 | $319,000 | $319,000 | | | | | | | | | **$375,000** | **$375,000** | **$0** |
| LPG Storage Tank PSV/Manifold Replacement | | | $180,000 | $180,000 | | | | | | | | | **$180,000** | **$180,000** | **$0** |
| Gas Valves Replacement | | | | | $238,000 | $238,000 | | | $290,000 | $290,000 | | | **$528,000** | **$528,000** | **$0** |
| Gas Meters Replacement | | | $16,000 | $16,000 | $17,000 | $17,000 | $18,000 | $18,000 | $19,000 | $19,000 | $21,000 | $21,000 | **$92,000** | **$92,000** | **$0** |
| Gas Piping and Other Facility | | | | | $179,000 | $47,162 | $196,000 | $47,480 | $217,000 | $47,750 | $242,000 | $47,992 | **$834,000** | **$ 190,384** | **$643,616** |
| Total | **$102,400** | **$102,400** | **$1,072,000** | **$1,072,000** | **$672,000** | **$365,589** | **$214,000** | **$65,480** | **$526,000** | **$356,750** | **$263,000** | **$68,992** | **$2,851,000** | **$2,032,811** | **$818,189** |

# EXHIBIT 2

# SCE Response to Cal Advocates
# Data Request #001, Question 5, attachment
# PubAdv-SCE-001-ST7-EVO Q.05 Answer (1)

*Southern California Edison*
*A.23-12-011 – 2025 Catalina Gas GRC*

**DATA REQUEST SET P u b A d v - S C E - 0 0 1 - S T 7 - E V O**

**To: Public Advocates Office**
**Prepared by: Richard S Heibel**
**Job Title: Plant Engineer**
**Received Date: 4/26/2024**

**Response Date: 5/10/2024**

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**Question 05:**
Referring to SCE-01, Chapter V, Section C, pp.58-60, for the Pebbly Beach Anode Bed and Anode Probe Replacement, SCE states that the project is expected to begin Q1 and end Q2 of 2024. Please provide detailed descriptions and support for the $80,000 assigned to 2023, and the $150,000 assigned to 2024. Provide a narrative for each project activity. Provide all cost details in excel.

**Response to Question 05:**
SCE's $230,000 forecast for the Pebbly Beach Anode Bed and Anode Probe Replacement included in direct testimony was based on prior cathodic protection system replacements on the Catalina Gas Distribution system, estimates for relocation, price increases for construction and materials, and management judgement.

Since SCE filed its Gas GRC application, it has updated its Pebbly Beach Anode Bed and Anode Probe Replacement project forecast from $230,000 to $274,000. The table below summarizes the 2020-2023 recorded costs and 2024 updated forecast. The $44,000 increase in the project forecast is a result of replacing the 2023 forecast with 2020-2023 recorded costs, receiving an updated vendor construction quote, and updating the real properties, project management, engineering, material, construction, and contingency estimates.

| | 2020-23 Recorded | 2024 Forecast | Total |
|---|---|---|---|
| Real Properties | $31,100 | $18,000 | $49,100 |
| Project Management | - | $25,000 | $25,000 |
| Engineering | - | $2,500 | $2,500 |
| Material | - | $35,000 | $35,000 |
| Construction | - | $140,000 | $140,000 |
| Contingency | - | $22,050 | $22,050 |
| **Total** | **$31,100** | **$242,550** | **$273,650** |
| **Rounded** | **$31,100** | **$243,000** | **$274,000** |

The $31,100 recorded in 2020-2023 represents recorded costs for real properties including, for example, surveying and mapping as part of pre-easement work.

The $243,000 forecast in 2024 represents costs for real properties, project management,

engineering, material, construction, and contingency. Real properties include obtaining the easement. Project management includes overseeing the planning, permitting, design, engineering, procurement, construction, scope, schedule, and cost forecast. Engineering includes capturing construction redlines in the as built set. Material includes the purchase of the new rectifier and anode bed and bringing the mainland material to the island via barge. Construction includes the installation of the new rectifier and anode bed. Contingency is an allowance added to address known risks for this remote island work.

SCE intends to update its forecast for this project and resulting impacts in Rebuttal.

# EXHIBIT 3

## American Petroleum Institute (API)
## Explanation of 510 and 572

Explanation for Footnote 12: American Petroleum Institute (API) Recommended Practices 510 and 572

API 510 is an inspection code developed and published by the American Petroleum Institute (API). It is called the Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration. Certified API 510 Pressure Vessel inspectors must have a broad knowledge base relating to maintenance, inspection, repair, and alteration of pressure vessels. The API 510 examination is designed to determine if individuals have such knowledge.

The outlined API 510 recommended practices cover the maintenance inspection, repair, evaluation for continued use, and the methods for computing the maximum allowable working pressure of pressure vessels constructed in accordance with any of the several editions of the former API-ASME Code for Unfired Pressure Vessels, the several editions of Section VIII of the ASME Boiler and Pressure Vessel Code, other recognized pressure vessel codes, or approved as jurisdictional special. Adoption of this recommended practice as a code does not permit its being used in conflict with any prevailing regulatory requirements.

API 572 is a recommended practice that covers the inspection of pressure vessels. It serves as a fundamental reference for API's Individual Certifications Program (ICP) 510 and API's Process Safety Site Assessment Program (PSSAP). The standard provides guidelines for the inspection, construction, and maintenance of pressure vessels, including those with a design pressure under 15 psig.

The outlined API 572 supplements API 510 by providing pressure vessel inspectors with information that can improve skills and increase basic knowledge of inspection practices. This recommended practice (RP) describes inspection practices for the various types of pressure vessels (e.g. drums, heat exchangers, columns, reactors, air coolers, spheres) used in petroleum refineries and chemical plants. API 572 addresses vessel components, inspection planning processes, inspection intervals, methods of inspection and assessment, methods of repair, records, and reports. API 510 has requirements and expectations for inspection of pressure vessels.

# EXHIBIT 4

# Catalina Gas Vaporizer Baseline Condition Assessment Report 2023

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

# Assessment Report

Generation Department – Asset Management Programs (AMP)

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**Customer:** **Catalina Gas – Eastern Operations**
**Asset** **Propane Gas Vaporizer**
**Date of Report:** **September 12, 2023**

**Brief Description of Work Performed**

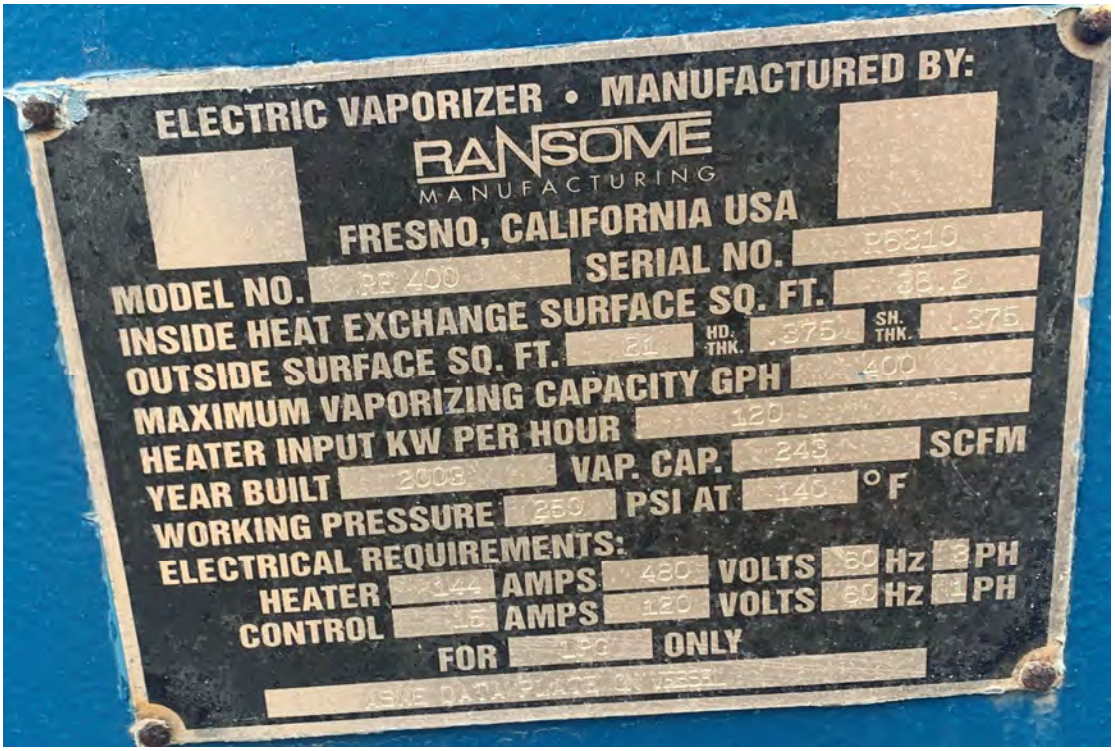
## System Description

Catalina Gas is responsible for supplying Catalina Island with heat energy. This energy is derived from liquified propane gas (LPG) that is diluted with atmospheric air in a pair of air mixers. Diluted propane gas has characteristics like natural gas, allowing service customers to use natural gas appliances. To convert liquid propane to gas, the propane is heated in a vaporizer. The gas supplies the system with the required pressure to motivate the fuel through the piping system eliminating the need for pumps or compressors.

Catalina Gas has a single triple redundant vaporizer. Each vaporizer in the train of 3 has the capacity to supply required heating to meet the needs of the gas distribution system as well as the propane gas powered micro-turbine generators.

Vaporizers were manufactured by Ransome Mfg. in 2003. Each vaporizer has the capacity to vaporizer 400 GPH at a rate of 234 SCFM. Heaters in each vaporizer are 480V – 60hz 3 phase requiring a maxim of 144 amps. Each vaporizer has an independent control and measuring system that is sensitive to system pressure.

Catalina Gas Vaporizer – 3 independent trains




Vaporizer tag _1 of 3

**System Assessment**

AMP Engineering was requested to complete a condition assessment of the Catalina Gas propane gas vaporizer. A physical inspection of the vaporizer was completed, including interviews with local stakeholders familiar with the equipment's operation and maintenance. Review of SAP maintenance history was also utilized in forming a condition score. Assessment follows standard SCE assessment criteria modeled after the HydroAMP / ThermalAMP assessment and scoring criteria. Assessment considered age, operational performance, maintenance history, existing preventative maintenance, and a physical inspection of the equipment.

Assessment Category Comments

- Age
  - Vaporizer age is 20 years as evidenced by the equipment tags stamped with a manufacture data of 2003
  - The vaporizer has no moving parts and a low-pressure vessel. The working component is a heating element. A rudimentary control system that includes 3 redundant pressure sensors and 3 heating elements, one per train. The expected useful life of the equipment is 30 years. Control system would have a useful life of 10 to 15 years.

- Operational Performance
  - The vaporizer is functioning as designed. With only one train needed and 3 trains available, reliability is not a concern.
  - One noted concern is the high electrical demand the unit places when the heating element is activated causing a frequency dip that impacts the running generators and system stability. Consideration should be given to adding a soft start to each heating element. A soft start would control in-rush voltage and current to the heating element allowing the diesel engines time to respond to the additional load. A professionally designed soft start would eliminate the sudden generator frequency drop.

- Maintenance History & PM's
  - A review of historical SAP work orders did not identify specific maintenance on the asset.
  - Discussion with maintenance personnel at the gas plant identified minimal maintenance required. The only corrective noted was the need to calibrate and infrequently replace the pressure transducers.
  - With triple redundancies and the historical reliability of this asset Catalina Gas should continue current maintenance practices.

- Consideration should be given to the addition of a soft-start system to reduce the frequency dip associated with this asset.
- Consideration should be given to the age of the control system and potential obsolescence.

- Physical Inspection
  - A visual physical inspection was completed. No corrosion was noted. The control panel is in good working order. No defects of maintenance items were noted.

Field Guide Assessment

A HydroAMP Field Guide for assessment of the General Equipment was utilized. Standard weighting as recommended by HydroAMP was considered representative.

**Maintenance Recommendations**

After reviewing current operation & maintenance practices combined with the implied reliability of the asset, Catalina Gas should continue current preventative maintenance practices.

Consideration should be given to adding a soft start to each heating element.

Consideration should be given to the age of the control system and its potential obsolescence.

Condition Assessments
- Every five (5) years or,
- After any rehabilitation, or
- Following any event, suggesting the asset may have been compromised.

Assessment Scoring – HydroAMP / ThermalAMP

| Gas Vaporizer Condition Summary | | | | |
|---|---|---|---|---|
| **No.** | **Condition Indicator** | **Score** | **Weighting Factor** | **Total Score** |
| 1 | Age (Score must be 0, 1, 2, or 3) | 3 | 1.000 | 3.000 |
| 2 | Maintenance History | 3 | 0.667 | 2.001 |
| 3 | Operational Performance (Score must be 0, 1, 2, or 3) | 1 | 1.000 | 1.000 |
| 4 | Physical Inspection (Score must be 0, 1, 2, or 3) | 2 | 0.667 | 1.334 |
| | **Well Equipment Condition Index (Condition Index should be between 0 and 10)** | | | 7.335 |

| Vaporizer Based Alternatives | |
|---|---|
| **Condition Index** | **Suggested Course of Action** |
| ≥ 8.0 and ≤ 10 (Good) | Continue O&M without restriction. Repeat condition assessment as needed. |
| ≥ 6.0 and < 8.0 (Fair) | Continue operation but consider reevaluation of O&M practices. Consider further inspections. Repeat condition assessment process as needed. |
| ≥ 3.0 and < 6.0 (Marginal) | Continue operation but reevaluate O&M practices. Perform applicable inspections. Accelerate condition assessment process. Begin planning for replacement/rehabilitation. |
| ≥ 0 and < 3.0 (Poor) | Consultation with experts. Adjust O&M practices as prudent. Begin replacement/rehabilitation process. |

For any questions, please reach out to the AMP group.

SCE GENERATION AMP

References:

# EXHIBIT 5

# SCE Response to Cal Advocates Data Request #001, Question 7, attachment, PubAdv-SCE-001-ST7-EVO Q.11a-c Answer

*Southern California Edison*
*A.23-12-011 – 2025 Catalina Gas GRC*

**DATA REQUEST SET P u b A d v - S C E - 0 0 1 - S T 7 - E V O**

**To: Public Advocates Office**
**Prepared by: Ryan Stevenson**
**Job Title: Senior Advisor**
**Received Date: 4/26/2024**

**Response Date: 5/10/2024**

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**Question 11.a-c:**
Referring to SCE-01, Chapter V, Section C, pp.72-74, for the Piping And Other Facility Infrastructure Replacement, please provide the following:

a) Provide all supporting documentation and explain the methodology behind the cost estimation of $150,000 per year plus escalation over the period of 2025-2028.

b) A list of critical assets that SCE has currently identified and established a risk score for since 2021 along with their current condition. If the assets have already been assigned an expected cost of repair/replacement, please include the expected cost.

c) A list of critical assets that SCE expects to conduct an assessment on in 2024. If a vendor has been assigned to conduct an assessment on one of the critical assets, please specify with "Yes" or "No".

**Response to Question 11.a-c:**

a) See attached Excel file. The cost estimate methodology consisted of reviewing historic capital projects not captured in other capital forecasts, applying price escalation since 2020, and factoring in asset age/risk and condition assessments.

b) See attachments that include assets with condition assessment. The attachment names are listed here for convenience:
   a. Catalina Gas AHC Dec 2022
   b. Catalina Gas AHC July 2023
   c. LPG Receiving Station – Assessment Report
   d. Catalina Gas Chromatograph Assessment Report
   e. Catalina Gas – Vaporizer – Assessment Report
   f. Catalina Gas – Heat Trace – Assessment Report
   g. Catalina Gas Plant ESD Assessment Report
   h. Catalina Gas Utility Asset Assessments

c) In 2024, SCE will be conducting asset condition assessments of the gas air mixer line insulation, gas system main pipeline, and main gas valves. The assessment of the air mixer lines will be conducted by a third-party vendor whereas the gas system main pipeline and main gas valves will be completed by SCE personnel.

# EXHIBIT 6

## Cal Advocates Capital Forecast Project 9 Reassessment

CAL ADVOCATES CAPITAL FORECAST PROJECT 9 REASSESSMENT

Repair and other orders not captured in other forecast costs (Other - Repair Orders Table)

| | HISTORICAL PERIOD (2004 - 2022) | | | | | | | | | | | | | | | | | | | | | SCE FORECAST | CAL ADVOCATES FORECAST | FORECAST PERIOD (2023-2028) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Description | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total | CAL ADVOCATES ADJUSTMENT -- ESCALATION STEP 1 | ESCALATION STEP 2 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total after Step 2 Escalation |
| SCADA | $ - | $ - | $ 34,702 | $ 35,289 | $ 139,840 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 209,831 | $ 349,351.75 | | | | | | | | |
| AVALON GAS DISTR LINE | $ - | $ - | $ - | $ 33,814 | $ 129,084 | $ 5,776 | $ (157,601) | $ (1,864) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 9,210 | $ 23,518.39 | | | | | | | | |
| DESIGN & INSTALL PEBBLY ** | $ 34,562 | $ 56,210 | $ 348,697 | $ 53,892 | $ 25,722 | $ 22,131 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 541,215 | $ 996,230.32 | | | | | | | | |
| BEACON,NEW C | $ 2,836 | $ 4,811 | $ 13,115 | $ 314 | $ (20,812) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 265 | $ 6,650.46 | | | | | | | | |
| PEBBLY BEACH MOLE | $ - | $ - | $ - | $ 5,513 | $ 100 | $ - | $ (223) | $ (69) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 5,321 | $ 9,324.19 | | | | | | | | |
| DIG-IN,JORDAHL CON | $ - | $ - | $ - | $ 304 | $ 1,375 | $ - | $ - | $ - | $ - | $ (242) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,437 | $ 2,375.73 | | | | | | | | |
| FLOOD/MUDSLIDES M | $ - | $ - | $ - | $ 4,173 | $ 311 | $ 396 | $ - | $ - | $ (5,180) | $ - | $ - | $ 34 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (265) | $ 825.45 | | | | | | | | |
| Triana- Time and Material | $ - | $ - | $ - | $ - | $ - | $ - | $ 13,836 | $ 3,271 | $ 484 | $ (141) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 17,450 | $ 27,270.33 | | | | | | | | |
| 232 W.Whittley, Grant Am | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,190 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,190 | $ 1,876.35 | | | | | | | | |
| 333 Wrigley Terrace Roa | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,473 | $ 1,443 | $ - | $ - | $ - | $ - | $ - | $ - | $ 4,916 | $ 6,652.41 | | | | | | | | |
| GAS PLANT CHROMATOGRAPH & OVEN REPL | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 63,731 | $ 4 | $ - | $ - | $ - | $ - | $ 63,735 | $ 85,418.32 | | | | | | | | |
| iPads-Catalina Gas-Oper Rounds | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 7,908 | $ (45) | $ 7,863 | $ 8,707.54 | | | | | | | | |
| EOGCC REMOTE WORKSTATION | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,364 | $ 19,421 | $ 21,785 | $ 22,037.54 | | | | | | | | |
| Total | $ 37,398 | $ 61,021 | $ 396,515 | $ 133,300 | $ 275,620 | $ 28,304 | $ (142,798) | $ 1,339 | $ (4,696) | $ (384) | $ - | $ 3,507 | $ 1,443 | $ 63,731 | $ 4 | $ - | $ - | $ 10,272 | $ 19,376 | $ 883,951 | $ 544,008.45 | | | | | | | | |
| Minus "DESIGN AND INSTALL PEBBLY" Costs) | $ 2,835.99 | $ 4,811.04 | $ 47,817.45 | $ 79,407.44 | $ 249,897.88 | $ 6,172.71 | $ (142,798.09) | $ 1,338.64 | $ (4,695.72) | $ (383.58) | $ - | $ 3,507.37 | $ 1,442.88 | $ 63,731.11 | $ 3.83 | $ - | $ - | $ 10,271.90 | $ 19,375.91 | $ 342,737 | **$ 28,632.02** | | | | | | | | |
| Handy Whitman Cost Inflation Index Factors (2022 Base Year) | 0.488 | 0.517 | 0.541 | 0.573 | 0.625 | 0.607 | 0.634 | 0.662 | 0.677 | 0.686 | 0.706 | 0.735 | 0.749 | 0.746 | 0.782 | 0.797 | 0.818 | 0.903 | 1.000 | 1.000 | | S&P GLOBAL ESCALATION RATES | 1.146 | 1.096 | 1.087 | 1.098 | 1.107 | 1.116 | |
| 2022 Dollars Including "DESIGN AND INSTALL PEBBLY" Costs | $ 76,642.34 | $ 117,933.51 | $ 733,588.16 | $ 232,616.63 | $ 440,645.01 | $ 46,648.28 | $ (225,221.05) | $ 2,021.18 | $ (6,938.20) | $ (559.53) | $ - | $ 4,773.05 | $ 1,926.00 | $ 85,413.42 | $ 4.90 | $ - | $ - | $ 11,369.17 | $ 19,375.91 | $ 883,951 | $ 81,065.20 | | | | | | | | |
| 2022 Dollars Excluding "DESIGN AND INSTALL PEBBLY" Costs | $ 5,812.00 | $ 9,298.18 | $ 88,466.57 | $ 138,570.97 | $ 399,522.55 | $ 10,173.34 | $ (225,221.05) | $ 2,021.18 | $ (6,938.20) | $ (559.53) | $ - | $ 4,773.05 | $ 1,926.00 | $ 85,413.42 | $ 4.90 | $ - | $ - | $ 11,369.17 | $ 19,375.91 | $ 342,736.76 | **$ 28,632.02** | | $ 32,799.90 | $ 31,377.72 | $ 31,117.93 | $ 31,435.97 | $ 31,705.23 | $ 31,947.31 | **$ 190,384.06** |
| | | | | | | | | | | | | | | | | | | | | $ 46,524 | | | $ 16,044.41 | $ 47,162.34 | $ 47,480.37 | $ 47,749.63 | $ 47,991.72 | $ 190,384.06 | |
| | | | | | | | | | | | | | | | | | | | | Price increase since 2020 (53%) | $ 71,181 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | Age of assets / risk assessments | $ 142,363 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | Round | $ 150,000 | | | | | | | |

**Cal Advocates excludes this line item from calculations*

CALCULATION STEPS:

1. Take each yearly total expenditure in SCE's Other Repair Orders Table and Subtract Line 7 "DESIGN AND INSTALL PEBBLY". Cal Advocates deems this line item an outlier as well as a cost not applicable to capital infrastructure replacements outlined in SCE's testimony for forecasted project #9. Cal Advocates does not include associated costs with this line item in calculations.
2. Convert each yearly total expenditure to 2022 dollars using the provided Handy Whitman Cost Inflation Index Table. This escalates each expenditure to the correct 2022 dollar amount and is labeled as ESCALATION STEP 1.
3. Take the average of the 19 yearly expenditures (2004-2022) in 2022 Dollars to get the yearly average.
4. Multiply the yearly average in 2022 dollars by the escalation rate associated to each future year (2023 - 2028) to get the forecasted future yearly expenditures. This escalates the 2022 average yearly dollar amount over the previous 19 years and converts it to each future forecasted year dollar amount. This is labeled as ESCALATION STEP 2.
5. Add each forecasted future yearly expenditure together to get the total dollar amount of $190,384. To incorporate the 2023 and 2024 forecasted costs into the 2025-2028 recovery, one last step is taken by first adding the 2023 and 2024 costs together and dividing by the four remaining years to get the forecasted recovery cost for each year (2025-2028). Then adding the costs evenly to each year, resulting in $47,162 for 2025, $47,480 for 2026, $47,750 for 2027, and $47,992 for 2028.

# APPENDIX B

# QUALIFICATIONS OF WITNESSES

# QUALIFICATIONS AND PREPARED TESTIMONY
# OF
# SCOTT LOGAN

Q.1 Please state your name and business address.

A.1 My name is Scott Logan. My business address is 505 Van Ness Avenue, San Francisco, California, 94102.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed by the Public Advocates Office at the California Public Utilities Commission (Cal Advocates) as the Program and Project Supervisor, Natural Gas Section, Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.

A.3 I received a Bachelor of Arts Degree in Economics from San Francisco State University in 1985. I was a Public Utilities Regulatory Analyst for Cal Advocates (and its predecessors) from 1987 until 2020 when I assumed my current position. As an Analyst, I worked on a variety of energy and electricity issues, including long-term planning and procurement, electric cost of service, energy efficiency, transmission planning and certification, nuclear power, and renewable resource policy. I testified on these and other issues on behalf of Cal Advocates in numerous Commission proceedings.

In my current position, I supervise the Cal Advocates staff working on natural gas issues and ratemaking.

Q.4 What portions of the Cal Advocates' Report on SCE's Test Year 2025 General Rae Case, A.23-12-011 are you sponsoring?

A.4 I am sponsoring Chapter 1

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

# QUALIFICATIONS AND PREPARED TESTIMONY
# OF
# SAMUEL TOPPER

Q.1 Please state your name and business address.

A.1 My name is Samuel Topper. My business address is 505 Van Ness Avenue, San Francisco, California, 94102.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed as a Public Utilities Regulatory Analyst in the Public Advocates Office at the California Public Utilities Commission (Cal Advocates), Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.

A.3 I have a Bachelor of Arts and Sciences Degree in Economics with a Statistical Modeling minor from Oberlin College. After graduating in May of 2023, I worked as a temporary financial analyst and as an Administrative Officer at the University of California, Irvine before receiving my full-time job at the California Public Utilities Commission in December of 2023. During my time in the Public Advocates Office and specifically the Energy Cost of Service and Natural Gas Branch, I have worked on a variety gas issues outside of the Catalina GRC, including long-term gas planning rulemakings, a Research Development and Demonstration Plan advice letter, cost allocation and rate design applications, and gas transmission and storage issues. I have also worked on producing evidence and modeling the regressive nature of monthly household gas utility bills by California Investor-Owned Utilities (IOU's) at the zip code level.

Q.4 What portions of the Cal Advocates' Report on SCE's Test Year 2025 General Rae Case, A.23-12-011 are you sponsoring?

A.4 I am sponsoring Sections 2.2.1-2.2.9 of Chapter 2.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.

# QUALIFICATIONS AND PREPARED TESTIMONY
# OF
# ERIC VO

Q.1 Please state your name and business address.

A.1 My name is Eric Vo. My business address is 505 Van Ness Avenue, San Francisco, California, 94102.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed as a Public Utilities Regulatory Analyst in the Public Advocates Office at the California Public Utilities Commission (Cal Advocates), Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.

A.3 I have a Bachelor of Science in Society and Environment with a minor in Public Policy from University of California, Berkeley.

Prior to my employment with Cal Advocates, I worked with an environmental nonprofit as a project manager focusing on policy research and advocacy. Since joining Cal Advocates in 2022, my responsibilities have included review of PG&E's zonal electrification, review of various gas advice letters and procurement matters, as well as represent Cal Advocate in the natural gas utilities' biomethane Procurement Advisory Meetings. I have also conducted various forecasting and project modeling on the natural gas system focusing on residential demand, price volatility, and bill rate analyses.

Q.4 What portions of the Cal Advocates' Report on SCE's Test Year 2025 General Rae Case, A.23-12-011 are you sponsoring?

A.4 I am sponsoring Sections 2.1 of Chapter 2.

Q.5 Does that complete your prepared testimony?

A.5 Yes, it does.