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**REVISED**

**PREPARED DIRECT TESTIMONY OF**  
**LINDEN S. OLAH**  
**ON BEHALF OF**  
**SOUTHERN CALIFORNIA GAS COMPANY (U 904 G)**

**(CHAPTER IV – DEPLOYMENT)**

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

July 2, 2026~~December 30, 2025~~

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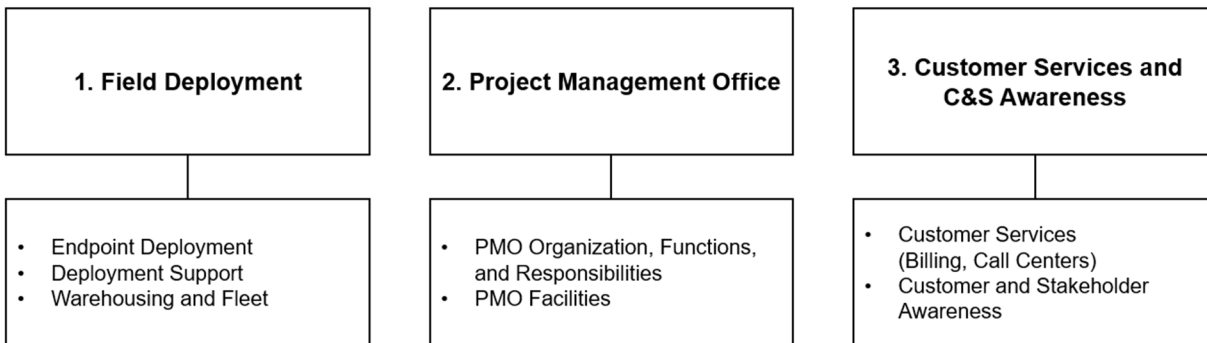
1 SoCalGas has designed a deployment approach that incorporates strategically located  
2 warehousing, a properly scaled and maintained fleet, and methodical scheduling, routing, and  
3 supervisory support.

4 SoCalGas is requesting recovery of ~~\$224.140~~\$205.115 million in direct operating and  
5 maintenance (O&M) costs and ~~\$273.438~~\$283.261 million in direct capital costs, totaling  
6 ~~\$497.577~~\$488.376 million in direct costs for the deployment activities of the AMIR Project.<sup>2</sup>  
7 The cost forecasts, organizational structure, and implementation approach presented in my  
8 testimony reflect a prudent and cost-efficient plan to execute the system-wide replacement.

## 9 **II. THE AMIR PROJECT DEPLOYMENT AREAS**

10 The AMIR Project Deployment is categorized into the following three major areas: (1)  
11 Field Deployment, (2) Project Management Office (PMO), and (3) Customer Services and  
12 Customer and Stakeholder (C&S) Awareness (*see* Figure IV-1).

13 **Figure IV-1 – AMIR Deployment Overview**



### 14 **A. Field Deployment**

15 Field Deployment represents a large and resource intensive component of the AMIR  
16 Project, encompassing all field operational activities required to replace more than six million  
17 modules across SoCalGas’s service territory. These activities include field technician (or  
18 “installer”) training, field installation and removal of modules, quality assurance (QA), material  
19 quality management (MQM), warehousing, and fleet services.  
20

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<sup>2</sup> Direct costs are presented in unescalated and unloaded dollars, including the base cost of labor, materials, and contracts before the application of escalation and overheads.

1                   **1.     Endpoint Deployment**

2                   Endpoint Deployment involves the physical removal and installation of replacement  
3 modules across SoCalGas’s service territory.<sup>3</sup> Endpoint Deployment also encompasses field  
4 technician training, QA of installations, and related support activities that will maintain safety,  
5 efficiency, and operational consistency throughout field deployment. The primary deployment  
6 window for endpoint replacement is scheduled between 2030 and 2034, with limited installations  
7 beginning in 2029.

8                   **a)     Field Training**

9                   To support Endpoint Deployment, SoCalGas will develop a comprehensive, two-tiered  
10 field training program for both newly hired and existing field technicians. The training program  
11 will be informed by the initial AMI deployment,<sup>4</sup> comparable company programs, and existing  
12 SoCalGas training curriculum.

- 13                   • New Technician Training: SoCalGas anticipates ~~over~~ approximately 1,000 new  
14 field technicians will participate in a 14-day training program over the  
15 deployment period (accounting for field technician turnover), delivered in cohorts  
16 of 14 field technicians by a two-person instructor team. This centralized training  
17 program will begin in 2029, ahead of module installation, to prepare the  
18 workforce for full deployment in 2030. The curriculum will include the following  
19 areas of instruction:
- 20                   ○ Gas safety procedures and identification of abnormal operating conditions;
  - 21                   ○ Meter reading and coding;
  - 22                   ○ Proper hand tool use and maintenance;
  - 23                   ○ Gas diversion detection;
  - 24                   ○ Removal of legacy modules and installation of new modules; and
  - 25                   ○ Customer interaction and professionalism.
- 26                   • Existing Field Technician Training: In addition to the New Technician Training  
27 program, existing Customer Service Field (CSF) and Gas Distribution technicians  
28 who currently perform module removals and installations will receive a focused  
29 four-hour training session. This course will include the safe removal of legacy  
30 modules, proper installation of replacement modules, and any new policies or  
31 procedures specific to AMIR deployment. Sessions will be delivered by the

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<sup>3</sup> For more information regarding the technology installed, refer to the Direct Testimony of Amy D. Vulin (Chapter III).

<sup>4</sup> For background on the initial AMI system, refer to the Direct Testimony of Jennifer L. Walker (Chapter I).

1 instructor team and conducted at existing SoCalGas bases across the service  
2 territory.

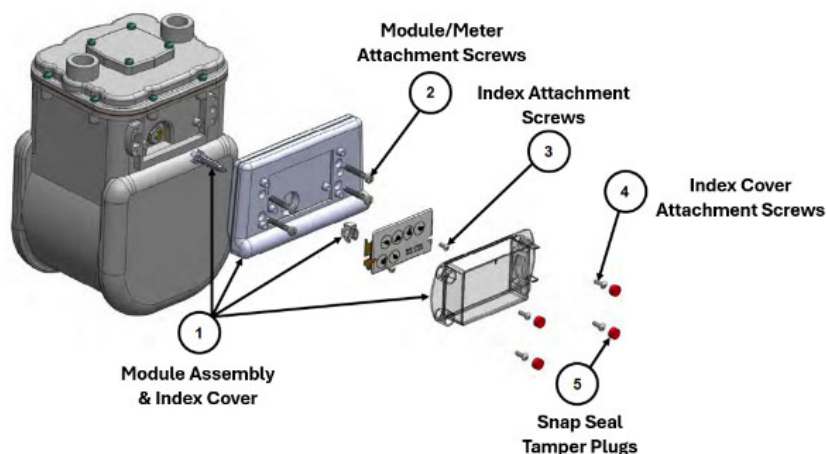
3 **b) Endpoint Installation and Removal**

4 Installation and removal activities constitute the largest component of Field Deployment.<sup>5</sup>  
5 SoCalGas will replace more than six million modules across its territory using a structured mass  
6 deployment approach, organizing field scheduling and routing geographically to optimize  
7 efficiency and reduce travel time. This deployment sequence will be similar to the initial AMI  
8 deployment, beginning with densely populated urban and suburban areas before progressing to  
9 regions with lower module density. Mass deployment will span approximately five years (*see*  
10 Table IV-1).

11 **Table IV-1**  
12 **AMIR Endpoint Installation Quantities by Year**

Year	Endpoint Installation Quantity
2029	25,000
2030	1,200,000
2031	1,800,000
2032	1,700,000
2033	1,300,000
2034	275,000
<b>Total</b>	<b>6,300,000</b>

13 **Figure IV-2**  
14 **SoCalGas Meter and Module Hardware Components**  
15



16  
<sup>5</sup> The costs for these modules and equipment are included in the Direct Testimony of Amy D. Vulin (Chapter III).

1 While the majority of endpoint installation and removal activities involve standard meter  
2 module replacements across residential, commercial, and industrial customer classes (*see* Figure  
3 IV-2), additional device types are also included in the deployment scope. The additional device  
4 types include new modules installed on electronic pressure monitors (EPM), electronic volume  
5 correctors (EVC), and electronic correctors (EC), which enable transmission of pressure and  
6 volume data through the AMI system. With regards to the approximately 4,500 ECs within the  
7 SoCalGas system, all must be replaced as the instrument design prohibits replacement of the  
8 module. This process requires pre-installation of the module on the EC, which is then sent to the  
9 field for installation as a single unit. This process is more involved than a standard module  
10 replacement and requires additional handling time to complete safely and accurately.

11 In addition, based on experience from SoCalGas's initial AMI deployment,  
12 approximately two percent of meters (approximately 126,000) are expected to require full meter  
13 replacement due to breakage. Breakage occurs when screws securing the communication  
14 module to the meter break within the asset, preventing the installation of a new module and  
15 requiring the replacement of the entire meter.

16 Separately, SoCalGas anticipates that approximately 30 percent of meters installed within  
17 curb meter boxes<sup>6</sup> (approximately 61,500) will require temporary removal and reinstallation to  
18 allow installation of the replacement module. In these instances, due to space constraints within  
19 the curb meter box enclosure, the module cannot be removed in place as it is positioned too close  
20 to the curb meter box wall or other equipment for technicians to access the screws securing it.  
21 This process is more involved than instances where the module is readily accessible due to  
22 confined working space and added handling time.

23 Installation and removal activities will be supported by a Field Safety Advisor, Field  
24 Supervisors, Area Managers, and Project Managers who coordinate daily assignments, complete  
25 safety observations for installers and evaluate safety trends, oversee scheduling and installation  
26 performance, and address variances in expected daily installation rates.

### 27 **c) Quality Assurance**

28 QA activities consist of independent field verification of installation work that promotes  
29 safety and consistency throughout the AMIR deployment. QA activities validate that field

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<sup>6</sup> Curb meter boxes are below-ground, reinforced enclosures designed to house gas meters and other operational equipment.

1 installations comply with established procedures and technical standards, enabling the early  
2 identification of issues and reducing the risk of systemic errors during large-scale field  
3 operations. QA Specialists will conduct randomized inspections of approximately five percent  
4 of completed installations, reviewing work quality, adherence to defined installation procedures,  
5 and accuracy of recorded meter data. Each QA Specialist is projected to complete approximately  
6 65 inspections per day, providing representative coverage across field installers and geographic  
7 regions.

8 Inspection results will be reviewed by QA Team Leads who will analyze trends, identify  
9 recurring issues, and coordinate with Field Supervisors and Instructors to address issues and  
10 reinforce training. This structure supports continuous performance monitoring and creates a  
11 feedback loop between field execution, training, and quality management. As installation  
12 volumes scale during the mass deployment period, QA personnel levels will be staffed  
13 proportionally at each warehouse location.

## 14 **2. Deployment Support**

15 Deployment Support includes MQM, where team members validate equipment design  
16 and production quality, and Back Office Support, which provides technical support, operational  
17 analysis, centralized scheduling, dispatch coordination, and administrative management for field  
18 operations.

### 19 **a) Material Quality Management**

20 The MQM workstream provides the technical validation and certification necessary to  
21 confirm that new modules meet design, safety, and performance specifications prior to and  
22 during mass production. This process establishes a rigorous quality framework that minimizes  
23 the risk of technical defects and supports consistent production of functioning modules from the  
24 technology vendor.

- 25 • Phase 1- Pre-Production Quality Management (2026 – 2029): The first phase of  
26 MQM focuses on design and certification prior to mass manufacturing. Design  
27 activities include module design review, form-fit-function analysis, prototype  
28 testing, and first-article inspection to verify that each component meets  
29 installation and operational standards. First-article qualification validates that  
30 early production samples match approved design specifications and are ready for  
31 full-scale manufacturing. In addition, once the prototype is approved, SoCalGas  
32 engineers will conduct functional and performance testing, American National  
33 Standards Institute (ANSI) compliance verification, and vendor factory  
34 certification. Factory certification involves on-site assessments of vendor

1 manufacturing processes to confirm that production lines can consistently produce  
2 modules meeting SoCalGas’s technical requirements.

- 3 • Phase 2 – Production Quality Management (2029 – 2034): Once full production  
4 begins, SoCalGas will continue MQM through ongoing quality verification of  
5 modules delivered for installation. SoCalGas engineers will perform statistical  
6 sampling and inspection of each production batch for more than six million  
7 modules to confirm adherence to performance standards. Sampled modules will  
8 undergo functional testing, visual inspection, and validation against factory data  
9 to verify adherence to established design requirements. Inspection results will be  
10 reviewed by an MQM Team Lead. This continuous verification process supports  
11 the reliability of equipment used in installation and the integrity of the AMIR  
12 Project deployment supply chain.

### 13 **b) Deployment Back-Office Support**

14 Deployment Back-Office Support serves as the central coordination hub for field  
15 deployment, providing the administrative, logistical, and data-management backbone for field  
16 operations. These functions coordinate daily field activity, maintain workforce schedules, and  
17 track installation performance across SoCalGas’s service territory. Key responsibilities include  
18 work-order routing, scheduling, dispatch coordination, records management, payroll processing,  
19 and meter data validation. Dedicated back-office personnel will include.

- 20 • Dispatchers: Manage day-to-day routing of field work orders and coordinate  
21 directly with the installation workforce, warehouse teams, and call-center staff to  
22 optimize coverage and response times.
- 23 • Technical Advisors: Resolve complex technical issues such as equipment damage,  
24 connectivity problems, or field-reported defects and support the development and  
25 deployment of updated training materials to address recurring challenges.
- 26 • Deployment Analysts: Track, report, and analyze operational performance and  
27 measure outcomes to develop actionable insights that inform deployment strategy  
28 and decision-making.
- 29 • Administrative Associate: Handle records, data entry, payroll processing, and  
30 budget reporting.
- 31 • Deployment Schedulers: Analyze forecasted and existing workloads against  
32 available resources to optimize workforce utilization, resolve workload issues,  
33 and reinforce adherence to project timelines.
- 34 • Meter Data Validation Analyst: Confirm the accuracy of the newly installed  
35 module read against the meter index read. Validation is performed by cross-  
36 referencing data transmitted by the module against information in the work order  
37 management system. If discrepancies are identified, technicians will follow  
38 established remediation procedures to address the issue.

1 Deployment Back-Office Support also provides tracking of installation progress,  
2 workforce utilization, and customer appointment completion rates. Their coordination enables  
3 consistent communication across workstreams and supports adherence to project milestones and  
4 schedule.

### 5 **3. Warehousing & Fleet**

#### 6 **a) Warehousing**

7 Warehousing activities support the physical storage, handling, and distribution of  
8 modules, materials, tools, and equipment required for the AMIR Project deployment. These  
9 facilities will serve as regional operations bases for installers, QA Specialists, and field support  
10 staff throughout the installation period. Warehouses will also provide staging locations for  
11 modules, meters, instruments, and ancillary materials. The number and size of warehouse sites  
12 will vary over time, ramping up during the peak installation years and scaling down as regional  
13 deployment concludes. This warehousing approach is designed to provide the right level of  
14 coverage and capacity at each stage of deployment while minimizing long-term lease  
15 obligations.

- 16 • Leasing and Permitting: SoCalGas will lease temporary warehouse facilities  
17 across its service territory to support the mass replacement of more than six  
18 million modules. Each leased site will meet local zoning, environmental, and  
19 permitting requirements to accommodate field staff, material storage, and  
20 administrative functions, as appropriate. Leasing and permitting planning  
21 activities begin in 2027 and 2028, with the first facilities coming online to support  
22 initial deployment of 25,000 meters in 2029. Additional sites will be established  
23 as deployment expands regionally between 2030 and 2032, corresponding to the  
24 peak installation period. As installation volumes taper in 2033 and 2034,  
25 warehouse operations will be systematically consolidated and decommissioned to  
26 align with the completion of field work in each region.
- 27 • Setup and Decommissioning of Leased Space: Activities include all labor and  
28 materials required to establish operational warehouse environments. Setup  
29 includes the creation of office space and dedicated areas for field installers, along  
30 with the installation of shelving, lockers, and equipment for field and office staff,  
31 as well as network technology, audiovisual, and safety systems.  
32 Decommissioning activities will occur at the end of each warehouse's deployment  
33 cycle and will include restoring facilities to pre-leased conditions as needed (e.g.,  
34 removing temporary infrastructure).
- 35 • Material Handling: Covers the day-to-day operations that support the movement  
36 and management of deployment materials. Key activities include:
  - 37 ○ Receiving, staging, and issuing modules and meters to field technicians;

- Collecting and processing removed modules and meters returned from the field; and
- Overseeing waste handling and recycling operations and managing hazardous or salvageable materials appropriately.
- **Inventory Management:** Oversees tracking of modules, instruments, parts, tools, and consumables used throughout the deployment period. Inventory levels are monitored against forecasted installation volumes to maintain adequate supply while avoiding excess stock. Standardized reporting allows the PMO and Field Deployment teams to monitor material usage and forecast replenishment needs. Upon completion of deployment in each region, inventory will be reconciled, and residual materials will be re-distributed for ongoing operations, as needed.

**b) Fleet**

Fleet includes fleet services and vehicles to provide the transportation resources necessary to support AMIR Deployment activities across the SoCalGas service territory. Vehicles are required for installers, QA Specialists, Field Supervisors, and Area Managers. The fleet composition and quantity are based on workforce sizing requirements aligned with the projected installation volumes during the deployment period from 2029 through 2034. Vehicle types and configurations have been selected based on safety and operational and cost efficiencies, while supporting the logistical needs of the field workforce. The following guidelines will be used to assign vehicles to crew:

- **Field Technicians:** Mid-size utility trucks will be assigned to field installers. These vehicles will provide adequate cargo space for daily module inventory, tools, and safety equipment while maintaining fuel efficiency and maneuverability within urban and suburban neighborhoods.
- **Quality Assurance, Area Managers, and Field Supervisors:** Sedans and compact SUVs will be assigned to QA Specialists, Area Managers, and Field Supervisors, who primarily conduct inspections and safety observations rather than material transport.

**B. PMO**

The PMO’s primary role is to maintain cross-functional alignment, facilitate timely decision-making, and support governance through project data, reporting, and project controls. PMO activities will span the entire project period (2025 through 2034), with staffing levels adjusted to align with key milestones.

**1. PMO Organization, Functions, and Responsibilities**

The PMO will manage functions required to coordinate a large, multi-year technology and field implementation program. Key PMO responsibilities include:

- 1 • Project Planning and Scheduling: Involves developing and maintaining the  
2 integrated master schedule that coordinates all AMIR Project activities, including  
3 technology readiness, warehouse mobilization, training, and field installation.
- 4 • Budgeting and Cost Control: Includes tracking actual costs against authorized  
5 budgets, coordinating cost reporting, and supporting financial reviews.
- 6 • Performance Monitoring: Involves collecting and analyzing Key Performance  
7 Indicators (KPIs) related to schedule adherence, installation rates, and workforce  
8 utilization.
- 9 • Vendor and Contract Management: Involves supporting procurement, onboarding,  
10 and coordination of external vendors for field operations, technology integration,<sup>7</sup>  
11 and support services.
- 12 • Change and Project Management: Includes project management (e.g., scope,  
13 schedule, resources), coordinating issue escalation, and facilitating structured  
14 change control.
- 15 • Cross-Workstream Coordination: Includes coordinating activities across Field  
16 Deployment, Customer Services and C&S Awareness, and Technology, to  
17 maintain alignment.
- 18 • Records Management: Includes maintaining and managing AMIR Project records.

## 19 **2. Project Facilities**

20 Facilities are associated with leasing and maintaining office space to accommodate PMO  
21 and management personnel who will require workspace, conference rooms, and supporting  
22 infrastructure such as telecommunications and secure network connectivity.

### 23 **C. Customer Services and C&S Awareness**

24 Customer Services and C&S Awareness include AMIR customer billing, customer  
25 contact support services, and customer and stakeholder awareness throughout the deployment  
26 period. These activities are critical to maintaining reliable billing operations, addressing  
27 customer inquiries, and supporting safe and efficient access to gas meters during module  
28 replacement. This area is organized into two categories: (1) Customer Services, and (2) C&S  
29 Awareness.

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<sup>7</sup> For additional information regarding AMIR Project technology activities, refer to the Direct Testimony of Amy D. Vulin (Chapter III).

1                   **1. Customer Services**

2                   **a) AMIR Customer Billing Support**

3                   Customer Billing involves activities required to manage AMIR related billing exceptions<sup>8</sup>  
4 caused by data discrepancies resulting from module replacements and sometimes network or  
5 system issues occurring from 2029 through 2034. During deployment, changes in modules will  
6 lead to billing exceptions. Analysts will review and resolve these billing exceptions, verify data  
7 integrity, and make necessary billing adjustments. AMIR-related billing exceptions are expected  
8 to track closely with installation volumes, increasing during peak replacement years and tapering  
9 as deployment concludes.

10                   **b) AMIR Call Center Support**

11                   As experienced in the original Advanced Meter deployment, field activity related to  
12 module replacements, and proactive customer engagement efforts described later in this  
13 testimony, is expected to increase customer inquiries. SoCalGas will staff a call center support  
14 team to handle AMIR-related questions. This call center support will handle customer inquiries  
15 related to scheduling, installation activity, meter access coordination, billing exceptions, and  
16 general project information. AMIR-related calls are expected to track closely with installation  
17 volumes, increasing during peak replacement years and tapering as deployment concludes. To  
18 manage this demand efficiently, SoCalGas will optimize call routing through automated tools  
19 that allow customers to self-direct their calls and limit demand for support from a live agent.  
20 These call center resources will operate as an integrated support function for the AMIR Project,  
21 providing timely responses to customers while maintaining service quality throughout the  
22 deployment period.

23                   **2. C&S Awareness**

24                   C&S Awareness efforts will provide information and updates regarding the AMIR  
25 Project to customers, communities, and external stakeholders throughout the deployment period.  
26 These activities are designed to promote public and workforce safety, customer awareness, and  
27 coordination as field work progresses across SoCalGas’s service territory. The C&S Awareness  
28 Team will develop and execute comprehensive communication campaigns, outreach programs,

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<sup>8</sup> A “billing exception” generally refers to any situation where a customer’s bill cannot be automatically generated or processed through the normal billing system workflow, usually because of inconsistent, abnormal, or a lack of data that requires manual review or correction before the bill can be issued.

1 and multilingual notifications. The effort will build upon SoCalGas’s existing Safe Access  
2 campaign, which educates customers about field personnel identification and access procedures.  
3 These activities are also intended to improve operational efficiency by increasing customer  
4 awareness and enhancing the likelihood of successful first-attempt access for field technicians.

5 Key activities include:

- 6 • Public Awareness and Safety Messaging: Communicate the purpose of the AMIR  
7 Project, promote safety awareness, and inform customers about the presence of  
8 SoCalGas personnel on their property.
- 9 • Notifications: Use direct mail, doorhangers, text alerts, traditional earned media,  
10 and digital tools to provide advance notice of upcoming module replacements.
- 11 • Multilingual and Targeted Campaigns: Deliver tailored messages by region,  
12 language, and customer type to promote understanding and participation.
- 13 • Stakeholder Awareness: Coordinate with community-based organizations, city  
14 officials, government agencies, and homeowner associations to support meter  
15 access and mitigate disruptions to module deployment.

### 16 **III. FORECASTED COSTS AND METHODOLOGY**

#### 17 **A. Overview of Cost Forecast Methodology & Assumptions**

18 SoCalGas developed the deployment cost forecast using a range of inputs, including  
19 labor estimates, vendor data, and subject matter expertise, to produce data-driven and reasonable  
20 cost estimates for the deployment activities associated with the AMIR Project. The following  
21 describes the process or categorization used to develop the deployment cost forecast for the  
22 AMIR Project. Additional details are provided in the workpapers supporting my testimony.

- 23 • Functional Decomposition: SoCalGas first defined the scope and work  
24 requirements for each area to clearly identify all activities necessary for  
25 implementation. SoCalGas subject matter experts (SME) and consultants  
26 collaborated to review the scope of work. Each AMIR deployment component  
27 was grouped into specific activities and cost categories – AMIR Field  
28 Deployment, AMIR PMO, and AMIR Customer Services and C&S Awareness.
- 29 • Bottom-Up Cost Estimation: SoCalGas then applied a detailed, bottom-up  
30 estimation process to quantify costs for each activity. Labor hours, material,  
31 vendor costs, and other associated cost elements were estimated using historical  
32 performance, comparable company projects, and current market data (data from  
33 outside sources that reflect prevailing industry prices or wage rates). Quantities  
34 such as vehicle leases, warehousing material, and installer tools were based on  
35 headcount forecasts which align with anticipated installation volumes and timing.
- 36 • Labor Costs: Labor cost assumptions were developed through coordination with  
37 SMEs and are generally based on the number of full-time equivalent employees  
38 multiplied by the annual labor rate for the relevant job classification.

- 1 • Non-Labor Costs: Non-Labor costs were developed using a combination of  
2 current vendor rates, market data, and SoCalGas SME input. Estimates reflect  
3 experience and data from the initial AMI deployment, supplemented by vendor  
4 Requests for Information (RFI), consultant estimates, historical actuals, and  
5 invoices.
- 6 • Competitive Solicitation (RFI/RFP): SoCalGas conducted an RFI to identify  
7 qualified and cost-competitive vendors for the AMIR Project. RFI information is  
8 used as a basis for our cost forecast. The RFI process is used to procure major  
9 deployment components, including Inventory Management Services and PMO  
10 Support Services. SoCalGas’s solicitation process evaluates vendors based on  
11 technical capability, implementation experience, safety, customer affordability,  
12 cost competitiveness, operational efficiency, and market risk. The results of the  
13 RFI processes form the basis for SoCalGas’s deployment cost forecast.
- 14 • Contingency: The contingency framework was developed and implemented  
15 through an evaluation of activities at both the category and sub-category levels.  
16 This assessment was conducted to determine the degree of risk associated with  
17 each area, taking into account factors such as evolving market conditions. Based  
18 on the risk profile determined for each area, differentiated contingency rates were  
19 applied in a manner proportionate to the identified level of exposure.
- 20 • Meter Growth Forecasts: Forecast is based on estimated demand for new meters  
21 expected to be installed as of 2029-year end and is used to inform the total  
22 module installation and removal requirements.

23 The deployment cost forecasting methodology reflects a structured and data-driven  
24 approach that integrates activity-based forecasting, vendor data and pricing, market data, SME  
25 input, historical cost information, and analysis of comparable company projects. The resulting  
26 forecasted costs represent a reasonable and supported estimate of the costs required for the  
27 deployment activities of the AMIR Project.

#### 28 **B. AMIR Deployment Forecasted Costs**

29 SoCalGas is requesting ~~\$224.140~~\$205.115 million in direct O&M costs and  
30 ~~\$273.438~~\$283.261 million in direct capital costs, totaling ~~\$497.577~~\$488.376 million in direct  
31 total costs for AMIR deployment activities. O&M costs include module removal, training, and  
32 customer-facing activities necessary to execute field deployment. Capital costs include new  
33 module installation, warehousing, and MQM, activities that support the sustained installation  
34 effort. Table IV-2 below provides the AMIR Deployment Total Costs by category (Field  
35 Deployment, PMO, and Customer Services and C&S Awareness) from 2025 through 2034.

**Table IV-2**  
**AMIR Deployment Total Costs by Category**  
**In 2025 \$ (000s)**

<b>AMIR Project Deployment Areas</b>	<b>Total</b>	<b>O&amp;M</b>	<b>Capital</b>
Field Deployment	360,249	123,064	237,185
PMO	71,759	25,682	46,076
Customer Services and C&S Awareness	56,369	56,369	-
<b>Total</b>	<b>488,376</b>	<b>205,115</b>	<b>283,261</b>

<b>AMIR Project Deployment Areas</b>	<b>Total</b>	<b>O&amp;M</b>	<b>Capital</b>
Field Deployment	366,266	138,970	227,295
<del>PMO</del>	<del>71,815</del>	<del>25,672</del>	<del>46,142</del>
Customer Services and C&S Awareness	59,497	59,497	-
<b>Total AMIR Project Deployment</b>	<b>497,577</b>	<b>224,140</b>	<b>273,438</b>

**1. Field Deployment**

SoCalGas is requesting recovery of ~~\$138.970~~\$123.064 million in direct O&M costs and ~~\$227.295~~\$237.185 million in direct capital costs, totaling ~~\$366.266~~\$360.249 million in direct total costs for technician training, field installation and removal of modules, QA, MQM, warehousing, and fleet services. Table IV-3 below provides AMIR Field Deployment costs by cost type (O&M and capital). Table IV-4 below provides AMIR Field Deployment costs by cost category. Additional detailed cost information and assumptions can be found in my supporting workpapers (SCG-IV-WP, WP4-01, WP4-02 & WP4-03).

**Table IV-3**  
**AMIR Field Deployment Total Costs by Type**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>						
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	
O&M	\$ -	\$ 113	\$ 209	\$ 2,152	\$ 6,579	
Capital	\$ 315	\$ 1,935	\$ 2,148	\$ 2,230	\$ 9,454	
<b>Total</b>	<b>\$ 315</b>	<b>\$ 2,049</b>	<b>\$ 2,357</b>	<b>\$ 4,381</b>	<b>\$ 16,033</b>	

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 22,757	\$ 31,054	\$ 28,847	\$ 23,174	\$ 8,178	<b>\$ 123,064</b>
Capital	\$ 44,258	\$ 62,867	\$ 56,528	\$ 44,504	\$ 12,945	<b>237,185</b>
<b>Total</b>	<b>\$ 67,015</b>	<b>\$ 93,921</b>	<b>\$ 85,375</b>	<b>\$ 67,679</b>	<b>\$ 21,123</b>	<b>\$ 360,249</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ 113	\$ 209	\$ 2,195	\$ 7,104
Capital	\$ 315	\$ 1,935	\$ 2,148	\$ 2,230	\$ 9,319
<b>Total</b>	<b>\$ 315</b>	<b>\$ 2,049</b>	<b>\$ 2,357</b>	<b>\$ 4,424</b>	<b>\$ 16,422</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 25,679	\$ 35,351	\$ 32,960	\$ 26,384	\$ 8,975	<b>\$ 138,970</b>
Capital	\$ 42,365	\$ 59,873	\$ 53,842	\$ 42,556	\$ 12,713	<b>227,295</b>
<b>Total</b>	<b>\$ 68,044</b>	<b>\$ 95,224</b>	<b>\$ 86,802</b>	<b>\$ 68,940</b>	<b>\$ 21,688</b>	<b>\$ 366,266</b>

**Table IV-4**  
**AMIR Field Deployment Total Costs by Category**  
**In 2025 \$ (000s)**

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Forecasted Years: 2025-2029					
Cost Category	2025	2026	2027	2028	2029
Endpoint Deployment	\$ 315	\$ 1,745	\$ 745	\$ 2,544	\$ 9,838
Deployment Support	\$ -	\$ 304	\$ 1,284	\$ 1,510	\$ 4,214
Warehousing and Fleet	\$ -	\$ -	\$ 327	\$ 327	\$ 1,981
<b>Total</b>	<b>\$ 315</b>	<b>\$ 2,049</b>	<b>\$ 2,357</b>	<b>\$ 4,381</b>	<b>\$ 16,033</b>

Forecasted Years: 2030-2034						
Cost Category	2030	2031	2032	2033	2034	Total
Endpoint Deployment	\$ 40,339	\$ 56,462	\$ 53,008	\$ 42,587	\$ 14,495	\$ 222,080
Deployment Support	\$ 5,732	\$ 5,725	\$ 5,572	\$ 5,196	\$ 3,096	32,633
Warehousing and Fleet	\$ 20,944	\$ 31,734	\$ 26,795	\$ 19,896	\$ 3,531	105,535
<b>Total</b>	<b>\$ 67,015</b>	<b>\$ 93,921</b>	<b>\$ 85,375</b>	<b>\$ 67,679</b>	<b>\$ 21,123</b>	<b>\$ 360,249</b>

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Forecasted Years: 2025-2029					
Cost Category	2025	2026	2027	2028	2029
Endpoint Deployment	\$ 315	\$ 1,745	\$ 745	\$ 2,587	\$ 10,038
Deployment Support	\$ -	\$ 304	\$ 1,284	\$ 1,510	\$ 4,374
Warehousing and Fleet	\$ -	\$ -	\$ 327	\$ 327	\$ 2,010
<b>Total</b>	<b>\$ 315</b>	<b>\$ 2,049</b>	<b>\$ 2,357</b>	<b>\$ 4,424</b>	<b>\$ 16,422</b>

Forecasted Years: 2030-2034						
Cost Category	2030	2031	2032	2033	2034	Total
Endpoint Deployment	\$ 40,976	\$ 57,256	\$ 53,880	\$ 43,258	\$ 14,650	\$ 225,452
Deployment Support	\$ 6,009	\$ 6,060	\$ 5,968	\$ 5,655	\$ 3,478	34,643
Warehousing and Fleet	\$ 21,060	\$ 31,908	\$ 26,954	\$ 20,026	\$ 3,560	106,171
<b>Total</b>	<b>\$ 68,044</b>	<b>\$ 95,224</b>	<b>\$ 86,802</b>	<b>\$ 68,940</b>	<b>\$ 21,688</b>	<b>\$ 366,266</b>

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**a) Endpoint Deployment Costs**

SoCalGas is requesting recovery of ~~\$114.973~~\$100.125 million in direct O&M costs and ~~\$110.479~~\$121.956 million in direct capital costs, totaling ~~\$225.452~~\$222.080 million in direct total costs for activities necessary for the removal and installation of modules, technician training, QA of installations, and related support activities. Table IV-5 below provides Endpoint Deployment costs by cost type (O&M and capital). Table IV-6 below provides Endpoint Deployment costs by cost category. Additional detailed cost information and assumptions can be found in my supporting workpapers (SCG-IV-WP, WP4-01).

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**Table IV-5  
AMIR Endpoint Deployment Total Costs by Type  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ 113	\$ 169	\$ 1,956	\$ 5,020
Capital	\$ 315	\$ 1,632	\$ 576	\$ 589	\$ 4,818
<b>Total</b>	<b>\$ 315</b>	<b>\$ 1,745</b>	<b>\$ 745</b>	<b>\$ 2,544</b>	<b>\$ 9,838</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 18,538	\$ 25,692	\$ 23,668	\$ 18,726	\$ 6,243	<b>\$ 100,125</b>
Capital	\$ 21,801	\$ 30,770	\$ 29,340	\$ 23,861	\$ 8,253	<b>\$ 121,956</b>
<b>Total</b>	<b>\$ 40,339</b>	<b>\$ 56,462</b>	<b>\$ 53,008</b>	<b>\$ 42,587</b>	<b>\$ 14,495</b>	<b>\$ 222,080</b>

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<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ 113	\$ 169	\$ 1,998	\$ 5,469
Capital	315	1,632	576	589	4,569
<b>Total</b>	<b>\$ 315</b>	<b>\$ 1,745</b>	<b>\$ 745</b>	<b>\$ 2,587</b>	<b>\$ 10,038</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 21,303	\$ 29,786	\$ 27,559	\$ 21,700	\$ 6,876	<b>\$ 114,973</b>
Capital	19,673	27,471	26,321	21,558	7,775	<b>110,479</b>
<b>Total</b>	<b>\$ 40,976</b>	<b>\$ 57,256</b>	<b>\$ 53,880</b>	<b>\$ 43,258</b>	<b>\$ 14,650</b>	<b>\$ 225,452</b>

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**Table IV-6**  
**AMIR Endpoint Deployment Total Costs by Category**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Field Training	\$ -	\$ -	\$ -	\$ -	\$ 929
Endpoint Installation/Removal	315	1,745	745	2,544	8,825
Quality Assurance	-	-	-	-	84
<b>Total</b>	<b>\$ 315</b>	<b>\$ 1,745</b>	<b>\$ 745</b>	<b>\$ 2,544</b>	<b>\$ 9,838</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Field Training	\$ 1,764	\$ 2,001	\$ 1,094	\$ 460	\$ 54	\$ 6,302
Endpoint Installation/Removal	38,122	53,824	51,279	41,671	14,267	213,339
Quality Assurance	453	638	634	456	175	2,439
<b>Total</b>	<b>\$ 40,339</b>	<b>\$ 56,462</b>	<b>\$ 53,008</b>	<b>\$ 42,587</b>	<b>\$ 14,495</b>	<b>\$ 222,080</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Field Training	\$ -	\$ -	\$ -	\$ -	\$ 941
Endpoint Installation/Removal	315	1,745	745	2,587	9,013
Quality Assurance	-	-	-	-	84
<b>Total</b>	<b>\$ 315</b>	<b>\$ 1,745</b>	<b>\$ 745</b>	<b>\$ 2,587</b>	<b>\$ 10,038</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Field Training	\$ 1,794	\$ 2,065	\$ 1,113	\$ 468	\$ 54	\$ 6,435
Endpoint Installation/Removal	38,729	54,554	52,133	42,335	14,422	216,578
Quality Assurance	453	638	634	456	175	2,439
<b>Total</b>	<b>\$ 40,976</b>	<b>\$ 57,256</b>	<b>\$ 53,880</b>	<b>\$ 43,258</b>	<b>\$ 14,650</b>	<b>\$ 225,452</b>

The total forecast for Field Training is ~~\$6.345~~ \$6.302 million. This forecast includes the labor, facilities, instructional materials, and administrative support required to prepare both new and existing technicians for safe and efficient installation and removal of AMI modules throughout the deployment period. Field Training supports deployment by qualifying more than 1,000 new

1 field technicians and over 1,000 existing field technicians to support field deployment activities.  
2 The forecast was developed using a bottom-up cost estimating approach with SoCalGas SMEs  
3 input, informed by the initial AMI deployment, and current field operations. Cost inputs include  
4 trainer and trainee labor hours, curriculum development, classroom facility costs, and required  
5 instruction materials. Cost drivers include expected installation volumes, daily installation  
6 targets, and projected workforce turnover throughout the deployment period.<sup>9</sup> Field Training  
7 costs are projected to occur from 2029 through 2034. Costs begin in 2029 to support curriculum  
8 development, instructor preparation, and initial training, peak in 2030 and 2031 as large-scale  
9 technician training ramps up, and decline through 2034 as activities shift toward training of new  
10 replacement personnel.

11 The total forecast for Endpoint Installation and Removal is ~~\$216.786~~\$213.339 million.  
12 This forecast includes the labor and associated support required to remove legacy modules and  
13 install replacement modules across SoCalGas's service territory. Forecasted costs include  
14 installer labor, safety oversight, field supervision, and project management to support a  
15 coordinated, territory-wide deployment. This forecast was developed using a bottom-up  
16 approach informed by historical benchmarks from the initial AMI deployment and current AMI  
17 field operations. Installer headcounts were derived from projected annual installation volumes  
18 and expected daily installation rates. Supervisor staffing levels were based on a planned 1:15  
19 supervisor-to-installer ratio, and Area Manager requirements were aligned with the number of  
20 active warehouses with each manager overseeing two to three locations.

21 Cost drivers include the number of technicians required to meet installation volumes  
22 based on projected timing of battery failures,<sup>10</sup> expected daily installation rates, repeat  
23 installation attempts required due to unsafe or inaccessible conditions on customer property, and  
24 expected module failures and malfunctions that occur outside of areas where mass deployment  
25 has started. Tools and equipment costs, including handheld work order management devices,  
26 were scaled proportionally with installer headcounts and developed using historical data.  
27 Endpoint Installation and Removal costs are projected to occur from 2025 to 2034. Early costs

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<sup>9</sup> Turnover rates were informed by the initial AMI deployment, which averaged approximately 249 percent over the full deployment period.

<sup>10</sup> For more information regarding module battery failures and the need for the AMIR Project, refer to the Direct Testimony of David M. Mercer (Chapter II).

1 include planning and costs to manage the competitive solicitation (RFI/RFP) process. Costs  
2 increase in 2029 with the installation of approximately 25,000 modules, peak between 2031 and  
3 2033, and decline in 2034 as installation volumes taper.

4 The total forecast for QA is \$2.439 million. This forecast includes the labor and  
5 associated support required to verify installation quality and maintain safety, accuracy, and  
6 consistency throughout field deployment. QA activities include inspection of completed module  
7 installations, validation of recorded meter data, and confirmation that installation procedures  
8 were followed. The forecast was developed using a bottom-up approach informed by historical  
9 inspection rates, current operational practices, and experience from the initial AMI deployment.  
10 Cost inputs include QA Specialist labor calculated using internal labor rates and projected  
11 inspection volumes, along with travel-related expenses such as hotel and per-diem costs  
12 estimated from current averages for comparable field-based activities. Key cost drivers include  
13 the five-percent QA inspection rate, which provides representative coverage while maintaining  
14 efficient resource use, and QA completion rate assumptions of approximately 65 inspections per  
15 specialist per day. QA costs are projected to occur from 2029 through 2034. Costs begin in  
16 2029 to support initial installations, peak from 2030 through 2032 during mass deployment and  
17 decline in 2033 and 2034 as installation volumes taper and QA staffing levels are reduced  
18 accordingly.

19 **b) Deployment Support**

20 SoCalGas is requesting recovery of ~~\$9.496~~\$8.692 million in direct O&M costs and  
21 ~~\$25.147~~\$23.941 million in direct capital costs, totaling ~~\$34.643~~\$32.633 million in total direct  
22 costs for Deployment Support. This category includes (1) MQM, which provides validation of  
23 equipment design and production quality, and (2) Deployment Back-Office Support, which  
24 provides centralized operational analysis, scheduling, dispatch coordination, technical, and  
25 administrative support for field operations. Table IV-7 below provides Deployment Support  
26 costs by cost type (O&M and capital). Table IV-8 below provides Deployment Support costs by  
27 cost category. Additional detailed cost information and assumptions can be found in my  
28 supporting workpapers (SCG-IV-WP, WP4-02).

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**Table IV-7  
AMIR Deployment Support Total Costs by Type  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ 20	\$ 131	\$ 1,059
Capital	-	304	1,265	1,379	3,154
<b>Total</b>	<b>\$ -</b>	<b>\$ 304</b>	<b>\$ 1,284</b>	<b>\$ 1,510</b>	<b>\$ 4,214</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u><b>Total</b></u>
O&M	\$ 1,606	\$ 1,606	\$ 1,606	\$ 1,606	\$ 1,059	\$ <b>8,692</b>
Capital	4,126	4,119	3,967	3,591	2,037	<b>23,941</b>
<b>Total</b>	<b>\$ 5,732</b>	<b>\$ 5,725</b>	<b>\$ 5,572</b>	<b>\$ 5,196</b>	<b>\$ 3,096</b>	<b>\$ 32,633</b>

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<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ 20	\$ 131	\$ 1,124
Capital	-	304	1,265	1,379	3,251
<b>Total</b>	<b>\$ -</b>	<b>\$ 304</b>	<b>\$ 1,284</b>	<b>\$ 1,510</b>	<b>\$ 4,374</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u><b>Total</b></u>
O&M	\$ 1,716	\$ 1,740	\$ 1,764	\$ 1,789	\$ 1,212	\$ <b>9,496</b>
Capital	4,292	4,321	4,204	3,866	2,266	<b>25,147</b>
<b>Total</b>	<b>\$ 6,009</b>	<b>\$ 6,060</b>	<b>\$ 5,968</b>	<b>\$ 5,655</b>	<b>\$ 3,478</b>	<b>\$ 34,643</b>

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**Table IV-8  
AMIR Deployment Support Total Costs by Category  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Material Quality Management	\$ -	\$ 304	\$ 1,121	\$ 1,183	\$ 1,565
Deployment Back-Office Support	-	-	164	327	2,649
<b>Total</b>	<b>\$ -</b>	<b>\$ 304</b>	<b>\$ 1,284</b>	<b>\$ 1,510</b>	<b>\$ 4,214</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Material Quality Management	\$ 1,717	\$ 1,711	\$ 1,558	\$ 1,182	\$ 448	<b>\$ 10,789</b>
Deployment Back-Office Support	4,014	4,014	4,014	4,014	2,649	<b>21,845</b>
<b>Total</b>	<b>\$ 5,732</b>	<b>\$ 5,725</b>	<b>\$ 5,572</b>	<b>\$ 5,196</b>	<b>\$ 3,096</b>	<b>\$ 32,633</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Material Quality Management	\$ -	\$ 304	\$ 1,121	\$ 1,183	\$ 1,565
Deployment Back-Office Support	-	-	164	327	2,809
<b>Total</b>	<b>\$ -</b>	<b>\$ 304</b>	<b>\$ 1,284</b>	<b>\$ 1,510</b>	<b>\$ 4,374</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Material Quality Management	\$ 1,717	\$ 1,711	\$ 1,558	\$ 1,182	\$ 448	<b>\$ 10,789</b>
Deployment Back-Office Support	4,291	4,349	4,410	4,473	3,030	<b>23,854</b>
<b>Total</b>	<b>\$ 6,009</b>	<b>\$ 6,060</b>	<b>\$ 5,968</b>	<b>\$ 5,655</b>	<b>\$ 3,478</b>	<b>\$ 34,643</b>

The total forecast for MQM is \$10.789 million. This forecast includes the labor and support required to validate module design, certify vendor management processes, verify production quality, and address product issues and defects throughout deployment. MQM activities follow two primary phases – Pre-Production Quality Management and Production Quality Management.

1 The forecast was developed using a bottom-up approach based on SoCalGas labor rates,  
2 SME input, and company requirements for material quality and testing. Cost inputs include  
3 estimated hourly labor requirements to perform design validation, prototype testing, factory  
4 certification, and ongoing QA and testing during mass production. Key cost drivers include the  
5 level of effort required to verify module design, confirm adherence to company requirements,  
6 and address any quality deviations identified during production. MQM costs are projected to  
7 occur from 2026 through 2034. Costs begin at lower levels in 2026 to support initial module  
8 design reviews, testing, and approval, increase in 2027 to support first-article inspections, meter  
9 validation, and factory certification, and remain steady through 2028 as full-scale manufacturing  
10 begins. During Phase 2 (2029-2034), costs remain steady to support ongoing QA and decline in  
11 2034 as production slows and deployment nears completion.

12 The total forecast for Deployment Back Office Support is ~~\$23.854~~\$21.845 million. This  
13 forecast includes the labor and supporting costs required to provide the technical support,  
14 administrative coordination, scheduling, dispatching, operational analysis, and meter data-  
15 validation functions that enable AMIR field deployment. Deployment Back Office personnel  
16 serve as the operational link between field technicians, warehouses, and customer service  
17 functions, confirming daily work orders, meter data, and installation performance are accurately  
18 tracked and reconciled across SoCalGas's service territory. The forecast was developed using a  
19 bottom-up approach informed by historical data from the initial AMI deployment and SoCalGas  
20 SME input. Cost inputs include estimated headcounts for technical advisors, deployment  
21 analysts, dispatchers, schedulers, administrative associates, and data validation analysts, along  
22 with their associated labor hours, supervision, and system-support needs. The forecast also  
23 incorporates targets for validating initial meter reads and resolving discrepancies between  
24 module-transmitted data and meter index data. Key cost drivers include the volume of meter  
25 installations requiring post-installation data validation, the size of the workforce supported, and  
26 the scale of scheduling and dispatch activity required during peak deployment. Each new  
27 module installation requires data confirmation to support billing integrity, driving the need for  
28 staffing across administrative and analytical functions. Deployment Back Office Support costs  
29 are projected to occur from 2027 through 2034. Costs increase in 2029 as warehouse and field  
30 operations mobilize, peak between 2030 and 2033 when installation and validation activity are at  
31 their highest and decline in 2034 as field operations taper.

c) **Warehousing and Fleet Services**

SoCalGas is requesting recovery of ~~\$106.171~~ \$105.535 million; ~~\$14.502~~ \$14.247 million in direct O&M costs and ~~\$91.670~~ \$91.288 million in direct capital costs for Warehousing and Fleet Services. These costs are for essential physical warehouse operations, including storage, material handling and distribution, inventory tracking, and tools and equipment required for field deployment. Fleet costs include vehicle leasing, fuel, insurance, maintenance and fleet management activities. Together, these services support timely material availability and reliable transportation for project staff throughout deployment. Table IV-9 below provides Warehousing and Fleet costs by cost type (O&M and capital). Table IV-10 below shows the Warehousing and Fleet costs by cost category. Additional detailed cost information and assumptions can be found in my supporting workpapers (SCG-IV-WP, WP4-03 & WP4-04)

**Table IV-9**

**AMIR Warehousing and Fleet Total Costs by Type**

**In 2025 \$ (000s)**

Forecasted Years: 2025-2029					
Cost Type	2025	2026	2027	2028	2029
O&M	\$ -	\$ -	\$ 20	\$ 65	\$ 500
Capital	-	-	308	262	1,481
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 327</b>	<b>\$ 327</b>	<b>\$ 1,981</b>

Forecasted Years: 2030-2034						
Cost Type	2030	2031	2032	2033	2034	Total
O&M	\$ 2,614	\$ 3,757	\$ 3,574	\$ 2,843	\$ 876	\$ 14,247
Capital	18,330	27,978	23,221	17,053	2,655	91,288
<b>Total</b>	<b>\$ 20,944</b>	<b>\$ 31,734</b>	<b>\$ 26,795</b>	<b>\$ 19,896</b>	<b>\$ 3,531</b>	<b>\$ 105,535</b>

Forecasted Years: 2025-2029					
Cost Type	2025	2026	2027	2028	2029
O&M	\$ -	\$ -	\$ 20	\$ 65	\$ 511
Capital	-	-	308	262	1,498
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 327</b>	<b>\$ 327</b>	<b>\$ 2,010</b>

Forecasted Years: 2030-2034						
Cost Type	2030	2031	2032	2033	2034	Total
O&M	\$ 2,660	\$ 3,826	\$ 3,637	\$ 2,895	\$ 887	\$ 14,502
Capital	18,400	28,082	23,317	17,131	2,673	91,670
<b>Total</b>	<b>\$ 21,060</b>	<b>\$ 31,908</b>	<b>\$ 26,954</b>	<b>\$ 20,026</b>	<b>\$ 3,560</b>	<b>\$ 106,171</b>

**Table IV-10**  
**AMIR Warehousing and Fleet Total Costs by Category**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Warehousing	\$ -	\$ -	\$ 164	\$ 164	\$ 732
Fleet	-	-	164	164	1,249
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 327</b>	<b>\$ 327</b>	<b>\$ 1,981</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Warehousing	\$ 14,410	\$ 22,343	\$ 17,861	\$ 12,789	\$ 1,342	\$ 69,803
Fleet	6,534	9,391	8,934	7,107	2,189	35,732
<b>Total</b>	<b>\$ 20,944</b>	<b>\$ 31,734</b>	<b>\$ 26,795</b>	<b>\$ 19,896</b>	<b>\$ 3,531</b>	<b>\$ 105,535</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Warehousing	\$ -	\$ -	\$ 164	\$ 164	\$ 732
Fleet	-	-	164	164	1,278
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 327</b>	<b>\$ 327</b>	<b>\$ 2,010</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Warehousing	\$ 14,410	\$ 22,343	\$ 17,861	\$ 12,789	\$ 1,342	\$ 69,803
Fleet	6,650	9,565	9,093	7,237	2,218	36,369
<b>Total</b>	<b>\$ 21,060</b>	<b>\$ 31,908</b>	<b>\$ 26,954</b>	<b>\$ 20,026</b>	<b>\$ 3,560</b>	<b>\$ 106,171</b>

The total forecast for Warehousing is \$69.803 million. This forecast includes the labor and supporting costs required to establish, operate, and decommission regional warehouse facilities that serve as operational bases for field deployment activities. Table IV-11 below provides Warehousing costs by cost type (O&M and capital). Table IV-12 below provides Warehousing costs by cost category. Additional detailed cost information and assumptions can be found in my supporting workpapers (SCG-IV-WP, WP4-03).

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**Table IV-11**  
**AMIR Warehousing Total Costs by Type**  
**In 2025 \$ (000s)**

<b>Warehousing Areas</b>	<b><u>Total</u></b>	<b><u>O&amp;M</u></b>	<b><u>Capital</u></b>
Leasing and Permitting	12,131	-	12,131
Setup and Decommissioning	13,525	-	13,525
Material Handling	23,912	-	23,912
Inventory Management	18,927	-	18,927
Project Management	1,309	-	1,309
<b>Total</b>	<b>69,803</b>	<b>-</b>	<b>69,803</b>

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**Table IV-12  
AMIR Warehousing Total Costs by Category  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Warehousing Areas</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Leasing and Permitting	\$ -	\$ -	\$ -	\$ -	\$ 95
Setup and Decommissioning	-	-	-	-	110
Material Handling	-	-	-	-	205
Inventory Management	-	-	-	-	158
Project Management	-	-	164	164	164
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 732</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Warehousing Areas</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Leasing and Permitting	\$ 2,374	\$ 3,704	\$ 2,944	\$ 2,089	\$ 190	\$ 11,396
Setup and Decommissioning	2,794	4,314	3,496	2,548	262	13,525
Material Handling	5,135	8,010	6,367	4,518	411	24,646
Inventory Management	3,943	6,151	4,890	3,470	315	18,927
Project Management	164	164	164	164	164	1,309
<b>Total</b>	<b>\$ 14,410</b>	<b>\$ 22,343</b>	<b>\$ 17,861</b>	<b>\$ 12,789</b>	<b>\$ 1,342</b>	<b>\$ 69,803</b>

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<b>Forecasted Years: 2025-2029</b>					
<b>Warehousing Areas</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Leasing and Permitting	\$ -	\$ -	\$ -	\$ -	\$ 101
Setup and Decommissioning	-	-	-	-	110
Material Handling	-	-	-	-	199
Inventory Management	-	-	-	-	158
Project Management	-	-	164	164	164
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 732</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Warehousing Areas</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Leasing and Permitting	\$ 2,527	\$ 3,942	\$ 3,134	\$ 2,224	\$ 202	\$ 12,131
Setup and Decommissioning	2,794	4,314	3,496	2,548	262	13,525
Material Handling	4,982	7,771	6,177	4,384	399	23,912
Inventory Management	3,943	6,151	4,890	3,470	315	18,927
Project Management	164	164	164	164	164	1,309
<b>Total</b>	<b>\$ 14,410</b>	<b>\$ 22,343</b>	<b>\$ 17,861</b>	<b>\$ 12,789</b>	<b>\$ 1,342</b>	<b>\$ 69,803</b>

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Warehousing functions encompass five primary components:



1 QA Specialists, and Area Managers throughout field deployment. Fleet costs include vehicle  
2 leasing, fuel, insurance, maintenance, and fleet project management support necessary to sustain  
3 a geographically distributed installation workforce. Table IV-13 below provides Fleet costs by  
4 cost type (O&M and capital). Table IV-14 below provides the Fleet costs by cost category.  
5 Additional detailed cost information and assumptions can be found in my supporting workpapers  
6 (SCG-IV-WP, WP4-04).

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**Table IV-13  
AMIR Fleet Total Costs by Type  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ 20	\$ 65	\$ 500
Capital	-	-	144	98	749
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 1,249</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 2,614	\$ 3,757	\$ 3,574	\$ 2,843	\$ 876	\$ 14,247
Capital	3,921	5,635	5,361	4,264	1,314	21,485
<b>Total</b>	<b>\$ 6,534</b>	<b>\$ 9,391</b>	<b>\$ 8,934</b>	<b>\$ 7,107</b>	<b>\$ 2,189</b>	<b>\$ 35,732</b>

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<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ 20	\$ 65	\$ 511
Capital	-	-	144	98	767
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 1,278</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 2,660	\$ 3,826	\$ 3,637	\$ 2,895	\$ 887	\$ 14,502
Capital	3,990	5,739	5,456	4,342	1,331	21,867
<b>Total</b>	<b>\$ 6,650</b>	<b>\$ 9,565</b>	<b>\$ 9,093</b>	<b>\$ 7,237</b>	<b>\$ 2,218</b>	<b>\$ 36,369</b>

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**Table IV-14  
AMIR Fleet Total Costs by Category  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Vehicles	\$ -	\$ -	\$ -	\$ -	\$ 922
Fleet Project Management	-	-	164	164	327
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 1,249</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Vehicles	\$ 6,207	\$ 9,064	\$ 8,607	\$ 6,779	\$ 1,862	\$ 33,442
Fleet Project Management	327	327	327	327	327	2,290
<b>Total</b>	<b>\$ 6,534</b>	<b>\$ 9,391</b>	<b>\$ 8,934</b>	<b>\$ 7,107</b>	<b>\$ 2,189</b>	<b>\$ 35,732</b>

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<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Vehicles	\$ -	\$ -	\$ -	\$ -	\$ 951
Fleet Project Management	-	-	164	164	327
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 164</b>	<b>\$ 164</b>	<b>\$ 1,278</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Vehicles	\$ 6,323	\$ 9,238	\$ 8,766	\$ 6,910	\$ 1,891	\$ 34,078
Fleet Project Management	327	327	327	327	327	2,290
<b>Total</b>	<b>\$ 6,650</b>	<b>\$ 9,565</b>	<b>\$ 9,093</b>	<b>\$ 7,237</b>	<b>\$ 2,218</b>	<b>\$ 36,369</b>

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The total forecast for Vehicles is ~~\$34.078~~ \$33.442 million and reflects the cost of providing vehicles for installers, QA Specialists, Field Supervisors, and Area Managers throughout the deployment period. The forecast includes one mid-sized truck or sedan per assigned personnel, based on operational requirements. Mid-sized vehicles were selected to optimize cost and operational efficiency, providing adequate payload capacity and driving range while reducing leasing, fuel, and insurance expenses compared to larger vehicles options. The forecast was developed using a bottom-up approach informed by current SoCalGas fleet rates, historical data, and SME input. Cost inputs include vehicle leasing, fuel, insurance, and maintenance expenses. Annual vehicle procurement volumes are aligned with field deployment headcount forecasts to provide adequate coverage during each phase of installation activity. Vehicles costs are projected to occur from 2029 through 2034. Costs are lower in 2029 as initial procurement activities occur, increase between 2030 and 2032 in alignment with peak installer and QA Specialist staffing levels, and decline through 2034 as installation work is completed and fleet requirements are reduced.

1 The total forecast for Fleet Project Management is \$2.290 million and reflects the labor  
2 and support required to oversee fleet competitive solicitation (RFI/RFP) process, planning,  
3 procurement coordination, vehicle delivery scheduling, and ongoing fleet deployment activities.  
4 The forecast was developed using internal labor rates, historical experience from the initial AMI  
5 deployment, and SoCalGas SME input. Fleet Project Management costs are projected to occur  
6 from 2027 through 2034. Costs are lower in 2027 and 2028 to support fleet planning and fleet  
7 vendor selection and increase during the deployment years through the end of installation  
8 activity in 2034.

## 9 2. AMIR PMO Costs

10 SoCalGas is requesting recovery of ~~\$25.672~~\$25.682 million in direct O&M costs and  
11 ~~\$46.142~~\$46.076 million in direct capital costs, totaling ~~\$71.815~~\$71.759 million in direct costs  
12 for PMO activities that provide the governance, coordination, and oversight necessary to manage  
13 a complex, multi-year replacement project. These functions include scheduling, budgeting,  
14 vendor management, and cross-workstream alignment throughout the project lifecycle. Table  
15 IV-15 below provides PMO costs by cost type (O&M and capital). Table IV-16 below provides  
16 the PMO costs by category. Additional detailed cost information and assumptions can be found  
17 in my supporting workpapers (SCG-IV-WP, WP4-05).

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**Table IV-15  
AMIR PMO Total Costs by Type  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ 2,761	\$ 3,239	\$ 2,813	\$ 2,898
Capital	2,915	5,017	4,492	4,830	5,661
<b>Total</b>	<b>\$ 2,915</b>	<b>\$ 7,778</b>	<b>\$ 7,730</b>	<b>\$ 7,643</b>	<b>\$ 8,559</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 2,881	\$ 2,847	\$ 2,830	\$ 2,761	\$ 2,642	<b>\$ 25,672</b>
Capital	5,492	5,169	4,999	4,353	3,215	<b>46,142</b>
<b>Total</b>	<b>\$ 8,373</b>	<b>\$ 8,016</b>	<b>\$ 7,829</b>	<b>\$ 7,115</b>	<b>\$ 5,857</b>	<b>\$ 71,815</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ 2,806	\$ 3,273	\$ 2,932	\$ 2,949
Capital	2,915	5,296	4,829	6,013	6,167
<b>Total</b>	<b>\$ 2,915</b>	<b>\$ 8,102</b>	<b>\$ 8,102</b>	<b>\$ 8,946</b>	<b>\$ 9,117</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 2,890	\$ 2,753	\$ 2,753	\$ 2,719	\$ 2,608	<b>\$ 25,682</b>
Capital	5,575	4,237	4,237	3,930	2,876	<b>46,076</b>
<b>Total</b>	<b>\$ 8,465</b>	<b>\$ 6,990</b>	<b>\$ 6,990</b>	<b>\$ 6,648</b>	<b>\$ 5,484</b>	<b>\$ 71,759</b>

**Table IV-16**  
**AMIR PMO Total Costs by Category**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Internal Labor and External Labor	\$ 2,915	\$ 5,478	\$ 5,430	\$ 5,343	\$ 6,259
Project Facilities	-	2,300	2,300	2,300	2,300
<b>Total</b>	<b>\$ 2,915</b>	<b>\$ 7,778</b>	<b>\$ 7,730</b>	<b>\$ 7,643</b>	<b>\$ 8,559</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u><b>Total</b></u>
Internal Labor and External Labor	\$ 6,073	\$ 5,716	\$ 5,529	\$ 4,815	\$ 3,557	\$ 51,115
Project Facilities	2,300	2,300	2,300	2,300	2,300	20,700
<b>Total</b>	<b>\$ 8,373</b>	<b>\$ 8,016</b>	<b>\$ 7,829</b>	<b>\$ 7,115</b>	<b>\$ 5,857</b>	<b>\$ 71,815</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Internal Labor and External Labor	\$ 2,915	\$ 5,802	\$ 5,802	\$ 6,646	\$ 6,817
Project Facilities	-	2,300	2,300	2,300	2,300
<b>Total</b>	<b>\$ 2,915</b>	<b>\$ 8,102</b>	<b>\$ 8,102</b>	<b>\$ 8,946</b>	<b>\$ 9,117</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u><b>Total</b></u>
Internal Labor and External Labor	\$ 6,165	\$ 4,690	\$ 4,690	\$ 4,348	\$ 3,184	\$ 51,059
Project Facilities	2,300	2,300	2,300	2,300	2,300	20,700
<b>Total</b>	<b>\$ 8,465</b>	<b>\$ 6,990</b>	<b>\$ 6,990</b>	<b>\$ 6,648</b>	<b>\$ 5,484</b>	<b>\$ 71,759</b>

The total forecast for Internal Labor and External Labor is ~~\$51.115~~\$51.059 million. This forecast includes costs required to plan, coordinate, and monitor all AMIR Project activities through the PMO. PMO internal and external staffing requirements were determined based on projected resource needs across the AMIR Project. During early phases, PMO activities will focus on RFI/RFP development, contracting, and vendor management. As the program advances and project resource needs expand, additional costs are projected for resource planning and hiring, general support, and overall project quality management. Throughout the project lifecycle, the PMO provides ongoing program governance, project tracking, cross-workstream coordination, reporting, master schedule management, and budgeting and financial oversight to support effective execution. The forecast was developed based on headcount assumptions informed by the initial AMI deployment, historical experience from other large-scale technology

1 and field implementation programs, and SoCalGas SME input to define project support  
2 requirements. More than a dozen distinct PMO workstreams were identified and evaluated to  
3 determine the level of support needed across the AMIR Project. These workstreams formed the  
4 basis for projected staffing, with resource levels varying by year, depending on specific project  
5 needs. On average, each workstream is staffed with one to three resources per year for the  
6 duration of the project.

7 The total forecast for Project Facilities is \$20.700 million. The forecast includes lease  
8 and facility-related expenses for office space and conference facilities to house PMO and  
9 management personnel. Costs also include telecommunications, secure network connectivity,  
10 and essential IT infrastructure needed to support daily PMO operations. Facilities requirements  
11 are based on an estimated 200 internal and external team members, with approximately 80 to 90  
12 percent requiring dedicated workspace. The forecast is based on historical data and reflects  
13 expected occupancy over the duration of the project. PMO labor and facilities costs are  
14 projected to occur from 2026 through 2034. PMO costs are projected to be relatively constant in  
15 order to support essential PMO activities.

### 16 **3. Customer Services and Customer & Stakeholder Awareness Costs**

17 SoCalGas is requesting recovery of ~~\$59.497~~\$56.369 million in direct O&M costs for  
18 Customer Services and Customer & Stakeholder (C&S) Awareness activities supporting the field  
19 deployment. These costs include AMIR customer billing support, AMIR call center support, and  
20 C&S awareness activities. Table IV-17 below provides AMIR Customer Services and C&S  
21 Awareness costs by cost type (O&M and capital). Table IV-18 below shows the Customer  
22 Services and C&S Awareness costs by cost category. Additional detailed cost information and  
23 assumptions can be found in my supporting workpapers (SCG-IV-WP, WP4-06 & WP4-07).

**Table IV-17**  
**AMIR Customer Services and C&S Awareness Total Costs by Type**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ -	\$ -	\$ 12,395
Capital	-	-	-	-	-
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,395</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 12,900	\$ 9,392	\$ 9,319	\$ 7,512	\$ 4,850	\$ 56,369
Capital	-	-	-	-	-	-
<b>Total</b>	<b>\$ 12,900</b>	<b>\$ 9,392</b>	<b>\$ 9,319</b>	<b>\$ 7,512</b>	<b>\$ 4,850</b>	<b>\$ 56,369</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ -	\$ -	\$ 12,536
Capital	-	-	-	-	-
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,536</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 13,413	\$ 10,012	\$ 10,050	\$ 8,149	\$ 5,338	\$ 59,497
Capital	-	-	-	-	-	-
<b>Total</b>	<b>\$ 13,413</b>	<b>\$ 10,012</b>	<b>\$ 10,050</b>	<b>\$ 8,149</b>	<b>\$ 5,338</b>	<b>\$ 59,497</b>

**Table IV-18**

**AMIR Customer Services and C&S Awareness Total Costs by Category  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Customer Services	\$ -	\$ -	\$ -	\$ -	\$ 1,078
C&S Awareness	-	-	-	-	11,458
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,536</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Customer Services	\$ 5,080	\$ 6,305	\$ 6,378	\$ 5,188	\$ 2,841	\$ 26,870
C&S Awareness	8,334	3,707	3,671	2,961	2,497	32,627
<b>Total</b>	<b>\$ 13,413</b>	<b>\$ 10,012</b>	<b>\$ 10,050</b>	<b>\$ 8,149</b>	<b>\$ 5,338</b>	<b>\$ 59,497</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Customer Services	\$ -	\$ -	\$ -	\$ -	\$ 938
C&S Awareness	-	-	-	-	11,458
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 12,395</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
Customer Services	\$ 4,566	\$ 5,685	\$ 5,648	\$ 4,552	\$ 2,354	\$ 23,742
C&S Awareness	8,334	3,707	3,671	2,961	2,497	32,627
<b>Total</b>	<b>\$ 12,900</b>	<b>\$ 9,392</b>	<b>\$ 9,319</b>	<b>\$ 7,512</b>	<b>\$ 4,850</b>	<b>\$ 56,369</b>

**a) Customer Services**

SoCalGas is requesting recovery of ~~\$26.870~~-\$23.742 million in direct O&M costs for Customer Services activities. Table IV-19 below provides Customer Services costs by cost type (O&M and capital). Table IV-20 below provides Customer Services costs by cost category. Additional detailed cost information and assumptions are provided in my supporting workpapers (SCG-IV-WP, WP4-06).

1  
2  
3

**Table IV-19  
AMIR Customer Services Total Costs by Type  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ -	\$ -	\$ 1,078
Capital	-	-	-	-	-
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,078</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 5,080	\$ 6,305	\$ 6,378	\$ 5,188	\$ 2,841	\$ 26,870
Capital	-	-	-	-	-	-
<b>Total</b>	<b>\$ 5,080</b>	<b>\$ 6,305</b>	<b>\$ 6,378</b>	<b>\$ 5,188</b>	<b>\$ 2,841</b>	<b>\$ 26,870</b>

4

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Type</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
O&M	\$ -	\$ -	\$ -	\$ -	\$ 938
Capital	-	-	-	-	-
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 938</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Type</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
O&M	\$ 4,566	\$ 5,685	\$ 5,648	\$ 4,552	\$ 2,354	\$ 23,742
Capital	-	-	-	-	-	-
<b>Total</b>	<b>\$ 4,566</b>	<b>\$ 5,685</b>	<b>\$ 5,648</b>	<b>\$ 4,552</b>	<b>\$ 2,354</b>	<b>\$ 23,742</b>

5

**Table IV-20**  
**AMIR Customer Services Total Costs by Category**  
**In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
AMIR Billing Support	\$ -	\$ -	\$ -	\$ -	\$ 8
AMIR Call Center Support	-	-	-	-	1,071
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,078</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
AMIR Billing Support	\$ 2,024	\$ 3,126	\$ 3,092	\$ 2,545	\$ 915	\$ 11,709
AMIR Call Center Support	3,055	3,179	3,287	2,643	1,926	15,161
<b>Total</b>	<b>\$ 5,080</b>	<b>\$ 6,305</b>	<b>\$ 6,378</b>	<b>\$ 5,188</b>	<b>\$ 2,841</b>	<b>\$ 26,870</b>

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
AMIR Billing Support	\$ -	\$ -	\$ -	\$ -	\$ 8
AMIR Call Center Support	-	-	-	-	930
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 938</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
AMIR Billing Support	\$ 2,024	\$ 3,126	\$ 3,092	\$ 2,545	\$ 915	\$ 11,709
AMIR Call Center Support	2,542	2,559	2,556	2,007	1,439	12,033
<b>Total</b>	<b>\$ 4,566</b>	<b>\$ 5,685</b>	<b>\$ 5,648</b>	<b>\$ 4,552</b>	<b>\$ 2,354</b>	<b>\$ 23,742</b>

The total forecast for AMIR Customer Billing Support is \$11.709 million and reflects the labor and support required to address billing exceptions resulting from AMIR deployment. As modules are activated and billing data transitions to the new AMI platform, temporary exceptions will be created. The forecast was developed using internal SoCalGas billing data, observed exception rates from the initial AMI deployment, and current billing system operations. Key cost drivers include the frequency of billing exceptions (correlated with installation

volumes), the labor required to research and resolve exceptions, and the timing of peak deployment activity.

The total forecast for the AMIR Call Center Support costs is ~~\$15.161~~\$12.033 million. This forecast includes the labor and support required to respond to customer inquiries during AMIR deployment. These costs include staffing to handle AMIR-related inquiries, scheduling questions, installation coordination, and customer follow up. The forecast was developed using a bottom-up approach informed by expected call volumes and observed call center patterns from the initial AMI deployment. Key cost drivers include forecasted call frequency, annual installation volumes, training, call routing automation development, and the expected staff required to maintain service levels at scale during the AMIR deployment period. All Customer Services costs are projected to occur from 2029 through 2034, increasing during peak installation years from 2030 through 2033 and declining in 2034 as deployment concludes.

**b) C&S Awareness**

SoCalGas is requesting \$32.627 million in O&M costs for C&S Awareness activities. These costs include customer communications and outreach, materials and support for awareness programs, and activities necessary to prepare and inform customers and stakeholders of AMIR deployment activities. Table IV-21 below provides Customer and Stakeholder Awareness O&M costs by year. Additional detailed cost information and assumptions are provided in my supporting workpapers (SCG-IV-WP, WP4-07).

**Table IV-21  
AMIR C&S Awareness Total Costs by Category  
In 2025 \$ (000s)**

<b>Forecasted Years: 2025-2029</b>					
<b>Cost Category</b>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
C&S Awareness (O&M)	\$ -	\$ -	\$ -	\$ -	\$ 11,458
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,458</b>

<b>Forecasted Years: 2030-2034</b>						
<b>Cost Category</b>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<b>Total</b>
C&S Awareness (O&M)	\$ 8,334	\$ 3,707	\$ 3,671	\$ 2,961	\$ 2,497	\$ 32,627
<b>Total</b>	<b>\$ 8,334</b>	<b>\$ 3,707</b>	<b>\$ 3,671</b>	<b>\$ 2,961</b>	<b>\$ 2,497</b>	<b>\$ 32,627</b>

1 This forecast includes the labor and supporting costs required to plan and execute  
2 SoCalGas communications and outreach for the AMIR Project. These costs include materials,  
3 advertising, translation services, outreach events, and internal and third-party labor, to inform  
4 customers, government agencies, community organizations, and other stakeholders of upcoming  
5 installation activities. These efforts support operational safety, customer awareness, and  
6 transparency throughout field deployment. SoCalGas customers are no longer accustomed to on-  
7 site meter access following the elimination of manual meter reading; therefore, early and clear  
8 communication is necessary to facilitate safe property access for deployment workforce.  
9 Proactive engagement also helps mitigate safety risks associated with imposters or fraud by  
10 providing official, verifiable information about SoCalGas personnel and activities.

11 The forecasted costs were developed using experience from the initial AMI deployment  
12 and subsequent experience from SoCalGas customer-facing programs and benchmarked against  
13 historical communication campaign costs and current vendor rates. Cost inputs include salary  
14 rates for outreach and communications personnel, projected advertising volumes, and the  
15 anticipated level of customer contact throughout deployment years. C&S Awareness costs are  
16 projected to peak in 2029 and 2030, driven by creative development, media production, printed  
17 material procurement, campaign design, and media distribution activities required to support  
18 AMIR Project outreach. Beginning in 2031, these costs decline and become constant, reflecting  
19 a steady-state level of engagement during the mass deployment phase.

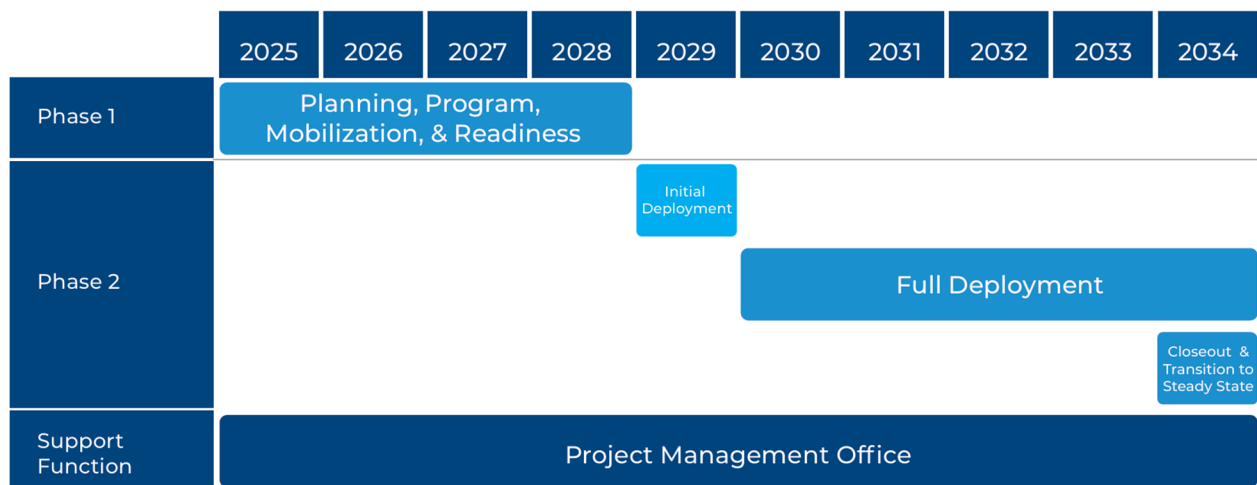
#### 20 **IV. AMIR PROJECT DEPLOYMENT ROADMAP**

##### 21 **A. AMIR Project Deployment Roadmap (2025-2034)**

22 The AMIR Deployment Roadmap organizes field execution into two phases – Phase 1:  
23 Deployment Readiness (2025 – 2028) and Phase 2: Mass Field Deployment (2029 – 2034).

24 There is one continuous support track spanning the entire program: the PMO (2025 – 2034).

**Figure IV-3  
AMIR Deployment Project Roadmap and Timeline  
2025 – 2034**



**1. Phase 1: Deployment Readiness (2025-2028)**

The AMIR Project follows a structured, multi-year roadmap for transitioning from SoCalGas’s existing AMI system to a modern, secure, and scalable platform between 2025 and 2034. The roadmap defines the sequence, timing, and coordination of field deployment, PMO, and customer services and C&S awareness activities necessary to deploy and transition to the new AMI system.

**a) 2025-2028 – Planning, Program Mobilization, and Readiness**

This period establishes the foundation for field deployment activities by developing the operational framework, contracts, workforce, and infrastructure needed for deployment.

- Establish PMO: Establish governance, scheduling, reporting cadence, plan for field deployment, support vendor contracting and RFI/RFP processes.
- Vendor Contracts: Finalize deployment vendor selection and execute agreements, including those supporting warehousing and fleet.
- Initiate MQM-Phase 1: Engineers to perform design reviews and prototype testing.
- Warehouse Selection and Planning: Locate warehousing sites to stage materials, tools, and equipment to support the 2029 initial installation group.
- Plan for Fleet Procurement: Establish a plan for procuring vehicles to support the deployment workforce.
- Process Design and Policy Development: Define policies and standard operating procedures to guide consistent installation and deployment related process execution.

1                   **2. Phase 2: Mass Field Deployment and Operations (2029 – 2034)**

2                   **a) 2029 – Initial Deployment**

3 This year serves as the bridge between system validation and full deployment.

- 4           • Finalize Initial Warehousing Leases and Build-outs: Secure lease agreements and  
5           complete facility modifications to prepare for operational use.
- 6           • Fleet Delivery and Modification: Initiate vehicle branding and upfitting to support  
7           needs of deployment workforce.
- 8           • Back-Office Support: Staff back-office support roles to enable clerical,  
9           dispatching, operational analysis, technical support, scheduling, and data  
10          validation deployment functions.
- 11          • Launch Training Program: Design and launch training program, including the  
12          new-technician and existing technician trainings.
- 13          • Begin Customer Services and C&S Awareness: Begin customer billing and call  
14          support functions. Initiate engagement efforts for safe access and early  
15          awareness.
- 16          • Initial Deployment: Deploy approximately 25,000 modules to validate system  
17          integration, logistics, workforce efficiency, and data flow.
- 18          • Start Installation QA: Refine installation metrics and QA inspection protocols  
19          based on initial installations.

20                   **b) 2030 – 2034 – Full Deployment**

21 This period represents the core field deployment phase.

- 22           • Ramp Up Installer Workforce: Increase workforce as installations increase and  
23           expand geographic deployment.
- 24           • MQM: MQM production sampling to maintain asset quality.
- 25           • Scale Deployment Activities: Increase and reduce various deployment areas to  
26           align with installation activity, including QA, warehousing, fleet, training, and  
27           Customer Services and C&S Awareness.

28                   **c) 2034 - Closeout and Transition to Steady State**

29           The final project year focuses on completing installations, decommissioning temporary  
30           facilities, and transitioning to ongoing operations.

- 31           • Decommission regional warehouses and release leased facilities.
- 32           • Finalize billing reconciliations and data validation.
- 33           • Transition steady-state operations to SoCalGas business units.

1                                   **3. Support Function Across All Phases**

2                                   **a) 2025 – 2034 – Project Management Office**

3                                   The PMO directs and coordinates all deployment workstreams, supporting project  
4 accountability and schedule adherence.

- 5                                   • Provide governance, coordination, and reporting across all deployment
- 6                                   workstreams.
- 7                                   • Oversee vendor management, cost tracking, and schedule control.
- 8                                   • Maintain PMO oversight through project closeout.

9 **V. CONCLUSION**

10                                  The deployment activities described in my testimony form the operational backbone of  
11 the AMIR Project. The field deployment work, encompassing endpoint deployment, field  
12 training, installation, removal, and QA activities, provides the foundation for replacing modules  
13 safely and efficiently across SoCalGas’s service territory. Deployment support functions,  
14 including MQM and the deployment back office, provide oversight, performance management,  
15 and issue resolution throughout the rollout. Warehousing and Fleet, through their materials  
16 handling, staging, distribution, and fleet responsibilities, enable timely delivery of equipment and  
17 supports field deployment. The PMO provides centralized governance controls and coordination  
18 to keep field deployment on schedule and within budget. Customer Services and C&S  
19 Awareness activities allow customers to remain informed, engaged, and supported. The cost  
20 forecasts, organizational structure, and implementation approach presented in my testimony  
21 reflect a prudent and cost-efficient plan to execute the system wide replacement.

22                                  This concludes my prepared direct testimony.

1 **VI. WITNESS QUALIFICATIONS**

2 My name is Linden S. Olah. I am employed by Southern California Gas Company  
3 (SoCalGas) as the AMIR Field Deployment Workstream Manager. My business address is 555  
4 West Fifth Street, Los Angeles, CA 90013. I have over 20 years of experience with SoCalGas in  
5 customer service, infrastructure support, and distribution operations. In my current role, I am  
6 responsible for all field operations-related tasks leading up to and including the successful  
7 deployment of over six million advanced meter module replacements. I have held a variety of  
8 management positions at SoCalGas, including roles in Training and Development, Compliance  
9 Assurance, Distribution Project Management, and Distribution Performance & Resource  
10 Management. I received a Bachelor of Arts in Business Administration from the University of  
11 La Verne. I have not previously testified before the Commission.