BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U 902 E) for Approval of Electric Program Investment Charge Plan for Years 2026-2030.	A.26-08-___

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APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) FOR APPROVAL OF FIFTH ELECTRIC PROGRAM INVESTMENT CHARGE PLAN FOR YEARS 2026-2030

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APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) FOR APPROVAL OF FIFTH ELECTRIC PROGRAM INVESTMENT CHARGE PLAN FOR YEARS 2026-2030

Pursuant to California Public Utilities Commission ("Commission" or "CPUC") Decisions ("D.") 12-05-037, D.11-12-035, D.21-11-028, and D.26-02-037, and Rule 2.1 of the Commission's Rules of Practice and Procedure ("Rule or Rules"), San Diego Gas & Electric Company ("SDG&E") hereby submits this application ("Application") for approval of its fifth Electric Program Investment Charge ("EPIC") Investment Plan ("EPIC 5 Plan").[1] The EPIC 5 Plan is Attachment A hereto.

I. EPIC PROGRAM BACKGROUND

D.11-12-035 established EPIC to "provide public interest investments in applied research and development, technology demonstration and deployment, market support, and market facilitation, of clean energy technologies and approaches for the benefit of electricity ratepayers" of SDG&E, Pacific Gas and Electric Company ("PG&E") and Southern California Edison Company ("SCE") (collectively, the "IOUs" or "IOU Administrators").[2] D.12-05-037 established the purposes and governance structure for EPIC and established the California Energy Commission ("CEC") as an administrator of the program with its own budget; each IOU is to administer its respective budgets. Funding for EPIC was initially authorized until

[1] D.26-02-037, Ordering Paragraph ("OP") 5 at 115, set August 26, 2026, as the filing date for EPIC 5 plans.

[2] D.12-05-037 at 2.

December 31, 2020; the CEC and each of the IOUs were required to propose plans to the Commission for the use of EPIC funds every three years.[3] In 2019, the CPUC opened Rulemaking ("R.") 19-10-005 to consider the renewal of the EPIC Program. In September 2020, D.20-08-042 renewed EPIC for ten years, through December 31, 2030, authorizing two five-year investment plan cycles ("EPIC 4" and "EPIC 5"). This decision authorized the CEC to continue its role as program Administrator and concluded Phase 1 of the proceeding. This decision deferred the determination of the IOUs to continue as EPIC administrators to Phase 2 of the proceeding. In 2021, the CPUC adopted D.21-11-028 authorizing the IOUs to file their EPIC 4 Investment Plans, subject to additional administrative requirements, and adopted EPIC's mission statement and guiding principles. D.24-03-007 adopted five strategic goals for the EPIC program; Transportation Electrification, Distributed Energy Resource ("DER") Integration, Building Decarbonization, Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas, and Climate Adaptation. This decision also established a process for developing proposed Strategic Objectives under those Strategic Goals. In February 2026, D.26-02-037 adopted 13 strategic objectives, authorized the IOUs to continue as EPIC Administrators for the EPIC 5 investment plan cycle (2026-2030), and ordered that the Administrators file their respective investment plans by August 26,2026.

A. SDG&E's Prior EPIC Plans

In the first four EPIC cycles, SDG&E gained valuable knowledge, data and tools through the completion of EPIC demonstrations, bringing value to ratepayers in the form of improved efficiencies, reliability, safety, and reduced costs. SDG&E EPIC administration has applied a strategy of building and growing knowledge bases in the areas of Unmanned Aircraft Systems

[3] *Id*. at 31 and OP 11 at 102.

("UAS"), advanced distribution system automation to support grid modernization and integration of distributed energy resources ("DERs"), interoperability of new technologies and emerging standards for communication infrastructure, just to name a few. These first four cycles, summarized below, provide additional value as they inform SDG&E, the industry, and standards development organizations, and support Commission initiatives.

On November 1, 2012, SDG&E filed Application ("A.") 12-11-002, seeking approval for its first EPIC ("EPIC 1") Plan, in which it proposed to execute five smart-grid related projects. D.13-11-025 approved SDG&E's EPIC 1 application.

On May 1, 2014, SDG&E filed A.14-05-004, seeking approval for its second EPIC ("EPIC 2") Plan, in which it proposed to execute five individual technology development and deployment ("TD&D") projects, as well as a sixth project through which SDG&E will participate in industry research, development and deployment ("RD&D") consortia. D.15-04-020 approved SDG&E's EPIC 2 plan.

On May 1, 2017, SDG&E filed A.17-05-009 seeking approval of its third EPIC ("EPIC 3") Plan proposing seven TD&D projects: (1) Integration of battery, photovoltaic other DER system combinations into utility distribution system operations; (2) energy storage performance evaluation to test Vanadium Redox Flow ("VRF") batteries and lithium ion batteries to understand ramifications for integration with power system infrastructure and operations; (3) Application of Advanced Metering Infrastructure ("AMI") data to advanced utility system operations; (4) Safety training simulators with augmented visualization; (5) UAS with advanced image processing for electric utility inspection and operations; (6) Repurposing post-service electric vehicle batteries for utility, commercial, and mass transit; (7) Demonstration of a

multipurpose mobile battery for the Port of San Diego and/or other applications. D.18-10-052, OP 3 at 152, approved SDG&E's EPIC 3 application.

On October 3, 2022, SDG&E filed A.22-10-002 and received approval of its fourth EPIC ("EPIC 4") Plan proposing five TD&D research topic areas: (1) Communication and control infrastructure for Power System Technology Advancement; (2) Mobile microgrid; (3) Optimizing Real-Time Net Energy Metering ("NEM") hosting capacity; (4) Demonstrating solutions for inverter integration issues; (5) Integrated Distributed Energy Resources ("IDER") operational flexibility per D.23-11-086, OP 3 at 31.

B. Commission Modifications to the EPIC Program

The Commission, on its own motion, opened R.19-10-005 to consider the renewal of the EPIC program. This proceeding reviewed the program, considered whether and how to continue funding the program, and considered appropriate administrative and programmatic improvements. D.20-08-042 renewed EPIC for ten years, through December 31, 2030, authorizing two five-year investment plan cycles (referred to, respectively, as EPIC 4 and EPIC 5). That decision continued the CEC as an administrator. The total annual budget for the EPIC 5 investment cycle (2026-2030) was set at $185 million.[4]

D.26-02-037 authorized the IOUs to continue as EPIC administrators for the EPIC 5 investment plan cycle and directed the EPIC Administrators to file investment plan applications for EPIC 5 by August 26, 2026.[5] This decision did not modify the previous instructions for EPIC 5 that were included in D.21-11-008, which instructed the IOUs to file EPIC 5 investment

[4] *See* D.26-02-037, OP 2 at 113.

[5] *Id.*, OP 5 at 115.

plans at the Strategic Initiative level, similar to the CEC's filing instructions.[6] "Strategic initiatives are defined as the strategies EPIC Administrators employ to meet their high-level Strategic Objectives. EPIC Administrators shall propose funding levels for the Strategic initiatives and specify how these initiatives will be operationalized, including the proposed activities."[7] SDG&E's EPIC 5 Plan calls its proposed activities "research topic areas," and otherwise conforms to this direction.

C. General Requirements for EPIC Plans

As summarized in this section, SDG&E's EPIC 5 Plan conforms to the Commission's requirements for the program. EPIC is designed to "be the primary vehicle for utility electric RD&D proposals other than the proposals submitted by the utilities for demand response and electric efficiency RD&D projects."[8] The IOUs may administer projects funded by EPIC only in the area of TD&D.[9]

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[6] The CEC filed its EPIC 4 plan on November 23, 2021 (*see* A.21-11-021, Application of the CEC for Approval of EPIC: Proposed 2021 – 2025 Investment Plan.).

[7] D.21-11-028, OP 8 at 57. This Decision states (at 16-17):

> We understand … [the CEC's] concern to be that budgeting at the level of research topic areas would unnecessarily constrain the CEC's nimbleness and ability to shift funding between solicitations as needed due to unforeseen circumstances and emerging conditions. That outcome is not our intent, which is why text descriptions of research topic areas or individual projects are not binding. Our intent is that specifying funding at a Strategic Initiative level provides the Commission with the information it needs to clearly understand the administrator's priorities and what is to be accomplished through each investment plan, while preserving EPIC administrator's ability to plan and execute project portfolios that maintain a long-range perspective, are dynamic in nature, address emerging issues, and make the best possible use of resources… [W]e note that funding may be shifted among research topics areas within an approved Strategic Initiative without Commission approval.

[8] D.12-05-037, Conclusions of Law ("COL") 15 at 96.

[9] *Id*. at 2, and Findings of Fact ("FOF") 8 at 90.

D.12-05-037 requires that the four EPIC Administrators submit "coordinated"[10] EPIC plans, that meet the following common requirements (these requirements still apply to the current application):[11]

- Any projects funded through EPIC must, first and foremost, demonstrate "the potential to produce electricity ratepayer benefits, defined as promoting greater reliability, lower costs, and increased safety;"[12]

- EPIC expenditures are to be guided by the complementary principles of providing societal benefits, assisting with the reduction of greenhouse gas ("GHG") emissions in the electricity sector at the lowest possible cost, supporting the Loading Order,[13] and contributing to goals related to low-emission vehicles and transportation, economic development, and efficient use of ratepayer monies;

- EPIC expenditures must follow the statutory guidance provided by California Public Utilities ("Pub. Util.") Code ("Section") §§ 740.1 and 8360;[14]

- EPIC Plans must be mapped to the electric utility value chain identified in D.12-05-037;[15] and

- EPIC funds may not be used to fund duplicative activities.[16]

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[10] *Id*. at 31, and FOF 9 at 91.

[11] D.21-11-028 adopted EPIC's mission statement and guiding principles. D.21-11-028 at 43 clarifies that each project does not need to meet all five principles,

[12] D.12-05-037, FOF 1 at 89.

[13] Since 2003, Commission-regulated utilities must procure resources to serve demand per the "Loading Order," in the following order of priority:

(1) Energy Efficiency & Conservation

(2) Demand Response

(3) Renewable Resources & Clean Distributed Generation, and

(4) Clean Conventional (Fossil) Generation, if necessary.

CPUC, Energy Action Plan, adopted April 18, 2003, *available at* http://docs.cpuc.ca.gov/published/report/28715.htm.

[14] D.12-05-037 at 18, COL 1 at 94, and OP 12(e) at 104.

[15] Per D.21-11-028 at 17, and OP 8 at 57, the language in D.12-05-037 OP 12 at 102, referencing "program areas" or "investment areas" is updated to "initiatives."

[16] D.12-05-037 at 40, and FOF 9 at 91 (EPIC Administrators to collaborate to "to ensure there is no duplication of effort").

In addition, D.12-05-037 specifies the information that the EPIC plans must include, such as summaries of and responses to stakeholder comments, informational summaries of RD&D efforts underway through approved Energy Efficiency ("EE") and Demand Response ("DR") and intended intellectual property ("IP") methodologies.[17]

Additionally, pursuant to D.26-02-037, although the EPIC Administrators are not required to file investment plans that meet every Strategic Objective, each proposed project must meet at least one of the Strategic Objectives adopted in this decision. A template for the EPIC 5 program cycle investment plan application, which included page limits for each section, and an Application Guidance Memorandum were provided by Energy Division to streamline the CPUC's review and approval process.

As shown below and in Attachment A, SDG&E's EPIC 5 Plan satisfies these requirements.

II. SUMMARY OF THE APPLICATION

SDG&E's EPIC 5 Plan, provided as Attachment A, is fully consistent with and responsive to the requirements summarized in the previous section D.12-05-037, D.13-11-025, D.15-04-020, D.21-11-028, and D.26-02-037.[18] The Commission's directives, as well as SDG&E's demonstrated vision for EPIC-funded TD&D programs, warrant the Commission's approval of the SDG&E EPIC Plan. The research topics proposed, and the eventual projects selected, in the EPIC 5 Plan have the potential to provide Commission-mandated benefits of

[17] Including those found at D.12-05-037 at OPs 12(d) at 104 and 15 at 104-105; D.13-11-025 at 66-67; and D.21-11-028 at 17 and OP 8 at 57.

[18] While SDG&E is not submitting any prepared testimony in support of its EPIC Plan in this application, it will make qualified witnesses available at the Commission's request.

lower costs, greater reliability, and increased safety, while offering benefits to electric utility ratepayers and alignment with State energy policies and statutes.

III. SUMMARY OF SDG&E'S EPIC 5 PLAN

SDG&E's EPIC 5 Plan is comprised of four strategic initiatives, each with a corresponding primary strategic objective. This plan supports the EPIC 5 goals of DER Integration, Climate Adaptation, Building Decarbonization, and Achieving 100% Net-Zero Carbon Emissions & the Coordinated Role of Gas through energy technology innovation of key existing and emerging technologies. The plan also contributes to resiliency and reliability needs of customers for the electric grid. The four strategic initiatives and their supporting strategic objectives are summarized below; these are more fully described in Attachment A, including stakeholder outreach and budget. Attachment A addresses such matters as metrics, expected outcomes, impact on Disadvantaged and Tribal Communities, and guiding principles.

A. Strategic Initiative: 1. Integrating DERs to Advance Grid and Community Resiliency

Distributed energy resources, including solar generation, energy storage, electric vehicles, and flexible loads, will play an increasingly important role as California transitions to a clean energy future. Effectively integrating these resources requires advances in grid visibility, interoperability, operational coordination, energy storage and workforce readiness. This initiative supports the EPIC Strategic Goal of Distributed Energy Resource Integration and is aligned most closely with EPIC Strategic Goal 9: Leveraging DERS for Grid and Community Resilience. The proposed research will evaluate technologies and operational approaches that can improve coordination among customer resources and utility systems, increase grid flexibility, prepare operators for increasingly complex grid conditions and determine suitability of emerging energy storage technologies.

SDG&E proposes two research topic areas for this initiative. The research topic area section of this investment plan provides details around how SDG&E plans to achieve this strategic initiative's objectives and provide value to its ratepayers and the State as a whole. Specifically, SDG&E has identified the following candidate research topic areas:

1. Connected Customer Resources and Resilient Grid Operations; and
2. Advanced Energy Storage Technologies.

These research topics are discussed in more detail in Attachment A.

B. Strategic Initiative: 2. Next Generation Resilience and Response

Climate change is increasing the frequency and severity of wildfire, extreme storms, and other hazards that can affect utility infrastructure and communities. These risks require more integrated information, improved grid visibility and analytical capabilities to support planning, mitigation, emergency response, and investment decisions.

This initiative supports the EPIC Strategic Goal of Climate Adaptation and is aligned most closely with EPIC Strategic Goal 13: Cost Effective Grid Hardening for Long Term Climate Impacts. The proposed research will explore how artificial intelligence, advanced sensing, climate data, grid and community vulnerability information can be combined to identify risks and support timely, informed action.

SDG&E proposes three research topic areas for this initiative. The research topic area section of this investment plan provides details around how SDG&E plans to achieve this strategic initiative's objectives and provide value to its ratepayers and the State as a whole. Specifically, SDG&E has identified the following research topic areas:

1. AI for Utility Resilience and Adaptation (AURA); and
2. Preventive Grid Sensing; and
3. Integrated Risk Analysis for Wildfire Mitigation

These research topic areas are discussed in more detail in Attachment A.

C. Strategic Initiative: 3. Guiding Customers to a Clean Energy Future

Building decarbonization is an important component of California's decarbonization strategy, but customers may face challenges understanding available technologies, costs, incentives, infrastructure requirements, and implementation pathways. These challenges can be especially significant for customers with limited access to technical assistance and/or financial resources.

This initiative supports the EPIC Strategic Goal of accelerating building decarbonization and is aligned most closely with EPIC Strategic Goal 4: Reducing Cost of Whole Home Electrification. The proposed research will evaluate how a customer-centric, AI-enabled electrification platform can provide accessible, personalized guidance regarding electrification opportunities. The research is intended to help customers evaluate energy choices with greater confidence, less confusion, and clearer information about costs, incentives, infrastructure needs, and available technologies.

SDG&E proposes one research topic area for this initiative. The research topic area section of this investment plan provides details around how SDG&E plans to achieve this strategic initiative's objectives and provide value to its ratepayers and the State as a whole. Specifically, SDG&E has identified the following research topic area:

1. AI-Enabled Customer Electrification Concierge

This research topic area is discussed in more detail in Attachment A.

D. Strategic Initiative: 4. Decarbonization Pathways for California's Economy

Achieving California's climate goals requires additional solutions for some customers and sectors to electrify. Research is needed to assess emerging pathways that can reduce

emissions while making effective use of existing infrastructure and supporting reliability and affordability.

This initiative supports the EPIC Strategic Goal: Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas and aligns with Strategic Objective 5: Innovative Approaches for Difficult-to-Decarbonize Sectors. The proposed research will evaluate approaches for lower emission energy products from natural gas such as hydrogen and solid carbon, and assess their potential use in fuel cell, transportation, industrial, and other difficult to decarbonize applications.

SDG&E proposes one research topic for this initiative. The research topic area section of the investment plan provides details on how SDG&E plans to achieve this strategic initiative's objectives and provide value to its ratepayers and the State as a whole. Specifically, SDG&E has identified the following research topic area:

1. Decarbonizing Natural Gas for Multiple Use Cases

This research topic area is discussed in more detail in Attachment A.

E. SDG&E's EPIC 5 Plan Supports the State's Energy and Climate Goals

SDG&E's EPIC 5 Investment Plan will help achieve California's energy and climate goals, such as Senate Bill ("SB") 100's carbon neutrality by 2045[19] and SB 32's requirement to reduce GHG emissions by 2030. [20] In addition to advancing State goals, SDG&E's EPIC 5 Investment Plan supports the CPUC's key proceedings, such as Integrated Resources Plan,[21] the

[19] SB 100 sets a goal of requiring renewable and zero-carbon energy resources to supply 100% of electric retail sales and state loads by 2045. See SB 100 (DeLeón, 2018), *available at:* https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

[20] SB 32 ordered a reduction in economywide emissions of 40% below 1990 levels by 2030. See SB 32 (Pavley, 2016), *available at*: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

[21] R.20-05-003, Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes (May 7, 2020).

High DER Ordering Instituting Rulemaking,[22] Long-Term Gas Planning,[23] Building Decarbonization,[24] Climate Adaptation,[25] and related Wildfire Mitigation and Public Safety Power Shutoff proceedings, by generating data and lessons learned from research and demonstrations. For additional information on alignment between SDG&E's EPIC 5 Investment Plan and CPUC Proceedings, refer to Attachment A, Appendix A11.

F. Summary of Stakeholder Engagement in Investment Planning Process

1. Internal Engagement

SDG&E engages internal stakeholders from start to finish in the planning and execution of EPIC projects. Initial investment planning for EPIC 5 began through a stakeholder engagement process involving Company departments at the Director level.[26] Each Director was asked to engage their staff in the plan creation process, requesting ideas, project proposals, and cost estimates. The stakeholder information was collected using a project intake form created by the EPIC Program Manager and resulted in numerous topic area submissions.

2. External Engagement

The SDG&E EPIC Website[27] serves as a comprehensive record of the public event presentations for EPIC 5 investment planning. To help inform the EPIC 5 application and provide necessary input from external stakeholders, the three IOU EPIC Administrators held

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[22] R.21-06-017, Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future (June 24, 2021).

[23] R.24-09-012, Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Long-Term Gas System Planning (September 26, 2024).

[24] R.19-01-011, Order Instituting Rulemaking Regarding Building Decarbonization (January 31, 2019).

[25] R.18-04-019, Order Instituting Rulemaking to Consider Strategies and Guidance for Climate Change Adaptation (April 26. 2018).

[26] At SDG&E, Directors are senior managers just below the executive level – not to be confused with members of the board of directors of the corporation.

[27] *See* sdge.com/epic.

three public workshops[28] and each of the three IOUs presented their respective EPIC 5 initiatives at the April 17, 2026, Disadvantaged Communities Advisory Group ("DACAG") meeting. Additional external engagement included surveys distributed to workshop participants, an SDG&E-targeted survey designed to better understand research priorities, needs and concerns in Disadvantaged and Vulnerable Communities ("DVC") and Tribal communities, participation in the *Building Energy Justice into Disaster Resilience & Recovery: Learning from Communities on the Front Lines* webinar; and attendance at the Tribal Energy and Safety Summit. These activities provided additional opportunities to gather stakeholder perspectives and consider community-informed approaches in the development of the research portfolio.

The three EPIC IOU Administrators coordinated their efforts in planning the workshops to avoid duplication in their candidate topic areas and support related activities across each utility and the CEC. In addition, the IOUs met extensively with the CEC to ensure duplication of EPIC 5 activities did not exist, and to potentially identify areas where all four EPIC Administrators would work together. Summaries of each workshop are provided in Attachment A, Appendix A1.

G. Overview of Investment Plan Budget Allocation

The Commission authorized SDG&E's EPIC 5 budget for $16,280,000.[29] SDG&E has no uncommitted EPIC 4 funds available to offset the authorized EPIC 5 budget. The Commission directed the IOUs to "propose funding levels for the Strategic Initiatives."[30] Per D.26-02-036, OP 2, SDG&E is requesting an inflation adjusted budget increase of 5%. As such, SDG&E proposes the following EPIC 5 budget, by strategic initiative, below in Table 1.

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[28] These workshops are described in Appendix A1 of Attachment A.

[29] D.21-11-028, Appendix B at B3.

[30] *Id.,* OP 8 at 57.

Table 1: SDG&E's EPIC5 (2026-2030) Budget Allocation

Strategic Initiative (Funding Item)	Amount
Strategic Initiative 1 Title: Integrating DERs to Advance Grid & Community Resiliency	**$6,000,000**
Strategic Initiative 2 Title: Next Generation Resilience and Response	**$2,500,000**
Strategic Initiative 3 Title: Guiding Customers to a Clean Energy Future	**$1,299,130**
Strategic Initiative 4 Title: Decarbonization Pathways for California's Economy	**$5,500,000**
CPUC Oversight Budget	**$85,470**
Administrative Budget	**$1,709,400**
Total Request[31]	**$17,094,000**

While SDG&E employed a very rigorous process to define the broad set of 7 research topic areas in its EPIC 5 application, over the course of the cycle additional needs and opportunities may arise that were unforeseen at the time the investment plan was developed. As such, SDG&E requests that the Commission allow the IOUs to file Tier 3 Advice Letters to request approval to add any additional research topics to their plans, after their plans are approved. This would be consistent with the previous process for requesting approval to pursue additional projects for investment plans filed at the project level in EPIC 1 through EPIC 4.

IV. SDG&E IS REQUESTING A RATE INCREASE BEYOND THE EPIC FUND COLLECTIONS THAT HAVE ALREADY BEEN AUTHORIZED

SDG&E is requesting approval for a 5% increase in this Application in addition to the collection of EPIC funds from electric utility ratepayers that were previously authorized in

[31] SDG&E is requesting an inflation adjustment of 5%. See Attachment A for more details.

D.11-12-035,[32] D.12-05-037,[33] D.15-04-020,[34] D.20-08-042, and D.26-02-037.[35] SDG&E has been collecting funds in accordance with those decisions since January 1, 2012, through the electric Public Purpose Programs ("PPP") bill component.[36] D.21-11-028 and D.26-02-037, authorize EPIC Administrators to request an inflation-adjusted budget increase to support increased costs associated with overseeing the program.[37] An inflation-adjusted budget review supports an increase of approximately 18% over current funding levels authorized within the Decision. While allowable, SDG&E remains mindful of the current rate pressures facing its customers and the general affordability concerns throughout the state of California and proposes a more modest increase of 5% for its project and administrative budgets. By identifying internal efficiencies and clearly defining initiatives that should be supported by EPIC, SDG&E is able to propose a smaller budget increase. This measured approach balances the need to maintain an effective EPIC research portfolio, while keeping SDG&E's commitment to affordability front-and-center.

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[32] D.11-12-035, OPs 2 and 3 at 40-41 (establishing the EPIC surcharge and ordering the electric IOUs to collect EPIC funds from their ratepayers in the same manner as the expiring system benefits charge associated with Pub. Util. Code § 399.8).

[33] D.12-05-037, OP 1 at 99.

[34] D.15-04-020, Appendix B, Table 5 at 7.

[35] D.20-08-042, OP 5 at 32-33.

[36] *See* Advice Letter ("AL") 2321-E, approved January 31, 2012 and effective December 22, 2011 (establishing SDG&E's EPIC surcharge and associated EPIC Balancing Account); AL 2375-E, approved August 14, 2012 and effective June 22, 2012 (revise its EPIC Balancing Account to align with SDG&E's 8.8% share of authorized funding beginning January 1, 2013); and AL 2402-E, approved January 3, 2013 and effective January 1, 2013 (revising SDG&E's electric PPP rates effective January 1, 2013 in accordance with OPs 1 and 7 of D.12-05-037). *See* AL 3616-E, approved and effective September 24, 2020, for SDG&E's adjustment to the EPICBA pursuant to D.20-08-042. Pursuant to D.26-02-037, AL 4824-E was submitted on March 30, 2026. A partial supplemental AL 4824-E-A was submitted on April 23, 2026. AL 4824-E-A was approved with an effective date of March 30, 2026.

[37] Based on the timing of the final decision, prior year incremental amounts will be included in the year following the approval. For example, if the final decision is approved in 2027, the incremental revenue requirements for 2026 and 2027 will be collected in rates in 2028.

V. SDG&E'S EPIC 5 PLAN SHOULD BE APPROVED AS REASONABLE, APPROPRIATE, AND IN THE INTEREST OF RATEPAYERS

D.12-05-037 mandates that any program funded through EPIC must, first and foremost, be able to demonstrate its "potential to produce electricity ratepayer benefits, defined as promoting greater reliability, lower costs, and increased safety."[38] In addition, it must use various complementary and statutory principles to guide the plan's development and ensure the result is "just and reasonable to ratepayers."[39]

The SDG&E EPIC 5 Plan is fully consistent with and responsive to the requirements outlined in D.12-05-037. The SDG&E EPIC Plan has the potential to provide ratepayers with greater reliability, lower costs, and increased safety by modernizing the electric grid.[40] In addition, the EPIC Plan aligns with the complementary principles outlined in D.12-05-037, such as the efficient use of ratepayer monies and support for GHG emission reduction policies.[41] It also meets the statutory criteria outlined in Pub. Util. Code §§ 740.1 and 8360. All seven proposed research topic areas map to the applicable sections of the electric utility value chain.[42] Lastly, SDG&E has been actively engaging with community partners prior to this filing and will continue to do so once the Investment Plan is approved. While community engagement has always been a core requirement under EPIC, a new and key component of EPIC 5 is the filing of

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38 D.12-05-037, FOF 1 at 89.

39 *Id*. at 20, and OP 2 at 99.

40 *See* EPIC 5 Plan (provided as Attachment A) at Sections 3. Funding Overview, and 4. Strategic Goals and Objectives.

41 *See id*.

42 *Id*. at Sections 3 and 4. SDG&E's EPIC 5 Plan maps to all sections of the utility value chain except for one: "Generation" as SDG&E is not proposing any research in this topic area. SDG&E would note that while its research topic areas touch on "Generation" it is not directly related to funding generation projects, which are prohibited through EPIC, but instead have indirect impacts.

SDG&E's Community Engagement Plan ("CEP"),[43] which establishes a structured approach for engaging communities and stakeholders throughout the EPIC 5 lifecycle. The CEP supports implementation of D.26-02-037 and describes how SDG&E will seek to promote transparency, accessibility, equity, and continuous improvement in EPIC planning and implementation.

VI. SDG&E'S EPIC PLAN FULFILLS REQUIREMENTS OF PAST EPIC DECISIONS

A. In Accordance with D.12-05-037, SDG&E has Collaborated and Consulted with Others During Plan Development

The Commission requires extensive coordination among the EPIC Administrators, as well as consultation with interested stakeholders. The Commission has stated that these collaborations between the EPIC Administrators are done under protection of the State Action Immunity doctrine from antitrust liability.[44] D.12-05-037 encourages the four EPIC Administrators to "offer a coordinated approach to clean energy RD&D"[45] through their EPIC plans "to ensure there is no duplication of effort."[46] D.12-05-037 also requires that the EPIC Administrators consult with stakeholders at specific times during the scoping and plan development process. As described above and in the SDG&E EPIC Plan (Attachment A at Appendices A1, A5, A6), SDG&E has satisfied these requirements.

B. The SDG&E EPIC Plan Provides a Sufficient Summary of SDG&E's Approved EE and DR Programs

In accordance with D.12-05-037, EPIC plans must provide informational summaries of RD&D efforts underway through approved EE and DR portfolios. In D.13-11-025, the

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[43] See SDG&E AL 4865-E, Submission of SDG&E's EPIC 5 Community Engagement Plan pursuant to Decision 26-02-037, submitted June 26, 2026 (pending approval).

[44] D.13-11-025 at 108-110.

[45] D.12-05-037, FOF 9 at 91.

[46] *Id*. at 40.

Commission instructed that "[t]he IOUs Administrators should provide more thorough informational summaries of their RD&D activities undertaken as part of their approved Energy Efficiency and Demand Response portfolios in their future EPIC investment plan applications."[47] However, in D.18-01-004, the CPUC directed that the Emerging Technologies Energy Efficiency Program be implemented by a third-party administrator under the CALNext Program. As such, there are no RD&D projects under the EE portfolio to report on. SDG&E's RD&D activities undertaken as part of its DR portfolio are included in its EPIC 5 Plan at Attachment A, Appendix A4.

C. SDG&E Will Implement Intellectual Property Methodologies in Accordance with D.13-11-025 and D.15-04-020

In D.13-11-025, D.15-04-020, and D.26-02-037, the Commission responded by outlining numerous methodologies and requirements for Intellectual Property ("IP") developed with EPIC funds.[48] Therefore, pending any changes to the Commission's IP requirements through this proceeding, SDG&E will employ IP methodologies in accordance with D.13-11-025, D.15-04-020, and D.26-02-037 for its forthcoming projects in its EPIC 5 Plan.

VII. STATUTORY AND PROCEDURAL REQUIREMENTS

A. Rule 2.1 (a) – (c)

In accordance with Rule 2.1 (a) – (c) of the Commission's Rules of Practice and Procedure, SDG&E provides the following information.

1. Rule 2.1 (a) - Legal Name

SDG&E is a corporation organized and existing under the laws of the State of California. SDG&E is engaged in the business of providing electric service in a portion of Orange County

[47] D.13-11-025, COL 59 at 125.

[48] D.13-11-025, OPs 28 at 139, and OPs 31-34 at 140-141; D.15-04-020, OPs 18 and 19 at 64; D.26-02-037, OP 9 at 116.

and electric and gas service in San Diego County. SDG&E's principal place of business is 8330 Century Park Court, San Diego, California 92123. SDG&E's attorney in this matter is Walter C. Waidelich.

2. Rule 2.1 (b) - Correspondence

Correspondence or communications regarding this Application should be addressed to:

Eneida Alvarez
Regulatory Case Manager
San Diego Gas & Electric Company
8330 Century Park Court
San Diego, CA 92123
Telephone: 619-676-3742
Email: ealvare6@sdge.com

with copies to:

Walter C. Waidelich
Attorney for:
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, CA 92123
Telephone: (858) 331-0806
Email: wwaideli@sdge.com

3. Rule 2.1 (c)

a. Proposed Category of Proceeding

The previous four EPIC proceedings, A.12-11-001 *et al*., A.14-04-034 *et al*., and A.17-05-009 *et al.*, and A.22-10-001 *et al*., were categorized as "ratesetting" proceedings.[49] SDG&E proposes that this proceeding also be categorized as a "ratesetting" proceeding.

b. Proposed Schedule and Issues to be Considered

SDG&E does not believe that approval of this Application will require hearings. The previous three EPIC triennial proceedings, A.12-11-001 *et al*., A.14-04-034 *et al*., and A.17-05-

[49] *See*, *e.g.*, D.15-04-020 at 56.

009 *et al.*, and the fourth EPIC quinquennial proceeding A.22-10-001 *et al*., did not require testimony or evidentiary hearings. SDG&E has provided ample supporting information to create a record upon which the Commission may grant the relief requested. In addition, SDG&E has presented the draft SDG&E EPIC Plan to interested stakeholders, including Commission Staff, several times during the Plan's scoping and development during workshops, and has incorporated relevant feedback into the SDG&E EPIC 5 Plan.

Therefore, SDG&E proposes the following schedule:

PROPOSED SCHEDULE – NO HEARINGS	
ACTION	**DATE**
Application filed	August 26, 2026
Response/Protests	September 28, 2026
Reply to Response/Protests	October 5, 2026
Stakeholder Workshops	October 20-22, 2026
Opening Briefs	January 11, 2027
Reply Briefs	February 1, 2027
Proposed Decision	March 5, 2027
Comments on Proposed Decision	March 19, 2027
Reply Comments	March 26, 2027
Commission Decision	April 2027

The issues to be considered are described in this Application. In the scoping memos for the EPIC 1, EPIC 2, EPIC 3, and EPIC 4 plans, the Commission noted that the major issue to be considered is whether the EPIC plans adequately comply with the requirements of previous EPIC decisions. [50] The scope of this proceeding should be identical.

[50] A.12-11-001, Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge (issued January 7, 2013) at 7-11; A.14-04-034, Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge (issued July 28, 2014) at 4-7.

4. Rule 2.1 (d) – Safety[51]

SDG&E is committed to safety. Based on current information, SDG&E's EPIC 5 Plan will not result in any adverse safety impacts on the facilities or operations of SDG&E. Moreover, if its EPIC 5 Plan is approved, SDG&E intends to partner with skilled labor and vendors that demonstrate the necessary and applicable safety training, knowledge, expertise and/or certification. Bidders' proposals are examined to assess the proposer's approach for safety in performing the project work. In addition, SDG&E will comply with all applicable current safety laws, rules and procedures, including SDG&E's internal policies.

B. Rule 2.2 – Articles of Incorporation

A copy of SDG&E's Restated Articles of Incorporation as last amended, presently in effect and certified by the California Secretary of State, was filed with the Commission on September 10, 2014, in connection with SDG&E's Application A.14-09-008, and is incorporated herein by reference.

C. Rule 3.2 – Authority to Change Rates

In accordance with Rule 3.2 (a) – (d) of the Commission's Rules of Practice and Procedure, SDG&E provides the following information.

1. Rule 3.2 (a) (1) – Balance Sheet

SDG&E's balance sheet, income statement and financial statement are included with this Application as Appendix A.

[51] In D.16-01-017, the Commission amended Rule 2.1 to require all applications to include a detailed showing of relevant safety considerations.

2. Rule 3.2 (a) (2) – Statement of Effective Rates

A statement of all of SDG&E's presently effective electric and gas rates can be viewed electronically on SDG&E's website. Appendix B to this Application provides the table of contents from SDG&E's electric tariffs on file with the Commission.

3. Rule 3.2 (a) (3) - Statement of Proposed Rate Change

Appendix C includes two tables showing SDG&E's proposed electric rates and rate revenues, by customer class.

4. Rule 3.2 (a) (4) – Description of Property and Equipment

SDG&E is in the business of generating, transmitting and distributing electric energy to San Diego County and part of Orange County. SDG&E also purchases, transmits and distributes natural gas to customers in San Diego County. SDG&E has electric transmission, distribution and service lines in San Diego, Orange and Imperial Counties. This includes a composite 92% ownership in the 500,000 volt Southwest Powerlink, including substations and transmission lines, which run through San Diego and Imperial Counties to the Palo Verde substation in Arizona. This also includes ownership of the 500,000 volt Sunrise Powerlink, including substations and transmission lines, which run through San Diego and Imperial Counties to the Imperial Valley substation. Gas facilities consist of the Moreno gas compressor station in Riverside County and the Rainbow compressor station located in San Diego County. The gas is transmitted through high and low-pressure distribution mains and service lines. Applicant's original cost of utility plant, together with the related reserves for depreciation and amortization for the six-month period ending March31, 2026, is shown on the Statement of Original Cost and Depreciation Reserve attached as Appendix D.

5. Rule 3.2 (a) (5) and (6) – Summary of Earnings

A summary of SDG&E's earnings (for the total utility operations of the company) is included as Appendix E to this Application.

6. Rule 3.2 (a) (7) – Statement re Tax Depreciation

For financial statement purposes, depreciation of utility plant has been computed on a straight-line remaining life basis, at rates based on the estimated useful lives of plant properties. For federal income tax accrual purposes, SDG&E generally computes depreciation using the straight-line method for tax property additions prior to 1954, and liberalized depreciation, which includes Class Life and Asset Depreciation Range Systems, on tax property additions after 1954 and prior to 1981. For financial reporting and rate-fixing purposes, "flow through accounting" has been adopted for such properties. For tax property additions in years 1981 through 1986, SDG&E has computed its tax depreciation using the Accelerated Cost Recovery System. For years after 1986, SDG&E has computed its tax depreciation using the Modified Accelerated Cost Recovery Systems and, since 1982, has normalized the effects of the depreciation differences in accordance with the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986.

7. Rule 3.2 (a) (8) – Proxy Statement

A copy of the most recent proxy statement sent to all shareholders of SDG&E's parent company, Sempra Energy, dated March 27, 2026, was mailed to the Commission on April 1, 2026, and is incorporated herein by reference.

8. Rule 3.2 (a) (10) – Statement re Pass Through to Customers

The rate increases reflected in this Application pass through to customers only increased costs to SDG&E for the services or commodities furnished by it.

9. Rule 3.2 (b) – Notice to State, Cities and Counties

In compliance with Rule 3.2 (b) of the Commission's Rules of Practice and Procedure, SDG&E will, within twenty days after the filing this Application, mail a notice to the State of California and to the cities and counties in its service territory and to all those persons listed in Appendix F to this Application.

10. Rule 3.2 (c) – Newspaper Publication

In compliance with Rule 3.2 (c) of the Commission's Rules of Practice and Procedure, SDG&E will, within twenty days after the filing of this Application, publish in newspapers of general circulation in each county in its service territory notice of this Application.

11. Rule 3.2 (d) – Bill Insert Notice

In compliance with Rule 3.2 (d) of the Commission's Rules of Practice and Procedure, SDG&E will, within 45 days after the filing of this Application, provide notice of this Application to all of its customers along with the regular bills sent to those customers that will generally describe the proposed rate changes addressed in this Application.

VIII. SERVICE

SDG&E will serve this Application and its attachments on parties to the service list for R.19-10-005, the most recent EPIC proceeding (A.22-10-001), and all parties to the most recent general rate cases for SDG&E (A.22-05-016), PG&E (A.25-05-009), and SCE (A.23-05-010). Copies will be sent by electronic mail to the Assigned Administrative Law Judge in each proceeding and the Chief Administrative Law Judge.

IX. REQUESTED RELIEF

SDG&E respectfully requests that the Commission issue a decision:

1. Authorizing the IOUs to file Tier 3 Advice Letters to request approval to add any additional research topics to their plans, after their plans are approved. This would be consistent with the previous process for requesting approval to pursue

additional projects for investment plans filed at the project level in EPIC 1 through EPIC 4;

2. Finding that SDG&E's EPIC 5 Application and Plan are in compliance with the requirements of past EPIC decisions (*i.e.*, D.12-05-037, D.13-11-025, D.15-04-020 and D.21-11-028, D.23-11-086);

3. Approving the SDG&E EPIC 5 Plan as reasonable, appropriate and in the interest of electric utility ratepayers;

4. Rendering other Findings of Fact, Conclusions of Law, and issuing Orders consistent with the foregoing requests; and

5. Any other relief as is necessary and proper.

X. CONCLUSION

WHEREFORE, San Diego Gas & Electric Company requests that the Commission grant SDG&E's Application as described herein.

Respectfully submitted this 26th day of August 2026.

By: /s/ *Walter C. Waidelich*
Walter C. Waidelich

Attorney for:
SAN DIEGO GAS & ELECTRIC COMPANY
8330 Century Park Court, CP32D
San Diego, CA 92123
Telephone: (858) 331-0806
E-mail: wwaideli@sdge.com

SAN DIEGO GAS & ELECTRIC COMPANY

By: /s/ *Miguel Romero*
Miguel Romero
San Diego Gas & Electric Company
Senior Vice President & Chief Commercial Officer

OFFICER VERIFICATION

Miguel Romero declares the following:

I am an officer of San Diego Gas & Electric Company and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing **APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) FOR APPROVAL OF ELECTRIC PROGRAM INVESTMENT CHARGE INVESTMENT PLAN FOR YEARS 2026-2030** are true to my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on August 21, 2026 at San Diego, California.

By: /s/ *Miguel Romero*
Miguel Romero

San Diego Gas & Electric Company
Senior Vice President & Chief Commercial Officer

APPENDIX A

BALANCE SHEET, INCOME STATEMENT AND FINANCIAL STATEMENT

SAN DIEGO GAS & ELECTRIC COMPANY
BALANCE SHEET
ASSETS AND OTHER DEBITS
MARCH 2026

1. UTILITY PLANT

		2026
101	UTILITY PLANT IN SERVICE	32,032,164,600
102	UTILITY PLANT PURCHASED OR SOLD	-
104	UTILITY PLANT LEASED TO OTHERS	112,194,001
105	PLANT HELD FOR FUTURE USE	22,116,256
106	COMPLETED CONSTRUCTION NOT CLASSIFIED	-
107	CONSTRUCTION WORK IN PROGRESS	1,847,946,929
108	ACCUMULATED PROVISION FOR DEPRECIATION OF UTILITY PLANT	(9,631,950,634)
111	ACCUMULATED PROVISION FOR AMORTIZATION OF UTILITY PLANT	(1,520,535,237)
114	ELEC PLANT ACQUISITION ADJ	3,750,722
115	ACCUM PROVISION FOR AMORT OF ELECTRIC PLANT ACQUIS ADJ	(3,563,184)
118	OTHER UTILITY PLANT	2,820,385,390
119	ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION OF OTHER UTILITY PLANT	- (642,114,341)
120	NUCLEAR FUEL - NET	-
	TOTAL NET UTILITY PLANT	$ 25,040,394,502

2. OTHER PROPERTY AND INVESTMENTS

121	NONUTILITY PROPERTY	$ 14,781,604
122	ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION	(4,338,514)
158	NON-CURRENT PORTION OF ALLOWANCES	298,329,773
123	INVESTMENTS IN SUBSIDIARY COMPANIES	-
124	OTHER INVESTMENTS	-
125	SINKING FUNDS	-
128	OTHER SPECIAL FUNDS	883,839,442
175	LONG-TERM PORTION OF DERIVATIVE ASSETS	6,791,008
	TOTAL OTHER PROPERTY AND INVESTMENTS	$ 1,199,403,313

SAN DIEGO GAS & ELECTRIC COMPANY
BALANCE SHEET
ASSETS AND OTHER DEBITS
MARCH 2026

3. CURRENT AND ACCRUED ASSETS

		2026
131	CASH	$ 319,914,951
132	INTEREST SPECIAL DEPOSITS	-
134	OTHER SPECIAL DEPOSITS	-
135	WORKING FUNDS	-
136	TEMPORARY CASH INVESTMENTS	427,504,910
141	NOTES RECEIVABLE	-
142	CUSTOMER ACCOUNTS RECEIVABLE	860,724,302
143	OTHER ACCOUNTS RECEIVABLE	104,522,779
144	ACCUMULATED PROVISION FOR UNCOLLECTIBLE ACCOUNTS	(54,178,923)
145	NOTES RECEIVABLE FROM ASSOCIATED COMPANIES	-
146	ACCOUNTS RECEIVABLE FROM ASSOCIATED COMPANIES	652,136
151	FUEL STOCK	1,493,562
152	FUEL STOCK EXPENSE UNDISTRIBUTED	-
154	PLANT MATERIALS AND OPERATING SUPPLIES	271,002,443
156	OTHER MATERIALS AND SUPPLIES	-
158	ALLOWANCES	322,437,397
158	LESS: NON-CURRENT PORTION OF ALLOWANCES	(298,329,773)
163	STORES EXPENSE UNDISTRIBUTED	-
164	GAS STORED	407,905
165	PREPAYMENTS	82,850,948
171	INTEREST AND DIVIDENDS RECEIVABLE	3,019,222
173	ACCRUED UTILITY REVENUES	94,793,918
174	MISCELLANEOUS CURRENT AND ACCRUED ASSETS	13,822,640
175	DERIVATIVE INSTRUMENT ASSETS	30,319,274
175	LESS: LONG -TERM PORTION OF DERIVATIVE INSTRUMENT ASSETS	(6,791,008)
	TOTAL CURRENT AND ACCRUED ASSETS	$ 2,174,166,683

4. DEFERRED DEBITS

181	UNAMORTIZED DEBT EXPENSE	$ 72,813,313
182	UNRECOVERED PLANT AND OTHER REGULATORY ASSETS	4,975,659,888
183	PRELIMINARY SURVEY & INVESTIGATION CHARGES	5,388,958
184	CLEARING ACCOUNTS	2,445,556
185	TEMPORARY FACILITIES	438,038
186	MISCELLANEOUS DEFERRED DEBITS	312,926,717
188	RESEARCH AND DEVELOPMENT	-
189	UNAMORTIZED LOSS ON REACQUIRED DEBT	3,497,740
190	ACCUMULATED DEFERRED INCOME TAXES	566,553,337
	TOTAL DEFERRED DEBITS	$ 5,939,723,547
	TOTAL ASSETS AND OTHER DEBITS	$ 34,353,688,045

SAN DIEGO GAS & ELECTRIC COMPANY
BALANCE SHEET
LIABILITIES AND OTHER CREDITS
MARCH 2026

5. PROPRIETARY CAPITAL

		2026
201	COMMON STOCK ISSUED	$ 291,458,395
204	PREFERRED STOCK ISSUED	-
207	PREMIUM ON CAPITAL STOCK	591,282,978
210	GAIN ON RETIRED CAPITAL STOCK	-
211	MISCELLANEOUS PAID-IN CAPITAL	802,165,368
214	CAPITAL STOCK EXPENSE	(24,605,640)
216	UNAPPROPRIATED RETAINED EARNINGS	9,574,580,006
219	ACCUMULATED OTHER COMPREHENSIVE INCOME	(6,192,376)
	TOTAL PROPRIETARY CAPITAL	$ 11,228,688,731

6. LONG-TERM DEBT

221	BONDS	$ 10,900,000,000
223	ADVANCES FROM ASSOCIATED COMPANIES	-
224	OTHER LONG-TERM DEBT	-
225	UNAMORTIZED PREMIUM ON LONG-TERM DEBT	-
226	UNAMORTIZED DISCOUNT ON LONG-TERM DEBT	(36,850,406)
	TOTAL LONG-TERM DEBT	$ 10,863,149,594

7. OTHER NONCURRENT LIABILITIES

227	OBLIGATIONS UNDER CAPITAL LEASES - NONCURRENT	$ 2,066,091,960
228.2	ACCUMULATED PROVISION FOR INJURIES AND DAMAGES	15,088,498
228.3	ACCUMULATED PROVISION FOR PENSIONS AND BENEFITS	33,065,362
228.4	ACCUMULATED MISCELLANEOUS OPERATING PROVISIONS	-
244	LONG TERM PORTION OF DERIVATIVE LIABILITIES	418,900
230	ASSET RETIREMENT OBLIGATIONS	855,751,876
	TOTAL OTHER NONCURRENT LIABILITIES	$ 2,970,416,596

SAN DIEGO GAS & ELECTRIC COMPANY
BALANCE SHEET
LIABILITIES AND OTHER CREDITS
MARCH 2026

8. CURRENT AND ACCRUED LIABILITIES

		2026
231	NOTES PAYABLE	$ -
232	ACCOUNTS PAYABLE	725,135,943
233	NOTES PAYABLE TO ASSOCIATED COMPANIES	-
234	ACCOUNTS PAYABLE TO ASSOCIATED COMPANIES	69,861,002
235	CUSTOMER DEPOSITS	25,105,692
236	TAXES ACCRUED	106,883,099
237	INTEREST ACCRUED	137,289,468
238	DIVIDENDS DECLARED	-
241	TAX COLLECTIONS PAYABLE	6,433,998
242	MISCELLANEOUS CURRENT AND ACCRUED LIABILITIES	171,252,715
243	OBLIGATIONS UNDER CAPITAL LEASES - CURRENT	130,356,592
244	DERIVATIVE INSTRUMENT LIABILITIES	486,199
244	LESS: LONG-TERM PORTION OF DERIVATIVE LIABILITIES	(418,900)
245	DERIVATIVE INSTRUMENT LIABILITIES - HEDGES	-
	TOTAL CURRENT AND ACCRUED LIABILITIES	$ 1,372,385,808

9. DEFERRED CREDITS

252	CUSTOMER ADVANCES FOR CONSTRUCTION	$ 30,893,780
253	OTHER DEFERRED CREDITS	571,532,914
254	OTHER REGULATORY LIABILITIES	3,190,226,172
255	ACCUMULATED DEFERRED INVESTMENT TAX CREDITS	230,149,932
257	UNAMORTIZED GAIN ON REACQUIRED DEBT	-
281	ACCUMULATED DEFERRED INCOME TAXES - ACCELERATED	-
282	ACCUMULATED DEFERRED INCOME TAXES - PROPERTY	2,771,464,916
283	ACCUMULATED DEFERRED INCOME TAXES - OTHER	1,124,779,602
	TOTAL DEFERRED CREDITS	$ 7,919,047,316
	TOTAL LIABILITIES AND OTHER CREDITS	$ 34,353,688,045

SAN DIEGO GAS & ELECTRIC COMPANY
STATEMENT OF INCOME AND RETAINED EARNINGS
MARCH 2026

1. UTILITY OPERATING INCOME

400	OPERATING REVENUES			$ 1,585,276,276
401	OPERATING EXPENSES	$	633,908,549	
402	MAINTENANCE EXPENSES		77,389,329	
403-7	DEPRECIATION AND AMORTIZATION EXPENSES		338,663,012	
408.1	TAXES OTHER THAN INCOME TAXES		80,555,370	
409.1	INCOME TAXES		46,223,962	
410.1	PROVISION FOR DEFERRED INCOME TAXES		53,243,413	
411.1	PROVISION FOR DEFERRED INCOME TAXES - CREDIT		(69,443,911)	
411.4	INVESTMENT TAX CREDIT ADJUSTMENTS		35,911,086	
411.6	GAIN FROM DISPOSITION OF UTILITY PLANT		-	
	TOTAL OPERATING REVENUE DEDUCTIONS			$ 1,196,450,810
	NET OPERATING INCOME			$ 388,825,466

2. OTHER INCOME AND DEDUCTIONS

415	REVENUE FROM MERCHANDISING, JOBBING AND CONTRACT WORK	$	-	
417	REVENUES OF NONUTILITY OPERATIONS		-	
417.1	EXPENSES OF NONUTILITY OPERATIONS		(1,790,717)	
418	NONOPERATING RENTAL INCOME		-	
418.1	EQUITY IN EARNINGS OF SUBSIDIARIES		-	
419	INTEREST AND DIVIDEND INCOME		39,986,510	
419.1	ALLOWANCE FOR OTHER FUNDS USED DURING CONSTRUCTION		16,871,629	
421	MISCELLANEOUS NONOPERATING INCOME		(147,852)	
421.1	GAIN ON DISPOSITION OF PROPERTY		-	
	TOTAL OTHER INCOME	$	54,919,570	
421.2	LOSS ON DISPOSITION OF PROPERTY	$	353,250.00	
425	MISCELLANEOUS AMORTIZATION		62,512	
426	MISCELLANEOUS OTHER INCOME DEDUCTIONS		11,610,369	
	TOTAL OTHER INCOME DEDUCTIONS	$	12,026,131	
408.2	TAXES OTHER THAN INCOME TAXES	$	248,902	
409.2	INCOME TAXES		297,917	
410.2	PROVISION FOR DEFERRED INCOME TAXES		22,484,919	
411.2	PROVISION FOR DEFERRED INCOME TAXES - CREDIT		(20,206,611)	
	TOTAL TAXES ON OTHER INCOME AND DEDUCTIONS	$	2,825,127	
	TOTAL OTHER INCOME AND DEDUCTIONS			$ 40,068,312
	INCOME BEFORE INTEREST CHARGES			428,893,778
	EXTRAORDINARY ITEMS AFTER TAXES			-
	NET INTEREST CHARGES*			132,848,396
	NET INCOME			$ 296,045,382

**NET OF ALLOWANCE FOR BORROWED FUNDS USED DURING CONSTRUCTION, ($6,401,890)*

SAN DIEGO GAS & ELECTRIC COMPANY
STATEMENT OF INCOME AND RETAINED EARNINGS
MARCH 2026

3. RETAINED EARNINGS

RETAINED EARNINGS AT BEGINNING OF PERIOD, AS PREVIOUSLY REPORTED	$	9,278,534,624
NET INCOME (FROM PRECEDING PAGE)		296,045,382
DIVIDEND TO PARENT COMPANY		-
DIVIDENDS DECLARED - PREFERRED STOCK		-
DIVIDENDS DECLARED - COMMON STOCK		-
OTHER RETAINED EARNINGS ADJUSTMENTS		-
RETAINED EARNINGS AT END OF PERIOD	$	9,574,580,006

SAN DIEGO GAS & ELECTRIC COMPANY
FINANCIAL STATEMENT
MARCH 2026

(a)	**Amounts and Kinds of Stock Authorized:**				
	Common Stock	255,000,000	shares		Without Par Value
	Amounts and Kinds of Stock Outstanding:				
	Common Stock	116,583,358	shares		291,458,395

(b) **Brief Description of Mortgage:**
Full information as to this item is given in Decision Nos. 93-09-069, 04-01-009, 06-05-015, 08-07-029, 10-10-023, 12-03-005, 15-08-011, 18-02-012, 20-04-015, and 22-12-011 to which references are hereby made.

(c) **Number and Amount of Bonds Authorized and Issued:**

First Mortgage Bonds:	**Nominal Date of Issue**	**Par Value Authorized and Issued**	**Outstanding**	**Interest Paid**
5.35% Series BBB, due 2035	05-19-05	250,000,000	250,000,000	13,375,000
6.00% Series DDD, due 2026	06-08-06	250,000,000	250,000,000	15,000,000
6.125% Series FFF, due 2037	09-20-07	250,000,000	250,000,000	15,312,500
6.00% Series GGG, due 2039	05-14-09	300,000,000	300,000,000	18,000,000
5.35% Series HHH, due 2040	05-13-10	250,000,000	250,000,000	13,375,000
4.50% Series III, due 2040	08-26-10	500,000,000	500,000,000	22,500,000
3.95% Series LLL, due 2041	11-17-11	250,000,000	250,000,000	9,875,000
4.30% Series MMM, due 2042	03-22-12	250,000,000	250,000,000	10,750,000
2.50% Series QQQ, due 2026	05-19-16	500,000,000	500,000,000	12,500,000
3.75% Series RRR, due 2047	06-08-17	400,000,000	400,000,000	15,000,000
4.15% Series SSS, due 2048	05-17-18	400,000,000	400,000,000	16,600,000
4.10% Series TTT, due 2049	05-31-19	400,000,000	400,000,000	16,400,000
3.32% Series UUU, due 2050	04-07-20	400,000,000	400,000,000	13,280,000
1.70% Series VVV, due 2030	09-28-20	800,000,000	800,000,000	13,600,000
2.95% Series WWW, due 2051	08-13-21	750,000,000	750,000,000	22,125,000
3.00% Series XXX, due 2032	03-11-22	500,000,000	500,000,000	15,000,000
3.70% Series YYY, due 2052	03-11-22	500,000,000	500,000,000	18,500,000
5.35% Series ZZZ, due 2053	03-10-23	800,000,000	800,000,000	42,800,000
4.95% Series AAAA, due 2028	08-11-23	600,000,000	600,000,000	29,700,000
5.55% Series BBBB, due 2054	03-22-24	600,000,000	600,000,000	33,300,000
5.40% Series CCCC, due 2035	03-28-25	850,000,000	850,000,000	25,117,500
5.20% Series DDDD, due 2036	03-20-26	625,000,000	625,000,000	-
5.95% Series EEEE, due 2056	03-20-26	475,000,000	475,000,000	-
Total First Mortgage Bonds:		**10,900,000,000**	**10,900,000,000**	**392,110,000**
Total Bonds:				**392,110,000**

TOTAL LONG-TERM DEBT	**10,900,000,000**	**10,900,000,000**		**392,110,000**

SAN DIEGO GAS & ELECTRIC COMPANY
FINANCIAL STATEMENT
MARCH 2026

Other Indebtedness	Date of Issue	Date of Maturity	Interest Rate	Outstanding	Interest Paid as of Q4' 2025
Commercial Paper & ST Bank Loans	Various	Various	Various	-	$8,906,891

Amounts and Rates of Dividends Declared:
The amounts and rates of dividends during the past five fiscal years are as follows:

Preferred Stock	Shares Outstanding	2022	2023	2024	2025	2026
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**

Common Stock		2022	2023	2024	2025	2026
Dividend to Parent	[1]	100,000,000	100,000,000	225,000,000	200,000,000	-

[1] San Diego Gas & Electric Company dividend to parent.

APPENDIX B

STATEMENT OF EFFECTIVE RATES

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The following sheets contain all the effective rates and rules affecting rates, service and information relating thereto, in effect on the date indicated herein.

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III. Memorandum Accounts

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III. Memorandum Accounts (Continued)

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FORM NO.	DATE	APPLICATIONS, AGREEMENTS AND CONTRACTS	CAL C.P.U.C. SHEET NO.	
117-2160	05/25	Generating Facility Interconnection Agreement (NEM/NEM-ST/NBT and Non-NEM/Non-NBT Generating Facility Export)	63022-E	T
117-2160-A	05/25	Generating Facility Interconnection Agreement (NEM/NEM-ST/NBT and Non-NEM/Non-NBT Generating Facility Export) Federal Government Only	63023-E	T
117-2259	08-95	Electronic Data Interchange (EDI) and Funds Transfer Agreement….	8802-E	
117-2300	01-23	Generating Facility Material Modification Notifications Worksheet	37244-E	
118-159	07-91	Group Load Curtailment Demonstration Program – Curtailment Agreement…	7153-E	
118-00228	07-98	Agreement for Illuminated Transit Shelters	11455-E	
118-459	07-91	Group Load Curtailment Demonstration Program - Peak Capacity Agreement	7154-E	
118-228	01-11	Operating Entity Agreement for Illuminated Transit Shelters……	22224-E	
118-1228	01-11	Agreement for Illuminated Transit Shelters	22225-E	
124-363	- - -	Declaration of Eligibility for Lifeline Rates.....	2857-E	
124-463	07-07	Continuity of Service Agreement.....	20126-E	
124-463/1	07-07	Continuity of Service Agreement Change Request.....	20127-E	
124-1000	09-07	Community Choice Aggregator (CCA) Service Agreement…….	20301-E	
124-1010	10-12	Community Choice Aggregator Non-Disclosure Agreement……	23228-E	
124-1020	03-12	Declaration by Mayor or Chief County Administrator Regarding Investigation, Pursuit or Implementation of Community Choice Aggregation	22786-E	
124-5152F	08-73	Application for Gas/Electric Service.....	2496-E	
132-150	03-26	Medical Baseline Allowance Application.....	64614-E	T
132-150/1-2	07-24	Medical Baseline Allowance Self-Certification……	62277-8-E	
132-150-20	03-26	Medical Baseline Allowance Application/Recertification Form	64615-E	T
132-150-21	03-26	Medical Baseline Allowance Application/Recertification Form (Spanish)	64616-E	T
132-150-22	03-26	Medical Baseline Allowance Application/Recertification Form (Chinese)	64617-E	T
132-150-23	03-26	Medical Baseline Allowance Application/Recertification Form (Tagalog)	64618-E	T
132-150-24	03-26	Medical Baseline Allowance Application /Recertification Form (Vietnamese)	64619-E	T
132-150-21A	03-26	Medical Baseline Allowance Application /Recertification Form Large Font (Spanish)	64620-E	T
132-150-22A	03-26	Medical Baseline Application/Recertification Form Large Font (Chinese)	64621-E	T
132-150-23A	03-26	Medical Baseline Application/Recertification Form Large Font (Tagalog)	64622-E	T
132-150-24A	03-26	Medical Baseline Application/Recertification Form Large Font (Vietnamese)	64623-E	T
132-01199	02-99	Historical Energy Usage Information Release (English).....	11886-E	
132-01199/1	02-99	Historical Energy Usage Information Release (Spanish)…….	11887-E	
132-1259C	06-74	Contract for Special Electric Facilities	2580-E	
		Contract for Electric Service - Agua Caliente – Canebrake…….	1233	
132-2059C		Resident's Air Conditioner Cycling Agreement..	4677-E	
132-6263	06-07	On-Bill Financing Loan Agreement…	21100-E	
132-6263/1	06-07	On-Bill Financing Loan Agreement for Self Installers……..…..….	21101-E	
132-6263/2	11-12	On-Bill Financing Loan Agreement for CA State Government Customers	23268-E	

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FORM NO.	DATE	APPLICATIONS, AGREEMENTS AND CONTRACTS	CAL C.P.U.C. SHEET NO.	
142-02762	01-13	Fuel Cell Generating Facility NEM and Interconnection Agreement	23444-E	
142-02763	10-12	NEM/VNM-A Inspection Report…	23234-E	
142-02765	01-15	NEM Application & Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 kW or Less…	26168-E	
142-02766	01-15	NEM Application & Interconnection Agreement for Solar and/or Wind Electric Generating Facilities Greater than 30 kW or up to 1000 kW…	26169-E	
142-02768	02-09	Photovoltaic Generation Allocation Request Form…	21148-E	
142-02769	07-14	NEM Aggregation Form…	25293-E	
142-02770	12-12	Generation Credit Allocation Request Form…	23288-E	
142-02771	08-16	Rule 21 Generator Interconnection Agreement (GIA)…	28051-E	
142-02772	06-14	Rule 21 Detailed Study Agreement…	25065-E	
142-02773	08-26	Interconnection App for Solar and/or Wind ONLY >30 Kw…	65086-E	T
142-02774	08-26	Interconnection App for Solar and/or Wind ONLY <30 Kw…	65087-E	T
142-02775	07-20	Net Energy Metering Non-Export / Non-Import Power Control Based Equipment Attestation	61611-E	
142-02776	04/21	Emergency Standby Generator Installation Request	34665-E	
142-02777	08-26	NBT Application and Interconnection Agreement <30kW	65088-E	T
142-02778	08-26	NBT Application and Interconnection Agreement >30 & <1000kW	65089-E	T
142-3201		Residential Hotel Application for Residential Rates	5380-E	
142-3242		Agreement for Exemption from Income Tax Component on Contributions and Refundable Advances…	6041-E	
142-4032	05-25	Application for California Alternate Rates for Energy (CARE) Program for Qualified Agricultural Employee Housing Facilities…	37472-E	
142-4035	06-05	Application for California Alternate Rates for Energy (CARE) Program for Migrant Farm Worker Housing Centers…	18415-E	
142-05200	08-16	Generator Interconnection Agreement for Fast Track Process…	28054-E	
142-05201	07-23	Exporting Generating Facility Interconnection Request…	37552-E	
142-05202	01-01	Generating Facility Interconnection Application Agreement…	14152-E	
142-05203	08-26	Generating Facility Interconnection Application…	65090-E	T
142-05204	07-16	Rule 21 Pre-Application Report Request…	27744-E	
142-05205	07-02	Optional Binding Mandatory Curtailment Plan Contract…	17729-E	
142-05207	06-19	Base Interruptible Program Contract…	32132-E	
142-05209	06-19	No Insurance Declaration…	32133-E	
142-05210	06-04	Rolling Blackout Reduction Program Contract…	18273-E	
142-05211	06-04	Bill Protection Application…	18273-E	
142-05213	07-03	Technical Incentive Program Application…	30079-E	
142-05215	06-19	Third Party Marketer Agreement for BIP…	32134-E	
142-05216	06-19	Notice by Aggregator to Add, Change or Delete Customers for BIP…	32135-E	
142-05217	06-19	Notice by Customer to Add, Change, or Terminate Aggregator for BIP…	32136-E	
142-05219	01-18	Technical Incentive Program Agreement…	30080-E	
142-05219/1	01-18	Customer Generation Agreement	15384-E	
142-05220	07-18	Armed Forces Pilot Contract…	30800-E	
142-05221	10-21	Application for Contract Demand Charge Suspension….	35507-E	
142-05301	03-23	Aggregator Agreement for Capacity Bidding Program (CBP)…	62079-E	
142-05302	02-18	Notice to Add, Change, or Terminate Aggregator for Capacity Bidding…	30210-E	

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FORM NO.	DATE	APPLICATIONS, AGREEMENTS AND CONTRACTS	CAL C.P.U.C. SHEET NO.	
142-05209	06-19	No Insurance Declaration…	32133-E	
142-05210	06-04	Rolling Blackout Reduction Program Contract…	18273-E	
142-05211	06-04	Bill Protection Application…	18273-E	
142-05213	07-03	Technical Incentive Program Application…	30079-E	
142-05215	06-19	Third Party Marketer Agreement for BIP…	32132-E	
142-05216	06-19	Notice by Aggregator to Add, Change or Delete Customers for BIP…	32133-E	
142-05217	06-19	Notice by Customer to Add, Change, or Terminate Aggregator for BIP…	18273-E	
142-05219	01-18	Technical Incentive Program Agreement…	18273-E	
142-05219/1	01-18	Customer Generation Agreement	30079-E	
142-05220	07-18	Armed Forces Pilot Contract…	32134-E	
142-05300	07-18	Capacity Bidding Program Customer Contract…	32135-E	
142-05301	07-18	Aggregator Agreement for Capacity Bidding Program (CBP)…	32136-E	
142-05302	02-18	Notice to Add, Change, or Terminate Aggregator for Capacity Bidding…	30080-E	
142-05215	06-19	Third Party Marketer Agreement for BIP…	15384-E	
142-05216	06-19	Notice by Aggregator to Add, Change or Delete Customers for BIP…	30800-E	
143-02764	02-13	Direct Access Customer Replacement Declaration……	23701-E	
144-0810	03-08	Critical Peak Pricing (CPP) Opt-Out Form……	20594-E	
144-0811	03-09	Capacity Reservation Election……	21133-E	
144-0812	08-13	Event Notification Form……	23703-E	
144-0813	08-13	Future Communications Contact Information Form……	23704-E	
144-0820	04-18	CISR-DRP……	61663-E	
144-0821	01-16	DRP Service Agreement……	27107-E	
175-1000	07-09	Customer Energy Network – Terms and Conditions……	62255-E	
182-1000	01-24	Renewable Energy Credits Compensation Agreement……	61747-E	
183-1000	07-14	PEV Submetering Pilot (Phase I) Customer Enrollment Agreement	26187-E	
183-2000	07-14	Submeter MDMA Registration Agreement……	26188-E	
185-1000	02-14	Customer Information Service Request Form……	24202-E	
185-2000	12-15	Energy Efficiency Financing Pilot Programs Authorization or Revocation of Authorization to Release Customer Information	26941-E	
187-1000	04-15	Rule 33 Standard Non-Disclosure Agreement (NDA)……	26294-E	
187-2000	04-15	Rule 33 Terms of Service Acceptance Form……	26295-E	
189-1000	09-25	Mobilehome Park Utility Upgrade Agreement……	63998-E	T
189-2000	06-21	Mobilehome Park Utility Conversion Application……	34960-E	
190-1000	10-15	Bioenergy Market Adjusting Tariff Power Purchase Agreement	26846-E	
190-2000	10-15	Green Tariff Shared Renewables (GTSR) Enhanced Community Renewables (ECR) Program Project Development Tariff Rider and Amendment	26874-E	
195-1000	05-17	Station Power -Agreement for Energy Storage Devices	28966-E	
200-1000	09-17	Declaration of Eligibility for Foodbank Discount	32193-E	
205-1000	12-20	Eligible Economic Development Rate Customer Application	33854-E	

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APPENDIX C

STATEMENT OF PROPOSED RATE CHANGE

ILLUSTRATIVE IMPACT ON ELECTRIC RATES AND BILLS[1,2]

Table A shown below illustrates the changes in rates that would result from CPUC approval of this application, compared to current rate levels.

If SDG&E's request is approved, the typical non-CARE residential electric customer using 400 kWh per month on Schedule TOU-DR1 would see a monthly bill increase of approximately $0.00. The actual impact will vary based on usage, baseline territory, and other factors.

Table A: Illustrative Proposed Electric Rate Impacts by Customer Class for SDG&E's Request (SDG&E: $0.2M, annually)

Customer Class	Proposed Rate Increase (¢/kWh)	Percentage Rate Increase (%)
Residential	0.00	0.00%
Small Commercial	0.00	0.00%
Medium Commercial	0.00	0.00%
Large C&I	0.00	0.00%
Agricultural	0.00	0.00%
Streetlighting	0.00	0.00%
System Total	0.00	0.00%

Table B shown below illustrates the changes in rates that would result from CPUC approval of this application and the California Energy Commission's (CEC) application, compared to current rate levels.

If the requests from both SDG&E and CEC are approved, the typical non-CARE residential electric customer using 400 kWh per month on Schedule TOU-DR1 would see a monthly bill increase of approximately $0.06. The actual impact will vary based on usage, baseline territory, and other factors.

[1] Increase comparing incremental annual impact to current effective rates as of 8/1/2026. Rate increase will be the same for bundled and unbundled customers. Percentage change reflects comparison to total bundled rates.
[2] The rate impact presented is based on the incremental proposed annual revenue requirement relative to the authorized 2026-2030 EPIC annual budget, as adopted in D.26-02-037. Based on the timing of the final decision, prior year incremental amounts will be included in the year following the approval. For example, if the final decision is approved in 2027, the incremental revenue requirements for 2026 and 2027 will be collected in rates in 2028.

Table B: Illustrative Proposed Electric Rate Impacts by Customer Class for the Combined Request (CEC: $2.4M + SDG&E: $0.2M, annually)

Customer Class	Proposed Rate Increase (¢/kWh)	Percentage Rate Increase (%)
Residential	0.01	0.03%
Small Commercial	0.01	0.04%
Medium Commercial	0.01	0.04%
Large C&I	0.01	0.04%
Agricultural	0.01	0.06%
Streetlighting	0.01	0.05%
System Total	0.01	0.04%

APPENDIX D

STATEMENT OF ORIGINAL COST AND DEPRECIATION

SAN DIEGO GAS & ELECTRIC COMPANY

COST OF PROPERTY AND
DEPRECIATION RESERVE APPLICABLE THERETO
AS OF March 31, 2026

No.	Account	Original Cost	Reserve for Depreciation and Amortization
	ELECTRIC DEPARTMENT		
302	Franchises and Consents	222,841.36	202,900.30
303	Misc. Intangible Plant	0.00	0.00
	TOTAL INTANGIBLE PLANT	222,841.36	202,900.30
310.1	Land	14,526,518.29	46,518.29
310.2	Land Rights	0.00	0.00
311	Structures and Improvements	93,563,902.13	74,027,258.61
312	Boiler Plant Equipment	167,667,055.55	133,050,758.36
312	Boiler Plant Equipment-top side depr adj	0.00	0.00
314	Turbogenerator Units	137,720,377.11	94,352,733.14
315	Accessory Electric Equipment	87,120,781.87	72,043,892.79
315.1	Computer Hardware	0.00	0.00
315.2	Computer Software	7,979,954.02	4,092,645.70
315.25	Cloud Computer Software	0.00	0.00
315.3	Communication Equipment	0.00	0.00
316	Miscellaneous Power Plant Equipment	81,371,710.55	38,547,186.16
	TOTAL STEAM PRODUCTION	589,950,299.52	416,160,993.04
338.01	Land	0.00	0.00
338.02	Land Rights	0.00	0.00
338.2	Structures and Improvements	0.00	0.00
338.4	Solar Panels	73,791,385.36	26,371,589.31
338.5	Collector System	162,767.62	47,935.06
338.6	Generator Step-up Transformers (GSU)	0.00	0.00
338.7	Inverters	4,346,998.99	2,609,572.04
338.8	Other Accessory Electrical Equipment	2,242,963.06	1,439,069.80
338.9	Computer Hardware	0.00	0.00
338.10	Computer Software	0.00	0.00
338.11	Communication Equipment	692,608.58	425,005.40
338.12	Miscellaneous Power Plant Equipment	1,032,971.42	546,323.32
	TOTAL SOLAR PRODUCTION	82,269,695.03	31,439,494.92
340.10	Land	224,368.91	0.00
340.20	Land Rights	2,427.96	2,427.96
341.00	Structures and Improvements	26,888,254.44	18,982,728.49
341.20	Structures and Improvements-Other	0.00	0.00
342.00	Fuel Holders, Producers & Accessories	21,651,513.75	15,003,533.81
342.20	Fuel Holders, Producers & Accessories-Other	0.00	0.00
343.00	Prime Movers	101,911,678.03	78,772,435.64
343.20	Prime Movers-Other	0.00	0.00

No.	Account	Original Cost	Reserve for Depreciation and Amortization
344.00	Generators	303,515,002.53	201,752,749.45
344.00	Generators - topside depr adj.	0.00	0.00
344.10	Inactive	0.00	0.00
344.20	Generators-Other	7,581,014.90	4,004,242.23
345.00	Accessory Electric Equipment	33,351,694.97	24,088,713.70
345.10	Computer Hardware	0.00	0.00
345.20	Computer Software	0.00	0.00
345.25	Comp Software (Cloud SaaS)	0.00	0.00
345.30	Communication Equipment	0.00	0.00
346.00	Miscellaneous Power Plant Equipment	59,180,667.63	44,042,495.95
346.20	Miscellaneous Power Plant Equipment-Other	0.00	0.00
	TOTAL OTHER PRODUCTION	554,306,623.12	386,649,327.23
	TOTAL ELECTRIC PRODUCTION	1,226,526,617.67	834,249,815.19
350.10	Land - Trans - future use	0.00	0.00
350.11	Land - Other	78,536,477.94	0.00
350.12	Land - SWPL	3,138,313.41	0.00
350.16	Land - SRPL	2,563,164.10	0.00
350.20	Land Rights - Trans (future)	(2,001.08)	0.00
350.21	Land Rights - Other	82,318,327.34	17,127,782.54
350.22	Land Rights - SWPL	18,638,712.99	6,936,117.62
350.26	Land Rights - SRPL	77,120,373.17	14,820,002.48
351.10	Trans. Computer Hardware	1,541,844.13	72,936.16
351.20	Trans. Computer Software	10,027,306.50	6,495,577.36
351.20	Trans. Computer Software	0.00	(282,075.18)
351.30	Trans. Communication Equipment	231,259,289.90	101,041,075.64
352.10	Structures and Improvements-Other	866,186,874.28	158,800,076.86
352.20	Structures and Improvements-SWPL	61,152,767.07	15,112,535.60
352.60	Structures and Improvements-SRPL	121,643,460.16	33,571,718.58
353.10	Station Equipment-Other	2,134,261,405.94	632,170,322.93
353.10	Station Equipment-Other	0.00	820,432.02
353.20	Station Equipment-SWPL	340,107,202.58	163,448,010.70
353.40	Station Equipment-CTC	1,420,392.88	764,927.29
353.60	Station Equipment-SRPL	167,980,084.54	61,032,976.12
354.10	Towers and Fixtures-Other	93,902,325.70	59,286,272.44
354.20	Towers and Fixtures-SWPL	66,825,262.39	73,937,526.05
354.60	Towers and Fixtures-SRPL	766,912,927.00	220,236,209.62
355.10	Poles and Fixtures-Other	1,405,040,305.28	335,118,362.71
355.20	Poles and Fixtures-SWPL	10,337,209.17	14,824,545.44
355.60	Poles and Fixtures-SRPL	3,343,703.96	1,722,413.15
356.10	Overhead Conductors and Devices-Other	893,808,657.62	224,035,796.69
356.20	Overhead Conductors and Devices-SWPL	46,894,002.63	73,000,610.94
356.60	Overhead Conductors and Devices-SRPL	173,822,444.20	61,230,161.33
357.00	Underground Conduit-Other	662,232,603.94	139,482,778.07
357.00	Underground Conduit-Other	0.00	0.00
357.60	Underground Conduit-SRPL	80,541,370.33	22,264,997.25
358.00	Underground Conductors and Devices-Other	620,316,528.63	122,569,503.50
358.60	Underground Conductors and Devices-SRPL	126,452,463.41	36,938,461.90
359.10	Roads and Trails-Other	189,306,594.45	26,021,884.51
359.20	Roads and Trails-SWPL	5,743,744.38	3,451,638.18
359.60	Roads and Trails-SRPL	243,347,847.85	53,999,283.72
	TOTAL TRANSMISSION	9,586,721,986.79	2,680,052,862.22

No.	Account	Original Cost	Reserve for Depreciation and Amortization
360.1	Land	21,403,455.56	0.00
360.2	Land Rights	96,634,415.41	59,125,785.69
361	Structures and Improvements	21,333,457.92	5,350,786.45
362	Station Equipment	763,005,036.77	415,988,675.38
363.1	Computer Hardware	0.00	0.00
363.2	Computer Software	209,307,300.07	104,852,691.60
363.25	Comp Software (Cloud SaaS)	1,109,759.52	37,715.17
363.3	Communication Equipment	198,716,709.44	46,636,534.36
364	Poles, Towers and Fixtures	1,507,516,519.76	328,809,373.40
365	Overhead Conductors and Devices	1,769,588,227.35	332,028,989.40
366	Underground Conduit	2,344,100,482.98	794,595,943.73
367	Underground Conductors and Devices	2,651,846,148.01	1,217,938,874.76
367	Underground Conductors and Devices	(92,706,809.75)	(13,954,025.67)
		0.00	0.00
368.1	Line Transformers	1,114,048,763.23	438,807,492.16
368.2	Protective Devices and Capacitors	51,021,270.88	35,743,593.63
369.1	Services Overhead	527,349,277.13	120,695,625.50
369.2	Services Underground	573,629,332.34	328,064,878.88
370.1	Meters	12,794,121.76	1,677,191.47
370.11	Meters-Electronic	216,993,938.73	187,177,193.30
370.2	Meter Installations	18,417,639.05	1,664,558.98
370.2	Meter Installations-Electronic	90,373,424.29	60,127,720.72
371	Installations on Customers' Premises	14,842,404.13	12,313,350.09
371.1	EV Charging Units	56,337,672.94	34,348,607.87
373.1	St. Lighting & Signal Sys.-Transformers	0.00	0.00
373.2	Street Lighting & Signal Systems	44,333,666.64	28,696,601.47
	TOTAL DISTRIBUTION PLANT	12,211,996,214.16	4,540,728,158.36
387.01	Land	4,831,367.94	0.00
387.02	Land Rights	352,231.25	27,338.04
387.10	Communication Equipment	1,393,551.29	25,037.07
387.11	Misc Energy Storage Equip	826,302.07	27,855.56
387.12	Asset Retirement Costs	0.00	0.00
387.20	Structures and Improvements	40,752,731.43	1,373,820.22
387.30	Energy Storage Equipment	998,633,111.11	324,210,821.88
387.30	Energy Storage Equipment	0.00	0.00
387.50	Collector System	26,016,337.79	877,039.89
387.60	Gen Step-up Transf (GSU)	8,709,427.20	264,747.25
387.70	Inverters	8,485,525.11	286,056.47
387.80	Computer Hardware	658,306.15	43,417.42
387.90	Computer Software	0.00	0.00
387.95	Comp Software (Cloud SaaS)	0.00	0.00
	TOTAL ENERGY STORAGE PLANT	1,090,658,891.34	327,136,133.79
389.1	Land	7,312,142.54	0.00
390	Structures and Improvements	45,330,343.57	34,425,464.92
392.1	Transportation Equipment - Autos	0.00	0.00
392.2	Transportation Equipment - Trailers	58,145.67	36,875.46
393	Stores Equipment	46,031.37	14,231.37
394.11	Portable Tools	44,825,595.91	18,524,048.84
394.2	Shop Equipment	12,415.42	(11,971.12)
395	Laboratory Equipment	5,635,597.52	2,780,524.00

No.	Account	Original Cost	Reserve for Depreciation and Amortization
396	Power Operated Equipment	0.00	56,972.74
397.10	Computer Hardware	0.01	(203.95)
397.20	Computer Software	57,871,636.18	14,953,191.67
397.25	Comp Software (Cloud SaaS)	0.00	0.00
397.30	Communication Equipment	159,403,994.42	110,774,380.87
397.60	Inactive	0.00	0.00
397.70	Inactive	0.00	0.00
398	Miscellaneous Equipment	1,814,624.35	1,231,447.43
	TOTAL GENERAL PLANT	322,310,526.96	182,784,962.24
101	TOTAL ELECTRIC PLANT	24,438,437,078.28	8,565,154,832.10
GAS PLANT			
302	Franchises and Consents	86,104.20	86,104.20
303	Miscellaneous Intangible Plant	1,385,195.44	80,803.06
	TOTAL INTANGIBLE PLANT	1,471,299.64	166,907.26
360.1	Land	0.00	0.00
361	Structures and Improvements	0.00	0.00
362.1	Gas Holders	0.00	0.00
362.2	Liquefied Natural Gas Holders	0.00	0.00
363	Purification Equipment	0.00	0.00
363.1	Liquefaction Equipment	0.00	0.00
363.2	Vaporizing Equipment	0.00	0.00
363.3	Compressor Equipment	0.00	0.00
363.4	Measuring and Regulating Equipment	0.00	0.00
363.5	Other Equipment	0.00	0.00
363.6	LNG Distribution Storage Equipment	2,168,803.11	1,860,744.54
	TOTAL STORAGE PLANT	2,168,803.11	1,860,744.54
365.1	Land	4,649,143.75	0.00
365.2	Land Rights	3,493,178.35	1,993,636.54
366	Structures and Improvements	23,700,957.35	14,454,717.63
367	Mains	992,075,351.85	191,828,265.54
368	Compressor Station Equipment	149,110,827.18	90,330,832.14
369	Measuring and Regulating Equipment	48,265,463.39	22,463,272.12
371	Other Equipment	3,600,392.48	844,711.84
	TOTAL TRANSMISSION PLANT	1,224,895,314.35	321,915,435.81
374.1	Land	1,514,272.84	0.00
374.2	Land Rights	8,518,373.53	7,939,371.98
375	Structures and Improvements	43,446.91	61,253.10
376	Mains	1,958,883,708.73	580,648,214.40
376	Mains	0.00	(0.00)
376.60	GTSR Hydro Test Costs	56,013,549.88	1,879,428.80
378	Measuring & Regulating Station Equipment	21,012,123.99	12,146,006.92
380	Distribution Services	871,105,093.65	365,131,485.66

No.	Account	Original Cost	Reserve for Depreciation and Amortization
381	Meters and Regulators	106,937,589.80	40,943,290.36
381.01	Meters and Regulators-Electronic	123,216,339.37	78,718,073.67
382	Meter and Regulator Installations	165,732,275.40	52,860,944.80
382.01	Meter and Regulator Installations-Electronic	27,518,280.73	26,725,472.87
385	Ind. Measuring & Regulating Station Equipme	1,516,810.70	1,454,399.06
387.11	Other Equipment	993,722.26	923,313.35
387.12	Other Equipment-CNG Depreciable	8,910,372.92	5,376,952.71
387.13	Other Equipment-CNG Bal Account	658,196.33	658,196.33
	TOTAL DISTRIBUTION PLANT	3,352,574,157.04	1,175,466,404.01
392.1	Transportation Equipment - Autos	0.00	0.00
392.2	Transportation Equipment - Trailers	0.00	0.00
394.1	Portable Tools	28,490,632.92	8,493,133.54
394.2	Shop Equipment	18,459.73	(5,172.20)
395	Laboratory Equipment	0.00	0.00
396	Power Operated Equipment	0.00	0.00
397	Communication Equipment	2,399,397.34	1,793,654.83
398	Miscellaneous Equipment	1,160,607.66	317,977.13
	TOTAL GENERAL PLANT	32,069,097.65	10,599,593.30
101	TOTAL GAS PLANT	4,613,178,671.79	1,510,009,084.92
	COMMON PLANT		
303	Miscellaneous Intangible Plant - Cloud	52,664,578.42	28,720,872.60
303	Miscellaneous Intangible Plant - Cloud	69,791,958.15	8,953,210.54
303	Miscellaneous Intangible Plant	1,197,360,567.04	688,672,403.86
350.1	Land	0.00	0.00
360.1	Land	0.00	0.00
389.11	Land	7,225,913.43	0.00
389.2	Land Rights	27,776.34	27,776.34
390	Structures and Improvements	705,594,601.72	272,431,771.91
391.1	Office Furniture and Equipment - Other	46,694,143.62	21,576,622.94
391.2	Office Furniture and Equipment - Computer E	103,874,691.70	75,653,607.29
392.1	Transportation Equipment - Autos	765,306.97	505,738.83
392.2	Transportation Equipment - Trailers	107,977.72	40,349.24
392.3	Transportation Equipment - Aviation	31,402,612.45	14,849,299.48
393	Stores Equipment	332,982.68	137,123.68
394.1	Portable Tools	1,503,266.67	930,366.29
394.2	Shop Equipment	136,283.14	101,921.13
394.3	Garage Equipment	1,801,884.51	637,560.06
395	Laboratory Equipment	2,464,613.65	1,198,210.28
396	Power Operated Equipment	0.00	0.00
397.1	Communication Equipment	0.00	0.00
397.3	Communication Equipment	592,110,080.69	249,520,070.96
397.3	Communication Equipment	0.00	0.00
398	Miscellaneous Equipment	3,407,907.11	1,399,093.57
118.1	TOTAL COMMON PLANT	2,817,267,146.01	1,365,355,999.00
	TOTAL ELECTRIC PLANT	24,438,437,078.28	8,565,154,832.10
	TOTAL GAS PLANT	4,613,178,671.79	1,510,009,084.92
	TOTAL COMMON PLANT	2,817,267,146.01	1,365,355,999.00

No.	Account	Original Cost	Reserve for Depreciation and Amortization
101 & 118.1	TOTAL	31,868,882,896.08	11,440,519,916.02
101	PLANT IN SERV-CLOUD CONTRA		
	Common	(52,664,578.42)	(28,720,872.59)
		(52,664,578.42)	(28,720,872.59)
118	PLANT IN SERV-COMMON NON-RECON		
	Common - Transferred Asset Adjustment	0.00	0.00
		0.00	0.00
101	ACCRUAL FOR RETIREMENTS		
	Electric	(85,776,502.94)	(85,776,502.94)
	Gas	(5,263,896.83)	(5,263,896.83)
	TOTAL PLANT IN SERV-ACCRUAL FOR RE	(91,040,399.77)	(91,040,399.77)
	PLANT PURCHASED OR SOLD		
102	Electric	0.00	0.00
	Gas	0.00	0.00
	TOTAL PLANT PURCHASED OR SOLD	0.00	0.00
	PLANT LEASED TO OTHERS		
104	Electric	112,194,000.02	51,086,254.41
	Gas	0.00	0.00
	TOTAL PLANT LEASED TO OTHERS	112,194,000.02	51,086,254.41
105	PLANT HELD FOR FUTURE USE		
	Electric	22,116,255.69	0.00
	Gas	0.00	0.00
	TOTAL PLANT HELD FOR FUTURE USE	22,116,255.69	0.00
107	CONSTRUCTION WORK IN PROGRESS		
	Electric	1,372,193,316.48	
	Gas	324,224,411.11	
	Common	151,529,201.17	
	TOTAL CONSTRUCTION WORK IN PROGRESS	1,847,946,928.76	0.00
	Thank you		
108.5	ACCUMULATED NUCLEAR DECOMMISSIONING		
	Electric	0.00	882,930,731.86
	TOTAL ACCUMULATED NUCLEAR DECOMMISSIONING	0.00	882,930,731.86
101.1	ELECTRIC CAPITAL LEASES	1,307,422,019.46	206,299,027.76
118.1	COMMON CAPITAL LEASE	136,138,935.52	69,471,303.86

No.	Account	Original Cost	Reserve for Depreciation and Amortization
		1,443,560,954.98	275,770,331.62
143	FAS 143 ASSETS - Legal Obligation	20,186,584.96	(875,342,421.48)
	FIN 47 ASSETS - Non-Legal Obligation	200,846,500.39	72,728,557.62
143	FAS 143 ASSETS - COR - Legal Obligation	0.00	(2,785,988,789.48)
	TOTAL FAS 143	221,033,085.35	(3,588,602,653.34)
	UTILITY PLANT TOTAL	35,372,029,142.69	8,941,943,308.21

APPENDIX E

SUMMARY OF EARNINGS

SAN DIEGO GAS & ELECTRIC COMPANY
SUMMARY OF EARNINGS
MARCH 2026
($ IN MILLIONS)

Line No.	Item		Amount
1	Operating Revenue	$	1,585
2	Operating Expenses		1,196
3	Net Operating Income	$	389
4	Weighted Average Rate Base	$	18,267
5	Rate of Return*		7.41%

*Authorized Cost of Capital

APPENDIX F

NOTICE OF STATE, CITIES AND COUNTIES

State of California
Attorney General's Office
P.O. Box 944255
Sacramento, CA 94244-2550

Naval Facilities Engineering Command
Navy Rate Intervention
1314 Harwood Street SE
Washing Navy Yard, DC 20374

City of Carlsbad
Attn. City Attorney
1200 Carlsbad Village Drive
Carlsbad, CA 92008-19589

City of Chula Vista
Attn. City Attorney
276 Fourth Ave
Chula Vista, Ca 91910-2631

City of Dana Point
Attn. City Attorney
33282 Golden Lantern
Dana Point, CA 92629

City of Del Mar
Attn. City Clerk
1050 Camino Del Mar
Del Mar, CA 92014

City of Encinitas
Attn. City Attorney
505 S. Vulcan Ave.
Encinitas, CA 92024

City of Escondido
Attn. City Attorney
201 N. Broadway
Escondido, CA 92025

City of Imperial Beach
Attn. City Clerk
825 Imperial Beach Blvd
Imperial Beach, CA 92032

City of Laguna Beach
Attn. City Clerk
505 Forest Ave
Laguna Beach, CA 92651

State of California
Attn. Director Dept of General Services
PO Box 989052
West Sacramento, CA 95798-9052

Alpine County
Attn. County Clerk
99 Water Street, P.O. Box 158
Markleeville, CA 96120

City of Carlsbad
Attn. Office of the County Clerk
1200 Carlsbad Village Drive
Carlsbad, CA 92008-19589

City of Coronado
Attn. Office of the City Clerk
1825 Strand Way
Coronado, CA 92118

City of Dana Point
Attn. City Clerk
33282 Golden Lantern
Dana Point, CA 92629

City of El Cajon
Attn. City Clerk
200 Civic Way
El Cajon, CA 92020

City of Encinitas
Attn. City Clerk
505 S. Vulcan Ave.
Encinitas, CA 92024

City of Fallbrook
Chamber of Commerce
Attn. City Clerk
111 S. Main Avenue
Fallbrook, CA 92028

City of Imperial Beach
Attn. City Attorney
825 Imperial Beach Blvd
Imperial Beach, CA 92032

City of Laguna Beach
Attn. City Attorney
505 Forest Ave
Laguna Beach, CA 92651

Department of U.S. Administration
General Services Administration
300 N. Los Angeles St. #3108
Los Angeles, CA 90012

Borrego Springs Chamber of Commerce Attn. City Clerk
786 Palm Canyon Dr
PO Box 420
Borrego Springs CA 92004-0420

City of Chula Vista
Attn: Office of the City Clerk
276 Fourth Avenue
Chula Vista, California 91910-2631

City of Coronado
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1825 Strand Way
Coronado, CA 92118

City of Del Mar
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Del Mar, CA 92014

City of El Cajon
Attn. City Attorney
200 Civic Way
El Cajon, CA 92020

City of Escondido
Attn. City Clerk
201 N. Broadway
Escondido, CA 92025

City of Fallbrook
Chamber of Commerce
Attn. City Attorney
111 S. Main Avenue
Fallbrook, CA 92028

Julian Chamber of Commerce
P.O. Box 1866
2129 Main Street
Julian, CA

City of Laguna Niguel
Attn. City Attorney
30111 Crown Valley Parkway
Laguna Niguel, California 92677

City of Laguna Niguel
Attn. City Clerk
30111 Crown Valley Parkway
Laguna Niguel, California 92677

City of Lakeside
Attn. City Clerk
9924 Vine Street
Lakeside CA 92040

City of La Mesa
Attn. City Attorney
8130 Allison Avenue
La Mesa, CA 91941

City of La Mesa
Attn. City Clerk
8130 Allison Avenue
La Mesa, CA 91941

City of Lemon Grove
Attn. City Clerk
3232 Main St.
Lemon Grove, CA 92045

City of Lemon Grove
Attn. City Attorney
3232 Main St.
Lemon Grove, CA 92045

City of Mission Viejo
Attn: City Clerk
200 Civic Center
Mission Viejo, CA 92691

City of Mission Viejo
Attn: City Attorney
200 Civic Center
Mission Viejo, CA 92691

City of National City
Attn. City Clerk
1243 National City Blvd
National City, CA 92050

City of National City
Attn. City Attorney
1243 National City Blvd
National City, CA 92050

City of Oceanside
Attn. City Clerk
300 N. Coast Highway
Oceanside, CA 92054-2885

City of Oceanside
Attn. City Attorney
300 N. Coast Highway
Oceanside, CA 92054-2885

County of Orange
Attn. County Counsel
P.O. Box 1379
Santa Ana, CA 92702

County of Orange
Attn. County Clerk
12 Civic Center Plaza, Room 101
Santa Ana, CA 92701

City of Poway
Attn. City Clerk
P.O. Box 789
Poway, CA 92064

City of Poway
Attn. City Attorney
P.O. Box 789
Poway, CA 92064

City of Ramona
Attn. City Clerk
960 Main Street
Ramona, CA 92065

City of Ramona
Attn. City Attorney
960 Main Street
Ramona, CA 92065

City of San Diego
Attn. Mayor
202 C Street, 11th Floor
San Diego, CA 92101

City of San Clemente
Attn. City Clerk
100 Avenida Presidio
San Clemente, CA 92672

City of San Clemente
Attn. City Attorney
100 Avenida Presidio
San Clemente, CA 92672

County of San Diego
Attn. County Counsel
1600 Pacific Hwy
San Diego, CA 92101

County of San Diego
Attn. County Clerk
P.O. Box 121750
San Diego, CA 92101

City of San Diego
Attn. City Attorney
1200 Third Ave.
Suite 1620
San Diego, CA 92101

City of San Diego
Attn. City Clerk
202 C Street, 2nd Floor
San Diego, CA 92101

City of San Marcos
Attn. City Attorney
1 Civic Center Dr.
San Marcos, CA 92069

City of San Marcos
Attn. City Clerk
1 Civic Center Dr.
San Marcos, CA 92069

City of Santee
Attn. City Clerk
10601 Magnolia Avenue
Santee, CA 92071

City of Santee
Attn. City Attorney
10601 Magnolia Avenue
Santee, CA 92071

City of Solana Beach
Attn. City Attorney
635 S. Highway 101
Solana Beach, CA 92075

Spring Valley Chamber of Commerce
Attn. City Clerk
3322 Sweetwater Springs Blvd, Ste. 202
Spring Valley, CA 91977-3142

Valley Center Chamber of Commerce
Attn. City Clerk
P.O. Box 8
Valley Center, CA 92082

City of Vista
Attn. City Attorney
200 Civic Center Drive, Bldg. K
Vista, CA 92084

City of Vista
Attn. City Clerk
200 Civic Center Drive
Vista, CA 92084

City of Aliso Viejo
12 Journey
Aliso Viejo, CA 92656

Attachment A

SDG&E Fifth
EPIC Investment Plan
2026-2030

San Diego Gas and Electric Company's Electric Program Investment Charge (EPIC) EPIC 5 Investment Plan

August 26, 2026

The EPIC program is funded by California utility customers under the auspices of the California Public Utilities Commission

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1. Executive Summary

San Diego Gas & Electric Company's (SDG&E) Electric Program Investment Charge (EPIC) 5 Investment Plan for the 2026-2030 program cycle presents a focused and disciplined portfolio of proposed investments designed to advance California's clean energy, reliability, resiliency, affordability, equity, and decarbonization objectives. As an EPIC Administrator, SDG&E has developed this plan to align with the California Public Utilities Commission's (CPUC) strategic goals and objectives while prioritizing initiatives that can deliver measurable customer and system benefits. Given SDG&E's comparatively limited EPIC funding allocation and lean administrative structure, the plan emphasizes targeted investments that are actionable, scalable, and supported by subject matter experts (SME) across operational and technical teams.

Maintaining a disciplined approach is particularly important because EPIC funding allows SDG&E to test emerging technologies and operational strategies before committing to larger-scale investments. By demonstrating new solutions in controlled environments, SDG&E can assess benefits, costs, implementation risks, and customer value before broader deployment helping to identify the most promising solutions, avoid unnecessary expenditures on unproven technologies, and ensure that ratepayer dollars are invested wisely and effectively.

The proposed portfolio builds on prior EPIC initiatives and focuses on evaluating emerging technologies and operational strategies that are not yet appropriate for traditional utility investment but have the potential to provide significant customer and grid value.

SDG&E's EPIC 5 Investment Plan establishes a focused and accountable approach to selecting research investments that can produce measurable customer and grid benefits. Because potential projects exceed SDG&E's available funding and administrative capacity, SDG&E submits a range of initiatives and research topic areas for CPUC's consideration but expects to advance only those that demonstrate the strongest alignment with regulations, customer needs, operational priorities, available expertise, scalability, and California's clean energy goals. Once SDG&E's Investment Plan is approved, SDG&E will begin scoping and developing its EPIC 5 projects.

SDG&E will continue coordinating with the other EPIC Administrators, focusing its limited resources on high-value knowledge sharing, complementary research, targeted technical collaboration, and avoiding duplicative efforts. Following approval of the Investment Plan, SDG&E will use a structured governance process to evaluate and prioritize projects, establish internal oversight, develop project-specific scopes and performance metrics, assess collaboration opportunities, and obtain public and community input. SDG&E's EPIC Community Engagement Plan submitted June 26, 2026,[1] currently pending approval, will further strengthen transparency, accessibility, equity, and accountability by integrating stakeholder engagement throughout the EPIC 5 lifecycle and supporting meaningful benefits for disadvantaged and low-income communities.

[1] Pursuant to Ordering Paragraph (OP) 7 at 115 of Decision (D.)26-02-037, SDG&E submitted its EPIC Community Engagement Plan via Tier 2 Advice Letter (AL) 4865-E (submitted June 16, 2026).

Funding Overview

SDG&E's EPIC 5 Investment Plan concentrates its budget and SME capacity on initiatives supporting four of the EPIC Strategic Goals:

- Distributed Energy Resource Integration through **Initiative 1: Integrating Distributed Energy Resources (DERs) to Advance Grid and Community Resilience**;
- Climate Adaptation through **Initiative 2: Next Generation Resilience and Response**;
- Building Decarbonization through **Initiative 3: Guiding Customers to a Clean Energy Future**; and
- Achieving 100% Net-Zero Carbon Emissions and the Coordinated Role of Gas through **Initiative 4: Decarbonization Pathways for California's Economy**.

Although SDG&E made a conscientious decision not to invest directly in the Transportation Electrification Strategic Goal, many of its proposed initiatives provide cross-cutting support for transportation electrification. SDG&E also has several existing programs that support customer adoption of electric vehicles and the expansion of charging infrastructure.

The scope and composition of the proposed portfolio reflect SDG&E's effort to direct its limited resources toward its highest-priority research needs while maintaining sufficient administrative capacity to oversee projects effectively and deliver transparent, measurable results. In determining the appropriate funding level for EPIC 5, SDG&E weighed the increased costs of administering the program and higher project-related costs, against the importance of minimizing impacts on customer rates.

Decision (D).26-02-037, Ordering Paragraph 2, authorizes EPIC Administrators to request inflation-adjusted budget increases to their EPIC 5 budgets using the California Department of Finance's California Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) method to support effective program administration. Although this method supports an inflation adjustment of approximately 18% increase, SDG&E proposes only a 5% increase to its project and administrative budgets. This measured request recognizes increased program costs while maintaining a strong focus on customer affordability and supporting an effective EPIC research portfolio.

Strategic Goals and Strategic Objectives

This section describes how SDG&E's proposed EPIC 5 initiatives and research topic areas align with the EPIC Strategic Goals and Strategic Objectives. It also identifies the anticipated customer and grid impacts, potential measures of success, and cross-cutting contributions to affordability, reliability, safety, resilience, equity, and decarbonization.

Strategic Initiatives

This section summarizes the needs each initiative addresses, anticipated customer and ratepayer benefits, alignment with EPIC Strategic Goals and Objectives and the Equity in Research, Development, and Demonstration (RD&D) Framework, coordination with CPUC proceedings and other administrators, and the unique role of EPIC funding. Collectively, the initiatives are intended to advance affordability, reliability, safety, resilience, equity, and decarbonization through practical and scalable research.

Strategic Roadmap

This section presents a graphical timeline for each Strategic Initiative showing how past and current EPIC and non-EPIC research relates to SDG&E's proposed EPIC 5 Research Topic Areas. The timelines illustrate how prior research has contributed to the existing knowledge base, identify the remaining research gaps addressed by EPIC 5, and demonstrate how the proposed work builds on related RD&D investments.

Research Topic Areas

This section introduces SDG&E's seven proposed Research Topic Areas:

1. **Connected Customer Resources and Resilient Grid Operations**
2. **Advanced Energy Storage Technologies**
3. **Artificial Intelligence (AI) for Utility Resilience and Adaptation**
4. **Preventive Grid Sensing and Response**
5. **Integrated Risk Analysis for Wildfire Mitigation**
6. **AI-Enabled Customer Electrification Concierge**
7. **Decarbonizing Natural Gas for Multiple Use Cases**

For each research topic area, the section identifies the research gaps to be addressed, the unique role of EPIC funding, connections to prior research, proposed metrics and impact assessment methods, expected customer and grid outcomes, equity outcomes and potential pathways for adoption and broader deployment.

2. Background

SDG&E's EPIC 5 Investment Plan (Plan) is designed to identify targeted, measurable investments that can deliver meaningful customer and grid system benefits. The CPUC EPIC Strategic Goals and Strategic Objectives, established in D.24-03-007 and D.26-02-037, respectively, provide the foundation for SDG&E's EPIC 5 portfolio. The Plan aligns with the CPUC EPIC Strategic Goals and Objectives to reduce technology and implementation risks before larger-scale investments are considered, helping protect ratepayer dollars. See Appendix A7 for additional information on the legislative drivers supporting the proposed investments and key regulatory decisions that established EPIC and have evolved program requirements.

SDG&E's EPIC proposal reflects a balanced approach to innovation, recognizing that the number of potential projects exceeds SDG&E's relatively limited EPIC budget. The proposed portfolio reflects concepts identified and supported by SDG&E's internal SME and operational teams; with prioritized research areas centered on these team's technical expertise, business ownership, and implementation capacity needed to responsibly evaluate and advance the work. Accordingly, SDG&E has prioritized initiatives that are most likely to produce scalable outcomes, improve operational readiness, and support customer and community needs. The Plan is also informed by the practical realities of SDG&E's EPIC administration: SDG&E does not have a large, dedicated EPIC staff, and many proposed projects are advanced by SME and operational teams in addition to their core responsibilities.

EPIC 5 advances a more structured paradigm for measuring impact by connecting each selected project to a defined research need, expected outcomes and project-specific performance indicators. When applicable, projects will establish baseline conditions, identify quantitative and qualitative metrics, and document measured results. Impacts may include verification of technical performance, improved operational readiness, customer and community benefits, equity outcomes, environmental benefits, cost effectiveness, or scalability. This structure reinforces the importance of selecting projects that are actionable, well-aligned with business and customer priorities, and capable of demonstrating transparent, measurable impact.

SDG&E has proposed a suite of potential initiatives and research topic areas that address a range of regulatory objectives, customer needs and business challenges. Given the limited EPIC budget, SDG&E expects to select a few of these projects for implementation, prioritizing those that demonstrate the strongest alignment with regulatory goals and the greatest potential to address customer and operational needs. In the event a funding shift of more than 15% is required within an initiative, SDG&E will seek CPUC's approval via a Tier 2 Advice Letter.[2]

The CPUC has emphasized increased coordination and collaboration among EPIC administrators as part of EPIC 5. SDG&E continues to support this collaborative approach and actively participates in separate meetings with the EPIC Administrators and Southern California Gas Company (SoCalGas). These meetings include recurring weekly Investor-Owned Utilities (IOU) coordination calls, biweekly coordination calls with the California Energy Commission (CEC) and the IOUs, and Strategic Goal specific workshops with Administrator SMEs. These efforts support identifying opportunities for alignment, information sharing, and engagement across administrator portfolios. At the same time, SDG&E's ability to participate in collaboration activities must be viewed in the context of its smaller EPIC budget and limited internal resources. SDG&E's technical SMEs are primarily operational personnel whose EPIC contributions are performed in addition to their core responsibilities, including maintaining system operations, supporting capital and compliance work, responding to emerging operational needs, and advancing existing business priorities. As a result, SDG&E is limited to participate in cross-administrator collaboration at the same scale or intensity as larger administrators such as Southern California Edison

[2] D. 21-11-028, OP 10 and OP 11.

(SCE) and Pacific Gas & Electric (PG&E), which have greater available SME capacity and larger EPIC portfolios.

These resource constraints have practical implications for the level and type of collaboration SDG&E can reasonably support. Limited SME availability may affect SDG&E's ability to attend every recurring CEC technical meeting, contribute to every cross-administrator workstream, support extensive joint project development, prepare detailed technical inputs on compressed timelines, participate in multiple parallel proposal-review processes, or provide ongoing implementation support for projects that are not closely aligned with SDG&E's portfolio and operational priorities. SME bandwidth limitations may also affect the pace at which SDG&E can evaluate potential joint opportunities, validate technical assumptions, review data needs, assess operational feasibility, and determine whether a collaborative concept can be implemented within SDG&E's systems, processes, and customer-service obligations.

Accordingly, SDG&E will continue to engage in collaboration where feasible, prioritizing activities that are directly aligned with SDG&E's EPIC 5 portfolio, customer benefits, regulatory obligations, and available resources. SDG&E expects to focus its participation on coordination efforts that provide clear value, such as knowledge sharing, alignment on research priorities, identification of complementary activities, and targeted technical input where SDG&E's experience or system needs are directly relevant.

CEC Collaboration Barriers

As of this filing, SDG&E acknowledges current limitations to IOU collaboration with the CEC surrounding eligible match funding and legal interpretations of use of funds. SDG&E will continue to pursue allowable collaboration through planning discussions, information sharing, and complementary activities, noting that potential for realized benefits may be limited. Concurrently, SDG&E is open to additional feedback and comments on the above constraints. SDG&E continues to support collaboration with CEC and looks forward to advancing mutually beneficial EPIC projects within the service territory.

Regulatory Barriers

Additionally, there are regulatory barriers that SDG&E continues to face in the implementation and sharing of innovations derived from EPIC projects. CPUC General Order (GO) 173 imposes stringent requirements on transactions involving utility property valued at $5 million or less. This order mandates a formal application process for approval, which can be time-consuming and cumbersome. Additionally, GO 173 does not distinguish between real property (such as land or facilities) and technologies or intellectual property (IP). This lack of differentiation is particularly problematic for the EPIC program, which is inherently innovative and often involves the development and transfer of advanced technologies and IP.

Similarly, CPUC Section 851 requires utilities to secure authorization from the CPUC before selling, leasing, or otherwise disposing of utility property necessary for public service. Again, real property and technologies are not differentiated. These regulations, while ensuring oversight, often delay the deployment and scaling of innovative solutions. For example, SDG&E is currently encountering difficulties in sharing their latest Artificial Intelligence (AI) software models developed through an EPIC project (Drone Inspection Program) with other utilities.[3] Other utilities (e.g. PG&E, SCE and international utilities) are very interested in this project technology, but the regulatory process for sharing is substantial. Creating regulatory efficiencies could enhance operational improvements and reliability across multiple utilities, while promoting technology transfer objectives.

[3] SDG&E's AI Drone Program, *available at* https://www.sdge.com/wildfire-safety/aviation-services

The current regulatory framework has historically delayed efforts by Administrators to collaborate on these advanced technologies and should be viewed as an area of potential improvement for EPIC.

EPIC 5 Portfolio Governance Process

SDG&E's EPIC 5 Investment Plan is structured around high-level Strategic Initiatives and Research Topic Areas. Following CPUC approval of SDG&E's EPIC 5 Investment Plan, SDG&E will begin scoping and developing its EPIC 5 projects. SDG&E will assess current regulatory landscape, electric utility industry conditions and prioritize RD&D efforts that best support SDG&E's customer benefits, business needs and California's climate and clean energy goals. SDG&E will evaluate projects within approved research topic areas and prioritize funding for initiatives that provide value to SDG&E customers, fill gaps for regulatory requirements, support broader electric utility industry needs, and, where feasible, deliver meaningful benefits to disadvantaged communities.

To support disciplined portfolio governance and maximize ratepayer value, SDG&E intends to use a structured process that includes developing project scoring and prioritization criteria; identifying a director champion for each selected project; establishing a steering committee to review key project decisions; and completing project-specific planning, including scope, metrics, equipment needs, testing and analysis requirements, staffing needs, contractor and procurement requirements, documentation expectations, and equipment disposition plans. After project details are further developed, SDG&E will conduct a final coordination review to identify potential opportunities for collaboration with other EPIC administrators, hold public workshop(s), and seek external and community input.[4] SDG&E may refine or expand these governance processes during implementation to continue improving program oversight and value for customers.

Community and Stakeholder Engagement

As part of its planning efforts, SDG&E implemented extensive stakeholder and community engagement that helped inform and develop its EPIC 5 Investment Plan. SDG&E engaged and solicited input from disadvantaged communities, Tribal governments and organizations, community-based organizations, customers, industry representatives, local government, and other interested stakeholders. Through workshops, webinars, surveys, listening sessions, meetings, and direct outreach activities, SDG&E gathered input on community priorities, technology needs, affordability concerns, resilience challenges, and opportunities to improve customer outcomes. This feedback was taken into consideration in the development of SDG&E's proposed Strategic Initiatives and Research Topic Areas. Community and stakeholder engagement will continue to guide SDG&E's EPIC 5 implementation to help ensure investments remain responsive to customer, community, and stakeholder needs. See Appendix A1, A5, and A6 for more details on engagement activities.

While community engagement has always been a core requirement under EPIC, a new and key component of EPIC 5 is the filing of SDG&E's Community Engagement Plan (CEP),[5] which establishes a structured approach for engaging communities and stakeholders throughout the EPIC 5 lifecycle. The CEP supports implementation of D.26-02-037 and describes how SDG&E will seek to promote transparency, accessibility, equity, and continuous improvement in EPIC planning and implementation. It also supports the equity requirements established in a prior EPIC decision, directing technology demonstration and deployment funding toward projects located in and benefiting disadvantaged communities and low-income

[4] D.21-11-028 at 17

[5] See SDG&E AL 4865-E Submission of SDG&E's EPIC-5 Community Engagement Plan pursuant to Decision 26-02-037, submitted June 26, 2026, (pending approval).

communities where applicable.[6] Subject to CPUC review and approval, SDG&E will implement its Community Engagement Plan to support continued engagement throughout the EPIC 5 cycle.

[6] D.23-04-042 OP 2.

3. Funding Overview

Table 1. Investment Plan Funding Summary

Strategic Initiative (Funding Item)	Amount	Primary Strategic Goal Addressed	Strategic Objectives Addressed*
Strategic Initiative 1 Title: Integrating DERs to Advance Grid & Community Resiliency	$6,000,000	DER Integration	**SO#9. Leveraging DERs for Grid and Community Resiliency,** SO#3. Smart Planning Tools for New Load and Clean Resources, SO#7: Impacts Research for New Generation and Storage SO#8. Increase Predictability of Weather Impact on, Intermittent Resources, Climate Risks, and Load, SO#11. Providing Data Input into a Value of DER Framework SO#13. Cost-Effective Grid Hardening for Long-Term Climate Impacts
Strategic Initiative 2 Title: Next Generation Resilience and Response	$2,500,000	Climate Adaptation	**SO#8. Increase Predictability of Weather Impact on, Intermittent Resources, Climate Risks, and Load,** SO# 13. Cost-Effective Grid Hardening for Long-Term Climate Impacts, SO#12. Optimizing Feeder/Circuit Operations
Strategic Initiative 3 Title: Guiding Customers to a Clean Energy Future	$1,299,130	Building Decarbonization	**SO# 4. Reducing Cost of Whole Home Electrification**, SO#5: Innovative Approaches for Difficult-to-Decarbonize Sectors, SO#6: Community Scale Decarbonization
Strategic Initiative 4 Title: Decarbonization Pathways for California's Economy	$5,500,000	Achieving 100% Net-Zero Emissions (NZE) & the Coordinated Role of Gas	**SO#5. Innovative Approaches for Difficult-to-Decarbonize Sectors**
Administration and Oversight			

Strategic Initiative (Funding Item)	Amount	Primary Strategic Goal Addressed	Strategic Objectives Addressed*
CPUC Oversight Budget	$85,470		
Administrative Budget	$1,709,400		
Total Request[7]	**$17,094,000**		

In selecting and allocating the budget to the forthcoming individual projects, as required by D.21-11-028, SDG&E will manage the budget allocation established at the initiative level, as described in Section 2 above. If SDG&E anticipates a need to reallocate more than 15% of the total program funds among its initiatives, it will file a Tier 2 Advice Letter and obtain CPUC approval before doing so, pursuant to D.21-11-028.[8]

Table 2. Investment Plan Strategic Initiatives by EPIC Strategic Goal and Objective

		EPIC STRATEGIC GOAL				
		1. Transportation Electrification	2. Distributed Energy Resource (DER) Integration	3. Building Decarbonization	4. Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas	5. Climate Adaptation
EPIC STRATEGIC OBJECTIVE	1. Reducing Medium and Heavy-Duty Vehicle Charging Infrastructure Costs					
	2. Overcoming Barriers to EV Benefits in Disadvantaged and Vulnerable Communities (DVCs)					

[7] SDG&E is requesting a budget increase of 5%. See Table 4 and Appendix A10 for more details.

[8] D.21-11-028 OP 11.

		EPIC STRATEGIC GOAL				
		1. Transportation Electrification	2. Distributed Energy Resource (DER) Integration	3. Building Decarbonization	4. Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas	5. Climate Adaptation
	3. Smart Planning Tools for New Load and Clean Resources	1 3	1 3	1 3		1 3
	4. Reducing Cost of Whole Home Electrification	3	3	3		3
	5. Innovative Approaches for Difficult-to-Decarbonize Sectors	3	3	3	4	3
	6. Community-Scale Decarbonization	3	3	3		3
	7. Impacts Research for New Generation and Storage	1	1	1		1

		EPIC STRATEGIC GOAL				
		1. Transportation Electrification	2. Distributed Energy Resource (DER) Integration	3. Building Decarbonization	4. Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas	5. Climate Adaptation
	8. Increase Predictability of Weather Impact on, Intermittent Resources, Climate Risks, and Load	1	1 2	1		1 2
	9. Leveraging DERs for Grid and Community Resiliency	1	1	1		1
	10. Expediting and Streamlining Interconnection and Energization Processes					
	11. Providing Data Input into a Value of DER Framework	1	1	1		1
	12. Optimizing Feeder / Circuit Operations					2

		EPIC STRATEGIC GOAL				
		1. Transportation Electrification	2. Distributed Energy Resource (DER) Integration	3. Building Decarbonization	4. Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas	5. Climate Adaptation
	13. Cost-Effective Grid Hardening for Long-Term Climate Impacts	1	1	1		1 2

Table 3. Anticipated Allocation of SDG&E EPIC 5 Administrative Budget*

EPIC Administrative Budget Category[9]	**Preliminary Estimate of Anticipated Share of Annual Administrative Expenses over EPIC 5 Period ($)***
Labor	$125,600
General and Administrative Expense and Overhead	$40,000
Travel	$15,000
Event Fees for Hosted and Attended Events	$20,000
Supplies and Materials	$5,000
Contracted Services	$120,000
Total	**$325,600**[10]
* Actual expenses to be reported in each administrator's following year EPIC Annual Report. This estimated budget includes only EPIC administrative costs—specifically, 10% of each IOU Admin EPIC budget and 15% of the CEC EPIC budget. It does not include project-specific costs, even if similarly labeled, which are funded through the Program Area budgets.	

[9] Per administrator response to Decision (D.)21-11-028 at Ordering Paragraph (OP) 16.

[10] SDG&E is requesting a budget increase under this application. This table reflects the authorized EPIC 5 SDG&E Administrative Budget, per D.26-02-037, and does not include the proposed 5% request.

SDG&E's anticipated administrative budget reflects the resources needed to support effective EPIC program administration, including the ongoing community engagement commitments and those described in SDG&E's EPIC 5 CEP. SDG&E's CEP establishes a structured approach for engaging communities and stakeholders throughout the EPIC 5 lifecycle, with emphasis on transparency, accessibility, equity, and continuous improvement. Consistent with that approach, administrative expenditures will be evaluated based on how they support program delivery, stakeholder engagement, regulatory compliance, reporting, and measurable public benefits.

This adaptive approach ensures that resources are directed where they are most effective in advancing EPIC objectives, while maintaining transparency through category-based tracking and annual reporting.

SDG&E's administrative resources will continue to support engagement activities such as community and Tribal outreach, workshops, listening sessions, surveys, focus groups, advisory discussions, stakeholder briefings, and participation in existing community forums. These activities are intended to increase awareness and understanding of EPIC investments and emerging clean energy and grid modernization technologies; provide opportunities for stakeholders to share feedback on project priorities, community needs, benefits, and potential impacts; and help identify barriers to participation, including language, technical, scheduling, accessibility, and resource constraints.

Any adjustments to administrative spending will remain within the approved budget and will be guided by principles of prudent stewardship, transparency, and alignment with EPIC objectives. This approach helps ensure that administrative resources are directed where they are most effective in supporting SDG&E's EPIC 5 CEP, advancing meaningful engagement, and maintaining clear reporting through annual budget tracking and EPIC reporting processes.

EPIC Administration Budget Increase Request

D.26-02-037, at OP 2, authorizes EPIC Administrators to request an inflation-adjusted budget increase to support increased costs associated with overseeing the program. Administrating EPIC has led to cost increases that have disproportionately impacted SDG&E, which has the smallest budget compared to the other Administrators. While a request for a budget increase is authorized and warranted, SDG&E is also mindful of the ongoing affordability challenges for its customers within the service territory and that a budget increase would impact rates. An inflation-adjusted budget review supports an increase of approximately 18% over current funding levels authorized within D.26-02-037. Based on the points above, SDG&E proposes a modest increase of 5% for its project and administrative budgets. The 5% increase was determined by comparing past EPIC administration costs associated with current inflationary pressures associated with projects and personnel. By identifying internal efficiencies and clearly defining initiatives that should be supported by EPIC, SDG&E proposes a smaller budget increase. This measured approach balances the need to maintain an effective EPIC research portfolio, while keeping SDG&E's commitment to affordability front-and-center. As a result, while SDG&E is not seeking an approximate 18% inflation adjustment, SDG&E does believe that 5% is necessary to continue supporting EPIC at a comparable level to past cycles. See Appendix A10 for calculation details.

Table 4. SDG&E's Proposed EPIC 5 Budget Including Inflation Adjustment Request

SDG&E's Authorized Budget[11]		**SDG&E Inflation Adjustment Request at 5%**
Total EPIC Budget	$925,000,000	
Total CPUC Oversight Budget (5% of 925,000,000)	$4,625,000	
IOUs Portion of EPIC Budget (20% of EPIC Budget)	$185,000,000	
SDG&E EPIC Budget (8.8% of IOU Budget)	$16,280,000	**$17,094,000**
SDG&E Admin Budget (10% of SDG&E EPIC Budget)	$1,628,000	**$1,709,400**
SDG&E Share of Oversight Budget (1.76% of CPUC Budget)	$81,400	**$85,470**
SDG&E Program Area TD&D Budget **(SDG&E EPIC Budget – Admin and Oversight Budgets)**	$16,280,000 - $1,628,000 - $81,400 = $14,570,600	**$15,299,130**

[11] Authorized budget pursuant to D.26-02-037 at Appendix B.

4. Strategic Goals and Strategic Objectives

EPIC Strategic Goal 1. Transportation Electrification - Investment Plan Alignment and Impact:

SDG&E made the decision not to propose a dedicated Transportation Electrification initiative partially due to limited funding and SME capacity, but also because other proposed initiatives provide cross-cutting support, which can be seen in Table 2. Additionally, SDG&E has a robust transportation electrification strategy and offers a host of customer programs that support enabling decarbonization of the sector.

EPIC Strategic Goal 2. Distributed Energy Resource Integration - Investment Plan Alignment and Impact:

The Plan supports Strategic Goal 2 through the *Integrating DERs to Advance Grid and Community Resilience* initiative and related research topic areas. Outcomes of this work are designed to improve the value, reliability, affordability, and operational readiness of customer-owned and utility-integrated DERs, including batteries, solar photovoltaic (PV), electric vehicles, flexible loads, emerging storage technologies, and operator training tools.

The initiative supports Strategic Objective 3 by advancing planning tools and operational insights needed to manage new load and clean resources; Strategic Objective 7 by evaluating the impacts and operational value of emerging storage and generation resources; Strategic Objective 8 by improving visibility into weather, load, DER behavior, and climate-related operating conditions; Strategic Objective 9 by testing how DERs can support grid and community resiliency; Strategic Objective 11 by generating performance, cost, and operational data that can inform a future value of DER framework; and Strategic Objective 13 by identifying opportunities for DERs, storage, and grid technologies to support more cost-effective resilience and grid hardening strategies.

Together, the proposed research areas demonstrate strong alignment with the DER Integration Strategic Goal and are expected to have a high magnitude of impact to meet SDG&E's projected needs of 3,230K electric vehicles because it addresses multiple barriers to the reliable, affordable, and scalable integration of customer-owned and utility-integrated resources.[12] The research provides an opportunity to evaluate and quantify the potential value of DERs and demand flexibility capabilities before pursuing broader production deployment. Through measurable outcomes and operational testing, the research may generate data-driven insights into customer savings, grid benefits, cost effectiveness, customer responsiveness, and operational performance, helping determine whether these capabilities warrant future investment and scaling.

EPIC Strategic Goal 3. Building Decarbonization - Investment Plan Alignment and Impact:

The Plan supports Strategic Goal 3 through the *Guiding Customers to a Clean Energy Future* initiative and related research topic area focused on helping customers navigate, plan, and adopt electrification solutions. The initiative is designed to address one of the most significant barriers to building decarbonization: the complexity customers face when evaluating electrification options, understanding infrastructure requirements, identifying available incentives, and developing a practical pathway to transition from fossil-fuel-based technologies. Through customer-focused innovation, SDG&E seeks to improve access to trusted information, reduce customer confusion, and accelerate adoption of cost-effective electrification solutions.

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[12] SDG&E *The Path to Net Zero* (April 2022), *available at* https://www.sdge.com/sites/default/files/documents/netzero2.pdf.

The initiative directly supports EPIC 5 Strategic Objective 4, Reducing Cost of Whole Home Electrification, by helping customers better understand electrification options, infrastructure needs, incentives, and project sequencing in ways that can reduce cost, complexity, and decision-making barriers. It also supports Strategic Objective 5, Innovative Approaches for Difficult-to-Decarbonize Sectors, by identifying tailored pathways for customers, buildings, or use cases where traditional electrification approaches may be more challenging. In addition, the initiative supports Strategic Objective 6, Community-Scale Decarbonization, by generating customer and community-level insights that can inform outreach, program design, and scalable electrification strategies. Across these objectives, the research advances EPIC's cross-cutting priorities by providing customer-focused solutions that promote affordability, equity, reliability, and long-term decarbonization while improving the customer experience.

Expected outcomes include increased customer awareness of electrification pathways, greater participation in electrification programs, reduced customer decision-making time, and improved adoption of technologies such as heat pumps, electric vehicles, and other electric end uses. Over time, the initiative is expected to support broader building decarbonization by helping customers identify practical electrification opportunities that align with their energy usage, building characteristics, affordability needs, and available incentives. Potential metrics include customer enrollment and engagement rates, completed electrification plans, electrification adoption rates, customer satisfaction, reductions in program delivery costs, and increased participation in disadvantaged and low-income communities.

SDG&E's goal to achieve net-zero energy use at company facilities by 2045[13] strongly aligns with this strategic goal. The proposed research supports this goal and is expected to have a high magnitude of impact by helping customers overcome information, affordability, incentive-access and infrastructure-readiness barriers to building electrification.

EPIC Strategic Goal 4. Achieving 100% Net-Zero Carbon Emissions and the Coordinated Role of Gas - Investment Plan Alignment and Impact:

The Plan supports Strategic Goal 4 through the *Decarbonization Pathways for California's Economy* initiative and its related research topic area focused on evaluating methane pyrolysis as a potential low-carbon hydrogen production pathway for difficult-to-decarbonize sectors. While direct electrification is expected to remain a primary decarbonization strategy for many customer end uses, certain sectors may continue to face practical barriers to full electrification, including medium- and heavy-duty transportation, commercial and industrial operations, backup generation, and other energy-intensive applications that require high heat, long operating hours, fast fueling, or fuel flexibility. This initiative is intended to evaluate whether methane pyrolysis can provide a complementary pathway for customers and sectors where electrification may not yet be feasible, cost-effective, or operationally practical.

The initiative directly supports EPIC Strategic Objective 5, by assessing whether methane pyrolysis can produce low-carbon hydrogen closer to customer end uses while reducing reliance on higher-emitting fuels. The research would evaluate technology readiness, hydrogen production costs, lifecycle greenhouse gas emissions, methane leakage risks and mitigation, solid carbon handling, air quality impacts, customer use cases, safety, permitting considerations, and scalability. These results would help determine whether methane pyrolysis can support California's long-term net-zero goals while providing objective data before any broader deployment or ratepayer investment decisions are considered.

Expected measurable impacts include improved understanding of the cost, emissions, safety, and operational performance of methane pyrolysis compared to other low-carbon hydrogen pathways. Potential metrics include hydrogen production cost per kilogram, lifecycle greenhouse gas emissions,

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[13] SDG&E *Sustainability Report 2024 Highlights* (published June 4, 2025) at 7, *available at* https://sdge.com/sites/default/files/SEMPRA_CSR%202024_SDGE_FINAL.pdf.

methane leakage rates, solid carbon utilization or sequestration potential, local air pollutant impacts, reduction in diesel or higher-emitting fuel use, customer participation, resiliency benefits, and applicability to disadvantaged, low-income, Tribal, or pollution-burdened communities. Over the EPIC 5 period, SDG&E expects this research to generate decision-quality information that can inform future clean fuel planning, customer transition strategies, and coordinated electric-gas decarbonization pathways.

This research is estimated to have a high magnitude of impact by advancing SDG&E's Path to Net Zero[14] and supporting the 4 GW of clean hydrogen resources needed to meet the future demand identified in the service territory.

EPIC Strategic Goal 5. Climate Adaptation - Investment Plan Alignment and Impact:

The Plan supports Strategic Goal 5 through the *Next Generation Resilience and Response* initiative and related research topic areas, including Artificial Intelligence (AI) for Utility Resilience and Adaptation (AURA), Preventive Grid Sensing and Response, and Integrated Risk Analytics for Wildfire Mitigation. Together, these efforts are designed to help SDG&E better anticipate, prepare for, and respond to the growing impacts of climate change, including extreme weather, wildfire risk, evolving load patterns, infrastructure vulnerabilities, and increasing operational complexity. These initiatives seek to improve utility resilience through enhanced data integration, advanced sensing technologies, artificial intelligence, climate-informed planning tools, and improved operational awareness.

The initiative directly supports EPIC 5 Strategic Objective 8 by integrating climate, weather, load, community vulnerability, asset, vegetation, and operational data to improve planning and preparedness for future climate conditions. It also supports Strategic Objective 12 by evaluating tools that can improve outage detection, fault location, restoration performance, field response, and operational decision-making. In addition, the initiative supports Strategic Objective 13 by helping SDG&E identify where resilience, wildfire mitigation, and grid hardening investments can provide the greatest customer and ratepayer value. Across these objectives, the proposed work advances EPIC's cross-cutting priorities of safety, reliability, resilience, affordability, equity, and customer-focused innovation by helping SDG&E make more informed investment decisions, reduce outage and wildfire-related risks, and improve preparedness for future climate conditions.

With 64% of its service area classified as a High Fire Threat District,[15] SDG&E expects the proposed research to have a high magnitude of impact through improvements to risk identification, targeting resilience investments where they offer the most benefit, and strengthening preparedness for increasingly severe climate conditions. This initiative will build on SDG&E's existing resilience efforts and provide actionable information to support more informed planning and operational decisions.

Finally, SDG&E will continue to coordinate through the Policy + Innovation Coordination Group (PICG) process and other administrator forums to demonstrate novelty, avoid duplication, share lessons learned, and identify targeted collaboration opportunities consistent with SDG&E's budget and SME capacity. EPIC funding is appropriate because these pre-commercial, system-level capabilities require utility-specific validation before broader deployment and are not fully addressed through private-sector investment, federal research, or General Rate Case funding.

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[14] *Supra* n.13.

[15] *Supra* n.14, at 2.

5. Strategic Initiatives

Initiative Title: 1. Integrating DERs to Advance Grid and Community Resiliency

Initiative Funding Amount: $6,000,000

Strategic Priority:

SDG&E's Integrating DERs to Advance Grid & Community Resiliency initiative is focused on helping customers realize greater value from a more distributed, electrified, and climate-impacted energy system. As customers adopt more distributed energy resources, SDG&E must evaluate how these resources can be coordinated in ways that improve customer affordability, reliability, resilience, and access to clean energy.

This initiative is designed to address the customer and operational challenges that arise as the grid becomes more dynamic with customer resources. Proposed research topic areas include coordinated customer DER programs, Distributed Energy Resource Management System (DERMS)-enabled orchestration, operator training and simulation for high-DER conditions, advanced energy storage technologies, and related safety, testing, and resilience applications. Together, these efforts are intended to help customers participate more effectively in clean energy programs, reduce peak demand, improve demand flexibility, enhance outage preparedness, and support a more reliable and resilient grid.

The expected impact is to create practical, scalable pathways for customer-owned and utility-integrated resources to deliver measurable benefits. At the same time, SDG&E can use the research findings to improve operational readiness, reduce implementation risk, and make more informed infrastructure investments that support long-term ratepayer value.

Strategic Objective(s) Supported:

- ✓ 3. Smart Planning Tools for New Load and Clean Resources
- ✓ 7. Impacts Research for New Generation and Storage
- ✓ 8. Increase Predictability of Weather Impact on Intermittent Resources, Climate Risks
- ✓ 9. Leveraging DERs for Grid and Community Resiliency
- ✓ 11. Providing Data Input into a Value of DER Framework
- ✓ 13. Cost-Effective Grid Hardening for Long-Term Climate Impacts

Strategic Goals(s) Supported:

- ✓ EPIC Strategic Goal 2: Distributed Energy Resource Integration

Alignment with EPIC Equity in RD&D Framework:

This initiative supports the EPIC [16] by determining whether customers, particularly those in disadvantaged, low-income, and Tribal communities, can meaningfully access and benefit from DER integration

[16] EPIC Equity in RD&D Framework applies to the approved principles within the EPIC Investment Plans, including prioritization, engagement, metrics, access, and outreach when it comes to evaluating and measuring impacts on DVCs and Tribes.

solutions. Customer-facing demonstrations are expected to evaluate barriers such as upfront cost, technology access, awareness, language, trust, digital access, scheduling constraints, and the ability to participate in automated or utility-managed programs.

Where appropriate, SDG&E may incorporate targeted outreach, inclusive enrollment approaches, tiered incentives, access to low- or no-cost enabling technologies, community-informed demonstration design, and feedback from customers and community-based organizations. The initiative will also consider whether DER and resilience solutions can improve outcomes for customers who experience higher energy burdens, greater climate and wildfire exposure, or reliability challenges. Progress may be measured through participation and retention metrics, demographic analysis, customer surveys, focus groups, stakeholder feedback, and assessment of whether benefits are accessible, understandable, and meaningful to customers.

Alignment with EPIC Strategic Goals and Strategic Objectives:

This initiative advances EPIC's Strategic Goals and Strategic Objectives (as mentioned above) by focusing on customer-centered DER integration, grid readiness, and operator training modernization. Rather than evaluating DERs only as technologies, the initiative examines how customers can participate in coordinated programs that provide value to both the customer and the grid. Research activities will assess how customer-owned and utility-integrated resources can be coordinated through open standards, aggregators, vendors, DERMS platforms, and utility grid management systems in a way that supports affordability, reliability, resilience, safety, and decarbonization. SDG&E is also interested in evaluating operator training tools that can better prepare system operators for increasingly complex, DER-rich grid conditions.

The initiative also incorporates EPIC's crosscutting principles by emphasizing equity, customer-focused solutions, reliability, resilience, emerging strategies, and safety, including cybersecurity. Customer-focused benefits may include bill savings, demand flexibility participation, cleaner energy options, improved access to energy programs, and greater resilience during grid events. Grid and ratepayer benefits may include peak reduction, load shifting, improved situational awareness, more effective use of DERMS, better operator preparedness, and improved planning data.

Coordination and Alignment with CPUC Proceedings:

The initiative supports the below CPUC proceedings by evaluating how customer-owned and utility-integrated distributed energy resources can be planned, interconnected, coordinated, and operated in ways that provide practical customer, grid, and ratepayer benefits. For more details, see Appendix A11.

- R.25-08-004 – Interconnection
- R.21-06-017 – High DER Future Grid (Tracks 1 & 3)
- R.19-10-005 – Development of Rates and Infrastructure for Vehicle Electrification
- R.22-07-005 – Demand Flexibility
- R.22-11-013 – Distributed Energy Resource (DER) Cost and Data

Coordination with EPIC and Gas RD&D Program Administrators:

IOU and Gas RD&D Coordination: SDG&E will continue coordination meetings with other IOU and Gas RD&D Administrators to share lessons learned, gather feedback, identify recommendations, and

support alignment where appropriate. SDG&E will also evaluate coordination opportunities carefully to avoid cross-subsidization concerns and ensure compliance with applicable CPUC GO requirements.

CEC Coordination: Absent additional funding, SDG&E will continue coordinating with the CEC to avoid duplication, participate in meetings and symposiums, and identify potential alignment opportunities. The IOUs are still evaluating how they may further partner with the CEC. As of this filing, SDG&E acknowledges that currently there exists limitations to IOU collaboration with the CEC surrounding eligible match funding and legal interpretations of use of funds. SDG&E's technical SMEs remain interested in partnering with the CEC where feasible and consistent with CEC's applicable funding rules.

Unique Role:

This initiative is appropriate for EPIC funding because the technologies, utility integration approaches, and unique system/operational strategies being evaluated are not yet mature enough for broad deployment and involve significant customer, technical, operational, and market uncertainty. Coordinated multi-DER orchestration, DERMS integration, cross-vendor interoperability, advanced energy storage evaluation, and high-DER operator training require real-world utility validation before customers and ratepayers can fully rely on them.

Private-sector investment alone is unlikely to address these needs because many of the benefits such as improved reliability, lower long-term costs, better outage preparedness, customer affordability, resilience, and transferable lessons for California utilities are shared across customers and the broader grid. Federal research programs generally focus on technology development, while General Rate Case funding is better suited for mature, deployable solutions. EPIC provides the appropriate pathway to evaluate these emerging capabilities before full-scale commercial deployment, helping SDG&E objectively evaluate technology suitability, reduce implementation uncertainty, and protect ratepayer investments before broader deployment decisions are considered.

Initiative Title: 2. Next Generation Resilience and Response

Initiative Funding Amount: $2,500,000

Strategic Priority:

SDG&E's Next Generation Resilience and Response initiative is focused on helping customers experience a safer, more reliable, and more resilient electric system as climate-related risks continue to grow. Customers increasingly face the impacts of extreme weather, wildfire risk, and more frequent stress on the grid. These conditions impact daily life, business continuity, public safety, access to essential services, and confidence in the energy system. This initiative is designed to evaluate new tools and technologies that can help SDG&E better anticipate risks, respond faster during events, and make more informed investments.

The initiative will evaluate research topic areas such as AI for Utility Resilience and Adaptation (AURA), Preventive Grid Sensing and Response, Mobile First Platform, Enhanced Distribution Grid Visibility, Smart Meters, and Integrated Risk Analytics for Wildfire Mitigation. Together, these efforts are intended to help SDG&E better anticipate and address climate, wildfire, outage, vegetation, assets, and community vulnerability risks before they disrupt customers. By combining advanced analytics, AI-enabled planning tools, and other smart planning technologies, the initiative seeks to give SDG&E better visibility into system conditions so it can make faster, more targeted decisions that support grid and customer safety.

The expected customer impact is improved reliability, stronger wildfire mitigation, faster outage detection and restoration, more efficient field response, and better prioritization of resilience investments. Customers may benefit from fewer or shorter outages, reduced wildfire-related risk, improved operational readiness, and more cost-effective use of ratepayer funds. By testing these technologies before broader deployment, SDG&E can help ensure future resilience investments are practical, scalable, and focused on delivering measurable customer benefits.

Strategic Objective(s) Supported:

- ✓ 8. Increase Predictability of Weather Impact on Intermittent Resources, Climate Risks
- ✓ 12. Optimizing Feeder / Circuit Operations
- ✓ 13. Cost-Effective Grid Hardening for Long-Term Climate Impacts

Strategic Goals(s) Supported:

- ✓ EPIC Strategic Goal 5: Climate Adaptation

Alignment with EPIC Equity in RD&D Framework:

This initiative supports the EPIC Equity in RD&D Framework by focusing on how climate resilience, wildfire mitigation, and outage response technologies can better serve customers and communities that may experience disproportionate impacts from extreme weather, wildfire risk, public safety power shutoff events, and extended outages. Disadvantaged, low-income, and Tribal communities may face greater barriers to preparing for or recovering from outages, including limited backup power options, language or access barriers, medical baseline needs, transportation constraints, and fewer financial resources.

The initiative supports the principle of prioritization by evaluating tools that can help identify where resilience investments may provide the greatest customer and community benefit. AURA, for example, is

intended to integrate climate vulnerability, grid vulnerability, community vulnerability, and load growth data to support more informed investment decisions. This can help SDG&E better understand which communities may be most exposed to climate and reliability risks and where investments could reduce customer disruption, avoid duplicative spending, and improve long-term resilience.

The initiative supports engagement and outreach by creating opportunities to incorporate customer and community perspectives into demonstration design, resilience metrics, vulnerability indicators, and evaluation criteria. Where projects affect disadvantaged, low-income, or Tribal communities, SDG&E may use targeted outreach, community-based organization coordination, Tribal consultation, stakeholder briefings, surveys, listening sessions, and feedback mechanisms to better understand local resilience needs and customer priorities.

The initiative supports metrics and access by evaluating whether project outcomes improve reliability, reduce risk, and enhance service for customers facing elevated vulnerability. Potential equity-related metrics may include the number of customers in disadvantaged or vulnerable communities benefiting from improved outage response, reduced outage duration, enhanced wildfire risk identification, improved inspection prioritization, or more climate-informed infrastructure planning. Additional measures may include community feedback, participation in outreach activities, customer satisfaction, improved restoration performance, and the extent to which resilience investments are prioritized based on both grid and community needs.

Alignment with EPIC Strategic Goals and Strategic Objectives:

This initiative supports EPIC Strategic Goals and Objectives (as mentioned above) by evaluating technologies that can help SDG&E better anticipate, prepare for, and respond to customer impacts from climate-driven risks. By integrating climate, grid, weather, vegetation, asset, community vulnerability, and operational data, the initiative supports more customer-focused planning and faster operational response during high-risk conditions.

The initiative incorporates EPIC's crosscutting principles by focusing on practical outcomes that matter to customers: fewer disruptions, faster restoration, improved wildfire safety, better field response, and more efficient use of ratepayer dollars. Reliability and resilience benefits may include faster fault detection, improved outage diagnostics, better situational awareness, reduced restoration time, improved wildfire and vegetation risk identification, and more targeted investment decisions. Safety benefits may include earlier identification of wildfire hazards, reduced exposure for field crews, and improved operational decision-making during high-risk conditions.

The initiative also supports affordability by helping SDG&E evaluate whether emerging technologies can reduce unnecessary field activities, avoid duplicative investments, improve inspection efficiency, and prioritize investments where they provide the greatest customer benefit. Cybersecurity, data governance, privacy, interoperability, and operational integration would be evaluated as part of technology readiness and deployment feasibility to help ensure customer data and grid operations remain protected.

Coordination and Alignment with CPUC Proceedings:

This initiative supports multiple CPUC Proceedings by evaluating technologies and operational strategies that can help utilities adapt to increasing climate and reliability challenges while improving customer outcomes. See Appendix A11 for more details.

- R.24-05-023 – Safety, Reliability, and Resilience of Electrical Distribution Systems
- R.18-04-019 – Climate Adaptation

- R.18-12-005 – Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions - Public Safety Power Shutoff (PSPS)
- R.20-05-003 – Integrated Resource Planning (IRP)
- R.21-06-017 – High Distributed Energy Resources (High DER Future Grid)
- R.19-09-009 – Microgrids and Resiliency

Coordination with EPIC and Gas RD&D Program Administrators:

SDG&E will continue to coordinate with other EPIC Administrators through the PICG process, administrator working groups, public workshops, and topic-specific coordination forums to identify complementary work, avoid duplication, and share lessons learned. For this initiative, coordination may include exchanging information on climate adaptation analytics, wildfire risk modeling, remote sensing, vegetation management technologies, advanced sensing, digital field tools, distribution system visibility, outage response, and resilience metrics.

Because the initiative is focused primarily on electric grid resilience, wildfire mitigation, climate adaptation, and customer outage response, coordination with gas RD&D administrators is expected to be targeted rather than central. Potential areas for coordination may include cross-sector resilience planning, emergency response, climate vulnerability assessment, wildfire risk mitigation, field safety, and data-sharing approaches where electric and gas infrastructure may be affected by common climate or wildfire hazards.

SDG&E will seek coordination opportunities that provide clear customer and ratepayer value, are consistent with applicable funding rules, and are feasible given SDG&E's limited budget and SME capacity.

Unique Role:

This initiative is appropriate for EPIC funding because the technologies and integrated approaches being evaluated are not yet mature enough for broad deployment but have the potential to deliver meaningful customer benefits if successfully validated. The initiative is not focused on a single technology; rather, it evaluates how AI-enabled planning tools, climate and community vulnerability analytics, preventive sensing, smart meter and multi-sensor data, remote sensing, vegetation risk analytics, mobile field technologies, and operational decision-support tools can work together to improve customer reliability, wildfire safety, outage response, and resilience planning.

Private-sector vendors may develop individual tools, but they typically do not have an incentive to validate how those tools perform together in a real utility environment or whether they deliver measurable ratepayer value. Federal and academic research may advance climate modeling, AI, remote sensing, or grid modernization concepts, but those efforts generally do not address SDG&E-specific operating conditions, California regulatory requirements, wildfire mitigation needs, equity considerations, cybersecurity, interoperability, and customer-service obligations. General Rate Case funding is more appropriate for mature, proven solutions ready for full, commercial deployment, whereas this initiative requires demonstration, validation, and benefit-cost evaluation before broader investment decisions can be made.

EPIC provides the appropriate pathway to evaluate these emerging resilience and response capabilities in a controlled, transparent, and customer-focused manner. By validating technologies before full deployment, the initiative can help reduce implementation risk, protect ratepayer investments, improve customer outcomes, and generate transferable lessons for California utilities.

Initiative Title: 3. Guiding Customers to a Clean Energy Future

Initiative Funding Amount: $1,299,130

Strategic Priority:

SDG&E's Guiding Customers to a Clean Energy Future initiative is designed to help customers make cleaner energy choices with greater confidence, less confusion, and clearer information about costs, incentives, infrastructure needs, and available technologies. As California advances building decarbonization, many customers are interested in options such as heat pumps, electric appliances, electric vehicles, solar, batteries, and other clean energy solutions, but may not know where to begin or how to determine which choices are right for their home, business, budget, or community.

This initiative proposes to evaluate a customer-centric, AI-enabled electrification concierge platform that can provide personalized, utility-backed guidance to customers. The platform would use customer usage data, property information, infrastructure readiness considerations, available incentives, financing options, contractor or implementation pathways, and grid capacity insights to generate step-by-step electrification roadmaps. The research is intended to build on SDG&E's Customer Home Electrification Readiness Program (CHERP), which established a human advisory model, while testing whether automation, AI, and integrated digital tools can significantly improve scalability, cost efficiency, customer experience, and program reach.

The expected impact is to make the clean energy transition easier for customers to understand and navigate. Customers may benefit from clearer step-by-step recommendations, better awareness of incentives, reduced decision time, improved confidence in project planning, and more affordable pathways to electrification. SDG&E and ratepayers may also benefit from improved load forecasting, better coordination between customer adoption and grid planning, more efficient program delivery, and reduced risk of avoidable infrastructure costs. Ultimately, the initiative is intended to help customers participate in California's clean energy future in a way that is practical, equitable, affordable, and aligned with their needs.

Strategic Objective(s) Supported:

- ✓ 4. Reducing Cost of Whole Home Electrification
- ✓ 5. Innovative Approaches for Difficult-to-Decarbonize Sectors
- ✓ 6. Community Scale Decarbonization

Strategic Goals(s) Supported:

- ✓ EPIC Strategic Goal 3: Building Decarbonization

Alignment with EPIC Equity in RD&D Framework:

This initiative supports the EPIC Equity in RD&D Framework by focusing on whether all customers, especially those who have historically faced higher barriers to clean energy participation, can access practical and understandable electrification guidance. Customers in disadvantaged, low-income, Tribal, renter, multifamily, and older-housing communities may face greater challenges related to upfront costs, contractor access, panel capacity, housing conditions, language access, digital access, and awareness of available programs. This initiative is intended to evaluate whether a customer-facing advisory platform can reduce these barriers and make clean energy options easier to understand and act upon.

The initiative supports prioritization by helping SDG&E identify customer segments and communities where electrification support, incentive navigation, and infrastructure-readiness guidance may provide the greatest benefit. It supports engagement and outreach by creating opportunities to gather customer and community feedback on whether recommendations are understandable, useful, culturally appropriate, and responsive to real-world customer needs. Where appropriate, SDG&E may coordinate with community-based organizations, Tribal representatives, and local stakeholders to inform outreach, platform design, language access, and customer education.

The initiative supports access by evaluating multiple ways for customers to receive guidance, including digital tools, CHERP-related advisory support, multilingual materials, and alternative support channels for customers who may not be comfortable relying solely on online tools. It supports metrics by tracking outcomes such as customer enrollment, completed electrification plans, customer satisfaction, participation by disadvantaged and low-income communities, adoption of recommended measures, incentive utilization, and reductions in customer decision time or program delivery cost. These measures may help determine whether the initiative provides meaningful, measurable, and equitable benefits to customers.

Alignment with EPIC Strategic Goals and Strategic Objectives:

This initiative advances EPIC Strategic Goal 3, Building Decarbonization, by helping customers move from interest in electrification to informed action. Rather than focusing only on technologies, the initiative focuses on the customer journey: understanding options, comparing costs, identifying incentives, evaluating infrastructure needs, and sequencing upgrades in a way that is practical and affordable. This directly supports Strategic Objective 4 by helping reduce the cost and complexity of whole-home electrification for customers. It also supports Strategic Objective 6 by enabling community-scale insights into electrification needs, barriers, and opportunities. Where customers or building types face more complex decarbonization challenges, the initiative may also support Strategic Objective 5 by identifying more tailored pathways.

The initiative incorporates EPIC's crosscutting principles by emphasizing customer-focused solutions, equity, affordability, reliability, resilience, emerging strategies, and safety. Customer-focused benefits may include clearer guidance, easier access to incentives, reduced reliance on multiple fragmented information sources, and improved confidence in clean energy decisions. Equity benefits may include expanded access to guidance for customers who otherwise may not have the time, resources, or technical expertise to pursue electrification. Affordability benefits may include improved incentive stacking, better project sequencing, and more efficient program delivery.

The initiative may also provide reliability and planning benefits by improving SDG&E's understanding of when, where, and how customers are likely to electrify. This can support better load forecasting, grid planning, and coordination between customer adoption and infrastructure needs. Because the initiative may rely on customer usage data, property information, and utility system information, cybersecurity, privacy, transparency, and data governance will be central considerations. The research would evaluate secure, consent-based data access, explainable AI outputs, customer privacy protections, and appropriate integration with SDG&E systems to help ensure that customer trust is protected.

Coordination and Alignment with CPUC Proceedings:

This initiative supports multiple CPUC Proceedings by helping translate statewide decarbonization, DER integration, gas transition, transportation electrification, and energization objectives into practical, customer-facing guidance. For additional proceedings and details that align with the initiative, please refer to Appendix A11.

- R.19-01-011 – Building Decarbonization In
- R.21-06-017 – High Distributed Energy Resources (High DER Future Grid)
- R.24-09-012 – Long -Term Gas Planning
- R.23-12-008 – Transportation Electrification Policy and Infrastructure
- R.22-07-005 – Demand Flexibility Through Electric Rates
- R.24-01-018 – Establishing Energization Timelines

Coordination with EPIC and Gas RD&D Program Administrators:

SDG&E will continue to coordinate with other EPIC administrators through the Program Investment Coordination Group process, administrator working groups, public workshops, and topic-specific coordination forums to identify complementary work, avoid duplication, and share lessons learned. For this initiative, coordination may include exchanging information on customer electrification tools, advisory service models, incentive navigation, AI-enabled customer engagement, load disaggregation, distribution planning integration, privacy protections, customer adoption metrics, and approaches for reaching disadvantaged and low-income communities.

Coordination with other electric EPIC administrators may help identify common customer barriers and compare approaches for improving the electrification experience. SDG&E may seek to understand where other administrators are evaluating customer education, electrification planning, affordability, or digital advisory tools, and where aligned metrics could support broader statewide learning.

Coordination with Gas RD&D administrators may be relevant where customer electrification intersects with long-term gas demand, building decarbonization, and customer transition planning. This coordination may include sharing information on customer transition pathways, assumptions about end-use electrification, and lessons learned where electric and gas decarbonization efforts overlap. SDG&E will also consider potential cross-subsidization issues where coordination involves both electric and gas utility activities, and will ensure that any collaboration remains appropriately scoped, funded, and aligned with applicable regulatory requirements so that electric EPIC ratepayer funds are used only for eligible electric ratepayer benefits. Given SDG&E's limited EPIC budget and SME capacity, SDG&E will prioritize coordination opportunities that provide clear customer and ratepayer value, avoid duplicative research, and are feasible within available resources.

Unique Role:

This initiative is appropriate for EPIC funding because it addresses a customer need that is not fully served by the private market: neutral, personalized, utility-backed guidance that helps customers understand the full electrification journey. Many private-sector tools focus on selling or supporting individual products, such as solar, batteries, EV chargers, or appliances. These tools may be useful, but they typically do not provide a holistic roadmap that considers the customer's energy usage, building conditions, affordability needs, available incentives, infrastructure readiness, and grid planning considerations in one trusted experience.

SDG&E has a unique role because customers often look to their utility for reliable information about energy use, bills, incentives, service upgrades, and grid requirements. SDG&E also has access to customer usage data, program information, and system planning insights that can support more tailored and accurate recommendations when handled securely and with customer consent. However, integrating these

capabilities into an AI-enabled, explainable, secure, and scalable customer advisory platform requires research and validation before broader deployment.

Federal and academic research may advance AI, load disaggregation, or building electrification concepts, but those efforts generally do not address SDG&E-specific customer needs, California regulatory requirements, equity commitments, utility data governance, grid planning constraints, and customer-service obligations. General Rate Case funding is more appropriate for mature, proven solutions ready for deployment, while this initiative requires demonstration, customer testing, and benefit-cost validation. EPIC provides the appropriate pathway to test this emerging customer support model, reduce implementation risk, protect customer data, and determine whether the approach can deliver meaningful customer and ratepayer benefits.

Initiative Title: 4. Decarbonization Pathways for California's Economy

Initiative Funding Amount: $5,500,000

Strategic Priority:

SDG&E's Decarbonization Pathways for California's Economy initiative is focused on helping customers and communities that cannot easily electrify still participate in California's clean energy transition. SDG&E sees a significant gap in addressing a key opportunity for California. While electrification is expected to serve as a primary pathway for many homes, buildings, and light-duty transportation needs, some customers and sectors face practical barriers that may make direct electrification difficult, costly, or operationally infeasible. These include medium- and heavy-duty transportation, industrial operations, commercial facilities, backup power applications, and other energy-intensive uses where customers may need high heat, long operating hours, fast fueling, resiliency, or fuel flexibility. Without additional low-carbon options, these customers may face higher costs, limited technology choices, continued reliance on higher-emitting fuels, or delayed participation in California's decarbonization goals.

This initiative proposes to evaluate methane pyrolysis as a potential customer-focused clean fuel pathway for difficult-to-decarbonize sectors. Methane pyrolysis heats methane in a non-oxygen environment to produce hydrogen and solid carbon. The hydrogen could potentially be used by customers in fuel cells, medium- and heavy-duty transportation, backup generation, commercial operations, or industrial processes, while the solid carbon may be sequestered or used in other industrial applications depending on its grade and quality. Unlike approaches that require large-scale hydrogen transport or extensive new hydrogen delivery infrastructure, customer-sited or localized methane pyrolysis may help reduce infrastructure barriers by producing hydrogen closer to where customers need it. The expected impact is to expand the portfolio of clean energy options available to customers, particularly those in hard-to-decarbonize sectors (i.e., heavy industry, long haul transportation, and high heat dependent processing) that need more than one pathway to reduce emissions. Ratepayers may benefit from early validation that reduces the risk of premature investment in unproven technologies, informs future planning, and identifies whether methane pyrolysis can support California's net-zero goals in a cost-effective, safe, and equitable manner.

Strategic Objective(s) Supported:

- ✓ 5. Innovative Approaches for Difficult-to-Decarbonize Sectors

Strategic Goals(s) Supported:

- ✓ EPIC Strategic Goal 4: Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas

Alignment with EPIC Equity in RD&D Framework:

This initiative supports the EPIC Equity in RD&D Framework by evaluating whether low-carbon fuel production can deliver meaningful benefits for customers and communities that face higher pollution burdens, limited clean energy options, or reliability challenges. Many difficult-to-decarbonize activities, such as goods movement, logistics, industrial operations, commercial fleets, and backup generation, are located near communities that may already experience elevated air quality impacts. By focusing on customer use cases where low-carbon hydrogen could reduce reliance on higher-emitting fuels or diesel-

based operations, the initiative can help assess whether methane pyrolysis can support cleaner local operations while expanding access to decarbonization pathways for customers that may otherwise be left behind.

The initiative supports prioritization by focusing on sectors and communities where direct electrification may not yet be feasible, affordable, or operationally practical, and where a lower-carbon fuel alternative could provide measurable customer and community benefits. It supports engagement and outreach by seeking input from potential customer partners, local businesses, industrial users, fleet operators, Tribal representatives, community-based organizations, and stakeholders in pollution-burdened communities to inform demonstration design, site selection, benefits assessment, and customer needs. It supports access by evaluating whether localized hydrogen production can reduce the infrastructure and cost barriers that often limit customer adoption of clean fuels.

Metrics may include hydrogen production cost, lifecycle greenhouse gas emissions, methane leakage mitigation, solid carbon handling, local air pollutant changes, customer participation, reduction in diesel or higher-emitting fuel use, customer resiliency benefits, community feedback, and whether project benefits accrue to disadvantaged, low-income, Tribal, or pollution-burdened communities. These metrics would help determine whether the technology provides measurable and equitable customer benefits before any broader deployment is considered.

Alignment with EPIC Strategic Goals and Strategic Objectives:

This initiative advances EPIC Strategic Goal 4: Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas by evaluating a potential low-carbon pathway for customers and sectors that cannot easily rely on direct electrification alone. It directly supports Strategic Objective 5: Innovative Approaches for Difficult-to-Decarbonize Sectors because methane pyrolysis could provide low-carbon hydrogen for customer applications such as medium- and heavy-duty transportation, industrial processes, commercial operations, backup generation, and fuel cell applications. The initiative is customer-focused because it seeks to expand practical decarbonization choices for businesses and communities that may otherwise face limited or costly options.

The initiative incorporates EPIC's crosscutting principles by addressing affordability, equity, reliability, resilience, safety, and emerging clean energy strategies. From an affordability perspective, the research can evaluate whether methane pyrolysis may produce hydrogen at a lower cost than other clean hydrogen pathways under certain use cases, while reducing the need for extensive new hydrogen transport infrastructure. From an equity perspective, the initiative can prioritize demonstrations that may reduce local pollution burdens or provide clean fuel alternatives for customers operating in or near disadvantaged communities. From a reliability and resilience perspective, customer-sited hydrogen production and fuel cell applications could support backup power, operational continuity, and energy flexibility for critical commercial or industrial customers.

Safety will be central to the research because the initiative involves methane feedstock, hydrogen production, solid carbon handling, equipment siting, air quality considerations, and operational controls. The project would evaluate methane leakage mitigation, lifecycle greenhouse gas impacts, hydrogen safety, carbon byproduct management, emergency response requirements, and applicable regulatory and permitting considerations. By assessing these issues through EPIC before broader deployment, SDG&E can protect customers and ratepayers, reduce implementation risk, and provide transparent data to inform future policy and planning decisions.

Coordination and Alignment with CPUC Proceedings:

This initiative supports the following CPUC proceedings by examining existing gas infrastructure and commercial pathways are viable solutions. See Appendix A11 for more details

- R.24-09-012 – Long-Term Gas Planning
- R.19-01-011 – Building Decarbonization
- R.13-02-008 – Biomethane Standard and Requirement, Pipeline Open Access Rules, and Related Enforcement Provisions
- R.20-05-003 – Integrated Resource Planning
- R.21-06-017 – High Distributed Energy Resources (High DER Future Grid)

Coordination with EPIC and Gas RD&D Program Administrators:

SDG&E will coordinate with other EPIC administrators and Gas RD&D program administrators through the Program Investment Coordination Group process, administrator working groups, public workshops, and topic-specific coordination forums to identify complementary work, avoid duplication, and share lessons learned. For this initiative, coordination is expected to focus on methane pyrolysis, low-carbon hydrogen production, customer-sited clean fuel applications, lifecycle greenhouse gas emissions, methane leakage mitigation, solid carbon handling, safety, permitting, air quality, and customer use cases in difficult-to-decarbonize sectors. SDG&E will also seek alignment with related electric and gas decarbonization efforts where low-carbon hydrogen, coordinated electric-gas planning, and customer resiliency may support California's net-zero goals.

Because this initiative is focused on the coordinated role of gas in achieving 100 percent net-zero carbon emissions, SDG&E expects coordination with Gas RD&D administrators to be particularly relevant. Coordination may include sharing technical assumptions, comparing project designs, discussing hydrogen production pathways, evaluating customer transition needs, identifying potential safety and emissions considerations, and understanding how gas infrastructure and customer-sited clean fuel technologies may complement electrification where direct electrification is not yet feasible, cost-effective, or operationally practical. Any coordination will remain subject to applicable funding rules, including restrictions on using IOU EPIC funds as cost share for certain CEC-administered grant opportunities.

Unique Role:

This initiative is appropriate for EPIC funding because methane pyrolysis remains an emerging, pre-commercial pathway that requires field validation before broader deployment or utility investment decisions are considered. The research is intended to answer public-interest questions that private-sector investment, federal research, and traditional utility deployment funding are unlikely to fully address, including whether methane pyrolysis can safely, cost-effectively, and measurably reduce emissions for customers and sectors that are difficult to electrify. Key research questions include technology readiness, hydrogen production cost, lifecycle greenhouse gas emissions, methane leakage mitigation, solid carbon handling and potential utilization, air quality impacts, safety, permitting, customer-site integration, resiliency value, and scalability.

Private-sector vendors may have an interest in developing individual technologies, but they generally do not have the same incentive to evaluate broader ratepayer value, customer equity, utility integration, safety, regulatory requirements, and transferable lessons for California's energy transition. Federal and academic research may advance hydrogen technologies, but those efforts may not address SDG&E-specific operating conditions, California policy objectives, customer use cases, electric-gas coordination, local air

quality considerations, or the practical requirements of deploying a customer-sited demonstration within a utility service territory. General Rate Case (GRC) funding is better suited for mature, proven assets that are ready for deployment, while this initiative requires demonstration, validation, and benefit-cost evaluation before it could be considered for broader use. This aligns with CPUC feedback received in SDG&E's 2024 GRC.[17]

[17] D. 24-12-074 at 337.

6. Strategic Roadmap

Figure 1. Strategic Roadmap

	EPIC 1-3 (<2020)	EPIC 4 (2021-2025)	EPIC 5 (2026-2030)
1. Integrating DERs to Advance Grid & Community Resilience	**Connected Customer Resources & Preparing for Resilient Grid Operations**		
	EPIC 2 Project 4: Systems Operations Development & Advancement **EPIC-3 Project 7:** Demonstration of Multi-Purpose MBESS for Port of San Diego/ Community Resource Centers, Demonstration of Multi-Purpose Mobile Battery Supplemental Use Cases: Operational Flexibility Trials of IEEE 2030.5 **EPIC 3 Project 4:** Safety Training Simulators w/ Augmented Visualization *__EPRI Utility Digital Worker Initiative Case Study__, Dec. 2025	**EPIC 4 Project 2:** Grid Resilience & Sustainability Through Integrated V2X and Renewable Energy at CRCs **EPIC 4 Project 6:** ITF Microgrid Testbed and IEEE 2030.5 Edge Testing **EPIC 4 Project 4:** Zonal Electrification with Integrated DER Operational Flexibility	The next phase of research advances both the operational coordination of DERs and the workforce capabilities needed to manage an increasingly distributed electric grid. The research will evaluate scalable utility-operated DER coordination alongside resilient grid training technologies that prepare operators for high-DER operating conditions, with the goal of improving grid reliability, resilience, affordability, and informing future utility deployment and operational strategies.
	Advanced Storage Technologies		
	EPIC 2 Project 1: Modernization of Distribution System and Integration of Distributed Generation and Storage **EPIC-3 Project 7:** Demonstration of Multi-Purpose MBESS for Port of San Diego/ Community Resource Centers, Demonstration of Multi-Purpose Mobile Battery Supplemental Use Cases: Operational Flexibility Trials of IEEE 2030.5	**EPIC 4 Project 2:** Grid Resilience & Sustainability Through Integrated V2X and Renewable Energy at CRCs **EPIC 4 Project 6:** ITF Microgrid Testbed and IEEE 2030.5 Edge Testing	The next phase of research shifts from deployment to evaluating emerging storage technologies that may provide enhanced safety, resilience, and operational flexibility. The research will establish the technical and operational evidence needed to support future utility adoption and guide long-term energy storage strategies for California's evolving electric grid.

2. Next Generation Resilience & Response	**AI for Utility Resilience & Adaptation**		
	EPIC 2 Project 2: Data Analytics in Support of Advanced Planning & System Operations	***Cal-Adapt**, LOCA2 Data Release (2022-2024) ***SDG&E Community Impact Platform** (CIP) (2023- 2026)	Previous EPIC investments established advanced climate analytics and community data capabilities to support utility planning. The next phase of research focuses on applying integrated data, predictive analytics, and decision-support tools to improve operational planning, risk prioritization, and grid resilience under changing climate conditions.
	Preventative Grid Sensing & Response		
	EPIC 2 Project 3: Monitoring, Communication and Control Infrastructure for Power System Modernization **EPIC 3 Project 3:** Applications of Advanced Metering Infrastructure (AMI) Data to Advance Utility System Operations	**EPIC 4 Project 3:** Camera and PQ	The EPIC 5 focus is on specific unresolved gaps; whether line-mounted feeder monitoring and Smart Meter 2.0 can be deployed cost-effectively and integrated into SDG&E's operational environment to achieve more granular, scalable, feeder-level situational awareness for improved grid reliability.
	Integrated Risk Analytics for Wildfire Mitigation		
	EPIC 2 Project 6: Collaborative Programs in RD&D Consortia: **EPIC 3 Project 5**: Unmanned Aircraft Systems (UAS) with Advanced Image Processing for Electric Utility Inspection and Operations		The next phase of research will evaluate UAV LiDAR, AI-enabled analytics, and other emerging technologies to determine their effectiveness in supporting risk-based management. The research will quantify improvements in risk prioritization, operational efficiency, and cost-effectiveness to inform scalable deployment strategies.

3. Guiding Customers to a Clean Energy Future	**AI-Enabled Customer Electrification Concierge**		
	EPIC 2 Project 5: Integration of Customer Systems into Electric Utility Infrastructure **EPIC 2 Project 6:** Collaborative Programs in RD&D Consortia: Module 1 Demonstration of Methodology and Tools for Estimating Propensity for Customer Adoption of Photovoltaics	**EPIC GFO-23-303 Decision Tool to Electrify Homes with Limited Electrical Panel Capacity** (Pecan Street, Inc. April 2024) ***SDG&E Customer Home Electrification Readiness Program** (CHERP) (2026)	The next phase of research advances beyond these approaches by evaluating an integrated, customer-facing platform that combines personalized electrification planning, infrastructure readiness assessments, implementation guidance, and incentive optimization within a single solution. The research will assess whether bringing together technical, financial, regulatory, and grid considerations can better support customer decision-making while improving utility planning and grid readiness for widespread electrification.
4. Decarbonization Pathways for California's Economy	**Decarbonizing Natural Gas for Multiple Use Cases**		
		***Assessing the Role of Hydrogen in California's Decarbonizing Electric System** (RAND Corp. 2023) ***Methane Pyrolysis for CO2-free H2** (Pacific Northwest National Lab, August 2024) **E3: Techno-economic Assessment of Hydrogen as a Decarbonization Measure for California's Electric System** (E3, 2025)	Previous research demonstrated regenerable catalysis pyrolysis as a promising pathway for producing carbon-free hydrogen, while reducing net production costs through the sale of solid carbon by-products. SDG&E EPIC 5 research aims to advance the research by evaluating the technology under real-world operating conditions, beyond the laboratory to assess its technical, operational and economic feasibility for utility applications.

*Denotes non-EPIC Research

7. Research Topic Areas

Research Topic Area Title: 1. Connected Customer Resources & Preparing for Resilient Grid Operations

Initiative Title: Integrating DERs to Advance Grid and Community Resilience

Gaps Addressed:

Significant gaps remain in understanding how multiple DERs (electric vehicles, batteries, PV, and flexible loads) interact and can be optimized together at the customer level. Customer participation at scale is also uncertain, particularly regarding automation acceptance, sustained engagement, and behavioral response to coordinated programs. In addition, there are no proven, scalable pathways linking DERMS dispatch signals to customer-owned devices through aggregators or vendors. EPIC 5 addresses these gaps and builds into SDG&E's EPIC-4 Zonal Electrification effort by enabling integrated, multi-DER program design with DERMS-connected orchestration and real-world pilots at scale. This initiative could unlock stacked customer and grid value, including bill savings, demand flexibility, and enhanced reliability. Ultimately, it reduces peak demand and validates DERMS investments, making it critical to achieving cost-effective electrification and grid modernization goals. SDG&E is currently developing a company-wide DERMS strategic roadmap, and as result, specific scope, capabilities, and use cases remain under evaluation and refinement. At the operational level, these resources introduce bidirectional power flows and fast-changing operating conditions that differ from traditional grid dynamics. Existing training environments do not adequately capture these inverter-based characteristics, creating a growing gap between system capability and operator readiness. Innovation is needed to develop and validate high-fidelity training environments that reflect real grid behavior.

Unique Role:
SDG&E views EPIC as a targeted research pathway that can help de-risk emerging technologies and avoid premature use of ratepayer funds on solutions that have not yet been validated. The challenges associated with coordinating customer-owned DERs and operating an increasingly complex, inverter-based grid remain pre-commercial and involve substantial technical, operational, and market uncertainty. Multi-DER orchestration, DERMS integration, cross-vendor interoperability, and advanced operator training environments require system-level validation that goes beyond individual technology demonstrations and is not well suited for traditional utility deployment funding. Private sector investment alone is unlikely to address these needs because the private sector cannot capture the benefits holistically as it would for a utility. Federal research programs generally focus on technology development, while General Rate Case funding is better suited for mature solutions ready for deployment. EPIC provides the appropriate venue to evaluate these emerging capabilities under California regulatory requirements and real-world grid conditions before broader deployment decisions are made which align with California's goal to deploy 7,000 MW of flexible load by 2030.

Leveraging Past RD&D:

This research topic builds on prior EPIC and broader RD&D investments by leveraging established Institute of Electrical and Electronics Engineers (IEEE) 2030.5 communication standards, validated interoperability, zonal DER coordination concepts, and lessons learned from demand response pilots, EV managed charging, early virtual power plant (VPP) demonstrations, DERMS platform deployments, digital twins, DER integration, microgrid testbed, and immersive training technologies. These prior efforts established the technical foundation for coordinated DER integration and advanced grid operations. This research extends that foundation by evaluating integrated, scalable coordination of multiple customer-

owned DERs while assessing how utility operators interact with these technologies in realistic, DER-rich operating environments. Unlike previous efforts that primarily focused on technology validation, system modeling, planning, or workforce training, this research emphasizes operational decision-making, usability, performance, and grid readiness. By integrating advanced DER coordination with operator evaluation in a realistic utility environment, the research advances EPIC's strategic roadmap by translating proven technologies into scalable operational capabilities that improve DER integration, operator preparedness, and overall grid reliability without duplicating prior RD&D investments.

Metrics and Impact Assessment:

Potential measures of success span both DER integration and utility operational readiness. Customer and grid outcomes may include customer bill savings, enrollment and participation rates, adherence to program guidelines, reliable automated response, peak reduction, load shifting, improved DERMS dispatch performance, and the coordinated operation of EVs, batteries, PV systems, and flexible loads. Operational outcomes may include improvement in operator decision accuracy, reduction in response sequencing errors, reduction in simulated restoration completion times, increase in validated high-DER operating scenarios, increase in inverter-based disturbance scenario coverage. SDG&E could measure these outcomes by establishing baseline performance using existing operator training scenarios and comparing results against performance in enhanced DER-rich simulation scenarios. Operator decision accuracy could be measured through scored exercises that evaluate whether operators identify the correct system condition, select appropriate actions, and follow established operating procedures. Restoration completion time could be measured by recording the time required to complete defined restoration steps under comparable outage scenarios. Equity metrics are included in Appendix A2.

Expected Outcomes:

Near-term, the proposed research aims to validate technologies and operational approaches for coordinated DERs and resilient grid training under realistic grid conditions. Ratepayers may benefit from potential bill savings, participation incentives, and expanded opportunities to enroll in DER programs, while utilities gain experience coordinating multiple DERs and evaluating advanced operator training capabilities. The research may also identify operational limitations, assess technology feasibility, and improve understanding of operator interaction with high-DER and inverter-dominated grid conditions. **Mid-term**, the research is expected to improve utility readiness by enhancing operator preparedness, expanding knowledge of DER coordination strategies, and improving operational visibility through evolving utility platforms such as DERMS, consistent with their approved use cases and capabilities. As experience grows, benefits may include improved peak demand management, enhanced circuit-level reliability, more efficient DERMS utilization, and better preparedness for complex restoration and emergency response scenarios. **Long-term**, as coordinated multi-DER programs mature and utility optimization capabilities advance, ratepayers and utilities may realize broader system efficiencies through optimized DER integration, greater utilization of non-wires alternatives, scalable coordination of customer-owned resources, enhanced grid reliability, and more informed utility investment decisions. If validated through grid training system evaluation activities, immersive digital twin technologies could support future applications such as advanced operator training, restoration and emergency preparedness exercises, workforce development, grid modernization readiness, and continued evaluation of emerging DER operating conditions and advanced grid technologies. These potential applications are illustrative only and demonstrate how validated technologies could support future operational readiness initiatives under separate CPUC consideration.

Equity Outcomes:

The research topic area may prioritize equitable access to project benefits by incorporating disadvantaged, low-income, and Tribal community considerations into both technology evaluation and customer participation strategies. Customer-facing demonstrations may emphasize targeted outreach, inclusive enrollment approaches, tiered incentives where appropriate, and access to low- or no-cost enabling technologies to reduce barriers to participation. Research and evaluation activities may also incorporate outage, restoration, and grid conditions representative of DVCs to ensure proposed solutions are assessed under scenarios that reflect diverse customer needs and operational challenges. Workforce development opportunities can be supported through collaboration with training programs serving under-represented populations. Potential equity outcomes include reduced customer energy burden, improved access to clean energy and automation programs, enhanced grid reliability for historically underserved communities, and increased community participation in grid innovation. Progress may be evaluated through participation and retention metrics, demographic analysis, workforce engagement, scenario relevance to community needs, customer and stakeholder feedback, and surveys and focus groups that assess satisfaction, accessibility, and perceived benefits.

Marketing and Deployment Plans:

The research topic follows a phased approach to evaluate technology readiness, operational performance, and pathways to broader deployment. Initial phases may focus on developing and validating technologies in controlled environments, including immersive digital twin scenarios, customer pilot design, and multi-DER integration using open standards and utility grid management platforms. Subsequent phases may expand testing to increasingly complex operating conditions, including high-DER scenarios, outage restoration events, and real-world customer participation across diverse households and circuits. Results may be used to refine technology requirements, customer enrollment strategies, incentives, interoperability standards, and operational processes while documenting lessons learned and implementation guidance for utilities and the CPUC. Technologies demonstrating technical feasibility, operational value, and customer acceptance may provide the foundation for future scalable deployment.

Potential barriers include regulatory barriers (as mentioned in the Background Section) system interoperability, utility system integration, cybersecurity, customer enrollment and trust, user adoption, model maintenance, program costs, and the maturity of grid management platforms. These risks could be mitigated through phased validation, modular system design, open standards, automation-first approaches, stakeholder engagement, structured documentation, and iterative testing aligned with regulatory frameworks, enabling a practical pathway toward reliable, scalable deployment that delivers both customer and grid benefits.

Research Topic Area Title: 2. Advanced Energy Storage Technologies

Initiative Title: Integrating DERs to Advance Grid and Community Resilience

Gaps Addressed:

As the energy storage market evolves, significant gaps remain in understanding which emerging storage technologies are suitable for specific utility, customer, and grid use cases. Technologies such as new battery chemistries, long-duration storage, second-life battery applications, dynamic line rating, and battery safety solutions may offer advantages over conventional approaches, but many have not yet been sufficiently validated under real-world conditions. Key uncertainties include lifecycle cost, degradation, safety performance, supply chain maturity, siting constraints, and interoperability with utility systems. These gaps make this research topic area a top priority because customers and grid operators will increasingly depend on storage and flexible grid technologies to support reliable service and clean energy integration. Successful execution will provide SDG&E and other utilities with objective, decision-quality technical and economic data that can inform future planning, procurement considerations, safety standards, technology diversification, and customer-focused deployment strategies before larger-scale investments are made. The research may include economic analysis of capital, installation, operations and maintenance and end of life costs.

This research topic area can also support CPUC Integrated Resource Planning (IRP) and IOU coordination by filling information gaps that currently limit the ability to compare emerging storage options against established lithium-ion deployments. As California relies more heavily on renewable generation, storage, and flexible resources, customers will need solutions that support reliable service, improved safety, reduce long-term costs, and strengthen resilience during grid events. Demonstration results may help SDG&E and other IOUs better understand how alternative storage chemistries, long-duration storage, second-life batteries, dynamic line rating, and related safety technologies perform under real-world use cases. These findings would not predetermine future procurement outcomes; rather, they would provide decision-quality information that can help inform future planning assumptions, resource evaluations, technology-readiness assessments, and coordination with CPUC proceedings.

Unique Role:

This research topic area is well aligned with EPIC and state goals because the potential benefits of alternative technology energy storage directly support California's decarbonization objectives while seeking to reduce long-term risk and costs for ratepayers. The research also builds upon prior SDG&E EPIC investments related to DER integration, operational flexibility, resiliency, and energy storage, that include SDG&E's EPIC 3: Mobile Battery Energy Storage System (MBESS); EPIC 4: Renewable Mobile Nanogrid and Integrated Testing Facility (ITF) Microgrid Testbed Projects.

Leveraging Past RD&D:

The proposed research builds on SDG&E's EPIC 4 ITF Microgrid Testbed, which is establishing a flexible laboratory environment for evaluating advanced energy storage technologies. The testbed will provide the infrastructure to assess alternative battery energy storage systems (BESS) alongside lithium-ion systems, enabling comparative performance evaluations, interoperability testing, and validation of utility integration approaches under controlled conditions. The research also leverages knowledge gained through SCE's EPIC 4 Accelerating Grid-Interactive, Flexible Data Centers in California project, which includes deployment of a sodium-ion battery. Through another CEC EPIC project and in collaboration with the

University of California, San Diego (UCSD) on Accelerating Grid-Interactive, Flexible Data Centers in California, SDG&E will gain operational experience with third-party integration, DERMS coordination, and grid optimization using alternative technologies. These complementary efforts will help inform future utility applications, deployment strategies, and operational best practices while avoiding duplication of prior EPIC investments.

Metrics and Impact Assessment:

This research may increase the understanding of risks and knowledge gaps of new generation and storage technologies, measured in impacted or targeted communities. Metrics may include percentage of participating DVC members who agree the storage research planning process was responsive to community input and resulting outcomes were appropriate for the community.

Ratepayer benefits may be evaluated by comparing the capital and lifecycle costs of new battery chemistry technology against existing lithium-ion deployments. Long-term affordability impacts may be evaluated using Levelized Cost of Storage (LCOS) analysis over a 20-year operating life, including estimated reductions in operations and maintenance costs relative to existing lithium-ion systems. These metrics may help quantify potential ratepayer savings associated with reduced maintenance requirements, lower cooling and operational overhead, and overall system lifecycle cost reductions.

Expected Outcomes:

Near-term (1-5 years): This research may evaluate the technical and economic value of storage systems for utility applications and provide objective performance data to inform future investment decisions. Upon successful demonstrations, new BESS installations may realize capital savings, or alternatively, greater capacity of energy installed at the same cost; in both rural and urban environments where different siting, safety, and operational conditions exist.

Mid-term (5-10 years): Findings from this research could result in noticeable reduction in operating expenditures related to BESS systems; end-of-life lithium-ion systems can be replaced with sodium-ion regaining operational capacity due to chemistry losses.

Long-term (10-20 years): Significant reduction in operating expenditures, lithium-ion full replacement; significant reduction in thermal runaway; operational efficiencies and grid resilience at Distribution Operations.

Equity Outcomes:

Disadvantaged, low-income, and tribal communities are positioned to see several benefits from this research project. Strategic deployment of BESS systems to and within these communities can achieve a lower project footprint than previous technologies while still bringing investment. Electrification initiatives, which can be difficult for disadvantaged communities but provide huge benefits in air quality, can pair sodium-ion technology with photovoltaic installations to provide renewable and reliable power. Tribal communities in high-fire areas would have a lower cost of entry into building microgrids for public safety power shutoff events while not contributing to the fire risk. To support collaboration and engagement on these topics, surveys or other outreach methods can be utilized to not only hear from community members pre project but also to assess and share best practices post completion.

Marketing and Deployment Plans:

The following steps are required to bring the project such as this to grid readiness. First, a Master Services Agreement with the vendor will be needed to begin construction of new BESS units. Second, technical teams within SDG&E will develop electric distribution engineering standards and documentation for installation, maintenance, safety, and system protection. Third, project teams will engage with vendors to identify new projects that may be considering lithium-ion technology and offer sodium-ion as viable alternative. Fourth, review inventory of projects to identify end-of-life, augmentation, or retrofit opportunities that could benefit from replacing lithium-ion BESS units with sodium-ion. Lastly, provide a deeper review of under-performing or mid-lifecycle assets that may need replacement or augmentation in the next 5 years.

A significant barrier for emerging storage technologies is likely to be supply-chain maturity and associated lead times. Although some technologies use abundant or relatively inexpensive materials, many currently have a limited number of qualified suppliers and few large-scale manufacturing facilities capable of supporting widespread deployment. However, by the time of expected project completion in 2030, there could be several GWh-sized manufacturing facilities available to supply an extensive rollout.

Research Topic Area Title: 3. AI for Utility Resilience and Adaptation (AURA)

Initiative Title: Next Generation Resilience and Response

Gaps Addressed:

The CPUC-mandated Climate Adaptation & Vulnerability Assessment (CAVA) is a fundamental motivator for this research topic area, as it outlines climate data that translates into this approach and urges decision-making applications of the data. Traditionally siloed data and separated views for decision-making necessitate innovation in grid planning by integrating climate vulnerability, grid vulnerability, community vulnerability, and load growth paired with the capabilities that AI unlocks. Integrating the large amount of data that this approach requires and transforming it into actionable and intuitive information, highlights the need and utility of AI. Additionally, successful execution of the research addresses key focus areas through improvement in reliability through climate-informed grid upgrades, enhanced safety via targeted resilience measures (e.g., microgrids), affordability through optimized investments, and equity by prioritizing vulnerable communities. Therefore, funding this research topic area is a priority.

Unique Role:

This work requires utility-specific integration, SDG&E planning data, customer/community vulnerability considerations, operational validation, cybersecurity/data governance, and benefit-cost assessment before broader deployment. The projects under the research area are scalable to other utilities state-wide, expanding those that benefit to include ratepayers beyond SDG&E's service area and consequently most appropriately funded by EPIC. Furthermore, the federal government is actively defunding climate and equity related work; therefore, this type of research is unlikely to receive any funding from the Federal government. The projects under the research topic directly benefit EPIC ratepayers, centering equitable decision-making and action. EPIC ratepayers would be an appropriate avenue for funding this work.

Leveraging Past RD&D:

SDG&E's Community Impact Platform (CIP), a digital twin platform developed to support Climate CAVA visualization, provides the foundation for this research topic area. The proposed work builds upon existing prioritization capabilities by enhancing data integration and applying advanced AI-enabled analytics to support climate-informed planning and investment decisions. Given the limited research focused on integrating climate, grid, community vulnerability, and load growth data into a unified decision-support framework, SDG&E's leadership in this research addresses a significant knowledge gap and advances utility resilience planning capabilities.

Expected Outcomes:

By integrating climate and asset data, load forecasts, and community vulnerability, this research helps SDG&E provide ratepayers benefits. Specifically, it supports optimizing expenditures that enable avoidance of redundant and potentially wasteful or ineffective use of ratepayer funds. It also reduces risk of stranded assets that could increase consequences for the customer such as an outage and prioritize upgrades that benefit both grid and community. It also supports Environmental Social Justice (ESJ) advancement by ensuring vulnerable communities are served equitably.

For Short-Term Impact Metrics, there are several that may apply to this project. They include usage of baselines developed under modeled conditions. Locational changes in service interruption indexes including System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), Customer Average Interruption Duration Index (CAIDI) and Customers Experiencing

Multiple Interruptions (CEMI). Pilot completion and AURA Platform deployment, with quantifiable number of datasets integrated. Climate-informed grid upgrades in areas serving vulnerable communities, tracked through number of projects prioritized using AURA. Lastly, utilization of AURA in project decision-making, including number of investment reviews using AURA and percentage of project business cases referencing AURA outputs.

The following Medium - Long-Term Metrics may apply to the project. They include a reduction in outage risk and/or duration (hours) of outages mitigated. Cost savings from avoided duplicative investments or future "re-hardening". And lastly, well-informed clean energy adoption and nature-based solutions in vulnerable communities as a potential resilience measure, e.g., resilient buildings (natural cooling centers)

Equity Outcomes:

Projects funded under the research topic area will aim to answer the necessary questions that underscore equitable decision-making, such as, "*Which disadvantaged communities experience the most outages and what upgrades would reduce that burden?".*

SDG&E may visualize and answer questions that allow the company to do the right project in the right location, funneling appropriate prioritization to and benefiting disadvantaged, low-income, and tribal communities. SDG&E also plans to directly engage communities regarding the community vulnerability metrics that may be integrated, and to validate these metrics with the communities they represent. The tool will use human decision authority, bias controls, data governance, and full-cost evaluation.

Marketing and Deployment Plans:

SDG&E proposes a phased deployment that focuses on developing a pilot with initial consolidation of climate, grid, community vulnerability with load growth. These inputs can then be validated, and findings can then be integrated into existing planning and operational systems to support user-facing interfaces. Upon success of the pilot and integration, enterprise-scale adoption can occur, which would entail scaling usage across planning domains, embedding information into existing tools with standardized workflows, and measuring outcomes (e.g., reduced rework, avoid stranded investments, improved resilience). Finally, industry replication through transferable methodology would be the final step for widescale adoption within other utility systems and regulatory planning.

Potential barriers for this effort include data fragmentation, legacy system integration, and AI maturity/adoption. SDG&E aims to mitigate these challenges through the following strategies. For data fragmentation, leveraging cloud and data mesh architecture and governance can help bridge gaps utilizing existing data, where possible. Legacy system concerns could be addressed by building modular interfaces that can integrate with existing systems in phases. Lastly, maintaining human-in-the-loop validation processes can manage potential growing pains with AI growth and adoption.

Research Topic Area Title: 4. Preventive Grid Sensing and Response

Initiative Title: Next Generation Resilience and Response

Gaps Addressed:

As electrification, DER adoption, and climate-related system stress increase, utilities require improved situational awareness across planning and operations to improve fault location and outage response. Specifically, there is a need for more granular and actionable visibility into feeder and lateral conditions, customer load, and DER activity, particularly in areas that lack SCADA-grade monitoring. Limited distribution system visibility can delay fault location, prolong outages, increase truck rolls, and constrain planning decisions, ultimately increasing costs for ratepayers. This research topic area aims to evaluate different pathways to improve visibility across the distribution system, from advanced grid sensing and communications to digital field operations. One path is to evaluate multi-sensor line-mounted monitoring devices and their integration into operational systems, testing a scalable approach to improve outage detection, fault location, resilience planning, and DER readiness. Another path is to determine whether AMI 2.0 meters and the supporting communications network can enable these use cases cost-effectively and at sufficient scale to support operational decision-making. A third demonstration evaluates secure, mobile situational awareness tools that consolidate asset information, inspection workflows, and digital documentation into a single platform, enabling field personnel to perform faster, more consistent inspections and safely leverage emerging technologies such as AI-assisted inspections, wearable devices, and augmented reality. Funding this topic area is a high priority because it will establish the business cases, technical requirements and value; ultimately leading to improved visibility for more targeted operations and investment decisions, helping SDG&E enhance reliability and climate resilience while managing long-term customer costs.

Unique Role:

EPIC funding is appropriate for this research topic area because it evaluates pre-commercial technologies and approaches that have not yet been sufficiently demonstrated for deployment through traditional utility budgets or General Rate Case funding. The research will assess the technical feasibility, operational suitability, cybersecurity considerations and business value within SDG&E's unique operating environment, validating the benefits are broadly beneficial to California ratepayers. While private vendors continue to develop hardware and software solutions, they do not address utility-specific questions regarding interoperability, operational integration, scalability, and cost-effectiveness within California's regulatory and distribution system context. Similarly, Federal programs generally focus on broader technology development rather than validating utility-specific operational use cases and deployment models. By generating objective technical, operational, and economic evidence before broader deployment decisions are made, this research reduces implementation risk, informs future investment decisions, and advances knowledge that is broadly applicable to California electric utilities.

Leveraging Past RD&D:

This research topic area builds prior utility and industry efforts in grid modernization, advanced sensing, Advanced Metering Infrastructure (AMI), distribution automation and operational analytics. Rather than duplicating prior work, the research addresses remaining gaps in operational integration, communications performance, deployment readiness and field usability within SDG&E's operational environment.

Line-mounted monitoring demonstrations will leverage lessons learned from past EPIC and other RD&D efforts on advanced monitoring, communications, and control system integration that provide the

foundation for this work, while the Strategic Roadmap would position this topic area as a next step toward more granular, scalable, feeder-level situational awareness.

AMI 2.0 builds directly on EPIC 4 work as a foundation for targeted deployment, integration testing, and cost quantification needed to assess whether AMI 2.0 can be scaled prudently. It extends the value of the work by moving from proof of concept toward operationalization and business-case development.

Mobile-first field operations platform leverages EPIC grid modernization investments to evaluate digital workflows, mobile technologies, and field situational awareness tools that support utility operations during both routine and emergency conditions.

Metrics and Impact Assessment:

SDG&E may evaluate ratepayer benefits by comparing baseline operational performance against demonstration results across technology performance, system integration, operational efficiency, cost-effectiveness, and equity outcomes. The assessment may use a combination of pilot telemetry, field event data, outage records, work management data, inspection records, communications performance logs, and geospatial analysis to determine whether advanced feeder monitoring, AMI-enabled visibility, and mobile field technologies provide measurable improvements over current processes. Baseline conditions may include historical outage diagnostics time, fault-location accuracy, truck-roll frequency, inspection completion time, engineering review turnaround time, documentation completeness, and reliability performance on comparable circuits or work activities.

For technology performance and system integration, SDG&E may assess device data availability, data accuracy, communications reliability, latency, cybersecurity readiness, and successful integration with operational systems such as SCADA, ADMS, OMS, AMI head-end systems, data lakes, and field mobility platforms, where applicable. Methodologies may include controlled functional testing, communications stress testing, data-quality validation, integration testing, event replay, and comparison of device-reported conditions against field-confirmed conditions. Key quantitative measures may include percentage of successful data transmissions, communications latency by use case, data completeness, fault-detection accuracy, fault-location accuracy, false positive and false negative rates, and the percentage of operational events successfully routed into existing workflows without manual intervention.

Operational value may be measured by evaluating whether the technologies reduce outage diagnostics time, shorten the time required to identify probable fault locations, reduce unnecessary truck rolls, improve field crew situational awareness, and increase the quality and consistency of inspection documentation. SDG&E may use before-and-after comparisons, matched-circuit comparisons, event-based case studies, field crew time studies, and workflow analytics to compare demonstration performance against current-state processes. Metrics may include reduction in outage diagnostics time, improvement in fault-location accuracy compared to actual field conditions, reduction in manual data collection, reduction in repeat site visits due to incomplete or inconsistent information, reduction in the number of systems or tools used per field task, and improvement in inspection record completeness and consistency. Reliability impacts may also be evaluated through changes in SAIDI, SAIFI, CAIDI, and CEMI indices; changes in the number, capacity, and value of vulnerable electric infrastructure assets; improvements in restoration performance, including Customers Experiencing Long Interruption Duration (CELID); outage hours avoided or mitigated; and avoided outage costs calculated using the Interruption Cost Estimate (ICE) Calculator 2.0, where applicable.

Cost-effectiveness and ratepayer value may be assessed through avoided-cost analysis, pilot cost tracking, lifecycle cost comparison, and benefit-cost screening. SDG&E may compare equipment, communications, integration, maintenance, labor, and program administration costs against quantified benefits such as reduced truck rolls, reduced inspection time, faster outage diagnostics, improved storm response,

improved asset information quality, and better targeting of future investments. Illustrative process-efficiency metrics may include a 20–30% reduction in average inspection completion time, a measurable reduction in the number of systems used per task, improvement in documentation consistency, reduction in average engineering review turnaround time, and reduction in repeat site visits compared to baseline conditions. Equity outcomes may be evaluated by overlaying demonstration locations and circuit impacts with disadvantaged, low-income, Tribal, wildfire-risk, and reliability-burden indicators, and by comparing whether customers in these areas experience measurable improvements in outage response, restoration performance, inspection prioritization, or service reliability. Where demonstrations affect specific communities, SDG&E may supplement quantitative analysis with community feedback, customer surveys, stakeholder input, and satisfaction measures to determine whether benefits are meaningful, accessible, and responsive to local needs.

Expected Outcomes:

In the near term, this research topic area may evaluate whether advanced feeder monitoring, communications, AMI-enabled visibility, and mobile field technologies can improve outage detection, fault location, inspection efficiency, and the timeliness and accuracy of operational data. Demonstrations may test automated data collection, communications performance, system integration, and digital field workflows under real-world operating conditions. In the mid term, successful demonstrations may support shorter outage restoration times, fewer unnecessary truck rolls, improved storm response, more efficient engineering and maintenance workflows, and better-informed asset management and investment planning. Over the long term, validated technologies could support broader deployment, improve reliability, reduce operating costs, strengthen DER integration readiness, and enable future capabilities such as AI-assisted inspections, wearable technologies, and other digital tools for field operations. Together, these outcomes can provide ratepayer benefits through improved reliability, more efficient utility operations, and more targeted use of infrastructure investments.

Equity Outcomes:

Demonstrations funded under this research topic area have the potential to benefit disadvantaged, low-income, and Tribal communities by improving outage detection, fault location, restoration speed, and service reliability, particularly on circuits facing elevated wildfire, climate, or infrastructure-related risks. In eligible communities, SDG&E could evaluate whether advanced feeder monitoring, AMI capabilities, and mobile field technologies result in measurable improvements in outage diagnostics, restoration times, field response, and operational efficiency compared to baseline conditions. Community benefits can be assessed using quantitative reliability and operational metrics, including outage duration, restoration times, fault-location accuracy, inspection efficiency, and reductions in unnecessary truck rolls. Where appropriate, stakeholder engagement activities would also gather feedback on service impacts, project implementation, and overall customer experience. This approach helps ensure that equity outcomes are based on demonstrated operational improvements and community feedback, rather than project location alone.

Marketing and Deployment Plans:

Plans for deployment begin with targeted demonstrations on selected circuits and specific field operations to evaluate installation requirements, communications performance, data quality, automation, digital workflows and integration with utility systems, including SCADA, ADMS and OMS. Depending on the technology being evaluated, demonstrations may include deployment on selected distribution circuits, integration with utility operational systems, or use within field operations to validate specific operational use cases. If demonstration results are favorable, subsequent phases would expand deployment to

additional circuits, operational workflows, or service territories where the technologies can improve system visibility, outage response, field operations, asset management, DER integration, and overall grid performance. Lessons learned from the demonstrations would be used to refine operating procedures, analytics, communications and data architecture, and system integration requirements, while informing future engineering design, procurement strategies, and broader deployment planning. Demonstration results would also be shared with utility stakeholders to support knowledge transfer and future implementation.

Potential barriers to broader deployment include communications reliability and coverage, systems integration complexity, data management, cybersecurity, connectivity in remote service areas, user adoption of new digital workflows, and the need to demonstrate cost-effectiveness under varying operating conditions. This research is intended to identify and address these barriers through phased demonstrations, performance evaluation, and development of scalable implementation approaches that can support future utility deployment

Research Topic Area Title: 5. Integrated Risk Analytics for Wildfire Mitigation

Initiative Title: Next Generation Resilience and Response

Gaps Addressed:

This research topic area evaluates the efficacy and cost effectiveness of integrating novel technologies, remote sensing and advanced data sources to improve high-fire-threat and climate-exposure conditions, and operational decision making across the distribution system. The EPIC-funded scope will be limited to research, demonstration, and validation of novel data-integration, sensing, analytical, and decision-support methods whose technical efficacy, cost-effectiveness, scalability, and ratepayer value have not been established. Current utility practices rely on time-based inspections and isolated monitoring technologies that limit the ability to differentiate risk at the circuit, span, and asset level particularly as wildfire exposure, climate variability, vegetation growth patterns, and operating constraints become increasingly dynamic.

While AI-enabled cameras and vegetation management platforms are available, there is limited understanding of how these technologies can be effectively integrated into utility operations to provide actionable information that supports wildfire mitigation, PSPS decision-making, and restoration activities. The aim of the research is to improve risk-informed operational decision making by integrating advanced sensing technologies, AI-enabled analytics and real time monitoring into utility operations.

Unique Role:

This research largely focuses on demonstrating, validating, and assessing the scalability of integrating various developed solutions into an enterprise-wide solution with the goal of expediting adoption across California IOUs. While individually these single novel technologies have been tested and assessed, their complete integration across work management workflows and cost-and-risk analyses remains untested and validated across IOUs. With little to no investments by individual vendors or private sector in whole, this EPIC project seeks to address a critical gap that directly aims to improve wildfire risk mitigation and grid reliability for California ratepayers. Additionally, due to the uncertainty and risk of the efficacy or cost effectiveness outcomes arising from this project, GRC funding would not be suitable at this time as the integration of these technologies and decision frameworks are not fully proven, necessary, or scalable to the utility.

Leveraging Past RD&D:

This Research Topic Area builds directly on SDG&E's EPIC-3 Project 5, Unmanned Aircraft Systems (UAS) with Advanced Image Processing for Electric Utility Inspection and Operations. That project demonstrated how UAS platforms, enhanced imaging, and sensor technologies could be used to inspect electric utility infrastructure, improve access to hard-to-reach areas, reduce personnel exposure to hazardous conditions, and support safer, more efficient operations. It also evaluated how aerial sensor data could be collected, stored, analyzed, and integrated with existing and future SDG&E systems, including the file types, metadata, sensor compatibility, and data-quality requirements needed to support future artificial intelligence and analytics capabilities. The project provided an important foundation by identifying practical UAS applications for electric utility inspections, wildfire mitigation, Public Safety Power Shutoff patrols, confined-space inspections, line-pulling support, coronal camera use, tethered UAS operations, and related field use cases.

The proposed research does not duplicate EPIC-3 Project 5 because it shifts from demonstrating individual UAS use cases and advanced image-processing capabilities to evaluating an integrated, scalable operational model for wildfire risk mitigation, vegetation management, and risk-informed decision-making. EPIC-3 Project 5 helped establish that aerial sensing and advanced imaging can provide operational value;

this research would build on those lessons by combining remote sensing, AI-enabled analytics, vegetation management platforms, weather and wildfire risk data, work management information, and cost-and-risk analysis into a more complete decision-support framework. The emphasis is on whether these tools can be integrated into enterprise workflows to improve prioritization, budgeting, field execution, and operational response across representative vegetation management areas and other high-risk conditions.

Consistent with the Strategic Roadmap, this research represents the next stage of RD&D maturity: moving from proof-of-concept demonstrations of UAS and imaging technologies toward broader operational integration, scalability validation, and measurable ratepayer benefit. Prior RD&D contributed knowledge on sensor selection, data capture, metadata requirements, inspection safety, field access, and potential cost and safety benefits. The proposed research will use that knowledge to evaluate how advanced sensing and analytics can support more targeted vegetation inspections, faster identification of high-risk conditions, improved wildfire and weather-related situational awareness, reduced unnecessary field activities, improved work prioritization, and better alignment between mitigation work and customer risk. In this way, the research leverages prior EPIC investments while addressing the remaining gap: how to turn validated sensing technologies into repeatable, scalable, and defensible utility workflows that improve reliability, wildfire safety, and cost-effective vegetation risk management for customers.

Metrics & Impact Assessment:

Success will be measured through demonstrable improvements in risk-targeting accuracy, workforce productivity, cost efficiency, and reductions in high fire threat-related reliability events, supported by quantifiable cost avoidance and sustained operational performance gains. In the short term, performance will be tracked through metrics such as inspection coverage per unit time, risk identification accuracy, field miles traveled per inspection cycle, efficiency of data collection, processing and operationalization times, reductions in field validation hours, and improvements in decision speed for wildfire and weather-related operational events. Where applicable, project-level capital and investment costs may be compared with baseline conditions and extrapolated to estimate potential costs and benefits. Over the longer term, evaluation will focus on reductions in high fire threat-related outages, decreases in cost per mile, improvements in worker productivity, measurable work avoidance in inspections and trimming activities, enhanced risk-adjusted prioritization, overall return on investment, cost avoidance, and reductions in greenhouse gas emissions. Reliability and resilience impacts may be evaluated through changes in restoration time, including Customers Experiencing Long Interruption Duration (CELID), hours of outages mitigated, and the percentage of identified critical load and DERs maintained during outage events. Where applicable, the research may measure the megawatts of emitting backup generation replaced by zero-emission DERs and estimate the value of avoided or mitigated outages using the Interruption Cost Estimate (ICE) Calculator 2.0.

Project impacts will be assessed through baseline-to-demonstration comparisons using outage, work management, and event data, supported by avoided-cost analysis, benefit-cost screening, and geospatial evaluation.

Expected Outcomes:

The research will provide ratepayer benefits over varied time spans. In the near term, benefits may include improved visibility into high fire threats, and weather-related risks, faster identification of high-risk conditions, more informed operational decision-making, and more efficient deployment of inspection and field resources. Over the mid-term, validated technologies and risk-based approaches are expected to improve worker productivity, reduce inspection and operational costs, support faster restoration and wildfire response, and reduce vegetation-related outages as they are integrated into routine utility

operations. In the long term, the research is expected to strengthen grid reliability, wildfire risk mitigation, and system resilience by supporting a more adaptive, data-driven operating model that optimizes resource allocation, reduces lifecycle costs, and generates transferable insights that support broader adoption across the utility industry.

Equity Outcomes:

Projects funded under this research area have the potential to benefit disadvantaged, low-income, and Tribal communities by improving identification of vegetation and wildfire-related risks, supporting more timely operational decisions, reducing high fire threats-related outages, and improving outage response where these communities are included in demonstration deployments. The research may also reduce unnecessary field activities and improve the prioritization of mitigation work in areas facing elevated wildfire or weather-related risk. These benefits would be supported through targeted engagement, including early consultation with Tribal and community stakeholders, culturally responsive outreach, and incorporation of local input into demonstration design and evaluation. Community perspectives would be gathered through surveys, stakeholder feedback, and participation measures to help assess whether project outcomes are measurable, meaningful, and responsive to community needs. Any AI-enabled tool will use human decision authority, bias controls, data governance, and full-cost evaluation.

Marketing and Deployment Plans:

The deployment plan would begin with initial scoping, benchmarking, and demonstrations across representative vegetation management areas (VMAs) and operational environments to evaluate technical performance, operational value, data quality, and cost effectiveness under field conditions. Successful demonstrations would progress to integration with utility workflows, decision-support tools, and workforce processes, supporting standardized, data-informed operations and broader deployment once the efficacy of the technologies and associated decision-making approaches are validated.

Key barriers to deployment include cost uncertainty, systems integration, interoperability, cybersecurity and data governance requirements, workforce adoption, development of decision-making frameworks, regulatory defensibility, procurement timelines, and data modeling. These challenges may be addressed through comparative analysis, phased implementation, standardized data requirements, strong data governance, early regulatory coordination, targeted workforce training and change management, and robust quality assurance of both the actions taken and the resulting operational outcomes. This staged approach is intended to support repeatable, scalable deployment while delivering measurable operational value and ratepayer benefits.

Research Topic Area Title: 6. AI-Enabled Customer Electrification Concierge

Initiative Title: Guiding Customers to a Clean Energy Future

Gaps Addressed:

This research aligns with CPUC directives and legislative requirements to accelerate building decarbonization, beneficial electrification, and equitable customer engagement. Recent CPUC proceedings focused on building decarbonization and grid modernization emphasize the need for proactive customer outreach, improved electrification planning, enhanced load forecasting, and the integration of customer-level data to support grid readiness. In addition, SB 1221 and the CPUC's Neighborhood Decarbonization Program require utilities to conduct extensive customer education, outreach, and engagement to facilitate cost-effective transitions from natural gas to clean electric alternatives. An AI-enabled electrification concierge directly supports these objectives by providing scalable, personalized guidance, increasing customer awareness and participation, and helping utilities achieve state decarbonization goals while ensuring affordability, equity, and efficient grid planning.

Today, customers seeking to electrify their homes or businesses face significant barriers, including fragmented information sources, lack of trusted guidance, and complex technical and regulatory requirements. While electrification is central to California's decarbonization goals, most customers do not know where to begin, what upgrades are needed (e.g., panel capacity, service upgrades), or how to navigate incentives and permitting processes.

Existing tools are either static, decentralized, or require high-touch human support. SDG&E's Customer Home Electrification Readiness Program (CHERP) addresses this gap through human advisors; however, it is inherently limited in scalability and cost efficiency.

This Research Topic Area addresses the need for scalable, personalized electrification planning tools; trusted, utility-backed advisory services; and integrated planning across customer usage, infrastructure, and incentives. By leveraging AI, this research will enable automated, data-driven, and customized electrification roadmaps for all customers, significantly expanding access beyond what human concierge models can achieve. This is a top priority to accelerate equitable electrification adoption at scale.

Unique Role:

This effort is uniquely suited for EPIC funding because utilities have access to customer load and usage data, that can enable more accurate and tailored electrification insights than private-sector tools. As a trusted advisor, SDG&E can provide neutral, unbiased recommendations that are not influenced by vendor or product incentives. The private sector typically focuses on point solutions (e.g., rooftop solar, EVs) rather than holistic electrification pathways. Similarly, federal and academic RD&D efforts do not focus on customer-facing, deployment-ready tools that integrate utility systems, customer needs, and grid constraints.

This EPIC funding enables a utility-backed, publicly accessible platform that helps customers make informed electrification decisions, supporting broader adoption of clean energy technologies and helping advance California's building decarbonization goals through 2030 and beyond.

Leveraging Past RD&D:

This research builds directly on EPIC GFO-23-303 Decision Tool to Electrify Homes with Limited Electrical Panel Capacity, which developed a freely available, user-friendly Tool for home electrification that provides recommendations on PEDs including load controls, low power appliances, space saving solutions, and other strategies for power efficient electrification. It will also have recommendations for

how the Tool could be adopted into utility electrification program/policy services, workforce training, and how software developers can integrate the Tool's specialized modules in their platforms. These prior EPIC investments in customer engagement, demand-side management, and data analytics demonstrated the value of personalized insights but lacked fully integrated electrification planning

Additionally, SDG&E's Customer Home Electrification Readiness Program (CHERP) **(**2026–present) established a human concierge model and identified key customer pain points, including confusion over multiple customer offerings, contractor knowledge gaps, and process for electrifying. Advancements in AI-driven load disaggregation and energy analytics can now be applied to infer appliance-level usage without requiring customer inputs.

This effort does not duplicate prior work but instead scales and operationalizes it by integrating AI, customer data, and electrification planning into a unified platform.

Metrics and Impact Assessment:

Key performance indicators (KPIs) will measure adoption and engagement through customer enrollment and engagement rates, including completion of electrification plans. Electrification outcomes will be assessed through increases in electrification project uptake (heat pumps, EVs, etc.), reductions in customer decision time for electrification projects, increase in electric consumption and decrease in natural gas consumption. Grid and system benefits include improved load forecasting accuracy through device-level insights and better alignment of customer electrification with grid capacity constraints. Cost efficiency measures will compare cost per customer served with the CHERP human concierge model and evaluate reductions in program delivery costs over time. Equity metrics will track participation and electrification rates among disadvantaged and low-income communities. Impact assessment tools will use AI-driven analytics dashboards, customer surveys and satisfaction scores, and comparisons of energy usage before and after electrification.

Expected Outcomes:

In the near term (one to three years), the research is expected to increase customer awareness of electrification pathways and improve engagement with utility programs. In the mid-term (three to seven years), it may accelerate adoption of electrification technologies while reducing customer friction and project delays. In the long term (seven years or more), the research could significantly contribute to grid decarbonization goals, enable a scalable and cost-effective advisory platform serving all customers, and improve grid planning through enhanced customer insights.

Equity Outcomes:

This research topic area will explicitly benefit disadvantaged and low-income communities by providing free, accessible electrification guidance; reducing reliance on costly consultants or contractors; highlighting incentives and financial assistance programs; and ensuring AI models account for housing diversity and constraints. The tool will use human decision authority, bias controls, data governance, and full-cost evaluation. Planned actions include targeted outreach to DVCs, partnerships with community-based organizations, multilingual platform support, and regular customer satisfaction surveys focused on equity groups.

Marketing and Deployment Plans:

This research will proceed in three phases. Phase 1 will focus on developing the AI models, integrating them with SDG&E systems, and piloting the tool with CHERP participants. Phase 2 will expand the tool to broader customer segments and incorporate participant feedback to improve its accuracy. Phase 3 will support full deployment to SDG&E customers through web and mobile interface and integration with customer portals and outreach campaigns. Transparency and explainability will help build customer trust in AI-generated outputs, while secure, consent-based data access will protect customer privacy. Integration Capacity Analysis (ICA) data will be incorporated to account for grid constraints and alternative access channels through CHERP will help with digital access gaps.

Research Topic Area Title: 7. Decarbonizing Natural Gas for Multiple Use Cases

Initiative Title: Decarbonization Pathways for California's Economy

Gaps Addressed*:*

SDG&E proposes a focused research initiative aligned with EPIC 5 Strategic Objective 5: Innovative Approaches for Difficult-to-Decarbonize Sectors. While growth in renewable energy, battery storage, and electrification of certain sectors of the economy (i.e., buildings and passenger transportation) have made concrete strides in lowering carbon emissions, critical gaps remain for economy-wide decarbonization. Based on preliminary feedback, the CPUC specifically noted that, "...the Commission is no longer prioritizing hydrogen related investments except in very narrow and clearly defined circumstances…***.any future proposals in this area begin with a clearer program driven framing and draw directly from core gaps identified in prior EPIC workshops and areas where EPIC Administrator coordination would accelerate significant solutions***".[18] SDG&E is well positioned to lead this effort and collaborate with EPIC Administrators and Gas RD&D program partners to advance the research and accelerate knowledge development in this area. SDG&E's proposed initiative is specifically tailored to address a narrow gap and would accelerate research into a potentially significant solution that could ultimately improve grid resiliency while reducing the need for additional capital expenditures through improvements to the process to create clean hydrogen (i.e., low Carbon Intensity (CI) hydrogen) for a difficult-to-decarbonize sector within SDG&E's service territory via methane pyrolysis technology.[19]

The primary gap this research topic area addresses is the lack of scalable, affordable, and locally deployable low-carbon fuel pathways for customers and sectors that are difficult to electrify. Examples of these sectors include existing passenger rail, steel and cement manufacturing, chemical production, and long-haul trucking. Without additional clean fuel options, these customers may face limited technology choices, delayed emissions reductions, higher compliance costs, or continued reliance on higher-emitting fuels. This gap is directly relevant to EPIC 5 because it affects whether California can achieve deeper, economy-wide decarbonization while maintaining affordability, reliability, and customer resiliency.

This research would directly benefit electric ratepayers by evaluating whether methane pyrolysis can provide a lower-cost, localized pathway to produce low-carbon hydrogen without requiring the same level of electric load, water use, land needs, and grid upgrades that have posed challenges with other hydrogen production pathways. If successful, the research could help reduce future electric system costs by avoiding or deferring infrastructure investments that might otherwise be needed to serve large new loads, while still supporting California's decarbonization goals. For example, instead of investing to upgrade distribution and transmission infrastructure to support the conversion of a diesel-powered train to electric, methane pyrolysis could be utilized to create hydrogen via the existing gas infrastructure and be a feedstock of a hydrogen powered locomotive. In a scenario such as this, the impact on rate payers would be much more limited. The project would also provide electric ratepayers with practical data on cost, emissions, reliability, and customer-site integration so SDG&E and the CPUC can make better-informed decisions before broader commercial deployment. In this way, EPIC funding would support early-stage validation of a technology that may reduce long-term costs, diversify clean energy options, improve resiliency, and help decarbonize sectors that are difficult to electrify without placing unnecessary pressure on the electric grid.

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[18] EPIC Policy + Innovation Coordination Group, EPIC 5: EPIC PICG RDD Meeting Final Report (December 3-5, 2025), at slide 27 (emphasis added).

[19] Definition of low carbon intensity hydrogen, per Title 26, Code of Federal Regulations (CFR), Part 1, *available at* https://www.govinfo.gov/content/pkg/FR-2025-01-10/pdf/2024-31513.pdf.

Unique Role:

SDG&E views EPIC as a viable regulatory pathway to research methane pyrolysis technology to meet the state's critical goal of decarbonization. First, federal partnership opportunities are limited when it comes to developing clean fuels infrastructure. The recent decision to revoke federal funding for the ARCHES project within California has created new barriers and policy confusion between California and the Federal Government. Given the state's current policy on decarbonization and the ongoing challenges in reducing the carbon footprint of industrial sectors of the economy, EPIC can serve as an important funding source for this type of work. Second, SDG&E has previously requested approval for clean energy innovations to support the evaluation, testing, and deployment of infrastructure and technologies needed to achieve SDG&E's and California's decarbonization, resiliency, and operational flexibility goals in the 2024 GRC.[20] These were either denied outright or the CPUC recommended that SDG&E seek funding via other sources (i.e., EPIC). Given the pre-commercial application of the methane pyrolysis technology, SDG&E sees EPIC as the proper venue to test and study the initiative. Third, the private sector has consistently spoken about the barriers of clean hydrogen adoption in the state due to the lack of infrastructure and supply chain. This research topic area aims to study and to potentially alleviate those concerns by constructing a methane pyrolysis project at a customer site. This arrangement will minimize the need for larger infrastructure investments and upgrades and offers a pathway to cut costs and resources to create clean hydrogen.

Leveraging Past RD&D:

While clean hydrogen has been generally funded under CEC's EPIC projects, researching the conversion of methane to hydrogen has been more limited. In EPIC 1, the CEC studied how a plasma reactor converted methane and carbon dioxide into hydrogen and carbon monoxide, with the hydrogen eventually to be used in electric generation. The project found that this process did convert roughly 30% of the injected gas into hydrogen, but at twice the power usage compared to electrolysis.[21] Although that project did not specifically evaluate methane pyrolysis, it is an example of a laboratory use-case with a similar technology. Since these initial studies within EPIC, the CEC has established the Clean Hydrogen Program to demonstrate or scale-up hydrogen projects that produce, process, deliver, store, or use hydrogen derived from water using eligible renewable energy resources per Assembly Bill 209. [22] Recently, the Department of Energy, in collaboration with the Pacific Northwest National Laboratory, oversaw a project that utilized Regenerable Catalysis Pyrolysis for producing carbon-free hydrogen, while reducing the hydrogen's net production cost to $1.0/kg through the sale of solid carbon by-products.[23] Given the positive results in laboratory testing, the next logical next steps are testing the technology under real-word conditions for more comprehensive results and data. SDG&E is proposing just that via this project.

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[20] D.24-12-074 at 331.

[21] CEC, *Low Temperature Microplasma-Assisted Hydrogen Production from Biogas for Electricity Generation*, *available at* https://www.energy.ca.gov/sites/default/files/2021-05/CEC-500-2020-063.pdf.

[22] CEC, Clean Hydrogen Program webpage, *available at* https://www.energy.ca.gov/programs-and-topics/programs/clean-hydrogen-program.

[23] Pacific Northwest National Laboratory, *Methane Pyrolysis for CO2-free H2 and Carbon Nanomaterials – CRADA 576 (Final Report)* (August 13, 2024), *available at* https://www.pnnl.gov/publications/methane-pyrolysis-co2-free-h2-and-carbon-nanomaterials-crada-576-final-report.

Metrics and Impact Assessment:

Key metrics for Objective 5: Innovative Approaches for Difficult-to-Decarbonize Sectors are to reduce the cost of these innovative technologies (i.e. cost improvement), reduce greenhouse gas (GHG) emissions and improve air quality in DVC communities. The methane pyrolysis technology initiative will aim to produce hydrogen at a lower overall cost compared to electrolysis. Several emissions will be measured by direct or indirect methods, including but not limited to natural gas consumption, methane, hydrogen, carbon production, Particulate Matter, and CO_2 if present. Based on preliminary calculations and assumption of two thousand kilograms of hydrogen usage per day, an estimated 26.5 metric tons of CO2 could be reduced daily.[24]

Engagement statistics, especially related to businesses that currently use or want to use hydrogen, may also be tracked during outreach, project activity, and sharing of findings.

Expected Outcomes:

Over the near term, SDG&E expects this project to verify the availability and usability of the methane pyrolysis technology in the above-mentioned sectors. If the project provides positive results in the mid-term, which would include hydrogen production at a lower cost compared to electrolysis and emission reductions as noted above, expansion opportunities to other facilities would follow. Longer term, SDG&E hopes to understand if this technology could support deeper decarbonization efforts.

The proposed outcomes include reducing the cost of low-carbon hydrogen production, minimizing lifecycle greenhouse gas emissions, and utilizing existing energy infrastructure to further reduce costs to customers. Additionally, this technology has the opportunity to support decarbonization of hard-to-electrified sectors (i.e., heavy industry, long haul transportation, and high heat dependent processing), improve energy reliability through diversified clean fuel pathways, and improve local air quality.

Equity Outcomes:

The project will engage with disadvantaged communities, low-income communities, and Tribal communities throughout project development and execution. Activities may include: 1) Early stakeholder engagement, 2) Community workshops, 3) Sharing of project results, 4) Local workforce development opportunities, 5) Local air-quality impact assessments.

Marketing and Deployment Plans:

SDG&E's initial outreach activities with local partners and businesses that are either currently using hydrogen for business purposes or are transitioning business activities to utilize hydrogen in the future. SDG&E would focus engagement by sector and location, with potential project partners needing to meet the examples included in the EPIC 5 Decision and, ideally, be located in a census track that is a disadvantaged community, has historically struggled with poor air quality, and/or has a high percentage of commercial / industrial facilities.

[24] Energy in hydrogen= 2,000 kg X33.3 kWh/kg= 66,600 kWh, the efficiency of fuel cell at 50%, 66,600X0.5= 33,300 kWh and assuming 35% efficiency on diesel, 33,300/0.35= 95,143 kWh. This is equal to 2,600-gallon diesel per day. Calculating CO2 reduction based on EPA emission factor for diesel, 10.21 kg CO2/gallonX2600= 26.5 metric tones.

Appendices

[25] D.12-05-037 at OP 12 requires a mapping of the planned investments to the electricity system value chain, including: (i) Grid operations/market design; (ii) Generation; (iii) Transmission; (iv) Distribution; and (v) Demand-side management.

[26] D.13-11-025 requires informational summaries of the IOUs' Research, Development and Demonstration (RD&D) activities undertaken as part of their approved Energy Efficiency (EE) and Demand Response (DR) portfolios.

A1. Summary of Investment Plan Development Stakeholder Comments and Correlated Administrator Responses

Appendix A1 summarizes the stakeholder and community engagement activities that informed development of SDG&E's EPIC 5 Investment Plan.

Table 5. EPIC 5 Stakeholder Engagement and Outreach Events

EPIC 5 Stakeholder Engagement and Outreach Events			
Stakeholder Event Name or Engagement Activity	**Date**	**Details**	**Consideration of Comments in EPIC 5 Investment Plan**
Disadvantaged Communities Advisory Group (DACAG) Meeting	April 17, 2026	Refer to Appendix A5	Refer to Appendix A5
EPIC Northern California ESJ and Tribes Joint Utilities Workshop	May 28, 2026	SDG&E presented the CEP and draft EPIC 5 Initiatives, (25 virtual attendees)	No questions or feedback were given, therefore, there was no stakeholder feedback to consider or incorporate into the Investment Plan.
EPIC Southern California ESJ Communities and Tribes Joint Utilities Workshop	June 18, 2026	SDG&E presented on the CEP and draft EPIC 5 Initiatives (15 virtual attendees)	A question regarding EPIC administrations and working with external partners was answered during the workshop. No feedback related to SDG&E's proposed initiatives was received.
Joint IOU EPIC Workshop	June 23, 2026	The IOUs presented their draft EPIC 5 Initiatives and proposed Research Topic Areas (87 virtual attendees)	Comments received emphasized flexible interconnection, non-wires solutions, coordination of large loads with DERs, data center flexibility, and knowledge sharing on AI and other emerging technologies. SDG&E considered these recommendations during

EPIC 5 Stakeholder Engagement and Outreach Events			
Stakeholder Event Name or Engagement Activity	**Date**	**Details**	**Consideration of Comments in EPIC 5 Investment Plan**
			EPIC 5 planning and identified general alignment with proposed research involving AI-enabled solutions, DER integration, grid flexibility, and emerging technology evaluation
Building Energy Justice into Disaster Resilience & Recovery	July 7, 2026	Presentation from impacted communities and learning from communities on the frontlines	Implemented resiliency measures for vulnerable DAC for SDG&E's Strategic Initiatives
SDG&E Community Based Organizations Mid-Year Webinar	July 30, 2026	SDG&E's Presentation of EPIC 5 Portfolio and Online Poll of Technology Priorities. (58 virtual attendees)	The top three priorities were battery storage or Backup Power, Wildfire Prevention Technologies, and Home Energy Management Systems. SDG&E is already investing in these research areas
EPIC 5 Community Priority and Engagement Survey	August 3, 2026	Surveyed 20,000 SDG&E customers in DACs and Tribal Communities, 469 responses were collected on August 18, 2026 Affordability is the dominate customer priority, followed by strong interest in clean energy technologies and customer desire for easier participation in utility offerings. Further engagement and communication is an area for improvement, as customer awareness of EPIC is low.	SDG&E continues to keep affordability in the forefront and is already considering investments to reduce customer's bills. SDG&E will continue to educate and conduct outreach throughout the EPIC cycle to inform customers of projects and outcomes
Tribal Government Survey	August 5, 2026	Refer to Appendix A6	Refer to Appendix A6

A2. Equity Matrix with Equity Funding Summary

SDG&E's equity matrix provides a traceable connection between portfolio development, applicable ESJ Action Plan goals, DACAG Equity Framework considerations, intended community benefits and quantitative performance measures. Because individual EPIC 5 projects have not yet been selected and funding is currently allocated at the initiative level, anticipated equity-related funding is not specifically estimated by research topic area at this stage.

Across the EPIC 5 portfolio, however, SDG&E will meet its requirement to direct at least 25% of applicable investments to projects located in and benefiting DVCs, and an additional 10% to projects located in and benefiting low income communities (LICs).[27] The combined 35% commitment is provisionally allocated equally across the research topic areas. These allocations will be refined during project scoping.

The metrics and measurement matrix in Table 6 provide potential metrics and data sources that may be used to measure research area outcomes. Because these research topic areas have not yet been developed into projects, specific value propositions and performance measures cannot yet be fully defined, thus the matrix does not represent proposed commitments. Specific measures will be finalized through community engagement and final project scoping.

Table 6. Portfolio Potential Metrics and Methods- Funding in DVC/LI/Tribes

Research Topic Area	Potential Impacts in DVC? (Y/N)	DAC/LI Funding Estimate	Potential Quantitative Metrics	Method	Data Source
1. Connected Customer Resources & Preparing for Resilient Grid Operations	Y	6%	Number and percentage of participants from /ESJ communities	Track customer enrollment	Customer records
			Average bill savings or incentives received	Compare customer bills	Billing and incentive records
			Improved Simulation Restoration Time	Measure elapsed time from event initiation to restoration	Digital twin platform
			Participation in demand flexibility or DER Programs	Compare enrollment and participation before and after demonstration	Program participation records

[27] D.23-04-042 at OP 2.

Research Topic Area	Potential Impacts in DVC? (Y/N)	DAC/LI Funding Estimate	Potential Quantitative Metrics	Method	Data Source
			Customer satisfaction and understanding	Pre- and – post project surveys and focus groups	Survey results
			Operator decision accuracy	Compare baseline and post-training simulation performance	Training and simulation records
			Validated operator training scenarios for DER-rich grid conditions	Track development and successful validation of new scenarios	Scenario validation documentation
3. AI for Utility Resilience and Adaptability	Y	6%	DVC/ESJ communities included in vulnerability analysis, high risk locations or circuits identified, community validation of assessment	Compare AI results with existing methods, validate community indicators through engagement	AI model data, Community feedback
4. Preventive Grid Sensing & Response	Y	6%	For selected circuits in DVCs: Fault detection accuracy, reduction in diagnostic time, reduction in restoration time, DVC customers benefiting	Measure for selected circuits difference in detection/response between pre and post-demonstration	SCADA, ADMS and OMS records, CalEnviroScreen and customer data
5. Integrated Risk Analytics	Y	6%	DVC circuits identified and evaluated,	Integrate DVC risk exposure into risk prioritization,	LiDAR, camera, weather and asset data, Lineman labor hour records

Research Topic Area	Potential Impacts in DVC? (Y/N)	DAC/LI Funding Estimate	Potential Quantitative Metrics	Method	Data Source
for Wildfire Mitigation			High-risk conditions identified in DVC, Reduced labor hours	Compare Observer/Patroller labor hours before and after AI camera monitoring	
6. AI-Enabled Customer Electrification Concierge	Y	6%	Number of incentives identified, Participation rates among DVC/ESJ communities electrification adoption rates, Electrification conversion rates	Evaluate change in participation numbers and track identified incentives improvements and projects completed	Incentive/program database, electrification tool analytic dashboard, customer surveys
7. Decarbonizing Natural Gas for Multiple Use Cases	Y	6%	GHG emissions avoided and improved air quality in DVCs	Determine if hydrogen through methane pyrolysis results in lower GHG emissions and local air pollutant emissions than fuel it replaces	CARB/EPA emissions factors, CalEnviroScreen mapping, traffic data

Per D.23-04-042 at OP 2, Table 7 below illustrates how the proposed research aligns and incorporates equity considerations guided by the ESJ Action Plan, and DACAG Equity Framework, into the EPIC 5 portfolio. Table 7 provides alignment of four of the DACAG five equity principles to SDG&E's EPIC 5 Research Topic Areas. SDG&E notes that Consumer Protection is not included in the matrix as it is not applicable to demonstration projects. Although the principles apply broadly to all SDG&E research topic areas, Table 7 provides a mapping of the research topic areas with the greatest potential to directly impact DVCs.

Table 7. EPIC 5 and ESJ Action Plan/ DACAG Equity Alignment

Research Topic Area	**ESJ Action Plan Goal**	**DACAG Equity Framework Category**	**EPIC 5 Incorporation Methods**
1. Connected Customer Resources & Preparing for Resilient Grid Operations	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 2:** Increase investment in clean energy resources to benefit ESJ communities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education, Financial Benefits	Include ESJ members in project design, test if DERMS dispatch improves savings, include operational scenarios involving circuits with high vulnerability.
2. Advanced Energy Storage Technologies	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 2:** Increase investment in clean energy resources to benefit ESJ communities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education	Engage communities to identify potential use cases to demonstrate reduction of emissions and expansion of access to renewable energy

Research Topic Area	ESJ Action Plan Goal	DACAG Equity Framework Category	EPIC 5 Incorporation Methods
3. AI for Utility Resilience and Response	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education	Investigate outage history by demographics to identify if DVCs, Tribal and LI communities experience disproportionate outages. Incorporate outage data into analytics platform to identify potential projects and locations for investments. Validate vulnerability metrics with participating communities and assess through surveys/discussions the accuracy/applicability to their communities
4. Preventive Grid Sensing & Response	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education	Prioritize testing on circuits serving DVCs that experience elevated wildfire, extreme weather and outage risks. Measure impacts of advanced sensing on detection, duration and restoration. Engage affected communities before and during demonstration to confirm concerns, critical facilities and vulnerabilities.
5. Integrated Risk Analytics for Wildfire Mitigation	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and	Health & Safety, Access & Education, Financial Benefits	Measure whether the project improves risk identification, mitigation prioritization, and emergency-response decisions in these communities. Engage affected communities, and

Research Topic Area	ESJ Action Plan Goal	DACAG Equity Framework Category	EPIC 5 Incorporation Methods
	public participation opportunities for ESJ communities		Tribal representatives to confirm local vulnerabilities, critical facilities, and resilience priorities
6. AI-Enabled Customer Electrification Concierge	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 2:** Increase investment in clean energy resources to benefit ESJ communities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education, Financial Benefits	Engage DVC customers in the tool design and testing to identify barriers and preferences to receive assistance. Include pathways for customers needing live assistance. Measure increases in customers identified for incentive eligibility and those proceeding to an electrification project
7. Decarbonizing Natural Gas for Multiple Use Cases	**Goal 1:** Consistently integrate equity and access considerations throughout CPUC regulatory activities **Goal 2:** Increase investment in clean energy resources to benefit ESJ communities **Goal 4:** Increase climate resiliency in ESJ communities **Goal 5:** Enhance outreach and public participation opportunities for ESJ communities	Health & Safety, Access & Education, Financial Benefits	Prioritize evaluation of methane-pyrolysis that could reduce emissions in DVCs. Measure GHG and local air quality benefits. Engage affected communities during project development to identify air quality, safety and resilience concerns

While ESJ Action Plan Goals 6 through 9 do not map directly to each research topic area, they will be considered across the EPIC 5 portfolio. Projects will consider safety, reliability, and cybersecurity consistent with **Goal 6**, particularly where emerging technologies could affect ESJ communities. Consistent with **Goal 7**, SDG&E will also look for appropriate opportunities to support workforce

development, supplier diversity, internships, and participation by residents and businesses in ESJ communities. Project demonstrations, training, and the sharing of research results may also support **Goal 8** by strengthening understanding of ESJ issues among project teams and other stakeholders. For **Goal 9**, the table above identifies metrics for tracking DVC participation, investments, benefits, and project outcomes. Together, these considerations will help guide how SDG&E implements, evaluates, and reports on its EPIC 5 portfolio.

A3. Mapping of Planned Investments to the Electricity System Value Chain[28]

Table 8 below maps SDG&E's proposed EPIC 5 Research Topic Areas to the electricity system value chain categories of grid operations/market design, generation, transmission, distribution, and demand-side management. The mapping shows that SDG&E's proposed portfolio is concentrated in distribution, grid operations, and demand-side management, reflecting the utility's focus on customer affordability, reliability, resilience, clean energy integration, wildfire mitigation, and operational readiness.

Table 8. Mapping of Planned Investment to the Electricity System Value Chain

Research Topic Area	Grid Operations / Market Design	Generation	Transmission	Distribution	Demand-Side Management
Connected Customer Resources & Preparing for Resilient Grid Operations	X	—	—	X	X
Advanced Energy Storage Technologies	X		X	X	X
AI for Utility Resilience and Adaptation (AURA)	X	—	X	X	X
Preventive Grid Sensing and Response / Enhanced Distribution Grid Visibility / Mobile First Platform	X	—	—	X	X
Integrated Risk Analytics for Wildfire Mitigation	X	—	X	X	X
AI-Enabled Electrification Concierge / Customer Clean Energy Guidance	X	—	—	X	X
Decarbonizing Natural Gas for Multiple Use Cases	X	—	—	X	X

[28] D.12-05-037 at OP 12 requires a mapping of the planned investments to the electricity system value chain, including: (i) Grid operations/market design; (ii) Generation; (iii) Transmission; (iv) Distribution; and (v) Demand-side management.

A4. Information Summary of Demand Response Research, Development and Demonstration Activities[29] (IOUs Only)

D.12-05-037 and D.13-11-025 require IOU Administrators to include information about ongoing Efficiency ("EE") and Demand Response ("DR") projects in their EPIC Plans to avoid duplication between the EE/DR projects and the EPIC projects. Specifically, each IOU Administrator must "include an appendix summarizing the R&D activities undertaken as part of their approved Energy Efficiency and Demand Response portfolios." This appendix should describe each project, including the purpose, funding, deliverables and progress to date.[30] SDG&E has provided the required information below.

Demand Response Projects

SDG&E's ongoing Emerging Technologies Demand Response ("ET-DR") efforts consist of evaluating demand-reducing technologies and strategies that are applicable to the San Diego region and market. The ET-DR program's focus is on technologies and strategies that promise significant, cost-effective demand reduction in the short- or midterm, and that appear to be sufficiently reliable and scalable for market-wide implementation. The ET-DR program is intended to identify, evaluate and demonstrate technologies that have strong potential to reduce power consumption during periods of higher energy prices or tight energy supplies in all of SDG&E customer segments (i.e., residential, agricultural, commercial and industrial), and to help bring these technologies to commercial availability.

SDG&E's ongoing ET-DR budget projects are summarized in Tables 9 and 10, respectively, as authorized in D.23-12-005. Although some projects involve technologies and applications also relevant to the EPIC 5 Research Topic Areas, they have distinct objectives and methods. ET-DR projects focus on evaluating specific technologies and customer loads for near-term demand response program applications, while EPIC 5 research addresses broader, earlier-stage questions related to utility system integration, operational use cases, interoperability, scalability and longer-term customer benefits.

Energy Efficiency - Not Applicable

The electric Emerging Technologies Energy Efficiency ("ET-EE") program is no longer administered locally by SDG&E. As directed by the CPUC in D.18-01-004, it is now implemented statewide through a third-party administrator under the CalNEXT program. Thus, this appendix reports only on SDG&E's applicable ET-DR projects.

Table 9. ET- DR Program Approved Budget 2024-2027

ET-DR	2024	2025	2026	2027
	$774,000	$774,000	$774,000	$774,000

[29] D.13-11-025 requires informational summaries of the IOUs' Research, Development and Demonstration (RD&D) activities undertaken as part of their approved Energy Efficiency (EE) and Demand Response (DR) portfolios.

[30] *Id.* at 66.

Table 10. Demand Response Emerging Technologies Program – Ongoing Projects

Ongoing Projects	Objective	Status
Evaluating Demand Response Capabilities of Connected Variable Capacity Heat Pumps	Test variable-capacity HVAC DR using load shed events, capacity limits and pre-heating strategies.	Customer recruitment and pre-event surveys were conducted, and heating and cooling test events began in Q1 2026. Testing, data collection, and analysis are expected to continue through Q4 2026
Flexible Demand Response Collaborative	Model and demonstrate the ability of large pumps, EV charging, and other flexible loads to serve as balancing resources that support integration of variable renewable energy.	The Flexible DR model and simulation findings for EV fleets is complete. Framing of long-term capacity solutions for large load discussions continue.
Smart Panel Demand Response and Load Management Study	Examine load shed and shift potential of smart panel devices.	The vendor has completed customer recruitment and is preparing the installation plans for each site.
Laboratory Testing of EV Meter Socket Adaptor (MSA)	Evaluate whether a meter socket adapter can safely support EV chargers and other electric loads without affecting meter operation or requiring costly electrical upgrades.	SDG&E is working with the vendor to schedule testing that will take place at the vendor's facility.
EV Load Detection Demonstration	Evaluate whether interval meter data and advanced analytics can reliably identify residential EV charging patterns and customers who may be suitable for managed charging programs.	The demonstration was initiated in Q1 2026. SDG&E is currently reviewing load detection data for a select group of residential customers in the vendor's platform.

A5. Disadvantaged Communities Advisory Group (DACAG) Engagement

Appendix A5 summarizes SDG&E's engagement with the Disadvantaged Communities Advisory Group (DACAG) and documents the feedback received during the April 17, 2026 DACAG meeting.

Table 11. DACAG Meeting (April 17, 2026) Feedback Summary

DACAG Meeting (April 17, 2026) Feedback Summary		
Summarized Feedback from DACAG	**SDG&E's Response**	**Consideration of Comments in EPIC 5**
Engage with the Tribal community across multiple groups.	SDG&E will work with its Tribal Liaison to identify appropriate venues to present EPIC to Tribal Audience.	Incorporated into EPIC 5 through SDG&E's Community Engagement Plan
Report on how engagement has been integrated into the EPIC 5 Investment Plans.	SDG&E will report on how comments and feedback from engagement activities have been incorporated into the EPIC 5 Investment Plan.	Tracked and documented feedback from engagement events describe how comments/questions inform EPIC 5 research priorities
Set expectations up front about the kind of feedback Administrators are looking for and not looking for in engagement activities.	ESJ workshops provide prompts and guidance on the types of feedback, input, and questions IOUs seek from participants.	Incorporated into the planned approach for EPIC 5 engagement. Workshop materials and other engagement activities identify the topics open for input, the decisions participants may help inform, and any regulatory, technical, schedule, or funding constraints on how feedback may be used.
Question: Does EPIC cover all of California?	EPIC covers service territories of the three large California IOUs (PG&E, SCE, SDG&E).	As the question was a request for clarification, it did not require a change to EPIC planning or implementation
Question: When a customer's meter is on reservation, are you engaging with the individual customer, or are you engaging with the tribe?	SDG&E' Tribal Liaison would reach out to the respective Tribal Government first before engaging with the customer.	Incorporated in the Community Engagement Plan as an engagement approach

DACAG Meeting (April 17, 2026) Feedback Summary		
Summarized Feedback from DACAG	**SDG&E's Response**	**Consideration of Comments in EPIC 5**
Educating tribal customers about how EPIC affects their bill would be helpful.	SDG&E will work with our Tribal Liaison and Tribal Account Executive to identify appropriate messaging and venues to present education around EPIC to Tribal audiences.	Incorporated in the Community Engagement Plan for outreach planning
Provide engagement with the community throughout the project, from beginning to end of the project	SDG&E shares information about its EPIC projects before launch through public pre-launch workshops. During the project's life, SDG&E provides quarterly updates on all projects on the EPIC database at epicpartnership.org.	SDG&E is exploring opportunities for community-based organizations to contribute to project implementation activities, including workforce development, training, and other partnership models that leverage local knowledge and capabilities while strengthening community participation in EPIC-funded demonstrations
For projects going into a disadvantaged community, Administrators should seek partnership with community groups or tribal groups.	SDG&E will consider partnerships with community groups on its EPIC projects when appropriate.	Incorporated in the Community Engagement Plan as an engagement approach

A6. Tribal Engagement

Appendix A6 summarizes SDG&E's Tribal engagement activities undertaken during development of the EPIC 5 Investment Plan and documents the feedback received from Tribal governments, Tribal leaders, and Tribal community representatives.

Table 12. EPIC 5 Tribal Engagement and Outreach Events

EPIC 5 Tribal Engagement and Outreach Events			
Stakeholder Event Name	**Date**	**Details**	**Consideration of Comments in EPIC 5 Investment Plan**
Tribal Energy and Safety Summit	May 18-20, 2026	SDG&E EPIC Team attended. Hosted Joint IOU EPIC Table and educated tribal leaders about EPIC and potential partnership; 90 in-person Tribal leaders were interested in partnering in SDG&E's EPIC-project. Positive feedback received regarding SDG&E's engagement efforts with Tribal communities	SDG&E will continue to prioritize Tribal engagement and focus on initiatives supporting these communities. Positive feedback received at the Summit informs community level value propositions for EPIC research.
Pauma Tribe Emergency Preparedness Workshop	July 27, 2026	EPIC team presented on upcoming Investment Plan and proposed initiatives to an audience of 25 people, including community members, tribal administrators, and other public agency representatives. Relevant impacts to limiting SDG&E's bills are a priority	Limiting bill impacts was main topic associated with Investment Plan. SDG&E will continue to prioritize affordability projects that could potentially reduce ratepayer bills, which are already some of SDG&E's EPIC 5 initiatives.
Tribal Government Survey	August 5, 2026	Survey issued to approximately 100 tribal government staff; Priority of investments results were battery storage/backup power, wildfire prevention, are the most urgent needs.	Tribal survey results have shaped the plan's priorities, program design, and engagement strategies, ensuring that investments deliver meaningful benefits to tribal communities.

EPIC 5 Tribal Engagement and Outreach Events			
Stakeholder Event Name	**Date**	**Details**	**Consideration of Comments in EPIC 5 Investment Plan**
		There is strong interest in new technology pilots and workforce programs.	
Meeting with Chairman of Tribal Climate Collaborative	August 11, 2026	SDG&E presented to Tribal leadership's interest in EV infrastructure and exploring potential use cases/partnerships for EPIC 5	Input highlighted tribal interest in transportation electrification and energy access solutions, which are already some of SDG&E's EPIC 5 initiatives. Feedback informed SDG&E's understanding of tribal energy priorities and supports continued consideration of equitable, community-focused research and innovation opportunities in the EPIC 5 Investment Plan.

A7. Regulatory and Legislative Background

This appendix provides legislation that supports SDGE&'s EPIC Strategic Initiatives and provides a high-level regulatory background of the evolution of the EPIC Program.

Table 13. Legislation and SDG&E EPIC 5 Portfolio Alignment

State Legislation	Background	Alignment with SDG&E's Strategic Initiative
SB 100 (2018)	Landmark legislation that created statewide target for 100% renewable and zero-carbon electricity by 2045	• Strategic Initiative: **1**
SB 32 (2016)	Extended and strengthened AB 32's mandate, setting a 40% below 1990 GHG level target by 2030	• Strategic Initiative: **1, 2, 3,** and **4**
SB 1221 (2024)	Directs the CPUC to create a voluntary zonal decarbonization program and designate priority neighborhood decarbonization zones	• Strategic Initiative: **1** and **3**
AB 1482 (2015)	Mandated the development of California's Climate Adaptation Strategy	• Strategic Initiative: **2**
AB 1384 (2022)	Requires updates to Climate Adaptation Strategy, including a focus on integrated planning, measurable success metrics, and timeframes	• Strategic Initiative: **2**
SB 1075 (2022)	Required the California Air Resource Board (CARB), in consultation with the CEC and CPUC, to produce a comprehensive report on hydrogen	• Strategic Initiative: **4**

Table 14. Key EPIC Regulatory Decisions

Proceeding or Decision	Description
D.11-12-035	Established the EPIC program.
D.12-05-037	Established the framework for CPUC oversight of the EPIC Program. EPIC funding was authorized to provide public interest investments in applied research and development, technology demonstration and deployment, market support, and market facilitation. Established electricity ratepayer benefits as a mandatory guiding principle of EPIC. Established EPIC funds administration: 80% of the funds to be managed by the CEC and 20% by the three IOUs, with the IOU role limited to the area of technology demonstration and deployment.
D.13-11-025	Approved SDG&E's EPIC 1 (2012-2014) investment plan (A.12-11-002).[31]
D.15-04-020	Approved SDG&E's EPIC 2 (2015-2017) investment plan (A.14-05-004).[32]
D.18-01-008	Established the framework for the EPIC Policy + Innovation Coordination Group.[33]
D.18-10-052	Approved SDG&E's EPIC 3 (2018-2020) investment plan (A.17-05-009). Adopted a Request for Proposal (RFP) process to select the Policy + Innovation Coordination Group. Established the requirement of at least two workshops (in Northern California and Southern California) for the purpose of providing training about EPIC, and related

[31] D.13-11-025, OP 6.

[32] D.15-04-020, OP 1.

[33] D.18-01-008, OP 2.

Proceeding or Decision	Description
	technical support, to Disadvantaged Communities and interested community-based organizations. [34]
R.19-10-005	CPUC initiated rulemaking to consider the renewal of the EPIC Program.
D.20-08-042	CPUC renewed EPIC for ten years, through December 31, 2030, authorizing two five-year investment plan cycles (EPIC 4 and EPIC 5), and concluded Phase 1 of the proceeding. Authorized the CEC to continue as an EPIC Administrator.[35] The role and budgets of the IOU Administrators were deferred to Phase 2 of R.19-10-005.[36]
D.21-11-028	Authorized the IOUs to continue as program Administrators for the EPIC 4 program cycle (2021-2025) Adopted EPIC's mission statement and guiding principles. Authorized the EPIC Administrators with the ability to propose budget adjustments for the 2026-2030 investment plan by the rate of inflation, using the California CPI-W methodology. [37]
D.23-04-042	Directed the EPIC Administrators to file Annual Reports by April 30 each year through a Tier 2 advice letter.[38]
D.23-11-086	Approved SDG&E's EPIC 4 (2021-2025) investment plan (A.22-10-002).[39]

[34] D.18-10-052, OPs 3, 8, 11.

[35] D.20-08-042, OP 1 and OP 2.

[36] *Id* at 11-12.

[37] D.21-11-028, OPs 1-3.

[38] D.23-04-042, OP 8.

[39] D.23-11-086, OPs 3-4.

Proceeding or Decision	Description
D.24-03-007	Adopted five Strategic Goals for the EPIC program – Transportation Electrification, Distributed Energy Resource Integration, Building Decarbonization, Achieving 100 Percent Net Zero Carbon Emissions and the Coordinated Role of Gas, and Climate Adaptation and established a process for developing strategic objectives.
D.26-02-037	Authorized the IOUs continue as EPIC 5 Administrators, along with the CEC, and directed Administrators to submit Community Engagement Plans and file EPIC 5 investment plans.

A8. Acronyms and Abbreviations

Table 15. List of Acronyms and Abbreviations

Acronym	Definition
ADMS	Advanced Distribution Management System
AI	Artificial Intelligence
AMI	Advanced Metering Infrastructure
AURA	AI for Utility Resilience and Adaptation
BESS	Battery Energy Storage System
CAVA	Climate Adaptation Vulnerability Assessment
CBO	Community-Based Organization
CEC	California Energy Commission
CEP	Community Engagement Plan
CHERP	Customer Home Electrification Readiness Program
CI	Carbon Intensity
CIP	Community Impact Platform
CPUC	California Public Utilities Commission
DAC	Disadvantaged Community
DACAG	Disadvantaged Communities Advisory Group
DER	Distributed Energy Resource
DERMS	Distributed Energy Resource Management System
DR	Demand Response
DVC	Disadvantaged Vulnerable Community
EE	Energy Efficiency

Acronym	Definition
EPIC	Electric Program Investment Charge
ESJ	Environmental and Social Justice
EV	Electric Vehicle
GFO	Grant Funding Opportunity
GHG	Greenhouse Gas
GO	General Order
GRC	General Rate Case
ICA	Integration Capacity Analysis
IOU	Investor-Owned Utility
IRP	Integrated Resource Planning
ITF	Integrated Testing Facility
LCOS	Levelized Cost of Storage
LIC	Low-Income Community
MBESS	Mobile Battery Energy Storage System
MHDV	Medium- and Heavy-Duty Vehicle
MSA	Meter Socket Adapter (or Master Services Agreement, depending on context)
NZE	Net-Zero Emissions
OMS	Outage Management System
O&M	Operations and Maintenance
PICG	Policy + Investment Coordination Group
PSPS	Public Safety Power Shutoff
PV	Photovoltaic
RD&D	Research, Development, and Demonstration

APPENDIX A8

Acronym	Definition
RTA	Research Topic Area
SCADA	Supervisory Control and Data Acquisition
SDG&E	San Diego Gas & Electric Company
SME	Subject Matter Expert
SO	Strategic Objective
TD&D	Technology Demonstration and Deployment
UAS	Unmanned Aircraft System
VMA	Vegetation Management Area
VPP	Virtual Power Plant

A9. Glossary

AURA (AI for Utility Resilience and Adaptation)
An AI-enabled planning and decision-support platform that integrates climate, grid, community vulnerability, and load-growth data to help identify, prioritize, and evaluate resilience, adaptation, and infrastructure investment opportunities. It is intended to support more informed and cost-effective utility planning under future climate conditions.

Community Impact Platform (CIP)
SDG&E's digital twin platform developed to support Climate Adaptation Vulnerability Assessment (CAVA) visualization and analysis. CIP serves as the foundation for integrating climate, infrastructure, and community data to support resilience planning and investment decision-making.

Demand Flexibility
The ability of customers, devices, or end uses to adjust electricity consumption in response to grid conditions, price signals, or utility programs by shifting, reducing, increasing, or managing energy use to support reliability, affordability, and clean energy integration.

Digital Twin
A virtual representation of physical assets, systems, or operations that uses real-world data to simulate conditions, evaluate scenarios, support planning, and improve operational decision-making. Within EPIC 5, digital twins may support grid planning, operator training, resilience analysis, and restoration preparedness.

Electrification Concierge
A customer-focused advisory platform that provides personalized guidance on electrification options, incentives, infrastructure requirements, technology choices, and project sequencing to help customers make informed clean energy decisions. The proposed EPIC 5 concept uses AI and utility data to provide tailored electrification roadmaps.

Methane Pyrolysis
A process that heats methane in a non-oxygen environment to produce hydrogen and solid carbon. The technology is being evaluated as a potential low-carbon hydrogen production pathway for customer applications and sectors that are difficult to decarbonize through direct electrification alone.

Operator Readiness
The preparedness of utility system operators to safely and effectively manage grid operations, including abnormal events, outages, high-DER conditions, and emerging technologies. Operator readiness may be enhanced through advanced training, simulation environments, and operational decision-support tools.

Resilient Grid Training Systems (RGTS)
Advanced training and simulation environments designed to help utility operators prepare for complex grid conditions, including high levels of distributed energy resources, inverter-based resources, outages, emergency response scenarios, and evolving operating conditions.

Value of DER Framework
A structured approach for evaluating and quantifying the costs, benefits, operational impacts, customer value, and grid value of distributed energy resources. The framework may help inform planning, policy development, DER compensation, and investment decisions by providing data-driven insights into DER performance and benefits.

A10. Request for Inflation Adjustment Budget Increase

Calculation Method

Using a compounded annual inflation method and the California Department of Finance forecasts[40] points to a 3.34% annualized rate of inflation, over the EPIC 5 cycle 2026-2030, which implies that to maintain purchasing power to the end of 2030, EPIC Administrators will need to raise their budgets by 1.0334^5 – 1 = 17.88%.

During the EPIC 4 cycle, EPIC had no inflation adjustment. Compound annual inflation rate during EPIC 4 was 23.9%, which means that to maintain purchasing power during EPIC 4, the EPIC Administrators needed to have increased budgets by 23.91% (consistent with the calculations CPUC used in Appendix B of D.15-04-020).

SDG&E is using efficiency gains to offset this inflation while still delivering value from its EPIC projects. SDG&E recognizes the impact that inflation rates are having on its ratepayers. Affordability is a guiding EPIC and SDG&E principle. As such, SDG&E is requesting a 5% inflation adjustment.

[40] California Department of Finance Forecast Table of Consumer Price Indices, https://dof.ca.gov/media/docs/forecasting/economics/economic-indicators/inflation/CPI-All-Item-CY.xlsx

CONSUMER PRICE INDICES, UNITED STATES AND CALIFORNIA

Year	CPI-W (Urban Wage Earners & Clerical Workers) United States Index	CPI-W (Urban Wage Earners & Clerical Workers) United States % Change	CPI-W (Urban Wage Earners & Clerical Workers) California Index	CPI-W (Urban Wage Earners & Clerical Workers) California % Change
2000	168.892	3.5	168.077	3.6
2001	173.517	2.7	174.731	4.0
2002	175.875	1.4	179.016	2.5
2003	179.808	2.2	183.759	2.6
2004	184.483	2.6	188.930	2.8
2005	190.975	3.5	195.881	3.7
2006	197.142	3.2	203.267	3.8
2007	202.767	2.9	209.875	3.3
2008	211.053	4.1	217.648	3.7
2009	209.630	-0.7	216.292	-0.6
2010	213.967	2.1	219.713	1.6
2011	221.575	3.6	226.364	3.0
2012	226.229	2.1	231.610	2.3
2013	229.324	1.4	234.947	1.4
2014	232.771	1.5	238.960	1.7
2015	231.810	-0.4	241.617	1.1
2016	234.076	1.0	246.194	1.9
2017	239.051	2.1	253.267	2.9
2018	245.146	2.5	263.091	3.9
2019	249.222	1.7	270.842	2.9
2020	252.248	1.2	275.630	1.8
2021	265.510	5.3	288.710	4.7
2022	287.984	8.5	310.565	7.6
2023	298.990	3.8	321.228	3.4
2024	307.552	2.9	330.850	3.0
2025	315.492	2.6	341.537	3.2
2026 f/	326.468	3.5	355.253	4.0
2027 f/	333.688	2.2	366.236	3.1
2028 f/	341.357	2.3	377.951	3.2
2029 f/	349.372	2.3	390.119	3.2
2030 f/	357.544	2.3	402.590	3.2

Actual data through 2025 are from U.S. Bureau of Labor Statistics (BLS) and California Department of Industrial Relation (DIR); projected levels and growth rates are from the f/ May Revision Forecast, May 2026.

All Urban Consumers: Include, in addition to wage earners and clerical workers, groups such as professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, and retirees, and others not in the labor force.

California CPI:

From 1965 to 1986: Population-weighted average of the CPI for Los Angeles, San Diego, and San Francisco MSAs.

From 1987 to 2017: Population-weighted average of the CPI for Los Angeles and San Francisco MSAs.

From 2018 onward: Population-weighted average of the CPI for Los Angeles, Riverside, San Diego, and San Francisco MSAs.

Los Angeles MSA: Includes the counties of Los Angeles and Orange.

Riverside MSA: Includes the counties of Riverside and San Bernardino.

San Diego MSA: San Diego county.

San Francisco MSA: Includes the counties of Alameda, Contra Costa, Marin, San Francisco, and San Mateo.

Source:

United States, Los Angeles, Riverside, San Diego, and San Francisco MSAs -- U.S. Bureau of Labor Statistics (BLS).

California -- Calculated by the CA Department of Finance using a formula developed by the CA Dept. of Industrial Relations (DIR).

Forecast -- CA Department of Finance, (percent changes calculated from unrounded data).

Annual percent change from 2026 onward are based on forecast.

Beginning with the January 2007 data, indices published by the BLS will be rounded to three decimal places.

Updated: May 2026.

Next forecast update: January 2026 (2026-27 Governor's Budget Forecast).

A11. Coordination and Alignment with CPUC Proceedings

Appendix A11 provides additional detail regarding how SDG&E's proposed EPIC 5 Strategic Initiatives align with and support CPUC proceedings.

Initiative Title: 1. Integrating DERs to Advance Grid and Community Resiliency

Alignment with CPUC Proceedings	Shared Focus and Initiative Alignment	Anticipated Outcomes and Ratepayer Benefits
R.25-08-004, Interconnection and **R.21-06-017, High DER Future Grid, Tracks 1 and 3**	Advances scalable approaches for planning, interconnecting, coordinating, and operating customer-owned and utility-integrated DERs. The initiative supports improved visibility into new load and DER adoption, earlier identification of grid constraints, DERMS coordination, customer-resource orchestration, distribution-system visibility, and operator readiness.	More timely and data-informed interconnection processes; reduced customer friction and delays; clearer interconnection pathways; improved situational awareness and circuit-level planning; more effective DER dispatch; and enhanced grid reliability and resilience.
R.19-10-005, Vehicle Electrification and **R.22-07-005, Demand Flexibility**	Evaluates how EV charging and other flexible customer loads can be coordinated with batteries, solar, automated controls, and demand flexibility programs to better align customer energy use with grid conditions.	Reduced peak-demand impacts; improved EV load management; increased participation in managed charging and demand flexibility offerings; greater automated load-shifting capability; improved bill-savings opportunities; and more effective use of customer resources to support grid needs.
R.22-11-013, DER Cost and Data Access and Use, and Equipment Performance Standards	Generates measurable information on DER performance, costs, customer participation, load impacts, interoperability, operational value, and the potential to avoid or defer infrastructure investments. The resulting data can inform DER valuation, distribution planning, policy development, and future investment decisions.	More transparent DER cost and performance information; improved understanding of customer-resource value; better planning and investment inputs; more efficient infrastructure spending; and potential avoidance or deferral of higher-cost grid investments.

Initiative Title: 2. Next Generation Resilience and Response

Alignment with CPUC Proceedings	Coordination Opportunity / Alignment	Anticipated Outcomes and Ratepayer Benefits
R.24-05-023 Safety, Reliability, and Resilience of Electrical Distribution Systems	Evaluate technologies and operational strategies that improve reliability, strengthen operational awareness, and reduce customer disruptions during grid events.	Improved situational awareness, stronger reliability planning, faster identification of system issues, and reduced customer impacts during outages or grid events. Safer, more reliable service; fewer customer disruptions; and more efficient use of ratepayer-funded reliability investments.
R.18-04-019 Climate Adaptation and related **Wildfire Mitigation** and **Public Safety Power Shutoff (PSPS)** proceedings	Evaluate tools that help SDG&E anticipate climate-driven risks, improve wildfire preparedness, and better target mitigation investments.	Improved wildfire-risk identification, enhanced climate adaptation planning, stronger PSPS preparedness, and more targeted resilience and mitigation strategies. Reduced likelihood and impacts of outages, improved wildfire safety, and more cost-effective resilience investments for customers and communities.
R.20-05-003 Integrated Resource Planning	Generate data and insights that can help prioritize cost-effective resilience investments, improve infrastructure planning, and avoid redundant or inefficient spending.	Better-informed investment planning, improved prioritization of resilience projects, and reduced risk of duplicative or unnecessary infrastructure development. More prudent use of customer funds, improved long-term planning, and potential avoidance of unnecessary or inefficient investments.
R.21-06-017 High Distributed Energy Resources	Improve visibility into evolving load patterns, climate impacts, and distribution system conditions associated with a more distributed and electrified grid.	Enhanced understanding of load growth, DER impacts, and changing distribution system needs under climate-related and electrification-driven conditions. Improved grid planning, stronger DER integration readiness, and better alignment of infrastructure investments with evolving customer and system needs.
R.19-09-009 Microgrids and Resiliency	Evaluate technologies that can strengthen community resilience, improve outage response and restoration, and support deployment of resilience solutions in areas with elevated reliability or wildfire risks.	Improved outage response, faster restoration, stronger community resilience, and better information to guide future resilience solution deployment. Increased reliability and resilience for customers in higher-risk areas, improved restoration performance, and more targeted use of ratepayer resources.

Initiative Title: 3. Guiding Customers to a Clean Energy Future

Alignment with CPUC Proceedings	Coordination Opportunity / Alignment	Anticipated Outcomes and Ratepayer Benefits
R.19-01-011, Building Decarbonization	Supports customer electrification planning by helping customers understand electrification options, infrastructure requirements, costs, incentives, and project sequencing. The initiative evaluates how personalized, utility-backed guidance can reduce barriers to adopting clean energy technologies and accelerate informed customer decision-making.	Improved customer understanding of electrification pathways, increased adoption of cost-effective electrification measures, greater utilization of available incentives, reduced customer confusion, and a more streamlined customer experience when pursuing clean energy upgrades.
R.21-06-017, High Distributed Energy Resources (High DER Future Grid)	Improves visibility into when, where, and how customers may adopt electrification technologies and distributed energy resources, helping inform distribution planning, load forecasting, and grid-readiness strategies. The initiative can provide insights into customer adoption patterns and infrastructure needs associated with an increasingly electrified and distributed energy system.	More accurate load forecasting, improved coordination between customer adoption and grid planning, enhanced DER integration readiness, and more efficient infrastructure investment decisions that support reliability, affordability, and customer choice.
R.24-09-012, Long-Term Gas Planning	Helps customers understand feasible pathways to transition fossil-fuel end uses to cleaner electric alternatives over time. The initiative can provide information on customer adoption trends, barriers, and decision-making factors that may influence long-term gas demand and customer transition planning.	Better-informed customer transition decisions, improved understanding of electrification opportunities and barriers, more effective long-term planning assumptions, and reduced risk of inefficient infrastructure investments as California advances its decarbonization goals.
R.23-12-008, Transportation Electrification Policy and Infrastructure, R.22-07-005, Demand Flexibility Through Electric Rates, and R.24-01-018, Establishing Energization Timelines	Supports customer electrification planning by helping customers understand how EV charging, demand flexibility participation, and electrification upgrades fit within broader home and business energy decisions. The initiative can provide personalized guidance on infrastructure readiness, panel capacity, service requirements, rate	Improved customer understanding of EV charging and electrification pathways, increased participation in demand flexibility programs, greater utilization of available incentives, earlier identification of infrastructure and service upgrade needs, reduced risk of project delays, improved customer experience, and more informed customer decisions.

Alignment with CPUC Proceedings	Coordination Opportunity / Alignment	Anticipated Outcomes and Ratepayer Benefits
	options, demand flexibility opportunities, available incentives, project sequencing, and potential energization considerations. It also provides insights into customer adoption patterns that can support utility planning for transportation electrification, flexible load management, and energization readiness.	Additional benefits may include improved load forecasting, better alignment between customer adoption and grid planning, more efficient infrastructure investments, and reduced long-term system costs while supporting California's transportation electrification and clean energy goals.

Initiative Title: 4. Decarbonization Pathways for California's Economy

Alignment with CPUC Proceedings	Coordination Opportunity / Alignment	Anticipated Outcomes and Ratepayer Benefits
R.20-01-007 and R.24-09-012, Long-Term Gas Planning	Evaluates whether existing gas infrastructure, when paired with methane-leak mitigation and lifecycle-emissions controls, can support a coordinated, lower-carbon role for gaseous fuels during California's energy transition.	Improved understanding of the cost, emissions, reliability, infrastructure, and long-term planning considerations associated with low-carbon gaseous fuels; better-informed decisions regarding the future role of existing infrastructure; and reduced risk of premature or inefficient ratepayer investment.
R.19-01-011, Building Decarbonization	Evaluates complementary low-carbon fuel pathways for commercial and industrial applications where direct electrification may not yet be technically feasible, operationally practical, or cost-effective.	Expanded decarbonization options for difficult-to-electrify customers; improved information regarding technology costs and applicability; and more informed customer and utility transition planning.
R.13-02-008, Biomethane Standards, Pipeline Open Access Rules, and Related Enforcement Provisions	Provides research relevant to renewable and low-carbon gas policy, including hydrogen definitions, gas-quality considerations, lifecycle emissions, and the potential need for further demonstrations to evaluate safe integration or injection standards.	Objective technical and operational data to inform future standards, safety requirements, emissions accounting, and regulatory consideration of low-carbon hydrogen applications.
R.20-05-003, Integrated Resource Planning	Evaluates the potential role of low-carbon hydrogen in supporting system reliability and economy-wide	Better-informed resource-planning assumptions; improved understanding of hydrogen's potential reliability and

Alignment with CPUC Proceedings	Coordination Opportunity / Alignment	Anticipated Outcomes and Ratepayer Benefits
	decarbonization, particularly for applications that may be difficult to serve through direct electrification alone.	decarbonization value; and more prudent evaluation of future infrastructure and resource investments.
Transportation Electrification and Clean Transportation Proceedings	Explores whether low-carbon hydrogen could support medium- and heavy-duty transportation applications where battery-electric solutions may face range, payload, fueling-time, or infrastructure constraints.	Additional decarbonization pathways for difficult-to-electrify transportation applications; improved understanding of customer costs and infrastructure needs; and reduced risk of investing in solutions that may not meet operational requirements.