BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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11/06/26
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Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future.	R.21-06-017 (Filed June 24, 2021)

SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) INDEPENDENT PROFESSIONAL ENGINEER DISTRIBUTION PLANNING ADVISORY GROUP REPORT

PUBLIC VERSION

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November 6, 2026

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Pursuant to the *Administrative Law Judges' Ruling Setting Schedule for the 2026-2027 Distribution Planning and Execution Process Cycle* dated April 20, 2026 (the "Ruling"), San Diego Gas & Electric Company ("SDG&E") hereby submits into the record of this proceeding the Independent Professional Engineer SDG&E 2026 Distribution Planning Advisory Group ("DPAG") Report dated November 6, 2026 prepared by Resource Innovations (the "DPAG Report"). The DPAG Report is attached hereto as **Attachment A.** Concurrently with this motion, SDG&E is submitting a motion for leave to file under seal the confidential version of the DPAG Report.

Respectfully submitted,

/s/ Roger A. Cerda

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November 6, 2026

ATTACHMENT A

INDEPENDENT PROFESSIONAL ENGINEER SDGE 2026 DPAG REPORT

resource innovations



Public Independent Professional Engineer SDG&E 2026 DPAG Report

Submitted to California Public Utilities Commission Energy Division and SDG&E

Date: November 6, 2026

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1. Introduction and Background

Summary of CPUC Rulemaking 14-08-013 and Other Rulemakings

In August 2014, the CPUC issued Rulemaking (R.) 14-08-013, which established guidelines, rules, and procedures to direct California's Investor-Owned Utilities (IOUs) to develop Distribution Resources Plans (DRPs).

In February 2018, the Commission issued Decision (D.) 18-02-004 which adopted the Distribution Investment Deferral Framework (DIDF) and directed the IOUs to file a Grid Needs Assessment (GNA) by June 1 of each year and a Distribution Deferral Opportunity Report (DDOR) by September 1 of each year. The GNA, as adopted by this decision, limits reported grid needs to four types of forecasted circuit level system deficiencies associated with the four distribution services that DERs can provide, as adopted in D.16-12-036: capacity, voltage support, reliability (back-tie) and resiliency (microgrid).

In May 2019, the assigned Administrative Law Judge (ALJ) issued a ruling that directed IOUs to file both the GNA report and DDOR on August 15 annually.

In April 2020, the assigned ALJ issued a ruling modifying the DIDF process and filings with respect to the Independent Professional Engineer (IPE) scope of work. This ruling also updated the 2020-2021 DIDF cycle schedule and defines the DIDF cycle to start on January 1 of each year and concludes July 31 the following year. Attachments A and B of the Ruling include a listing of the IPE-specific reforms discussed in the Ruling and the updated IPE scope of work. These Attachments to the Ruling are attached as Appendix A of this report. This ruling also included a new IPE Post-DPAG Report deliverable within the IPE scope of work.

In May 2020, the assigned ALJ issued a ruling modifying the DIDF process. This Ruling established 56 new reform requirements including process changes for approval for the Integrated Energy Policy Report (IEPR) dataset used for forecasting, requests for certain datasets to be hosted on the DRP Data Portals, value stacking that may result in deferral projects that exceed the cost cap, changes to how Locational Net Benefit Analysis (LNBA) data is presented, and recommendations for potential 2021-2022 DIDF cycle reforms.

In February 2021, the Commission issued IDER D. 21-02-006 which introduced the Partnership Pilot and the SOC Pilot and streamlined the DIDF RFO.

In June 2021, the assigned ALJ issued a ruling on recommended reforms to the DIDF process and revisions to some previous reforms to align with requirements adopted by D. 21-02-006.

In November 2021, the Order Instituting Rulemaking (OIR) to Modernize the Electric Grid for a High Distributed Energy Resources Future (R.21-06-017) was filed to replace the 2014 Distribution Resource Plan and now stands as the OIR home for GNA and DDOR compliance.

In 2022, the Commission issued the 2022 DIDF Ruling, establishing seven reforms to three solicitation frameworks.

In May 2023, the Commission's 2023 DIDF Ruling focused primarily on updates to known load tracking and reporting, as well as terminating the SOC Pilot.

In June 2024, the assigned ALJ granted the motion filed by SDG&E and SCE, as well as a separate motion filed by PG&E, requesting that portions of the DIDF process be suspended temporarily and removing solicitation-related reporting requirements within the 2024 GNA/DDOR reporting period, as well as off-ramping the Partnership Pilot.

In October 2024, D.24-10-030 eliminated the DIDF solicitations process. The decision focused on measures to enhance the transparency of the distribution planning process. This included renaming DDOR to Distribution Upgrade Project Report (DUPR) and additional reporting requirements in the DUPR.

In December 2025, the Commission adopted Resolution E-5413 (Pending Loads) and Resolution E-5414 (Scenario Planning), which establish additional requirements applicable to the 2025–2026 Distribution Planning and Execution Process (DPEP) cycle and this GNA/DUPR filing.

Resolution E-5413 requires utilities to implement a standardized pending loads framework, including the categorization, tracking, and reporting of pending loads in the GNA and DUPR, and to describe how changes in pending load assumptions are incorporated into grid need identification and planned investments.

Resolution E-5414 requires utilities to adopt a scenario planning framework based on Low, Base, and High load growth scenarios and to incorporate the results of those scenarios into both the GNA and DUPR. The Resolution further requires utilities to develop and report a transparent decision logic framework describing how multiple scenario outcomes are translated into a single set of planned investments included in the DUPR.

In April 2026, the ALJ issued a ruling that set the schedule for the 2025-26 and 2026-27 Distribution Planning and Execution Process (DPEP) cycles. The schedule for the 2025-26 DPEP cycle is shown in Table 1-1.

Table 1-1 Proposed DPAG Schedule for 2025-26 DPEP Cycle (Partial table from the April 2026 ALJ Ruling)

Activity	Date
IOU GNA/DUPR filings Final IPE Plans Circulated	August 17, 2026
IPE Preliminary Analysis of GNA/DUPR data adequacy circulated	September 4, 2026
DPAG meetings with each IOU	Week of September 14, 2026
Participants provide questions and comments to IOUs and IPE	September 25, 2026
IOU responses to questions	October 5, 2026
Follow-up IOU meetings via webinar (Optional)	Week of October 12, 2026
IPE DPAG Reports	November 6, 2026
IPE Post-DPAG Report (covering all three Utilities)	March 15, 2027

Independent Professional Engineer

The California Public Utilities Commission (Commission) rulings direct Pacific Gas and Electric Company, San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (Utilities or IOUs) to enter into a contract with an Independent Professional Engineer (IPE). Through a contract with Resource Innovations, SDG&E engaged Mr. Sundar Venkataraman[1], PE, to serve as the advisory engineer (referred to as the Independent Professional Engineer (IPE)).

The (IPE services for the 2025-26 DPEP is per CPUC D.18-02-004, Administrative Law Judge's Ruling (R. 14-08-013) issued May 7, 2019, and Administrative Law Judge's Ruling Modifying DIDF (R.14-08-013) issued April 13, 2020, which defined the original IPE scope of work. This original scope of work has been modified by subsequent orders and rulings, as well as updates to the scope of work made by the Energy Division on March 4, 2025, which modified the original scope and included additional scope items to support the High DER proceeding. This updated scope of work is included as Appendix A.

[1] Consistent with the CPUC decision, the contract with Resource Innovations (RI) provides for other individuals within RI to assist Mr. Venkataraman to perform the work in the IPE contract provided that these other individuals are also bound by the same confidentiality and conflict of interest requirements that Mr. Venkataraman is required to meet.

1.1. IPE Plan

As required by the April 23, 2020, Ruling, the IPE developed an IPE Plan that served to guide the IPE's steps to verify and validate the GNA/DDOR results. The plan was developed using a three-step process:

1. In step 1, IPE developed a draft IPE Plan working with the Energy Division and SDG&E by mid-May 2026.
2. The Plan was distributed to the service list and also discussed at the CPUC Distribution Forecasting Working Group (DFWG) meeting - both in an attempt to obtain stakeholder feedback on the plan.
3. Based upon stakeholder feedback received and under the direction of the Energy Division, the IPE revised the plan and made its IPE Final Plan available on August 17, 2026.

A copy of the Final IPE Plan is included as Appendix C.

The IPE Plan covers the business processes that the IOUs use to identify which distribution or sub-transmission projects are recommended to proceed to implementation. One of the core purposes of the plan is to answer the question - Are the IOUs identifying every project that will be needed to provide the new or additional service requirements of their customers early enough to provide the service in a timely manner?

The business processes in the plan are organized generally in the order that they are performed. Starting with capturing the peak load values for each circuit, using the CEC IEPR forecasts to develop utility specific system level values which are then disaggregated to the circuit level, adjusted for known and pending loads and then used to determine if there is an overload or other issue during the planning period. For circuits that have a need, the least-cost/best-fit planned investment is selected.

In every DPEP cycle, the IPE reviews the plan to determine if any of the steps could be streamlined or eliminated in that cycle without compromising the intent of the verification and validation process. Such streamlining allows the IOUs and the IPE to focus additional time on more recent additions in the IPE's scope. Based on this review, the following steps were skipped since the business process used by the utility did not change from the prior cycle[2]:

- Steps 5-7 - Convert Peak Growth to 8760 Profile, Determine Net Load and Peak Load

[2] SDG&E's business process for normalizing the peak load and developing the base load profiles changed in this cycle. Therefore, a verification and validation of Step 5 was included in this cycle.

- Steps 9-11 - Initial Comparison to Equipment Ratings, Evaluate No Cost Solutions and Comparison to Equipment Ratings after No Cost Solutions
- Step 14 - Development of capital costs for the planned investments.
- Step 19 - Compare 2026 forecast loads with actual loads

In addition, the verification and validation of the following steps related to the identification and prioritization of Candidate Deferral Opportunities (CDOs) are no longer required since the requirement for DIDF solicitations have been eliminated as per D.24-10-030.

- Step 15 - Development of Candidate Deferral Projects
- Step 16 - Development of operational requirements for CDOs
- Step 17 - Prioritization of Candidate Deferral Projects into Tiers
- Step 18 - Calculation of LNBAs for planned projects
- Step 25 - Track solicitation results to inform next cycle

In addition, based on inputs from the ED, the following steps were skipped in this cycle.

- Step 21 - Review plan for changes to the planning process for the next cycle
- Step 22 - Review implementing of planning standard and/or planning process
- Step 23- Review list of internally approved capital projects

Two steps (Steps 27 and 28), which were added in the last cycle, were included in this cycle.

- Step 27 – Review Methodology used for Prioritization of Planned Projects
- Step 28 – Review Project Execution Tracking Data and Metrics

Several new steps were added in this cycle.

- Step 4b – Determine hot spots
- Step 4c – Gather Pending Loads data used in Step 2
- Step 13b – Develop solution for single investment plan
- Step 13c – Determine if planned solutions/projects identified in previous cycles continue to be needed and are the appropriate solution to meet the need (project scope and timing)
- Step 20b – Analyze pending load tracking dataset. Review categorization of PL and supporting information

In this cycle, SDG&E did not identify any hot spots since no B2 or C pending loads were present within the 10-year planning horizon. Pursuant to E-5414, SDG&E is allowed to create

only base and high scenarios for the 2025-2026 DPEP cycle[3]. Because there was no existence of B2 or C Pending Loads within the planning horizon, SDG&E's high scenario was equivalent to the base scenario. As such, it was decided that verification and validation of Steps 4b and 13b were not required to be performed in this cycle.

1.2. Definitions of Verification and Validation

As part of the development of the IPE Plan, detailed definitions were developed to clarify the meaning of Verification and Validation as applied to the IPE scope of work. These definitions which are used and applied in all IPE deliverables are listed below:

Verification – Is a review performed by the IPE during which an independent check is performed to determine if the results produced were developed using data assumptions and business processes that were defined and described by the utility or are based upon standard industry approaches that do not have to be defined and described. In other words, "Did the IOU follow their own processes correctly as defined by the IOU?"

Validation – Is a review performed by the IPE during which an independent assessment is performed of the appropriateness of the approach taken by the utility to perform a task from an engineering, economics, and business perspective. In other words, "Are the processes implemented by the IOU the best way to identify all necessary planned solutions and investments. And to what extent were the IOU methodologies appropriate and effective?"

1.3. Services Considered within the DDOR Framework

D.16-12-036 approved the four services proposed by the Competitive Solicitation Framework Working Group (CSFWG)[4] and directed the utilities to consider these services in the GNA/DDOR process. The four services described in the decision are listed below in an excerpt from the decision:

"The following definitions for the key distribution services that distributed energy resources can provide are adopted for the Competitive Solicitation Framework:

- Distribution Capacity services are load-modifying or supply services that distributed energy resources provide via the dispatch of power output for generators or reduction in load that is capable of reliably and consistently reducing net loading on desired distribution infrastructure.

[3] E-5414 OP2 "San Diego Gas and Electric Company shall partially implement scenario planning in the 2025-2026 DPEP cycle, performing only a high and base case scenario"
[4] D.16-12-036 OP 2

- Voltage Support services are substation and/or circuit level dynamic voltage management services provided by an individual resource and/or aggregated resources capable of dynamically correcting excursions outside voltage limits as well as supporting conservation voltage reduction strategies in coordination with utility voltage/reactive power control systems.
- Reliability (back-tie) services are load-modifying or supply services capable of improving local distribution reliability and/or resiliency. Specifically, this service provides a fast reconnection and availability of excess reserves to reduce demand when restoring customers during abnormal configurations; and
- Resiliency (micro-grid) services are load-modifying or supply services capable of improving local distribution reliability and/or resiliency. This service provides a fast reconnection and availability of excess reserves to reduce demand when restoring customers during abnormal configurations."

1.4. Approach to Information Collection

The data required for the verification and validation of each business step, as well as the date when the data was due were specified in the Final IPE plan that was issued on August 17, 2026. This data was provided by SDG&E to the IPE using their secure FTP site. In addition, the information reflected in this report was obtained through a number of methods including:

- Email exchanges with SDG&E to review material, respond to IPE questions, and describe any Verification and/or Validation Demonstration walk-throughs as outlined in the IPE Plan and whose results are described later in the report.
- Participation in SDG&E's DPAG Webinar (September 18, 2026).
- A review of publicly available materials referred to in the discussions with SDG&E or materials previously filed with the CPUC.

A list of the data provided by SDG&E is included as Appendix D.

1.5. Report Contents

The remainder of this report includes the following sections:

- **Section 2** – Review of GNA Report, which briefly discusses the contents of the SDG&E GNA Report, and any significant differences noted in SDG&E's reports between the 2026 and 2025 reports. Observations and comments that result from the Validation review with respect to the GNA Report are included in this section.

- **Section 3** – Review of DUPR Report, which briefly discusses the contents of the SDG&E DUPR Report, and any significant differences noted in SDG&E's reports

between the 2026 and 2025 reports. Observations and comments that result from the Validation review with respect to the DUPR Report are included in this section.

- **Section 4** – IPE Recommendations
- **Section 5** – Known Load Tracking Data and Metrics, which reviews the known load tracking data and the known load metrics calculated by the utilities.
- **Section 6** – Verification Approach and Results, which reviews the approach and results of the verification performed by the IPE
- **Appendix A** – Revised IPE Scope of work
- **Appendix B** – DPAG Meeting responses.
- **Appendix C** – IPE Final IPE Plan - SDG&E
- **Appendix D** - SDG&E Data Requests and Responses

Confidential Information

There are a number of places in this report that contain confidential Information. They may include, for example, grid needs information from the GNA or DDOR that are subject to the 15/15 Rule or contains business confidential data. This data is highlighted to show that it is Confidential but is still readable. The documents that are included in the appendices of this report are treated the same way. SDG&E has also assigned a pseudonym (such as "A" or "B") for a circuit name whenever it appears in the filename in both the confidential and public versions of the attachments.

The public version of this report will contain some figures and tables that are redacted. We recognize that this impacts the information that the public receives from the IPE report. We have tried to minimize the impact of redaction in the public report by providing both GNA and Facility IDs (which are public). We have also provided the results of our verification in a generic way without naming the circuit(s) on which the verification was performed.

2. Review of GNA Results

The GNA/DUPR Report submitted by SDG&E is summarized at a high level below. The GNA report is intended to provide stakeholders with an overview of grid needs that arise from the IOU's distribution planning process. The DUPR is intended to provide stakeholders with an overview of each IOU's new planned investment(s) with a focus on improving transparency of the DPEP and monitoring distribution planning improvements.

2.1. Scope of SDG&E's GNA/DUPR Reports

The SDG&E GNA/DUPR Report is a written report with an accompanying Excel spreadsheet of potential grid needs on its distribution system. SDG&E filed its GNA/DUPR Report for the 2025-2026 DPEP cycle on August 17, 2026, as required by the CPUC. SDG&E's 2026 GNA/DUPR report is organized similar to last year's report under the sections shown below. This year's report also includes a new section on Pending Loads tracking data and metrics.

- Distribution Planning Process
- SDG&E's Distribution Resources Planning Assumptions and GNA Scope
- GNA Results
- DUPR Planned Project Results
- Known Load Tracking Data and Metrics
- Pending Load Tracking Data and Metrics
- Distribution Capital Per Customer Metric

The report contains the following appendices:

- Appendix 1 – Load Disaggregation
- Appendix 2 – Substation Bank and Circuit Forecast Detail Summary
- Appendix 3 – DER Disaggregation Process
- Appendix 4 – Known Load and Pending Load Tracking Data
- Appendix 5 – DUPR – Planned Investments
- Appendix 6 – Project Execution Table

2.1.1. Distribution Planning Process

SDG&E's overall distribution planning process, which remains unchanged from the prior cycle, begins with assessing the historical peak load review for circuits and banks. SDG&E makes adjustments to the historical peak load considering factors such as anticipated new load additions, load transfers, loss of a generator, and weather conditions at the time of the historical peak, etc. In this cycle, SDG&E transitioned from using an in-house methodology for normalizing peak load for weather to using LoadSEER for this purpose.

SDG&E uses a third-party proprietary software forecast toolset from Integral Analytics, Inc. (LoadSEER) to disaggregate the load forecast provided by the California Energy Commission (CEC) to a circuit level. SDG&E uses another third-party software (SPIDER - Spatial Penetration & Integration of Distributed Energy Resources) to disaggregate some of the CEC's IEPR Distributed Energy Resource (DER) forecast components such as light duty electric vehicles (LDEV), photovoltaic solar and energy storage, to the zip code level. SDG&E maps the zip code level forecast from SPIDER to circuits based on the customer counts on each circuit within the given zip code.

All of this data is used in LoadSEER to obtain 576 hourly net load circuit forecasts (typical weekday and weekend loads for each month) which are reviewed by SDG&E's distribution planning engineers to identify and correct errors, to address technical issues, and to validate the circuit level forecasts for overall reasonableness.

SDG&E also develops power flow models in Synergi by extracting circuit models from its Geographic Information System (GIS) and forecasts from LoadSEER. These power flow models are used to investigate voltage, as well as capacity needs at the line segment level.

SDG&E identifies conventional distribution projects or Non-Wires Alternatives (NWA) (such as utility-owned battery storage) that mitigate forecast circuit performance issues revealed by the power flow results (i.e., distribution needs). SDG&E investigates if any of the forecast grid deficiencies have operational-based solutions (which have little to no associated capital investment), are the result of forecast discrepancies, and/or have committed planned investments that were identified in a previous planning cycle. Based on this analysis, SDG&E provides a list of distribution needs that would result in a new distribution capital infrastructure, if built. These are included in the DUPR as Planned Investments. SDG&E's Distribution Planning Process does not identify needs on the secondary electric system (e.g., service transformers, service drops) nor mitigation for needs on the secondary system.

2.1.2. SDG&E's Distribution Planning Assumptions and GNA Scope

This section discusses the methodology and assumptions related to load forecasts, DER growth forecasts and distribution operational switching/load transfer criteria used to forecast and identify distribution needs that are reflected in SDG&E's 2026 GNA.

SDG&E's Distribution Planning Horizon

SDG&E's 2026 GNA covers the period between 2026-2035. Starting this year the IOUs were required to extend the planning horizon to a minimum of 10 years from five years used in the

past cycles.[5] As in the prior GNA's, SDG&E uses only the first three years of the five-year forecast when identifying needs associated with downstream line segments of a circuit.

SDG&E's Distribution System Load Forecast Assumptions

SDG&E used the CEC adopted 2024 IEPR Local Reliability Scenario[6] consisting of the system-level baseline demand forecast, Additional Achievable Energy Efficiency (AAEE) scenario 2, Additional Achievable Fuel Substitution (AAFS) scenario 3, and Additional Achievable Transportation Electrification (AATE) scenario 3, for the SDG&E distribution service area as the starting point for forecasting circuit-level loads. Note that SDG&E proposed to use AAFS Scenario 3 (instead of AAFS Scenario 4 which is used in the Local Reliability Scenario) for planning because the CEC identified important distinctions between Programs incremental to Codes and Standards (PiCS) and Zero Emission Appliance Standards (ZEAS) assumptions in the SDG&E service territory.

SDG&E used a process to adjust the CEC's forecast for known load additions and identify remaining loads (econometric or spatial loads) to be disaggregated in the forecasting models. In this cycle, SDG&E used all the known loads, with the exception of Transportation Electrification (TE) known loads for adjusting the CEC's baseline load growth forecast. TE known loads were deducted directly from the CEC IEPR's system-level TE load growth forecast, which was obtained by combining the baseline and AATE components of the IEPR forecast. The process used by SDG&E to reconcile known loads with the IEPR forecast was verified by the IPE and is further discussed in Section 2.4 of this report.

The resultant system-level growth, allocated by customer class (residential, industrial, and commercial) is disaggregated to a circuit level using the LoadSEER GIS geo-spatial forecasting program which employs satellite imagery and proprietary data analytics to score each acre in SDG&E's territory for the likelihood of increased load by customer class. The circuit-level load forecasts are entered into the LoadSEER forecasting program which generates the 576-hourly load profiles for each circuit.

In this cycle, SDG&E created Pending Loads categories as per D.24-10-030 which described pending loads as "less certain than a known load (e.g., a customer request for service) but more certain than economic disaggregation of the IEPR forecast based on trends." SDG&E also developed a hot spot methodology to include the pending loads in scenario planning as per Resolutions E-5413 and E-5414. SDG&E only identified category B1 pending loads within the 10-year planning horizon. SDG&E did not identify any incremental category B2 or C pending loads within the 10-year planning period. However, SDG&E did identify B2 pending

[5] D.24-10-030 at 54

[6] As per May 9, 2025, Joint Utilities (SCE, SDG&E and PG&E) Letter to Energy Division seeking approval of the IEPR forecast elements for 2025-2026 Distribution Planning Process cycle.

loads based on MDHD EV bottom-up forecast beyond the 10-year planning period. Since there were no B2 or C pending loads within the planning period, SDG&E did not identify any hot spots. Since this would result in no differences between the base and high scenarios, SDG&E studied a single forecast scenario[7].

SDG&E performs weather normalization for each circuit using the circuit's historical daily maximum load and the historical Temperature-Humidity Index (THI) derived from a nearby weather station. The weather normalization process was updated in the last cycle. The IPE's verification of the process is discussed in Section 6 of this report. Finally, LoadSEER software applies an adverse weather factor to each circuit to create the 1-in-10 weather-year forecast which is the basis for identifying distribution grid needs.

SDG&E employs several steps to validate and adjust historical peak loads to establish a starting point for distribution loading projections that are consistent with the existing circuit configuration on a going-forward basis. SDG&E also adjusts the circuit and transformer bank peak loads, if necessary, to account for the largest distributed generation facility interconnected with a circuit being offline during that circuit's or transformer bank's peak – also known as G-1 planning scenario.

In Appendix 2 of the GNA report, SDG&E provided a detailed summary of the substation bank and circuit peak demand forecasts that were utilized for the GNA.

SDG&E's Distribution System DER Growth Forecast Assumptions

SDG&E uses CEC's hourly system level forecasts for behind-the-meter photovoltaic solar (PV), behind-the-meter energy storage (ES), energy efficiency (AAEE), light duty electric vehicles (LDEV), medium-heavy duty electric vehicles (MDHDEV), as well as fuel substitution (AAFS) as a starting point for modeling these load modifiers.

For the 2025-26 DPEP, SDG&E used the following 2024 IEPR Local Reliability Scenario documents to develop DER growth at the circuit level:

- CEDU 2024 Baseline Forecast – SDGE
- CED 2024 Hourly Forecast – SDGE – Local Reliability
- 2024 AAEE Hourly Impacts – SDGE – Scenario 2

[7] OP2 of Scenario Planning resolution E-5414 required San Diego Gas and Electric Company to partially implement scenario planning in the 2025-2026 DPEP cycle, performing only a high and base case scenario.

- 2024 AAFS Hourly Impacts – SDGE – Scenario 3[8]
- 2024 AATE Hourly Impacts – SDGE – Scenario 3

SDG&E uses the SPIDER model to disaggregate the above-mentioned system-level DER forecasts. The system-level incremental megawatt (MW) capacity by DER technology type is allocated to the circuits based on allocation methodologies specific to each DER type. Variables used to allocate incremental DER capacity geospatially include consumption by customer class, historical PV adoption by zip code, the s-curve trending model, weather zones, and many other factors specific for each type of DER. The variables and disaggregation methodology are discussed in Appendix 3 of SDG&E's GNA report. In this cycle, SDG&E made improvements, such as MDHD EV representation at the system level, enhanced gas consumption data, uploaded DER load shapes and a forecast software upgrade, as described in the May 2026 DFWG meeting.

The process used by SDG&E to disaggregate DERs was verified by the IPE and is further discussed in Section 7 of this report.

SDG&E's Load Transfers and Switching Assumptions

SDG&E's 2026 GNA included "low cost" load transfers and switching operations to arrive at the final list of mitigation solutions. The operational/switching-based load transfers are normally the lowest cost options to address an identified need and utilize existing capacity on distribution circuits. The 2026 GNA deficiencies addressed through load transfers are shown in Table 2-1. A hundred and fifty needs were solved through load transfers. In addition, there were three needs addressed through phase balancing - GNA_2026_007 (2026_0043), GNA_2026_080 (2026_0533) and GNA_2026_081(2026_0534).

[8] As mentioned earlier, SDG&E proposed to use AAFS Scenario 3 (instead of AAFS Scenario 4 which is used in the Local Reliability Scenario) for planning because the CEC identified important distinctions between Programs incremental to Codes and Standards (PiCS) and Zero Emission Appliance Standards (ZEAS) assumptions in the SDG&E service territory.

Table 2-1: SDG&E GNA Deficiencies Solved via Load Transfers and Phase Balancing

GNA_ID	Facility ID	GNA_ID	Facility ID	GNA_ID	Facility ID	GNA_ID	Facility ID
GNA_2026_001	2026_0008	GNA_2026_132	2026_0874	GNA_2026_062	2026_0375	GNA_2026_122	2026_0836
GNA_2026_002	2026_0009	GNA_2026_133	2026_0875	GNA_2026_064	2026_0384	GNA_2026_123	2026_0839
GNA_2026_003	2026_0011	GNA_2026_134	2026_0876	GNA_2026_065	2026_0418	GNA_2026_124	2026_0847
GNA_2026_004	2026_0026	GNA_2026_135	2026_0878	GNA_2026_066	2026_0422	GNA_2026_125	2026_0848
GNA_2026_005	2026_0027	GNA_2026_136	2026_0886	GNA_2026_067	2026_0431	GNA_2026_126	2026_0851
GNA_2026_006	2026_0034	GNA_2026_137	2026_0888	GNA_2026_068	2026_0438	GNA_2026_140	2026_0907
GNA_2026_008	2026_0046	GNA_2026_138	2026_0890	GNA_2026_069	2026_0445	GNA_2026_141	2026_0908
GNA_2026_009	2026_0047	GNA_2026_139	2026_0902	GNA_2026_071	2026_0465	GNA_2026_142	2026_0909
GNA_2026_010	2026_0055	GNA_2026_015	2026_0094	GNA_2026_072	2026_0491	GNA_2026_143	2026_0920
GNA_2026_012	2026_0064	GNA_2026_016	2026_0102	GNA_2026_073	2026_0499	GNA_2026_144	2026_0923
GNA_2026_013	2026_0078	GNA_2026_017	2026_0116	GNA_2026_074	2026_0502	GNA_2026_146	2026_0934
GNA_2026_014	2026_0093	GNA_2026_019	2026_0119	GNA_2026_075	2026_0507	GNA_2026_147	2026_0935
GNA_2026_044	2026_0270	GNA_2026_020	2026_0121	GNA_2026_077	2026_0512	GNA_2026_149	2026_0948
GNA_2026_045	2026_0271	GNA_2026_021	2026_0122	GNA_2026_078	2026_0513	GNA_2026_150	2026_0951
GNA_2026_046	2026_0273	GNA_2026_023	2026_0127	GNA_2026_079	2026_0525	GNA_2026_151	2026_0953
GNA_2026_047	2026_0274	GNA_2026_024	2026_0133	GNA_2026_082	2026_0535	GNA_2026_152	2026_0957
GNA_2026_048	2026_0277	GNA_2026_025	2026_0142	GNA_2026_083	2026_0536	GNA_2026_154	2026_0962
GNA_2026_049	2026_0279	GNA_2026_026	2026_0143	GNA_2026_084	2026_0542	GNA_2026_155	2026_0963
GNA_2026_050	2026_0280	GNA_2026_027	2026_0149	GNA_2026_086	2026_0571	GNA_2026_156	2026_0964
GNA_2026_051	2026_0296	GNA_2026_028	2026_0150	GNA_2026_087	2026_0579	GNA_2026_157	2026_0965
GNA_2026_052	2026_0302	GNA_2026_029	2026_0152	GNA_2026_100	2026_0660	GNA_2026_160	2026_0970
GNA_2026_053	2026_0313	GNA_2026_030	2026_0168	GNA_2026_101	2026_0673	GNA_2026_161	2026_0972
GNA_2026_054	2026_0314	GNA_2026_031	2026_0188	GNA_2026_102	2026_0675	GNA_2026_162	2026_0974
GNA_2026_055	2026_0338	GNA_2026_032	2026_0190	GNA_2026_103	2026_0681	GNA_2026_163	2026_0977
GNA_2026_088	2026_0580	GNA_2026_033	2026_0197	GNA_2026_104	2026_0701	GNA_2026_164	2026_0981
GNA_2026_089	2026_0582	GNA_2026_034	2026_0210	GNA_2026_105	2026_0704	GNA_2026_169*	2026_0087
GNA_2026_090	2026_0583	GNA_2026_035	2026_0219	GNA_2026_106	2026_0713	GNA_2026_171*	2026_0261
GNA_2026_091	2026_0600	GNA_2026_037	2026_0230	GNA_2026_107	2026_0718	GNA_2026_176*	2026_0167
GNA_2026_092	2026_0601	GNA_2026_038	2026_0238	GNA_2026_108	2026_0730	GNA_2026_177*	2026_0413
GNA_2026_093	2026_0608	GNA_2026_039	2026_0240	GNA_2026_109	2026_0732	GNA_2026_181*	2026_0130
GNA_2026_094	2026_0609	GNA_2026_040	2026_0248	GNA_2026_110	2026_0734		
GNA_2026_095	2026_0614	GNA_2026_041	2026_0250	GNA_2026_111	2026_0755		
GNA_2026_096	2026_0622	GNA_2026_042	2026_0254	GNA_2026_112	2026_0756		
GNA_2026_097	2026_0649	GNA_2026_043	2026_0269	GNA_2026_113	2026_0757		
GNA_2026_098	2026_0651	GNA_2026_056	2026_0344	GNA_2026_114	2026_0762		
GNA_2026_099	2026_0655	GNA_2026_057	2026_0345	GNA_2026_115	2026_0765		
GNA_2026_127	2026_0852	GNA_2026_058	2026_0349	GNA_2026_117	2026_0768		
GNA_2026_128	2026_0854	GNA_2026_059	2026_0350	GNA_2026_118	2026_0772		
GNA_2026_129	2026_0862	GNA_2026_060	2026_0363	GNA_2026_119	2026_0811		
GNA_2026_131	2026_0869	GNA_2026_061	2026_0374	GNA_2026_121	2026_0832		

*Note: These needs were identified later in the planning process.

GNA Scope

SDG&E's 2026 GNA identifies distribution grid needs associated with the four distribution services that the Commission determined that DERs may be able to provide: distribution capacity, voltage support, reliability (back-tie), and resiliency (microgrid). The GNA identifies distribution capacity, and reliability (back-tie) services needs at the circuit level, substation transformer bank level and the line segment level. Since SDG&E does not have any transmission projects that come under the jurisdiction of the CPUC, no transmission level needs are identified in the GNA.

GNA Refinements

SDG&E's 2026 GNA identified refinements subsequent to the internal dissemination of the distribution load forecast and prior to the publication of the GNA/DUPR on August 17, 2026. These refinements included the addition of 17 new needs, changes to the year or amount of 11 needs, deferral of five needs, and the removal of 22 needs identified earlier in the cycle.

2.2. Changes to GNA for 2026

There are no changes in data formats between SDG&E's 2026 GNA and SDG&E's 2025 GNA. The 2026 GNA/DUPR report includes Pending Load Tracking Data in a format similar to the Known Loads Tracking Data.

2.3. Discussion of GNA Results

SDG&E's 2026 GNA identified a total of 182 needs related to distribution capacity at the substation bank, circuit and line segment levels with eight circuits having a back-tie (reliability) need in addition to a capacity need. One out of the 182 needs was identified in the 2024 cycle. However, in this case, the solution that was identified earlier is no longer sufficient since the need has subsequently grown. Therefore, this need that existed in the 2024 cycle (Facility ID 2024_0840) is also identified as a need in the current cycle.

SDG&E has indicated in prior cycles that a back-tie need is addressed along with other distribution service upgrades rather than evaluated through a separate analysis. A detailed discussion of SDG&E's back-tie analysis can be found in Section 2.4 of the 2021 IPE report. Table 2-2 shows a summary of the grid needs by distribution service type and by the type of equipment on which a constraint requiring mitigation was identified.

Table 2-3 shows the dates by which the mitigation measures are anticipated to be in place.

Table 2-4 shows the list of 29 needs that are associated with a planned capital project in the 2026 GNA report. Needs that are addressed through low-cost/no-cost load transfers and phase balancing are not shown in this table. Twenty eight of the 29 needs shown in the table are driven by growth in demand, of which 11 are due to specific loads, 17 due to general demand growth and one due to voltage requirements. Nineteen of the 29 needs are in the first three years of the forecast and 27 of the 29 needs are in the first five years of the forecast.

Table 2-2: Summary of the Number of Grid Needs[9] by Distribution Service Type and Equipment Type

Equipment Type	Distribution Service				Total
	Peak Thermal	Voltage	Back-Tie	Microgrid	
Substation Bank	41	0	0	0	41
Circuit	121	0	8	0	121
Line Segment	19	1	0	0	20
Totals	181	1	8	0	182

Table 2-3: Summary of the Number of Grid Needs by Anticipated Upgrade Date

In-Service Date	Distribution Service				Total
	Peak Thermal	Voltage	Back-Tie	Microgrid	
2026	13	0	0	0	13
2027	16	1	1	0	17
2028	7	0	1	0	7
2029	9	0	1	0	9
2030	23	0	4	0	23
2031	15	0	0	0	15
2032	16	0	1	0	16
2033	31	0	0	0	31
2034	30	0	0	0	30
2035	21	0	0	0	21
Totals	181	1	8	0	182

[9] Note that where identified grid needs are mitigated by the same solution, such as a "Peak Thermal" and "Back-Tie" need that is mitigated by a new circuit with a cross-tie switch, SDG&E counts the number of grid needs as one, not two.

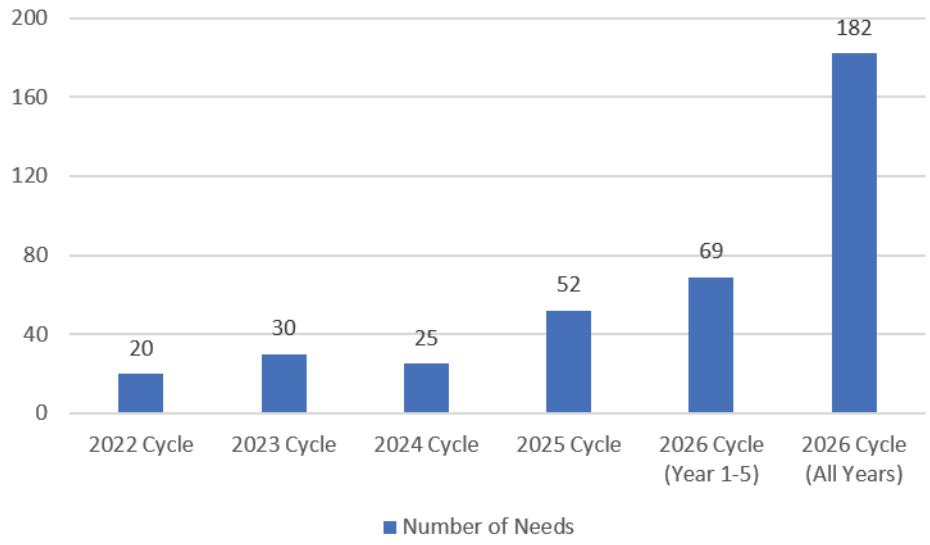
Table 2-4: List of Needs from the GNA Report

GNA_ID	Facility ID	Substation	Bank or Circuit ID	Distribution Service Identified	Primary Driver of Grid Need	Anticipated Upgrade Date
GNA_2026_011	2026_0057	JAMACHA	92	Thermal/Back-Tie	Specific Load	6/1/2030
GNA_2026_018	2026_0117	OTAY	155	Thermal	Demand Growth	6/1/2028
GNA_2026_022	2026_0123	CHOLLAS WEST	161	Thermal/Back-Tie	Specific Load	6/1/2027
GNA_2026_036	2026_0225	GENESEE	272	Thermal/Back-Tie	Specific Load	6/1/2032
GNA_2026_063	2026_0378	ASH	456	Thermal	Demand Growth	6/1/2030
GNA_2026_070	2026_0448	BORDER	535	Thermal/Back-Tie	Specific Load	6/1/2028
GNA_2026_076	2026_0511	MISSION	701	Thermal	Demand Growth	6/1/2026
GNA_2026_085	2026_0547	GENESEE	745	Thermal/Back-Tie	Specific Load	6/1/2030
GNA_2026_116	2026_0767	SAMPSON	1219	Thermal/Back-Tie	Specific Load	6/1/2029
GNA_2026_120	2026_0825	MIRA SORRENTO	1450	Thermal	Specific Load	2/1/2027
GNA_2026_130	2026_0863	CHOLLAS WEST	CSW3233	Thermal/Back-Tie	Specific Load	6/1/2030
GNA_2026_145	2026_0929	OTAY	OY3233	Thermal	Demand Growth	6/1/2028
GNA_2026_148	2026_0942	PROCTOR VALLEY	PV4142	Thermal	Demand Growth	6/1/2030
GNA_2026_153	2026_0959	SAN MATEO	SMO4041	Thermal	Demand Growth	6/1/2035
GNA_2026_158	2026_0968	SPRING VALLEY	SV3031	Thermal/Back-Tie	Demand Growth	6/1/2030
GNA_2026_159	2026_0969	SWEETWATER	SW3132	Thermal	Demand Growth	6/1/2030
GNA_2026_165	2026_0399	Cabrillo	480	Thermal	Demand Growth	6/1/2027
GNA_2026_166	2026_0400	Cabrillo	481	Thermal	Demand Growth	6/1/2027
GNA_2026_167	2026_0550	Genesee	748	Thermal	Specific Load	6/1/2028
GNA_2026_168	2026_0482	La Jolla	571	Thermal	Demand Growth	6/1/2027
GNA_2026_170	2026_0108	Mission	145	Thermal	Demand Growth	6/1/2027
GNA_2026_172	2026_0298	STATION F	364	Thermal	Demand Growth	6/1/2026
GNA_2026_173	2026_0115	OTAY	153	Thermal	Demand Growth	6/1/2027
GNA_2026_174	2026_0125	CHOLLAS WEST	163	Thermal	Specific Load	6/1/2026
GNA_2026_175	2026_0501	PROCTOR VALLEY	591	Thermal	Demand Growth	6/1/2027
GNA_2026_178	2026_0165	MELROSE	206	Thermal	Demand Growth	6/1/2027
GNA_2026_179	2026_0621	SHADOWRIDGE	859	Voltage	Low Voltage	6/1/2027
GNA_2026_180	2026_0815	GRANT HILL	1438	Thermal	Demand Growth	6/1/2026
GNA_2026_182	2026_0826	ALPINE	1458	Thermal	Specific Load	6/1/2026

2.4. GNA Observations and Conclusions

- The total number of grid needs in the 2026 GNA was significantly higher than those observed in the past cycles. In this cycle there were 182 needs compared to 52, 25, and 30 the 2025, 2024 and 2023 GNAs, respectively. However, the primary reason for the increase in the number of needs in the cycle is due to the planning horizon being extended to 10 years compared to the five years used in past cycles. The number of needs in the first five years of the current cycle is 69, which is comparable to the needs in the prior cycle. Figure 2-1 shows the number of needs in the past four cycles.

Figure 2-1: Number of Needs in the Past Four DPP Cycles

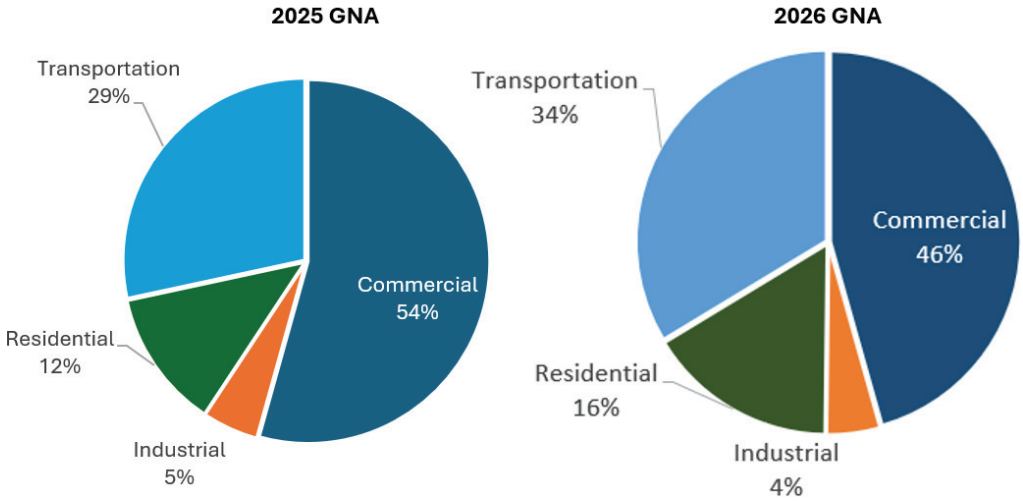


- As observed in the last cycle, the majority of the needs in this cycle, i.e., 181 out of 182 needs were capacity needs. Only one need was due to voltage requirements.

- Of the 182 needs in this cycle, 25 (14%) are specifically associated with known loads and the remaining 86% are primarily due to general demand growth. The percentage of needs due to Known Loads is lower than prior years because of the longer planning horizon when there is general demand growth in later years. However, the GNAs triggered by Known Loads are 29% during the first five years of planning, which is roughly in the range observed in the last cycle. Note that while certain grid needs may be specifically associated with known loads, multiple factors contribute to identifying a grid need, e.g., known loads, forecast organic load growth for existing customers, the rating of circuit equipment, forecast output of DER additions, etc.

- The total known load additions across all the forecast years increased from 433 MW in the 2025 GNA to 462 MW in the 2026 GNA. Compared to 2025 GNA, the commercial known loads were lower and the residential, industrial and transportation loads were higher. A pie chart of the total known load additions by customer type is shown in the Figure 2-2 below for the 2025 and 2026 GNAs.

Figure 2-2: Known Load Customer Types and Load (MW) in the 2025 and 2026 GNA



- Figure 2-3 and Figure 2-4 show a comparison of the IEPR load forecast and the load forecast used in the GNA on a cumulative and annual basis, respectively. SDG&E's methodology compares the IEPR forecast and the sum of the known loads and eligible pending loads on an annual basis as per the methodology outlined in the Resolution E-5413 and assigns spatial load to the extent the annual IEPR forecast exceeds the annual sum of the known loads and eligible pending loads (known loads are always modeled in the DPP analysis using the customer's indicated in-service year and circuit location).

  In SDG&E's methodology used for the first time this cycle, the comparison between the IEPR forecast and the sum of the known loads and eligible pending loads is performed for each load category (residential, commercial, industrial, etc.) as opposed to total baseline load growth used in the past cycles. The results of this methodology can be clearly observed in Figure 2-4. It can be seen that in the first two years of the forecast (2027), a small amount of spatial loads is added in spite of the total Known and Pending Loads exceeding the IEPR forecast for that year. This is because the industrial component of the IEPR forecast is higher than the sum of corresponding Known and Pending Loads resulting in some amount of spatial loads being added. Starting the third year (2028), spatial loads

are assigned to circuits since the sum of the known and pending loads in those years is lower than the IEPR forecast.

Figure 2-3: Cumulative Load Forecast Growth for the 10-year Planning Period

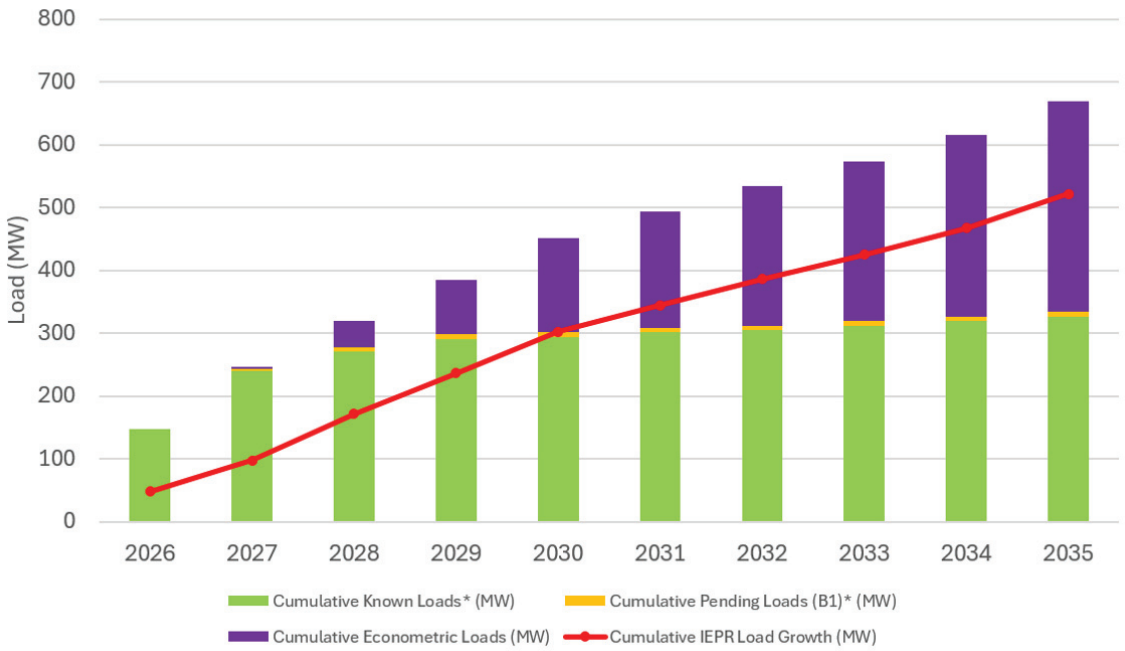
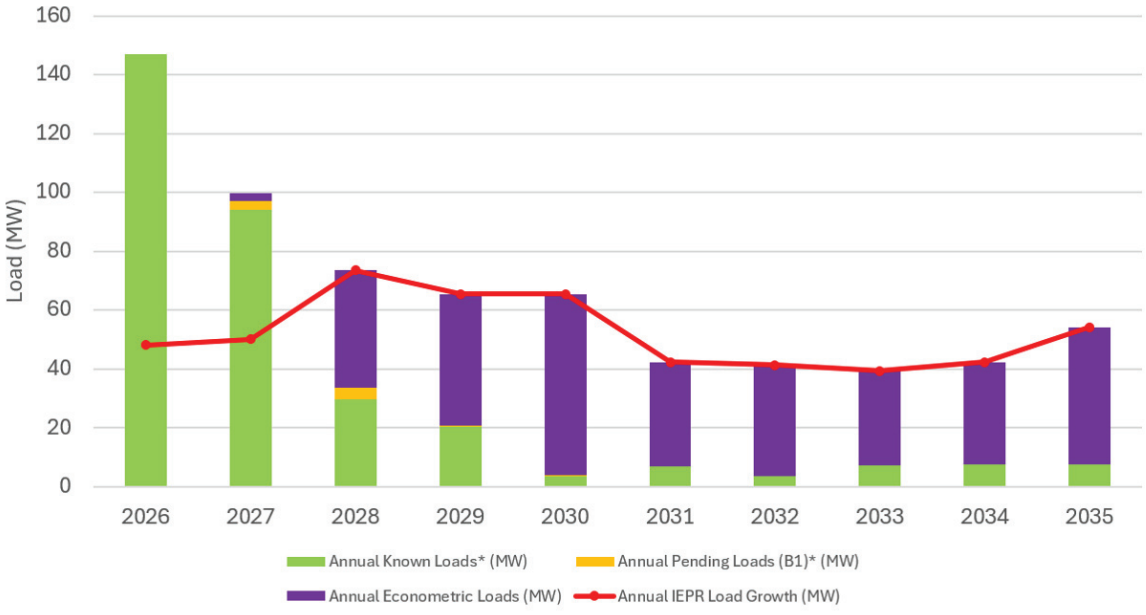


Figure 2-4: Annual Load Forecast Growth for the 10-year Planning Period



3. Review of DUPR Results – Planned Investments

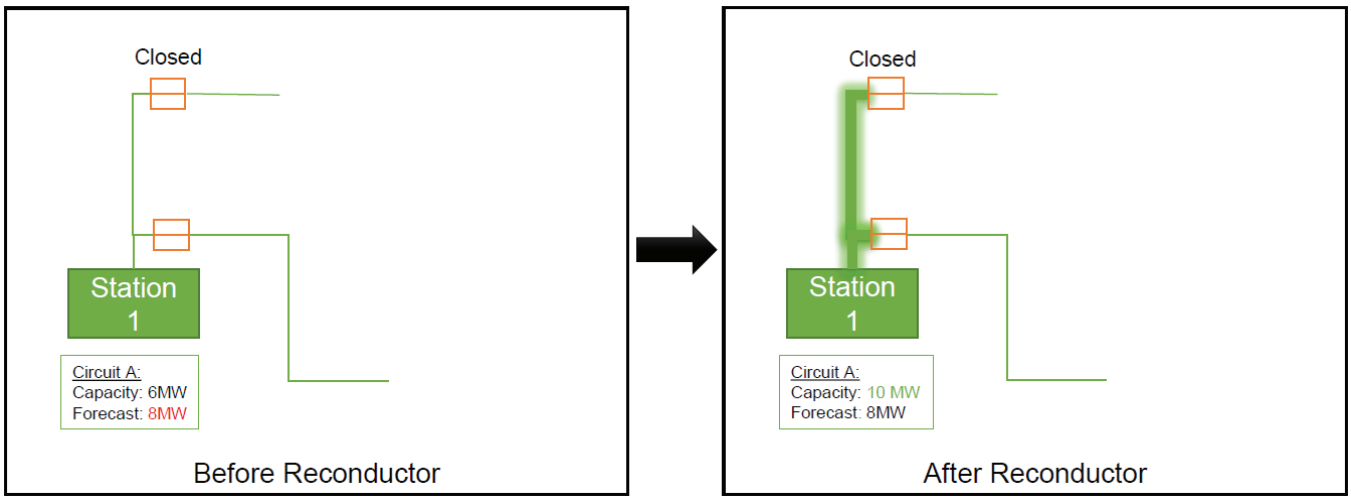
The DUPR begins with SDG&E's distribution planning engineers reviewing the needs identified in the GNA to determine the least cost, best fit and just-in-time solution to mitigate them. Typically, the least cost solution to resolve identified needs is to utilize existing equipment, which can also allow for rapid implementation. These include "no cost" load transfers and phase balancing which were discussed in Section 2.1.2 of this report. Of the 182 needs identified in this cycle, 150 needs were addressed using load transfers and three needs were addressed using phase balancing.

SDG&E's 2026 DUPR provides an overview of 29 planned investments associated with the remaining 29 needs identified in the 2026 GNA. Table 3-1 shows the information for the planned investments provided in Appendix 5 of the GNA/DUPR report. The planned investment projects have in-service dates ranging from 2026 to 2035. The planned projects are as follows: (i) four new substation bank projects, (ii) nine new circuit projects, (iii) thirteen projects that involve reconductoring, (iv) one project that involves transferring load to another circuit with new equipment, and (v) two projects involving other equipment. SDG&E provided illustrative examples of planned project types in their 2023 DPAG meeting presentation. These examples are reproduced below for convenience.

Reconductor

In this project type, the limiting element is a conductor rated at 6MW, which is reconductored using a larger (10 MW) size conductor as show in in Figure 3-1.

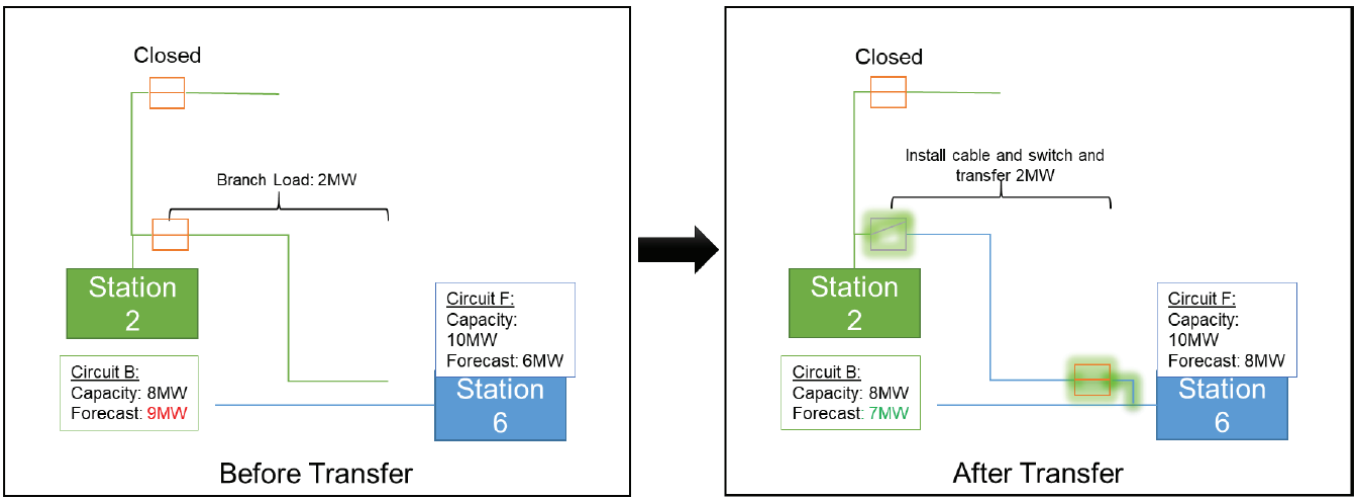
Figure 3-1: Figure Showing an Example Reconductoring Project



Load Transfer with New Equipment

In this project type, Circuit B is expected to overload in the future. One of the laterals of this circuit is transferred over to a neighboring station (Station 6) using a new circuit and a switch. With this load transfer, the forecast load remains below the rating of the circuit. This is shown in Figure 3-2.

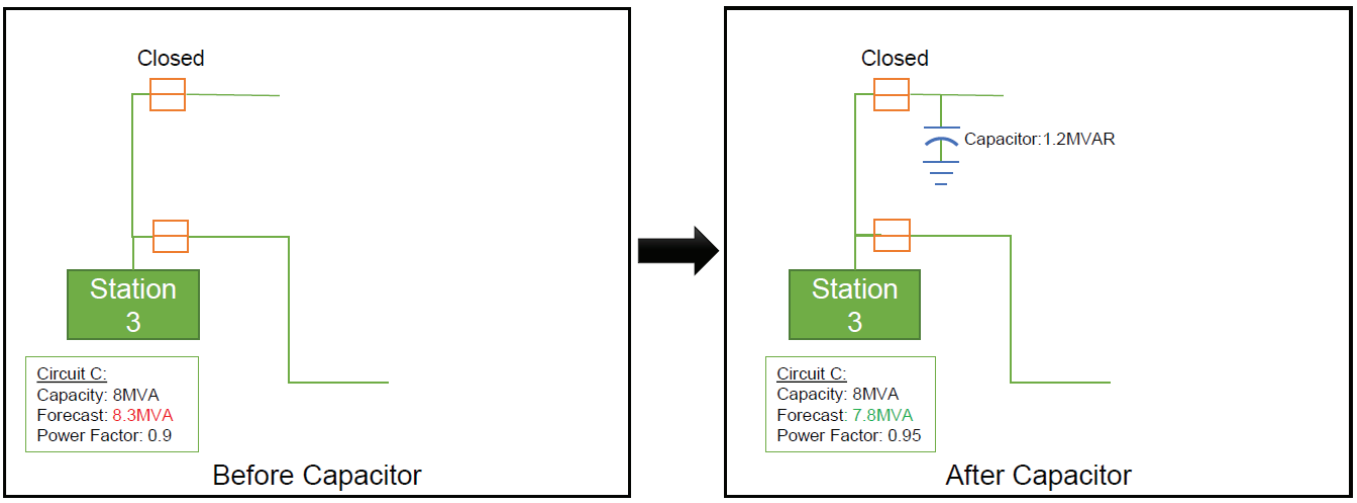
Figure 3-2: Figure Showing an Example Load Transfer Project



New Capacitor

In this project type, Circuit C is expected to be above its MVA rating. The solution is to add a capacitor to the circuit to provide reactive power support. A voltage regulator project is similar to a capacitor project. This is shown in Figure 3-3.

Figure 3-3: Figure Showing an Example New Capacitor Project



New Circuit/Transformers

In this project type, Circuit D is forecast to be above its rating in the future. The solution is to add a new Circuit E to take on some of the load that was on Circuit D. This is shown in Figure 3-4.

Figure 3-4: Figure Showing an Example New Circuit Project

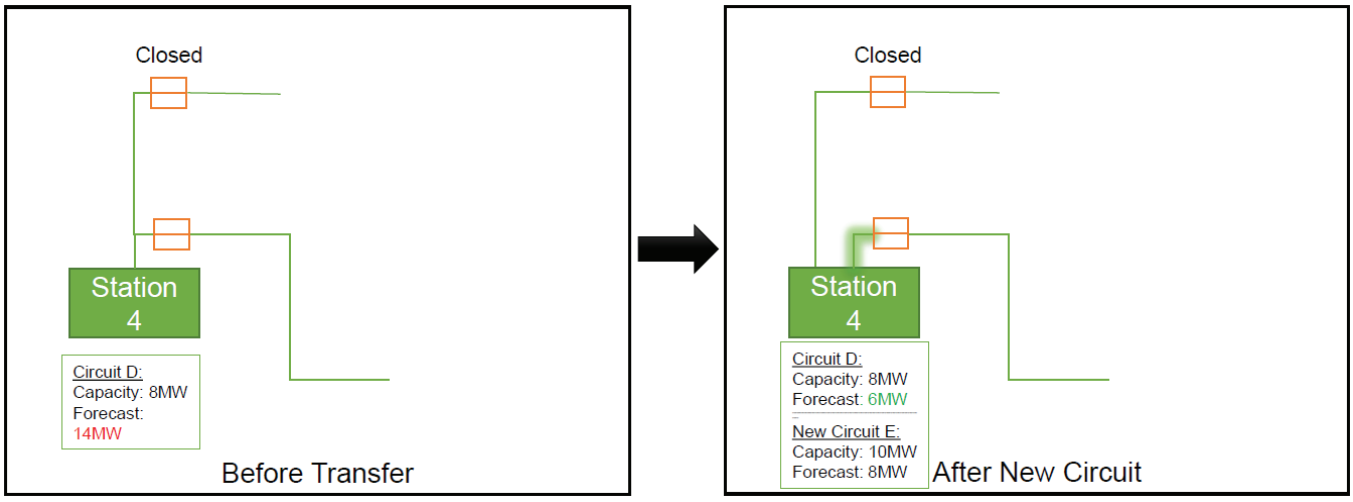


Table 3-1: Planned Investments

GNA ID	DUPR ID	Facility ID	Substation	Bank / Circuit	Description	Equipment Involved	In-Service Date
GNA_2026_011	DUPR_2026_01	2026_0057	JAMACHA	92	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2027
GNA_2026_170	DUPR_2026_02	2026_0108	Mission	145	Reconductoring	OH Conductor	6/1/2027
GNA_2026_173	DUPR_2026_03	2026_0115	OTAY	153	Reconductoring	OH Conductor	6/1/2027
GNA_2026_018	DUPR_2026_04	2026_0117	OTAY	155	Reconductoring	OH Conductor	6/1/2028
GNA_2026_022	DUPR_2026_05	2026_0123	CHOLLAS WEST	161	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2028
GNA_2026_174	DUPR_2026_06	2026_0125	CHOLLAS WEST	163	Reconductoring	UG Cable	6/1/2026
GNA_2026_178	DUPR_2026_07	2026_0165	MELROSE	206	Transformer	Transformer	6/1/2027
GNA_2026_036	DUPR_2026_08	2026_0225	GENESEE	272	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2032
GNA_2026_172	DUPR_2026_09	2026_0298	STATION F	364	Reconductoring	OH Conductor	6/1/2026
GNA_2026_063	DUPR_2026_10	2026_0378	ASH	456	Reconductoring	OH Conductor	6/1/2030
GNA_2026_165	DUPR_2026_11	2026_0399	Cabrillo	480	Reconductoring	OH Conductor	6/1/2027
GNA_2026_166	DUPR_2026_12	2026_0400	Cabrillo	481	Reconductoring	UG Cable	6/1/2027
GNA_2026_070	DUPR_2026_13	2026_0448	BORDER	535	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2028
GNA_2026_168	DUPR_2026_14	2026_0482	La Jolla	571	Reconductoring	OH Conductor, Transformer	6/1/2027
GNA_2026_175	DUPR_2026_15	2026_0501	PROCTOR VALLEY	591	Reconductoring	OH Conductor	6/1/2027
GNA_2026_076	DUPR_2026_16	2026_0511	MISSION	701	Reconductoring	UG Cable	6/1/2026
GNA_2026_085	DUPR_2026_17	2026_0547	GENESEE	745	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2030
GNA_2026_167	DUPR_2026_18	2026_0550	Genesee	748	Reconductoring	OH Conductor	6/1/2028
GNA_2026_179	DUPR_2026_19	2026_0621	SHADOWRIDGE	859	Low Voltage	Capacitor Bank, Reconductor, Voltage Regulator	6/1/2027
GNA_2026_116	DUPR_2026_20	2026_0767	SAMPSON	1219	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2029
GNA_2026_180	DUPR_2026_21	2026_0815	GRANT HILL	1438	Reconductoring	OH Conductor	6/1/2026
GNA_2026_120	DUPR_2026_22	2026_0825	MIRA SORRENTO	1450	Transfer with New Equipment	UG Cable	2/1/2027
GNA_2026_130	DUPR_2026_23	2026_0863	CHOLLAS WEST	CSW3233	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2028
GNA_2026_145	DUPR_2026_24	2026_0929	OTAY	OY3233	New Substation Bank	Substation Bank	6/1/2030
GNA_2026_148	DUPR_2026_25	2026_0942	PROCTOR VALLEY	PV4142	New Substation Bank	Substation Bank	6/1/2030
GNA_2026_153	DUPR_2026_26	2026_0959	SAN MATEO	SMO4041	New Substation Bank	Substation Bank	6/1/2035
GNA_2026_158	DUPR_2026_27	2026_0968	SPRING VALLEY	SV3031	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2027
GNA_2026_159	DUPR_2026_28	2026_0969	SWEETWATER	SW3132	New Substation Bank	Substation Bank	6/1/2030
GNA_2024_0025	DUPR_2026_29	2026_0885	GENESEE	GE3031	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2031

3.1. DUPR Report Planned Investments – Observations and Conclusions

The 2026 DUPR had 29 planned investments compared to 22 planned investments in the 2025 DUPR. The table below summarizes the project types for the two years.

Table 3-2: Comparison of 2026 and 2025 Planned Project Types

Project Type	2026 DUPR	2025 DUPR
New Substation Bank	4	3
New Circuit	9	10
Reconductor Circuit	13	4
Transfer with new equipment	1	5
Other	2	0
Total	29	22

4. IPE Recommendations

i. In this cycle, SDG&E transitioned from an in-house methodology for weather-normalizing peak load and developing feeder load profiles to using LoadSEER. SDG&E provided documentation describing the new process, and additional methodological documentation may not be available. In the next cycle, where feasible, SDG&E should provide additional input data and intermediate results to support independent verification of the overall load profiles developed through the new process. For a representative sample of circuits, these data should support a detailed review of the treatment of historical weather, load-weather relationships, abnormal operating conditions, and the derivation of the planning-weather load profiles.

5. Known and Pending Load Tracking Data and Metrics

The ALJ's June 16, 2022, DIDF Reform order required all three utilities to track known load projects in the 2022 GNA/DDOR. The reform also required the Known Load Tracking Data to include a unique project identifier, impacted circuit, initial service request date, load amount, current expected in-service date or indication if service request was cancelled, if appropriate, and type/category of load and, if appropriate, the actual date service was initially provided and the amount.

The May 2023 Ruling required the Utilities to provide a narrative summary report that includes metrics that are calculated using the Known Load Tracking Data and the implications of the calculated metrics.

This is the fourth cycle in which the utilities are providing the Known Load Tracking Data and the third cycle in which the utilities are providing the Known Load Tracking Data Metrics.

SDG&E provided the Known Load Tracking Data as Appendix 4 and the Known Load Tracking Metrics in Section 5 of their report.

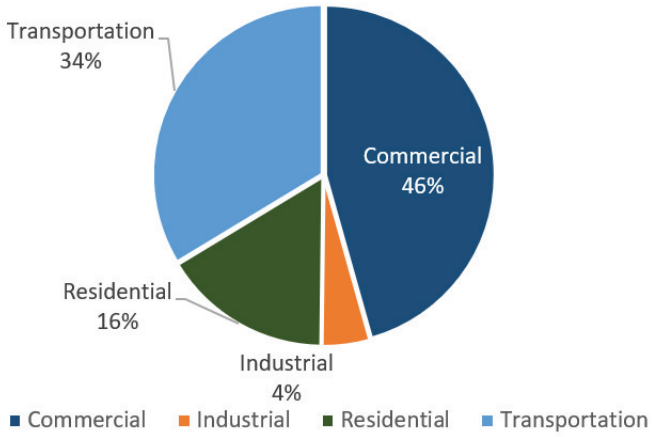
The Utilities and the Energy Division are currently working on standardizing the Known Load Tracking Data and the Known Load Metrics. Therefore, this report will not be making any recommendations for any change to either.

5.1. Known Load Tracking Data

SDG&E's 2026 Known Load Tracking Data reflects known loads as of the end of the first quarter of 2026 along with a few refinements (additions, removal and load amount corrections) made to the tracking data between the time it was initially put together and mid-July 2026. This dataset is complete and contains data for all the fields requested in the June 2022 Reform order.

The 2026 GNA Known Load amounts by category as a percentage of total known loads is shown in Figure 5-1.

Figure 5-1: Known Load Amounts by Category as a Percentage of Total



5.2. Known Load Metrics

The May 2023 Ruling required the Utilities to provide a narrative summary report that includes metrics that are calculated using the Known Load Tracking Data and the implications of the calculated metrics. SDG&E provided a narrative summary of Known Load Tracking Metrics in Section 5 of their report. Only a few of the metrics are summarized here. For a detailed discussion of all the metrics, please refer to SDG&E's GNA/DUPR report.

- **Metrics 1-4: Total and Annual Known Load Changes –** SDG&E reported Metrics 1-4 that provided information on known loads by forecast year and type, as well as changes to these known loads when compared with values from the last cycle. On a cumulative basis (i.e., total known loads across all the forecast years), known loads increased by 7% in this cycle when compared with the previous cycle. Most of the increase came from the residential and transportation loads with small decreases in industrial and commercial known loads. The table below provides a summary of the cumulative known loads by type from the last two cycles.

Table 5-1: Changes to Total Known Load Amount for IEPR Planning Horizon in the Recent Two Cycles

Type	2025-26 DPEP Cycle for the 10-Year Forecast Horizon (2026-2035)	2024-25 DPEP Cycle for the 12-Year Forecast Horizon (2025-2036)	Percentage Change from Prior to Current Cycle
Commercial	211.0	235.6	-10%
Industrial	21.1	21.6	-2%
Residential	74.7	53.4	40%
Transportation	155.7	123.1	26%
Total Non-TE	306.8	310.7	-1%
Total with TE	462.5	433.7	7%

- **Metric 5-7: Service Amount Deferred (MW or MVA) (MW or MVA, %)** – SDG&E provided a calculation of Metric 5. SDG&E interpreted this metric as measuring the amount of known loads reported for the 2025 DPEP cycle that have been reported for the 2026 DPEP cycle with a later in-service year. SDG&E calculated that 145 MW out of 409 MW or 35% of the known loads (in MW) were deferred in the 2026 cycle. For comparison, this metric was 37% in the last cycle. SDG&E also reported deferral rate by customer category (Metric 7) which showed rates of 31%, 25%, 31% and 34%, respectively for Commercial, Industrial, Residential and Transportation categories. SDG&E calculated this metric and made the observation that the service might be deferred due to a number of factors that are not within their control.

- **Metric 8: Cancellation Rate Total (%)** – SDG&E interpreted this metric as measuring the number of known loads included in the 2025 DPEP cycle that have been reported in this 2026 DPEP cycle's known load tracking data as being cancelled. SDGE calculated a cancellation rate of 3%(7 known loads cancelled out of the total of 215 reported known loads in the 2025 tracking data). For comparison, this metric was at 11% in the last cycle. SDG&E made the observation that the calculated values may not be typical across all categories of loads. SDG&E also noted that the calculation of this metric is sensitive to when the customer cancels its service request and when that cancellation is recorded in SDG&E's records.

- **Metric 10: Service Request Amount Increase Rate Total and Average Amount (%, MW or MVA)** – SDG&E interpreted this metric as measuring the total and average changed load amount of known loads reported for the previous 2025 DPEP cycle that have been reported in the 2026 DPEP cycle with an increased load amount. SDG&E calculated an increase of 0.06% (0.23 MW) for the known loads that were reported in both the 2025 and 2026 cycles. For comparison, this metric was 2%

in the last cycle. SDG&E made the observation that the increased or decreased load amounts appeared to be a small portion of the total known loads and load amounts. SDG&E also made the observation that due to the small sample size, SDG&E does not find this metric and the associated metrics (10 through 13) meaningful or useful. Furthermore, SDG&E questioned the usefulness of the average amount (of increase or decrease) calculation.

- **Metric 12: Service Request Amount Decrease Rate Total and Average Amount (%, MW or MVA)** – SDG&E interpreted this metric as measuring the total and average changed load amount of known loads reported for the previous 2025 DPEP cycle that have been reported in the 2026 DPEP cycle with a decreased load amount. SDG&E calculated a decrease of 4.22% in this cycle compared to less than 3% in the last cycle.

5.3. Pending Load Tracking Data and Metrics

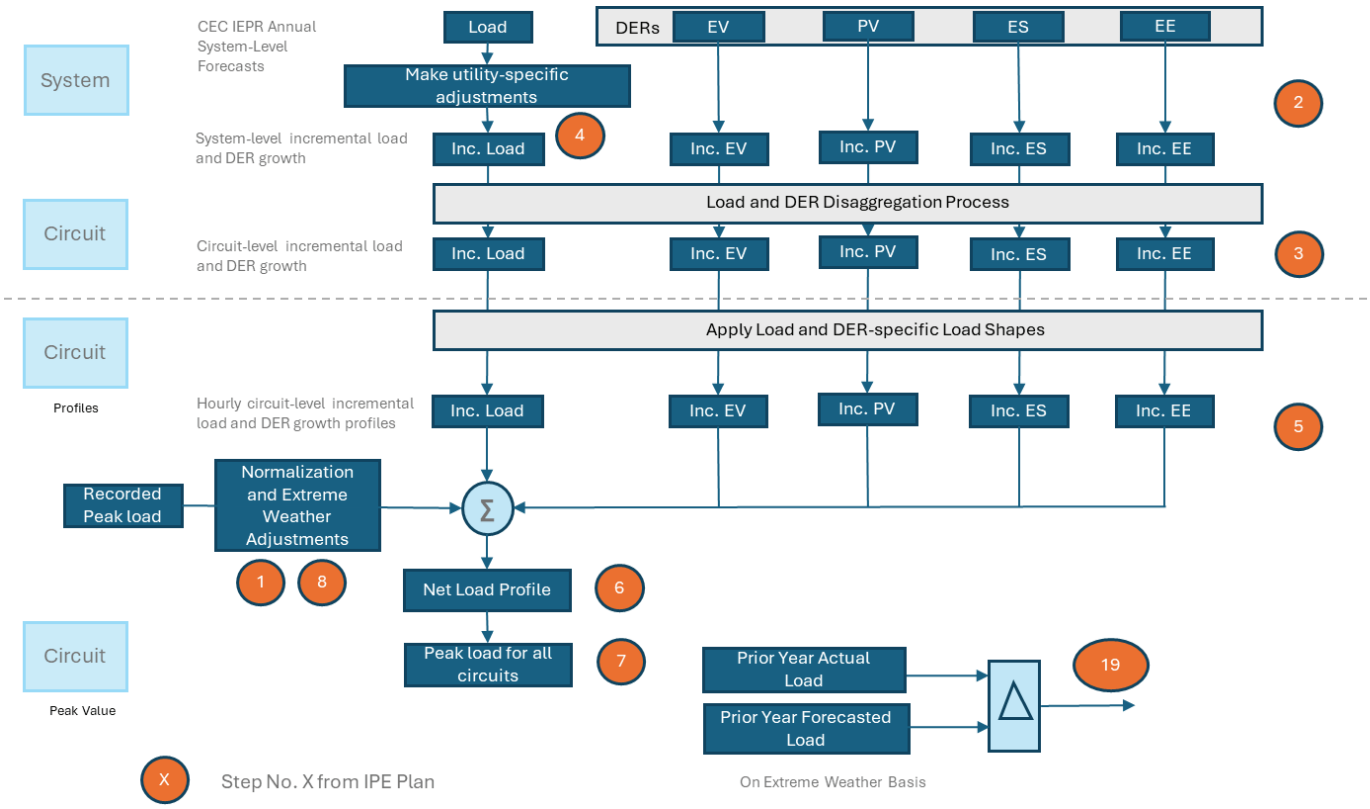
Resolution E-5413 required the Utilities to provide data for Pending Loads A, B1 and B2 similar to the data provided for known loads and include that data in the Known Load Tracking Data. Each tracked pending load should be reported similar to how known loads are tracked from year to year and these pending loads should be included in the metrics that are now reported for known loads in the GNA/DUPR. Appendix 4 of SDG&E's GNA/DUPR report included both the Known and Pending Loads Tracking Data. The Pending Load Tracking Data in Appendix 4 shows nine Category B1 Pending Loads that add up to 74.7 MW in 2026 and increase to 127.17 MW in 2035. However, the Pending Loads data provided by SDG&E during the IPE V&V process for this step showed only 18.1 MW of Category B1 Pending Loads. SDG&E indicated that the Pending Load Data Tracking Sheet was filled out incorrectly and plans to file a correction. All three Utilities reported only Pending Load Metrics 1 and 2 since the other metrics would require two years of pending loads to calculate.

6. Verification Approach and Results

The results of the step-by-step verification process followed by the IPE are presented in this section. This verification review follows the framework set out in the Final IPE Plan included in Appendix C. Any differences from last year's processes are discussed in this section. The following graphic provides an overview of the steps of the V&V process related to the development of the peak load forecasts. Only those steps that were completed this cycle are described below. As mentioned in Section 1.1, Steps 5, 6, 7 and 19 were skipped in this cycle.

- Steps 1 and 8 verify and validate the process used to normalize the peak load and adjust for "extreme" weather conditions
- Step 2 verifies and validates the process used to develop the GNA system-level annual load and DER forecasts using CEC's IEPR forecasts as the starting point
- Step 3 verifies and validates the process used for disaggregating the system-level loads to the circuit level
- Step 4 verifies and validates the process used for making adjustments to the forecasts to account for known loads

Figure 6-1: Business Steps Overview



A summary of the verification and validation steps that were performed and the steps that were skipped in this cycle are provided in the Table 6-1 below.

Table 6-1: Plan for Verification and Validation Steps

Verification and Validation Step	Status for 2025-2026 DPP
Steps 1 and 8 - Collect 2025 Actual Circuit Loading, Normalize and Adjust for Extreme Weather	Performed
Step 2 - Determine Load and DER Annual Growth on System Level	Performed
Step 3 - Disaggregate Load and DER Annual Growth to the Circuit Level	Performed
Step 3a - Check sum of all disaggregated load and DERs same as CEC IEPR System Level values	Performed
Step 4a - Gather Known Load data that is used in Step 2	Performed

Verification and Validation Step	Status for 2025-2026 DPP
Step 4b – Determine Hot Spots	Not applicable in this cycle
Step 4c – Gather Pending Loads data used in Step	Performed
Step 5 - Convert peak growth of load to 576 profile as needed	Performed
Step 5a – Convert DER growth to 576 profile as needed	Skipped in this cycle
Step 5b – Convert base forecast and Weather normalization adjustment of load to 576 profile as needed	Skipped in this cycle
Steps 6-7 – Derive net load profile; Determine peak load	Skipped in this cycle
Steps 9-11 - Initial Comparison to Equipment Ratings, Evaluate No Cost Solutions and Comparison to Equipment Ratings after No Cost Solutions	Skipped in this cycle
Step 12 - Compile GNA Tables Showing Need and Timing	Performed
Step 13a - Develop Recommended Solution	Performed
Step 13b - Develop solution for single investment plan	Not applicable in this cycle
Step 13c - Determine if planned solutions/projects identified in previous cycles continue to be needed and are the appropriate solution to meet the need	Performed
Step 14 - Estimate Capital Cost for each Planned Investment	Skipped in this cycle
Step 15 - Development of Candidate Deferral Projects	No longer required due to the elimination of DIDF solicitation requirement
Step 16 - Development of Operational Requirements	No longer required due to the elimination of DIDF solicitation requirement
Step 17 - Prioritization of Candidate Deferral Projects into Tiers	No longer required due to the elimination of DIDF solicitation requirement

Verification and Validation Step	Status for 2025-2026 DPP
Step 18 - Calculate LNBA Values	No longer required due to the elimination of DIDF solicitation requirement
Step 19 - Compare 2025 Forecast and Actuals at Circuit Level for statistically meaningful number of distribution circuits	Skipped in this cycle
Step 20a - Analyze known load tracking dataset and verify the calculation of known load metrics	Performed
Step 20b - Analyze pending load tracking dataset and verify the calculation of known load metrics	Performed
Step 21 - Review plan for changes to the planning process for the next cycle	Not Required
Step 22 - Review implementing of planning standard and/or planning process	Not Required
Step 23 - Review list of internally approved capital projects	Not Required
Step 24 - Respond to and incorporate DPAG comments	Performed
Step 25 - Track solicitation results to inform next cycle	Not Required
Step 26 - Treating confidential material in the IPE report	Performed
Step 27 - Review Methodology used for Prioritization of Planned Projects	Performed
Step 28 - Review Project Execution Tracking Data and Metrics	Performed

6.1. PROCESSES TO DEVELOP SYSTEM LEVEL FORECASTS AT CIRCUIT LEVEL

6.1.1. Collect 2025 Actual Circuit Loading, Normalize and Adjust for Extreme Weather – Steps 1 and 8

Purpose: To verify the calculation of weather-normalized peak loads for a subset of circuits selected by the IPE; Perform validation of the process.

Process: SDG&E uses the 2025 actual circuit loading data from Supervisory Control and Data Acquisition (SCADA) to develop the normalized 1-in-2 peak load for each circuit. First, SDG&E uses Integral Analytics SCADA Scrubber to remove any data errors and temporary load transfers. SDG&E engineers then review scrubbed data and identify peak load for each circuit. Generation from largest single generator (or closely coupled generators) above 0.5MW are added back based on expected generation during the peak load hour. Starting this cycle, SDG&E used LoadSEER to develop 1-in-2 weather adjusted peak load for each circuit using the peak load from the SCADA data. SDG&E used an in-house tool for normalizing measured peak load data in prior cycles.

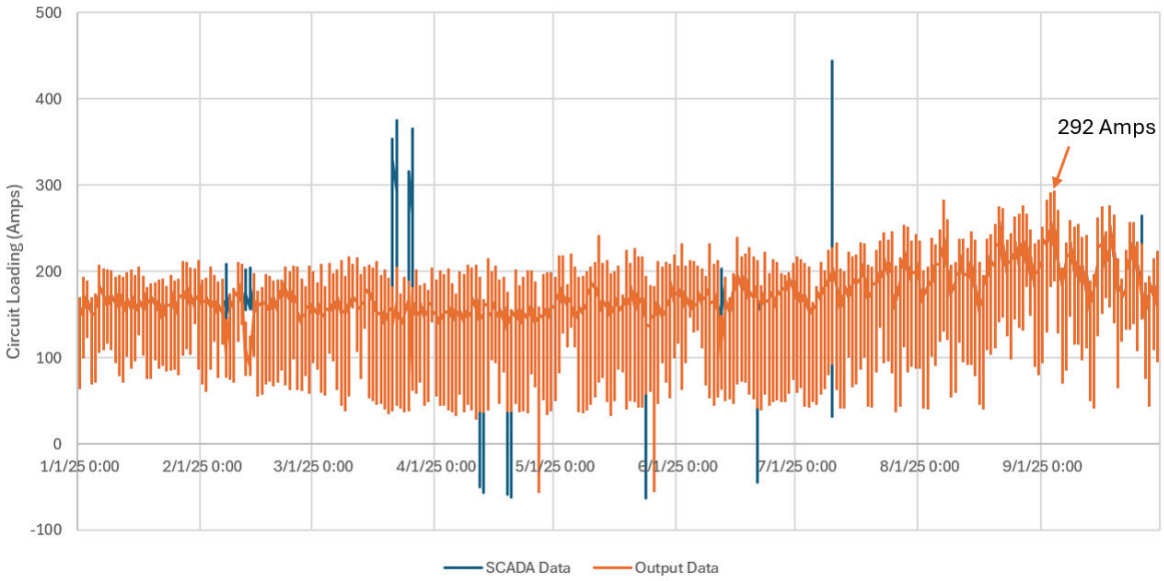
Verification: The IPE collected the observed peak load data for selected circuits that will be used in the verification of subsequent steps. This is shown in Table 6-2. This table also shows the equipment rating and the capacity with Alternate Service. SDG&E indicated that "Capacity with Alternate Service" is capacity contracted by a customer which needs to be available all the time. The loading on a circuit will be limited to the Alternate Service rating if it's lower than the equipment rating.

Table 6-2: Scrubbed 2024 Peak Load and Rating for Select Circuits

Facility ID	Facility Code	Peak Load (Amps)	Peak Date and Time	Equipment Rating	Capacity w/Alt Service
	A				
	B				
	C				
	D				
	E				
	F				
	G				
	H				
	I				

The IPE obtained the 2025 hourly raw SCADA data, as well as scrubbed data from SCADA Scrubber for all the circuits shown in Table 6-2. The raw and scrubbed data for one of the circuits is shown in Figure 6-2. In this figure, the instances of temporary load transfer and other spikes in loading can be seen in the raw SCADA data (blue). The scrubbed data is shown in orange. The peak of the scrubbed data matches with the value reported in Table 6-2 for this circuit.

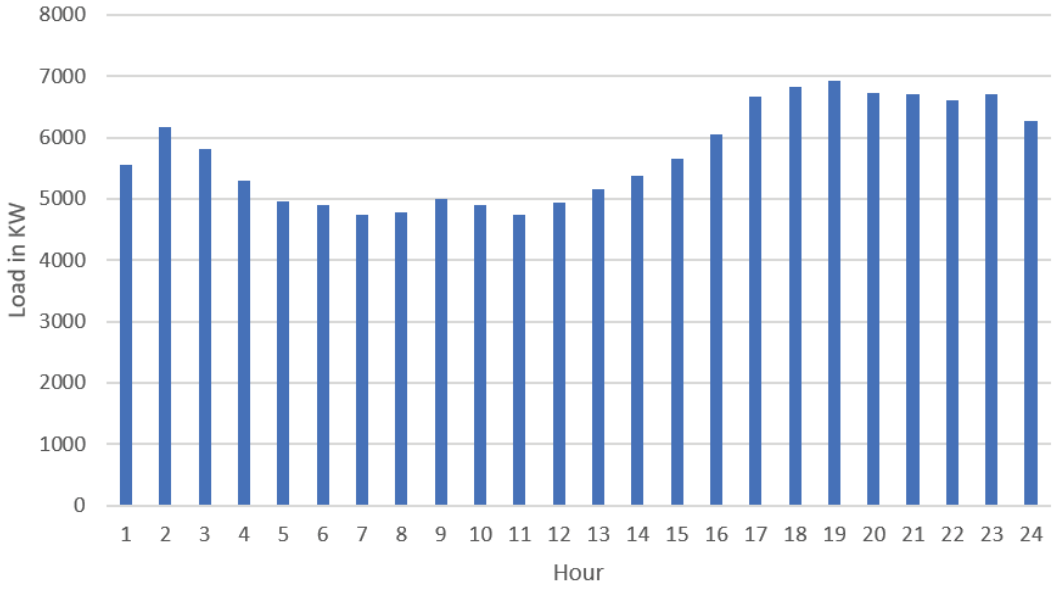
Figure 6-2: Raw and Scrubbed Hourly Load (Amps) Profile for a Circuit



As mentioned previously, for this cycle, SDG&E did not independently perform weather normalization calculations. Instead, SDG&E relied on the weather normalization functionality built into integral analytics' LoadSEER Weather Analysis. LoadSEER uses SCADA peak loads, along with the hourly circuit loads for the last three years and hourly temperature data for the last thirty years to develop weather-adjusted (1-in-10 or P95) 576-hourly load profiles. The P95 profiles translate to a 1-in-10 probability load profile and P75 translates to 1-in-2.

Because these calculations are internal to LoadSEER, SDG&E was not able to provide detailed weather normalization calculations. Instead, SDG&E provided the 1-in-10 baseline profile for the same 10 circuits selected in Step 1. Figure 6-3 shows the 1-in-10 baseline profile for peak weekday in September for a circuit. It can be observed from the figure that the peak load is around 6900 KW or 332 Amps. The 1-in-10 peak load was approximately 15% above the 2025 observed peak load for this circuit. The IPE plans to conduct additional verifications of the new process in the next cycle.

Figure 6-3: LoadSEER 1-in-10 Load Profile for a circuit



6.1.2. Determine Load and DER Annual Growth on System Level - Step 2

Purpose: To verify the calculation of annual system level load and DER growth using the CEC IEPR system-level forecasts as the starting point.

Process: The process used by SDG&E to determine system-level load and DER forecasts is summarized below. The changes to the process when compared with the last cycle are identified below.

- SDG&E uses the IEPR hourly forecast file to determine the peak value of the following load and DER components for all forecast years:
  - Unadjusted Consumption
  - Climate Change
  - Light Duty EV - Baseline and Additional Achievable TE (LDEV)
  - Medium Heavy Duty EV - Baseline and Additional Achievable TE (MDHDEV)
  - Behind-the-Meter PV (PV)
  - Behind-the-Meter Energy Storage - Residential and Non-Residential (ES)
  - Additional Achievable Energy Efficiency (AAEE)
  - Additional Achievable Fuel Substitution (AAFS)
- SDG&E calculates the Baseline Peak Load for each forecast year using the peak values of Unadjusted Consumption, Climate Change and Estimated Losses obtained

from a powerflow program. Baseline Peak Load is calculated by subtracting Climate Change and Estimated Losses from the Unadjusted Consumption.

- SDG&E calculates the Baseline Peak Load Growth (incremental) for each forecast year using the Baseline Peak Load values (the growth is the change in peak load between successive years). This Baseline Load Growth value does not include the peak load impact of any of the DERs, including LDEVs and MDHDEVs.
- SDG&E compares the Baseline Load Growth value for each forecast year with the total known loads and eligible pending loads (A, B1 and B2 in hot spots for the base scenario) for that year. The known load MW value for a year is the sum of all the known loads, except the TE known loads. Similarly, the pending load MW value for a year is the sum of all the pending loads, except the TE pending loads.
- If the sum of the known and pending loads for a year is higher than the Baseline Load Growth value for that year, SDG&E does not add any Econometric (Spatial) Loads in that year. However, if the known load MW value for a year is lower than the Baseline Load Growth value for that year, an Econometric Load equal to the difference between the Baseline Load Growth value and the known load MW value is added in that year. The one difference in this cycle is that SDG&E makes this comparison by customer class, i.e., separately for residential, commercial, and industrial loads.
- Unlike the prior cycle, SDG&E does not resolve any difference between the Cumulative IEPR Baseline Load Growth forecast and the Cumulative Known and Pending Load MW value (without EVs) at the end of the forecast period.
- Similar to the last cycle, SDG&E also used a similar process to reconcile the differences between LDEV Load Growth values from IEPR with the LDEV Known Loads. Using this methodology, SDG&E determines the Econometric LDEV loads at the system level. In this cycle, SDG&E is using the same process to reconcile IEPR MDHDEV forecast with corresponding known loads.
- For the remaining DERs (PV, ES, AAFS, AAEE), SDG&E uses the peak value from the CEC hourly file (discussed in the first step of this process) as the system-level forecast.
- The system-level Econometric Baseline Load Growth (by customer class), the Econometric TE Loads and the DERs are then disaggregated to circuits using allocation factors discussed in Step 3.

Verification: The IPE obtained the file for "CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast" and performed the calculations as described above. The calculation of the system-level load growth value for Baseline Load Growth, TE Load Growth and DER load growth made by the IPE matched with those provided by SDG&E.

The annual growth forecasts for Baseline Load Growth and TE Load Growth used by SDG&E to develop the needs in the GNA and verified by the IPE are provided in Table 6-3. The

annual growth forecasts for DERs (PV, ES, AAFS, AAEE) used by SDG&E to develop the needs in the GNA and verified by the IPE are provided in Table 6-4.

As discussed earlier, SDG&E reconciles the IEPR Baseline Load Growth values by customer class with the non-TE known and pending Loads. Figure 2-4 showed the results of the reconciliation. Similarly, SDG&E also reconciles LDEV and MDHDEV Load Growth values. Figure 6-4 shows the reconciliation of IEPR LDEV Load Growth values with the LDEV known loads and LDEV Econometric Load Growth. Since the LDEV known loads are significantly smaller than the IEPR LDEV Load Growth forecast, LDEV Econometric Load Growth is added in every year of the forecast. Figure 6-5 shows the reconciliation of SDG&E's MDHDEV forecast.

Figure 6-4: Annual and Cumulative LD EV Loads

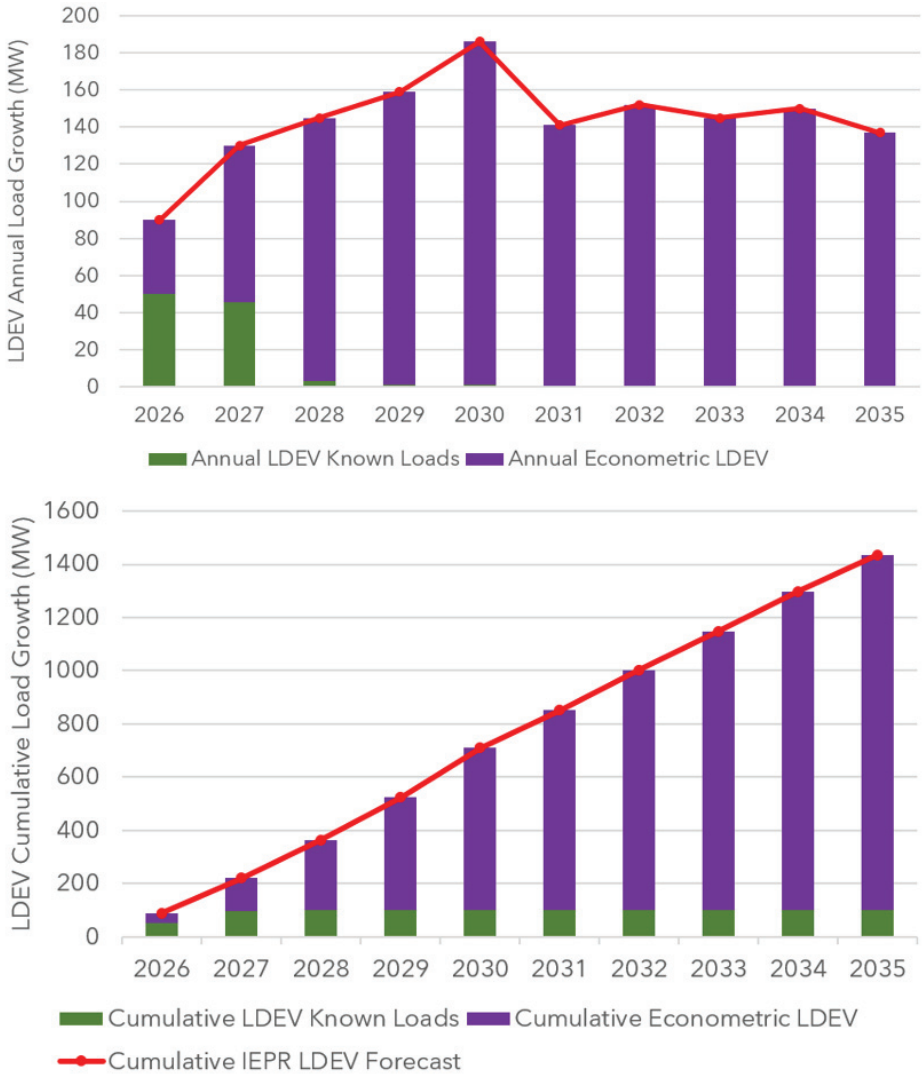


Figure 6-5: Annual and Cumulative MDHD EV Loads

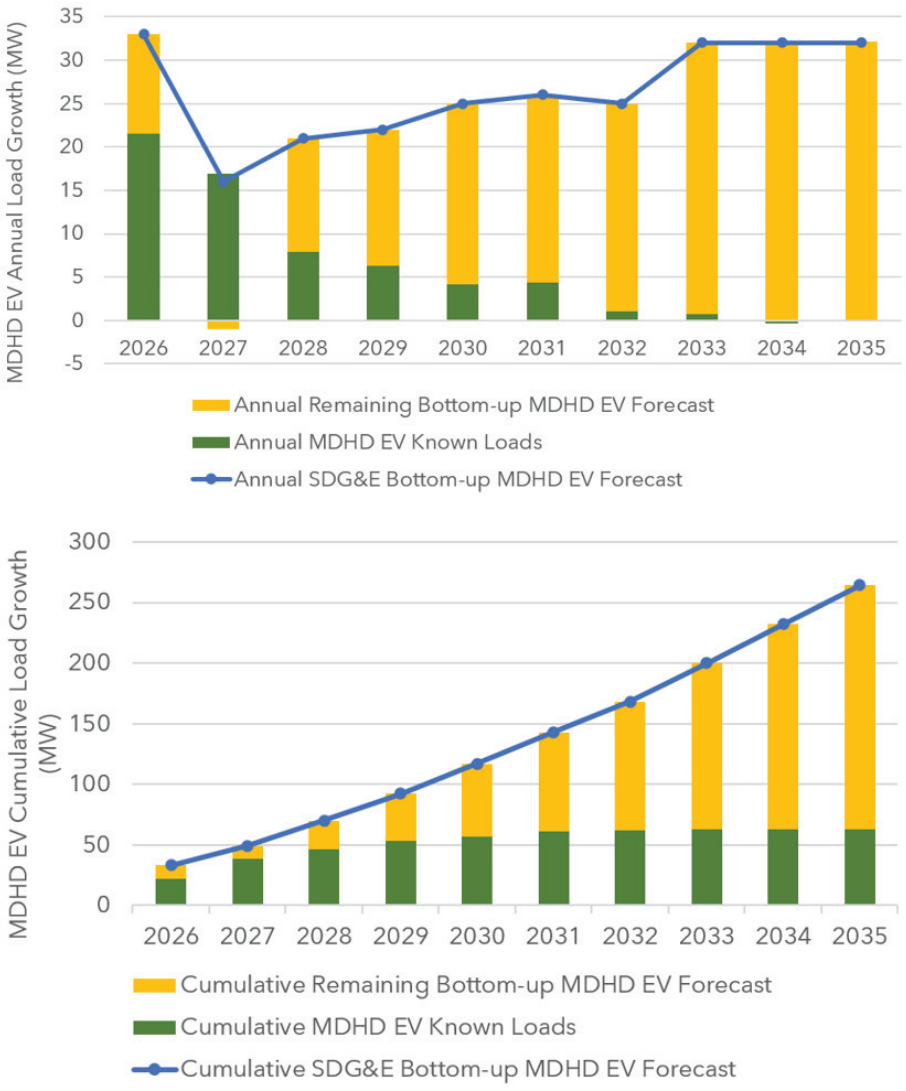


Table 6-3: Developing Annual System-level Load and EV Peak Load Forecasts from CEC IEPR Forecast

#	2024 IEPR Baseline Load Growth		2025 (MW)	2026 (MW)	2027 (MW)	2028 (MW)	2029 (MW)	2030 (MW)	2031 (MW)	2032 (MW)	2033 (MW)	2034 (MW)	2035 (MW)
1	UNADJUSTED_ CONSUMPTION		5358	5394	5436	5488	5540	5595	5648	5701	5754	5808	5860
2	CLIMATE_CHANGE		19	31	39	58	69	77	81	84	85	88	105
3	Transmission Losses		117	117	117	115	112	110	125	140	154	169	184
4	Baseline Load Growth (Incremental)			48	50	73	65	65	42	41	39	42	54
5	Baseline Load Growth (Cumulative)			48	98	171	237	302	345	386	425	467	522
6	Residential Load Growth Incremental	0.34	0	16	17	25	22	22	14	14	13	14	19
7	Commercial Load Growth Incremental	0.56	0	27	28	41	37	37	24	23	22	24	30
8	Industrial Load Growth Incremental	0.10	0	5	5	7	6	6	4	4	4	4	5
	Known Loads Incremental			**2026 (MW)**	**2027 (MW)**	**2028 (MW)**	**2029 (MW)**	**2030 (MW)**	**2031 (MW)**	**2032 (MW)**	**2033 (MW)**	**2034 (MW)**	**2035 (MW)**
9	Residential Known & Pending B1 Loads			39.2	28.3	10.1	0.9						
10	Commercial Known & Pending B1 Loads			88.1	66.3	18.7	17.8	1.6	7.0	3.5	7.0	7.6	7.6
11	Industrial Known & Pending B1 Loads			19.6	2.5	4.9	2.1	2.1					
12	Total Known & Pending B1 Loads			146.9	97.1	33.7	20.8	3.7	7.0	3.5	7.0	7.6	7.6
13	Residential Load Growth Incremental	34%	0.0	-23	-11	15	21	22	14	14	13	14	19
14	Commercial Load Growth Incremental	56%	0.0	-61	-38	22	19	35	17	20	15	16	23
15	Industrial Load Growth Incremental	10%	0.0	-15	2	2	4	4	4	4	4	4	5
	Disaggregation			**2026 (MW)**	**2027 (MW)**	**2028 (MW)**	**2029 (MW)**	**2030 (MW)**	**2031 (MW)**	**2032 (MW)**	**2033 (MW)**	**2034 (MW)**	**2035 (MW)**
16	Residential			0	0	15	21	22	14	14	13	14	19
17	Commercial			0	0	22	19	35	17	20	15	16	23
18	Industrial			0	2	2	4	4	4	4	4	4	5
#	**IEPR LDEV**		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
19	IEPR LDEV Annual			90.0	130.0	145.0	159.0	186.0	141.0	152.0	145.0	150.0	137.0
20	LDEV Known Loads Annual			50.4	45.8	3.1	1.1	1.1	0.7	0.1	0.0	0.0	0.0

21	LDEV Econometric Loads			39.6	84.2	141.9	157.9	184.9	140.3	151.9	145.0	150.0	137.0
#	**IEPR MDHDEV**		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
22	IEPR MDHDEV Annual			33.0*	16.0	21.0	22.0	25.0	26.0	25.0	32.0	32.0	32.0
23	MDHDEV Known Loads Annual			21.6	17.0	7.9	6.3	4.1	4.3	1.0	0.7	-0.3	-0.1
24	MDHDEV Econometric Loads			11.4	-1.0	13.1	15.7	20.9	21.7	24.0	31.3	32.3	32.1

*Note: SDG&E noted that it had used an incorrect value for IEPR MDHDEV forecast for 2026 and that the impact was a net 2 MW higher load during the forecast period. The IPE verified that SDG&E calculation of the net impact was correct.

Table 6-4: Calculation of System-Level DERs to Disaggregate in LoadSEER

DERs	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Additional Achievable Fuel Substitution (AAFS)	52	104	125	162	158	163	176	158	150	143
Additional Achievable Energy Efficiency (AAEE)	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6
Behind-the-Meter Energy Storage (ES)	-7	-6	-4	-5	-1	-6	-1	-1	-1	0
Behind-the-Meter PV (PV)	-54	-55	-54	-54	-53	-49	-40	-31	-25	-20

6.1.3. Disaggregate Load & DER Annual Growth to Circuit Level – Step 3

Purpose: To verify that the sum of the disaggregated loads and DERs at the circuit level match the CEC system-level values.

Process: A high-level summary of SDG&E's load & DER disaggregation process is given below. This process is the same as those used in the prior cycle.

Load Disaggregation

SDG&E uses Integral Analytics LoadSEER software to score each acre in SDG&E's territory for the likelihood of increased load by customer class. SDG&E allocates the customer class load growth projections (verified in Step 2) to each parcel based on the ratio of the parcel score to the total score and maps the load growth to circuits based on closest proximity. Results are reviewed by local planning engineers with specialized knowledge of local areas.

DER Disaggregation

SDG&E disaggregates system-level growth forecasts (verified in Step 2) down to the circuit level for the following DERs: AAEE, PV, ES, LDEV, and MDHDEV, and AAFS. The system-level incremental MW capacity by DER technology type is allocated to the circuits based on methodologies specific to each DER type. Variables used to allocate incremental DER capacity geospatially include consumption by customer class, historical PV adoption by zip code, the s-curve trending model, weather zones, and many other factors specific to each type of DER. The DER disaggregation process is described in detail in Appendix 3 of the GNA report and was also presented at the DFWG Meeting in May 2026.

Verification: The IPE obtained circuit-level load and DER growth forecasts for all circuits from SDG&E. The IPE performed a check to see if the sum of the circuit level forecasts for load and each DER matched with the corresponding system-level values verified in Step 2. Table 6-5 to Table 6-10 show the results of the verifications performed. The results show that the sum of circuit level forecasts match with the corresponding system-level values for both load and DERs.

Table 6-5: Load Growth Forecast Verification at the Feeder Level

System-level load growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Commercial	0.0	0.0	22.4	18.9	35.1	16.7	19.6	15.0	16.0	22.8
Residential	0.0	0.0	15.0	21.5	22.3	14.4	14.1	13.4	14.4	18.5
Industrial	0.0	2.5	2.4	4.3	4.3	4.2	4.1	3.9	4.2	5.3
Total	0.0	2.5	39.8	44.7	61.7	35.3	37.8	32.2	34.6	46.6
Sum of circuit-level load growth forecast calculated by the IPE (MW)										
Commercial	0.0	0.0	22.4	18.9	35.1	16.7	19.6	15.0	16.0	22.8
Residential	0.0	0.0	15.0	21.5	22.3	14.4	14.1	13.4	14.4	18.5
Industrial	0.0	2.5	2.4	4.3	4.3	4.2	4.1	3.9	4.2	5.3
Total	0.0	2.5	39.8	44.7	61.7	35.3	37.8	32.2	34.6	46.6

Table 6-6: EE Growth Forecast Verification at the Feeder Level

System-level EE growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Total	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6
Sum of circuit-level EE growth forecast calculated by the IPE (MW)										
Commercial	-8	-7	-7	-7	-6	-5	-5	-5	-5	-4
Residential	-1	-1	-1	-1	-1	0	0	0	0	0
Industrial	-4	-4	-4	-4	-3	-3	-3	-3	-3	-2
Total	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6

Table 6-7: ES Growth Forecast Verification at the Feeder Level

System-level ES growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Total	-7	-6	-4	-5	-3	-4	-1	-1	-1	0
Sum of circuit-level ES growth forecast calculated by the IPE (MW)										
Commercial/ Industrial	-7	-6	-4	-5	-1	-6	-1	-1	-1	0
Total	-7	-6	-4	-5	-1	-6	-1	-1	-1	0

Table 6-8: PV Growth Forecast Verification at the Feeder Level

System-level PV growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Total	-54	-55	-54	-54	-53	-49	-40	-31	-25	-20
Sum of circuit-level PV growth forecast calculated by the IPE (MW)										
COM/IND	-54	-55	-54	-54	-53	-49	-40	-31	-25	-20
Total	-54	-55	-54	-54	-53	-49	-40	-31	-25	-20

Table 6-9: EV Growth Forecast Verification at the Feeder Level

System-level EV growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
MHDEV	11.0	-1.0	13.0	16.0	21.0	22.0	24.0	31.0	32.0	32.0
LDEV	39.6	84.2	141.9	157.9	184.9	140.3	151.9	145.0	150.0	137.0
Sum of circuit-level EV growth forecast calculated by the IPE (MW)										
MHDEV	10.7	-1.1	12.4	15.2	20.5	21.4	23.7	31.2	32.1	32.0
LDEV	39.6	84.2	141.9	157.9	184.9	140.3	151.9	145.0	150.0	137.0

Table 6-10: AAFS Growth Forecast Verification at the Feeder Level

System-level AAFS growth forecast from CEC (MW)										
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
AAFS	52	104	125	162	158	163	176	158	150	143
Sum of circuit-level AAFS growth forecast calculated by the IPE (MW)										
AAFS	52	104	125	162	158	163	176	158	150	143

6.1.4. Add Known and Pending Load Growth Projects to Circuit Level Forecasts (those loads not in CEC forecast) – Step 4

Purpose: To verify the process used by SDG&E to account for Known and Pending Load Growth Projects in load forecasting process.

Process: As discussed in 6.1.2, if the sum of the known and pending loads for a year is higher than the Baseline Load Growth value for that year, SDG&E does not add any Econometric (Spatial) Loads in that year. However, if the sum of the known and pending loads for a year is lower than the Baseline Load Growth value for that year, an Econometric Load equal to the difference between the two is added in that year. Examples of known and pending loads are given below:

- New Commercial: Business, Hospitals, Parking, Military and Farming
- New Residential: Home construction
- New Industrial: Manufacturing and Chemical Processing

Verification: The IPE gathered known and pending load additions by customer class at the circuit level, which are shown in Table 6-11. The IPE compared the cumulative circuit-level load by customer class with the system-level values used in Step 2. These values matched exactly.

Table 6-11: Known and Pending Load Additions by Customer Class

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Grand Total
Commercial	88.10	66.35	18.74	17.75	1.60	6.96	3.46	7.01	7.62	7.62	225.20
Industrial	19.63	2.45	4.88	2.13	2.13						31.23
Residential	39.16	28.32	10.08	0.87							78.44
TE (LDEV & MDHDEV)	67.75	63.11	9.17	5.83	3.21	2.85	0.52	0.38	0.25		153.07
TOTAL without TE	146.89	97.12	33.70	20.76	3.73	6.96	3.46	7.01	7.62	7.62	334.87
TOTAL with TE	214.64	160.24	42.87	26.59	6.94	9.81	3.98	7.40	7.86	7.62	487.95

6.1.5. Convert Peak Growth to 576 Profile, Determine Peak Load – Steps 5, 6 and 7

SDG&E uses the circuit-level peak load growth forecast by customer class (verified in Step 3) and typical 576-hourly profiles for each customer class to develop the Peak load growth 576 hourly profile for each circuit for each forecast year. These load profiles are generated by LoadSEER based on historical load data. Similarly, SDG&E uses the circuit-level DER growth forecast by customer class (if applicable) and typical 576-hourly profile for each DER to develop the DER growth 576 hourly profile for each circuit for each forecast year. The typical

576-hourly profiles for DERs are developed using the 8760 hourly profiles in the CEC IEPR hourly file.

The verification of Steps 5-7 was excluded in this cycle. However, the typical profiles of the DERs are included for reference. These profiles were generated using the data provided in the file "CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast" for the year 2040 and they are very similar to the profiles used in the last cycle.

Figure 6-6: Typical LDEV Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)

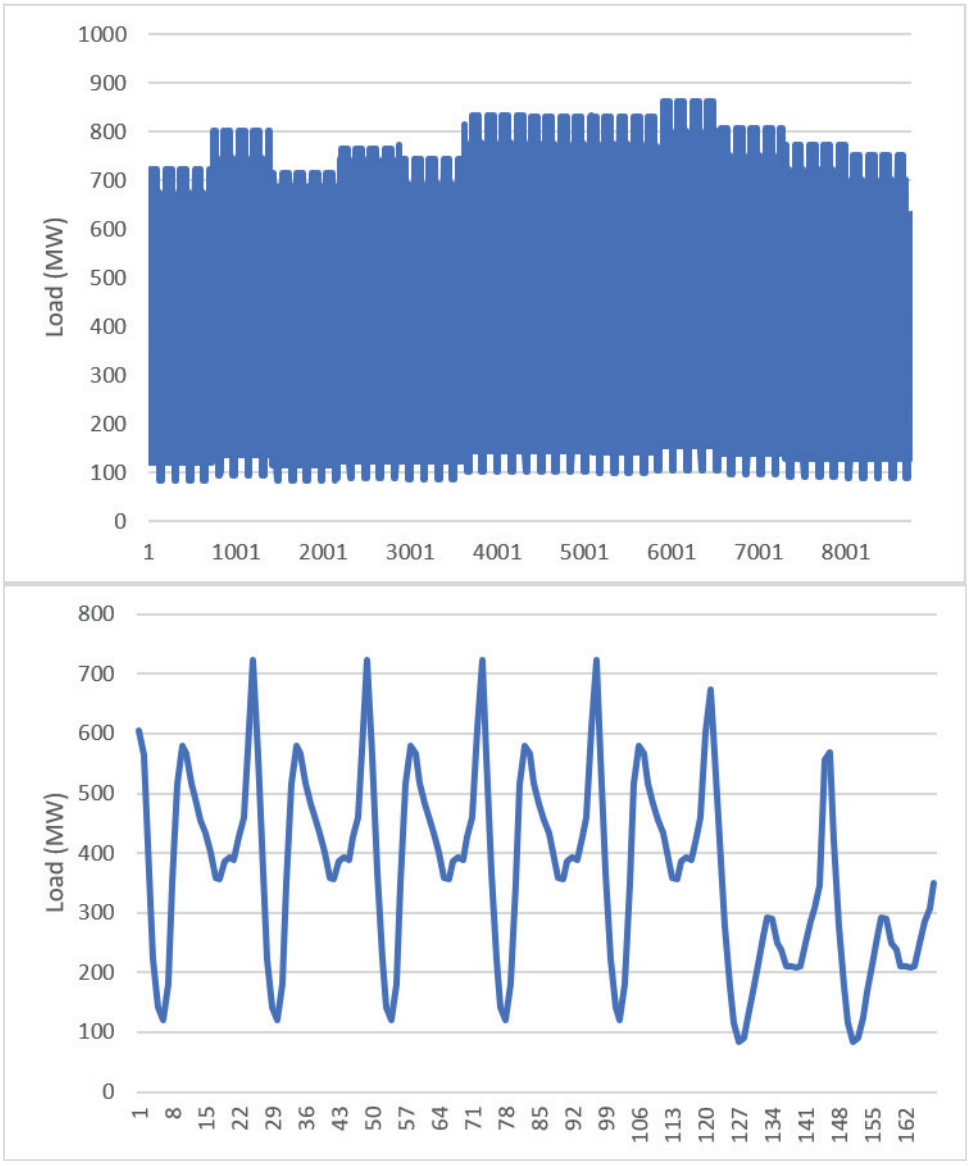


Figure 6-7: Typical MDHDEV Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)

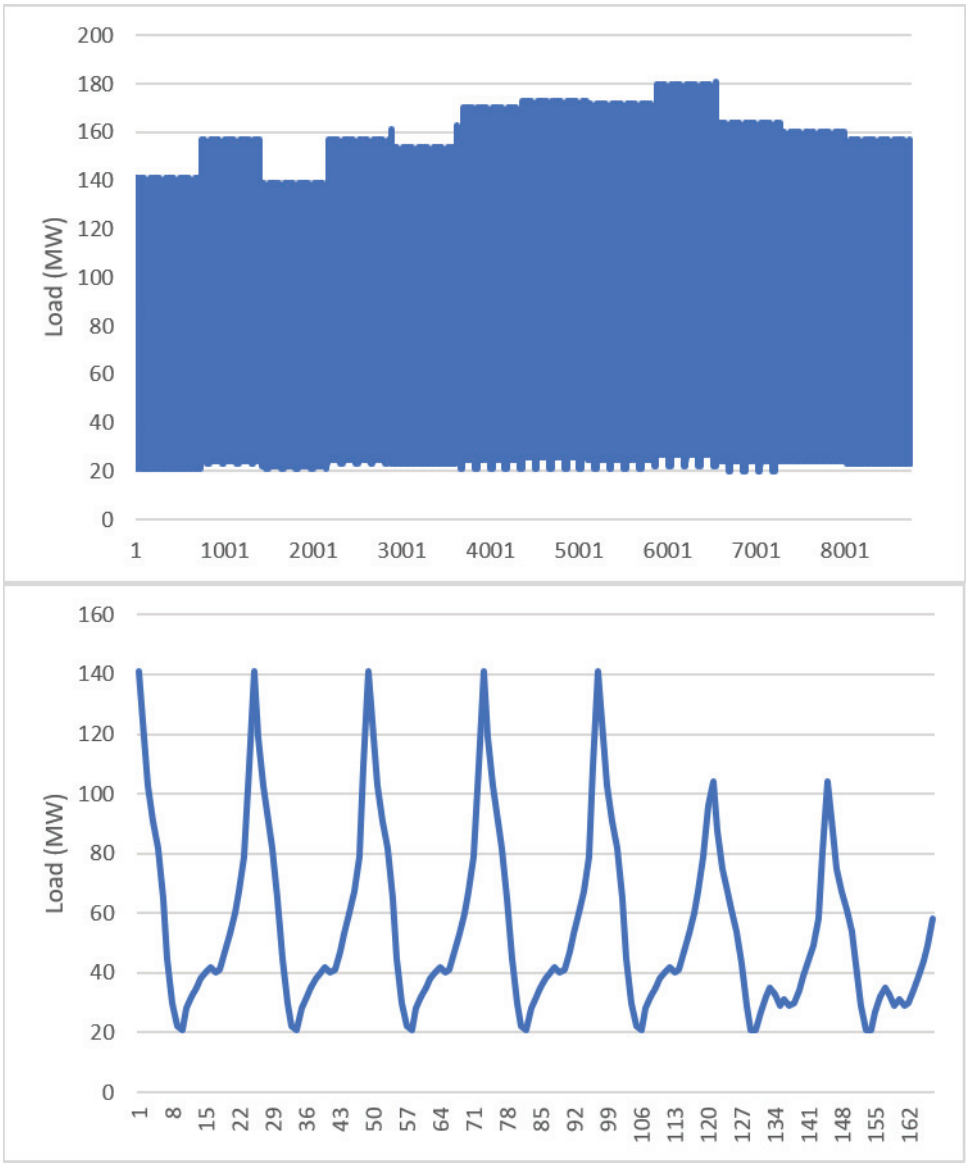


Figure 6-8: Typical BTM-PV Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)

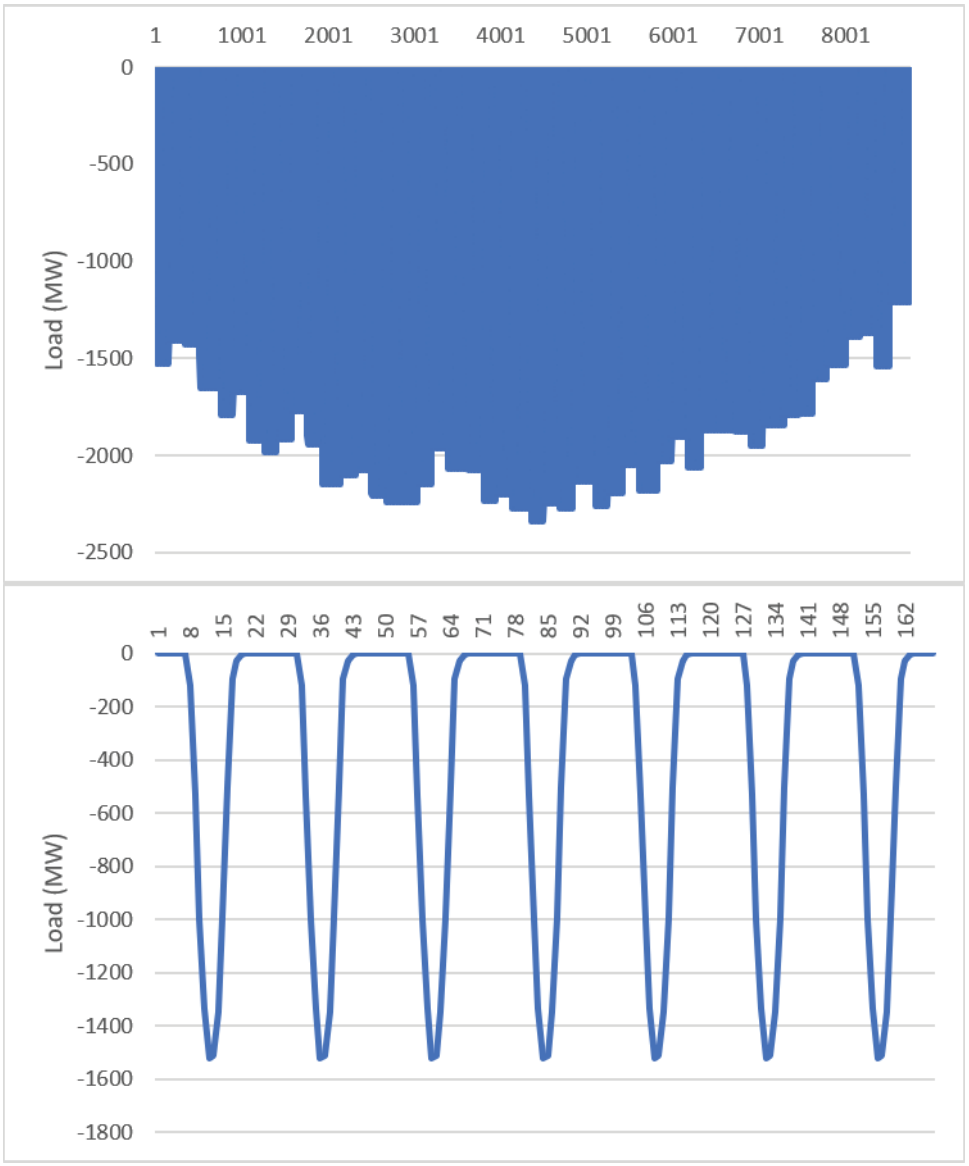


Figure 6-9: Typical BTM-ES (Non-Res) Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)

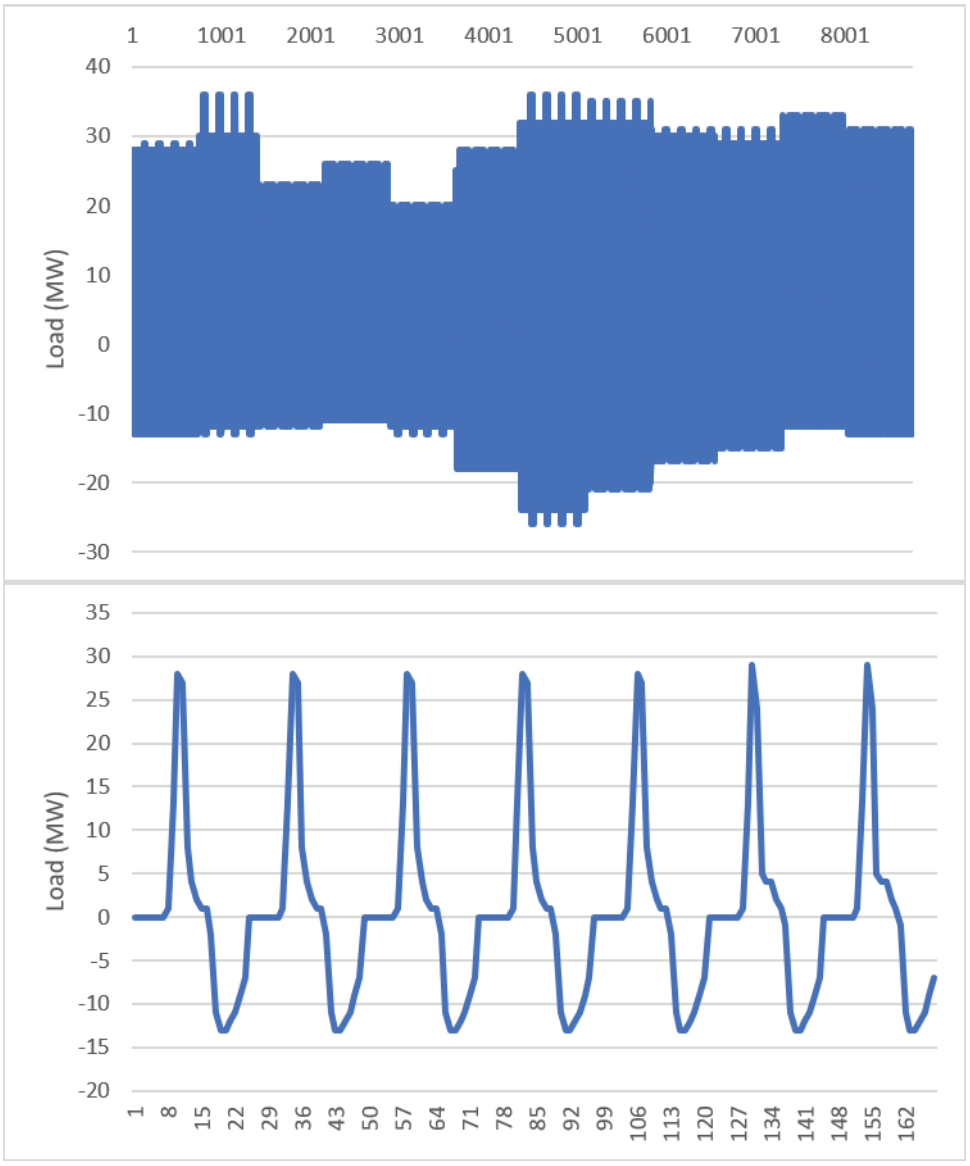


Figure 6-10: Typical AAEE Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)

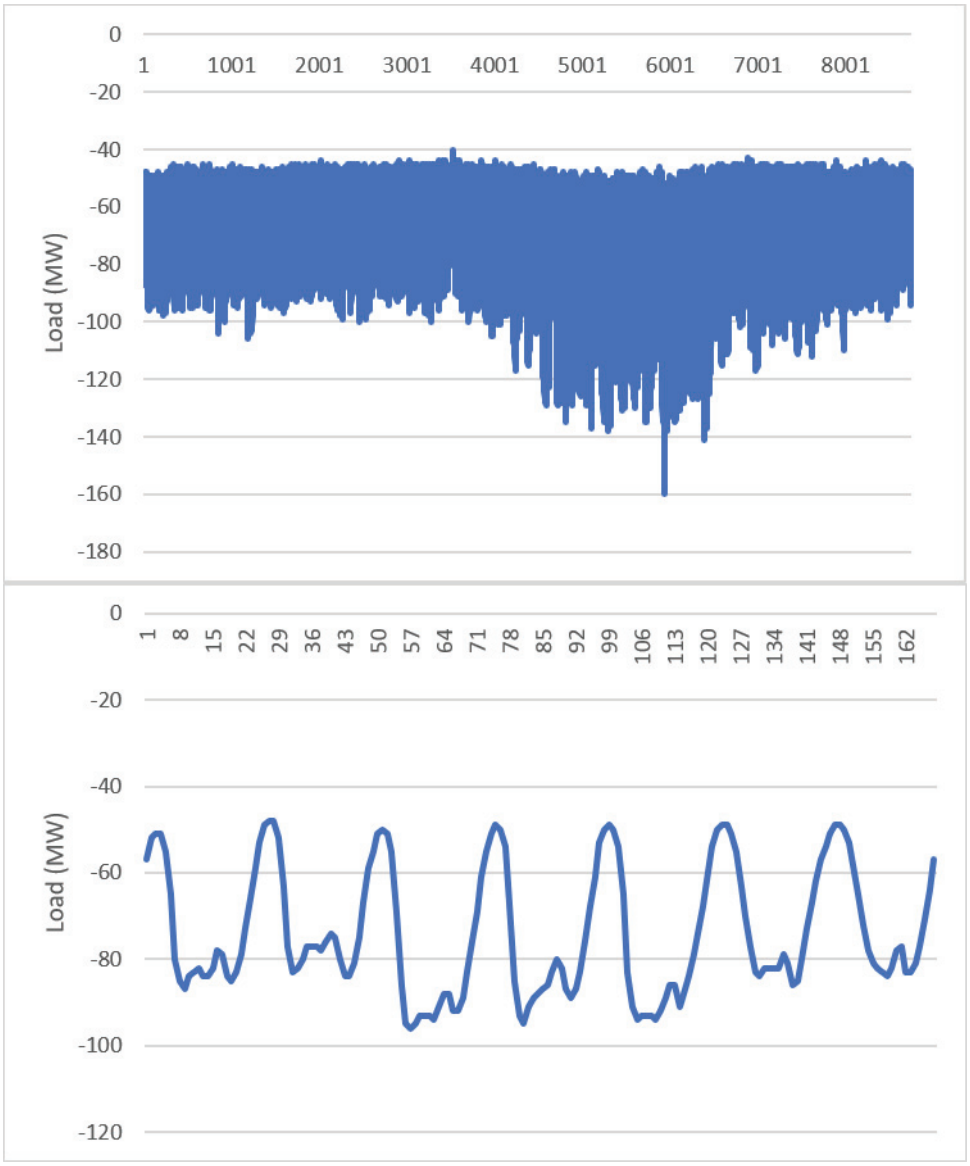
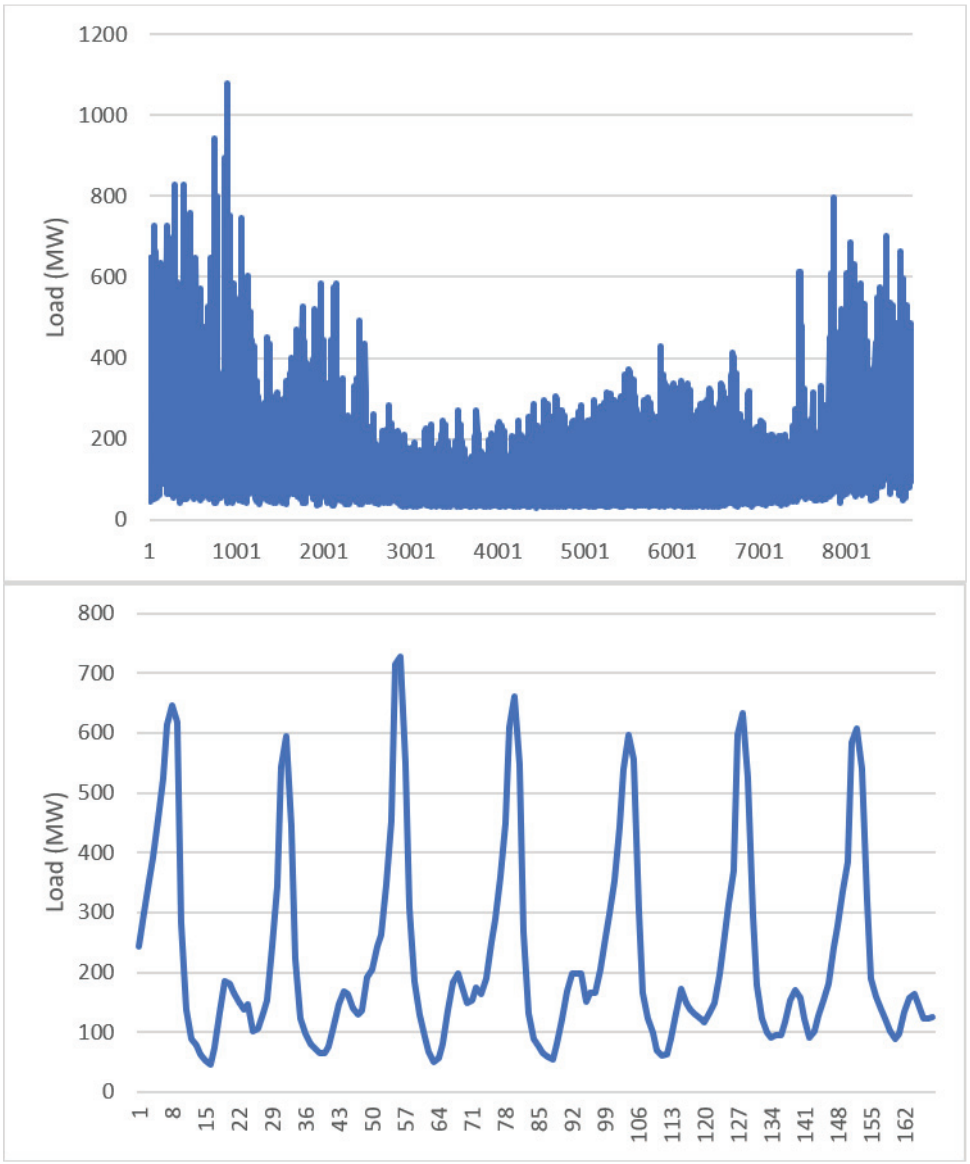


Figure 6-11: Typical AAFS Load Profile (Source: CED 2024 Hourly Forecast - SDG&E Local Reliability Forecast)



6.2. PROCESSES TO DETERMINE CIRCUIT NEEDS AND DEVELOP GNA

6.2.1. Initial Comparison to Equipment Ratings, Evaluate No Cost Solutions and Comparison to Equipment Ratings after No Cost Solutions – Steps 9, 10 and 11

Purpose: To verify the overloads calculated by SDG&E for circuits prior to load transfers, phase balancing, etc.

As per the IPE Plan, the verification and validation of these steps were skipped in this cycle.

6.2.2. Compile GNA Tables Showing Need and Timing – Step 12

Purpose: To verify that SDG&E's planning standard/process were followed in determining the needs shown in the GNA table.

Verification: The IPE obtained the GNA table in Excel format that showed the forecast peak load and the components of the peak load and verified that the sum of the components matched the forecast peak load. There were no changes to the planning standards/criteria in the development of the GNA tables when compared with the prior cycle.

6.3. PROCESSES TO DEVELOP PLANNED INVESTMENTS AND COSTS

6.3.1. Develop Recommended Solution – Step 13

Purpose: The purpose of this step was to verify and validate the process SDG&E used to identify planned projects to address the needs. Of particular interest was the verification and validation of the process used by SDG&E to determine whether planned investments identified in prior cycles are still needed and are the appropriate solution based upon planning assumptions for load and DER growth and other planning assumptions used in the current DPEP cycle.

Verification: SDG&E provided a general description of the process that is used to confirm that planned solutions and planned investments identified in earlier DPEP cycles are still needed and the appropriate solution or investment at this time.. This process is summarized below.

As a part of the annual cycle, SDG&E verifies all active projects while identifying solutions for the new grid needs. This allows for adjustments to project scope or timeline as needed to reflect updated forecasts and system conditions.

SDG&E determines whether a planned upgrade project is still necessary by conducting comparative overload studies using updated system forecasts and conditions. This process involves evaluating system performance in two scenarios:

1. With the upgrade in place – to confirm that, with updated conditions, there are no overloads.
2. Without the upgrade in place – to assess whether, with updated conditions, there will be an overload.

This dual-scenario analysis helps engineers determine if the upgrade remains justified or if the overload has been mitigated due to changes in demand, customer energization timelines, or other system updates. If in the 'without upgrade' scenario the overload persists, the upgrade is kept, though its scope or timeline may be adjusted to align with the updated system conditions. If the overload is no longer present, the upgrade may be deferred or cancelled.

The analysis is performed using Synergi, SDG&E's distribution planning tool, which models the full distribution system and incorporates forecast loads and system constraints. Engineers use Synergi to run power flow simulations and identify potential overloads. While the process involves automated modeling and simulation, interpretation of results and decision-making rely on engineering judgment and planning criteria.

SDG&E also stated that in the case of a customer cancelling its service request, SDG&E will, as soon as feasible, reassess any upgrades tied to the service request.

All three Utilities provided detailed information about the planned project reconfirmation process which was included in the 2026 IPE Post DPAG report.

6.3.2. Estimate Capital Cost for Candidate Deferral Projects – Step 14

Purpose: To verify the project costs provided by SDG&E against other sources such as rate case filings. To verify the total project level costs provided by SDG&E with those included in the DUPR.

As per the IPE Plan, this step is no longer required.

6.4. PROCESSES TO DEVELOP CANDIDATE DEFFERAL LIST AND PRIORITIZE

6.4.1. Development of Candidate Deferral Projects – Step 15

Purpose: To develop a list of Candidate Deferral Opportunities and verify that this list matches the results SDG&E included in its DDOR.

As per the IPE Plan, this step is no longer required.

6.4.2. Development of Operational Requirements – Step 16

Purpose: To confirm operational requirements for selected circuits are developed using the process described and that the values developed are the same as included in subsequent steps of the process (DDOR and DPAG).

As per the IPE Plan, this step is no longer required.

6.4.3. Prioritization of Candidate Deferral Projects into Tiers – Step 17

Purpose: To verify that prioritization process used by SDG&E is consistent with the description of the prioritization metrics, components, and tier ranking process.

As per the IPE Plan, this step is no longer required.

6.4.4. Calculate LNBA Ranges and Values – Step 18

Purpose: To verify the calculation of LNBA performed by SDG&E for the planned projects.
As per the IPE Plan, this step is no longer required.

6.4.5. Compare 2025 Forecast and Actuals at Circuit Level – Step 19

Purpose: The purpose of this step is to perform a comparison of the forecast versus actual peak load for a statistically meaningful number of circuits. If the above data for all the circuits is available with minimal effort, the IPE will perform the comparison for all circuits. The purpose is to get some insight into the "accuracy" of the overall circuit planning process recognizing that there are many variables that can affect the comparison; many of these variables are beyond the control of the utility.

As per the IPE Plan, the verification and validation of this step was skipped in this cycle.

6.5. Known and Pending Load Tracking Data and Metrics Calculation – Step 20

Purpose: To analyze the Known and Pending Load Tracking data and verify the calculation of the Known and Pending Load metrics.

Verification: The IPE obtained the 2026 Known and Pending Load Tracking data and the calculation of the metrics in Excel format and verified the calculations made by SDG&E. This is discussed in Section 4 of this report.

6.6. OTHER IPE WORK

Steps 21, 22, 23 and 25 are no longer required to be verified as discussed in Section 1 of this report.

6.6.1. Respond to and Incorporate DPAG Comments – Step 24

The IPE was available during the SDG&E DPAG meeting. There were no written comments or questions directly addressed to the IPE. However, there were several questions addressed to SDG&E. The responses from SDG&E can be found in Appendix B-1.

6.6.2. Treating confidential material in the IPE Report – Step 26

The IPE work products have followed the process and steps included in this Business Step in developing the IPE Final Report. Additional actions were taken to minimize the material that is redacted in the public version of this report to maximize the reader's ability to understand what the IPE did during this DPEP cycle.

6.7. Methodology Used for Prioritization of Planned Projects

Purpose: To perform verification and validation of the process used by SDG&E to prioritize planned projects for execution.

Verification: This verification was not performed. SDG&E stated that it does not prioritize between projects beyond the scoping and timeline development conducted at the individual project level. In cases where budget constraints arise, SDG&E considers the totality of its business needs and conducts an internal assessment to identify potential funding solutions to determine the best course of action for the capacity project.

6.8. Project Execution Tracking Data and Metrics

Purpose: To perform verification and validation of the projection execution tracking data.

Verification: This is the second cycle where SDG&E has provided the project execution tracking data. In this cycle, SDG&E included the status of all ongoing projects that were identified in the 2026 cycle and only completed projects from the prior three cycles, i.e., 2023-2025. Ordering Paragraph 26 of D24-10-030 states that Utilities shall include additional details on all ongoing and (eventually) the prior three years' completed distribution capacity projects in their public Distribution Deferral Opportunity Report (DDOR), now the Distribution Upgrade Project Report (DUPR) filing. Further, the Energy Division clarified that by August 15, 2026, all ongoing projects shall be reported and all completed projects from the past three years of distribution capacity projects. Therefore, SDG&E should not only include completed projects from the past three cycles but also all ongoing projects from the current, as well as prior cycles. Apart from this, the project execution data provided by SDG&E was complete and contained data in the template prescribed by the Energy Division.

SDG&E indicated that it will be filing an amendment of SDG&E's 25-26 GNA DUPR Appendix 6 Project Execution Table to include all ongoing distribution capacity projects in addition to past three years' completed projects.

Appendix A IPE Scope

Proposed IPE Scope of Work (Draft)

Proposed Changes to Current Scope of Work

Current IPE Scope	Recommendations
Step 1 - Collect 2024 Actual Circuit Loading and adjust/normalize for weather as needed	Keep in future cycles
Step 2 - Determine Load and DER Annual Growth on System Level	Keep in future cycles
Step 3 - Disaggregate Load and DER Annual Growth to the Circuit Level	Keep in future cycles
Step 3a - Check sum of all disaggregated load and DERs same as CEC IEPR System level values	Keep in future cycles
Step 4 - Add Incremental Load Growth Projects to Circuit Level Forecasts (those loads not in CEC forecast)	Keep in future cycles
Step 5 - Convert DER growth load to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 5 - Convert peak of load to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 5 - Convert base forecast and weather normalization adjustment to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 6 - Derive net load profile	Recommend skipping unless process changed.
Step 7 - Determine net peak load	Recommend skipping unless process changed.
Step 8 - Adjust for extreme weather	Keep in future cycles
Step 9 - Initial comparison to equipment ratings to determine if ratings exceeded	Recommend skipping unless process changed.
Step 10 - Evaluate no cost solutions - incorporate load transfers, phase balancing, correct data errors	Recommend skipping unless process changed.
Step 11 - Comparison to equipment ratings to determine if ratings exceeded	Recommend skipping unless process changed.
Step 12 - Compile GNA tables showing need amount and need timing, etc (consistent with IOU's documented planning standards and/or planning process	Keep in future cycles
Step 13 - Develop Recommended solution and generate list of Planned Investments (follow the IOU's documented planning standards and/or planning process)	Keep in future cycles

Step 14 - Estimate capital cost for candidate deferral projects	Eliminate
Step 15 - Development of Candidate Deferral Projects list through application of screens (timing and technical)	Eliminate
Step 16 - Development of operational requirements for CDO (daily, monthly, annually, etc)	Eliminate
Step 17 - Prioritization of Candidate Deferral Projects into Tiers	Eliminate
Step 18 - Calculation of LNBA ranges and values for all planned projects.	Eliminate
Step 19 - Compare 2023 Forecast and Actuals at Circuit Level [proposed change would increase from ~10% of circuits to include all circuits if possible]	Keep in future cycles
Step 20 - Analyze known load tracking dataset and verify the calculation of known load metrics	Keep in future cycles
Step 22 - Review implementing of planning standard and/or planning process	Eliminate
Step 23 - Review list of internally approved capital projects	Eliminate
Step 24 - Respond to and incorporate DPAG comments	Keep in future cycles
Step 25 - Track solicitation results to inform next cycle	Eliminate
Step 26 - Treating confidential material in the IPE report	Keep in future cycles

Proposed Additions to IPE Scope of Work

Decision	New items	IPE Scope
3.1-Allow Utilities to Use Bottom-Up, Known Load Data to Determine Growth	Definition of Reliable Bottom-up Data (as well as, Customer energization Request, Known Load, Pending Load etc.) (Page 42) Note: Decision 3.1 allows Utilities to use reliable bottom-up data to estimate total load growth in a given year, even if it exceeds the forecasted load growth based on the IEPR for that year. Further, this decision directs that, in years without reliable bottom-up data, total growth should correspond to the forecast amount and not be adjusted downwards.	Annual verification and validation for the use of known loads already being performed as a part of Step 2 of the current V&V process. No new steps required.
3.2 – Require Utilities to Improve Method for Setting Caps on Load Growth from IEPR data.	IOU to work with CEC and CPUC to staff in developing proposals for the method and accounting for discrepancies between the system and circuit level. (Page 43) Decision 3.2 further focuses on developing proposals for the method and accounting for discrepancies between the system and circuit level (forecasts). The forecast at the system level (IEPR) is a coincident peak load forecast and is not necessarily equal to the sum of the peak loads on all the circuits. So, a methodology needs to be devised to develop circuit level forecasts that takes this into account. This decision approves, with one modification, the recommendation to require Utilities to submit Advice Letters proposing how they will improve their methods for setting caps on load growth based on the IEPR forecasts and other data. Utilities shall file Tier 3 Advice Letters. (Page 47)	Verify and validate IOUs' use of methodology for accounting for discrepancies between the system and circuit level load forecasts in the DPP. Annual starting 2025-2026 cycle. Annual verification and validation of methods for setting caps on load growth from IEPR data already covered under Step 2 of the current V&V process. No new steps required.
3.4 – Require Utilities to Expand the DPP Forecast Horizon to Align with IEPR and Expand the Planning Horizon to 10 Years.	To ensure transparency, utilities shall provide a description of the thermal capacity evaluation methodology in the annual GNA report (Page 55)	No new steps required to verify the expanded DPP planning horizon. The current V&V will be extended from 5 years to 10 years. Annual starting 2025-2026 cycle.

3.5 – Require Utilities to Use Scenario Planning to Improve Forecasting and Disaggregation	Workshops to develop scenario planning methodology and process. (Page 59) Utilities shall develop scenario planning capabilities that enable them to: (1) analyze multiple forecasts; (2) identify capacity deficiencies for each scenario and report them in the annual GNA; and (3) develop one investment plan informed by the multiple scenarios and reported in the DDOR or successor filing. (Page 61)	Attend workshop. One Time. Estimated Q1 2025 Verify and validate each DPP scenario and how utilities create one investment plan informed by multiple scenarios in the annual DPEP. Annual starting 2025-2026 cycle. • Develop draft IPE Plan for V&V of scenario planning – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026
3.6 - Require Utilities to Improve Disaggregation Methodology for Load Growth	Require Utilities to Improve Disaggregation Methodology for Load Growth (Page 62) This decision adopts the recommendation to require Utilities to improve disaggregation methodologies for load growth and distributed energy resources but delays implementation to the 2027 GNA and the 2026-2027 DPP cycle. To track progress toward improved disaggregation in the interim, Utilities shall report annually in the GNA on the development of advanced disaggregation methodologies and present these at the annual Distribution Forecast Working Group workshops or successor workshops. (Page 65)	Verify and validate the improved disaggregation methodology. Annual starting 2026-2027 cycle. Q3 2027. • Develop draft IPE Plan for V&V of improved disaggregation methodology – Q2 2027 • Finalize IPE plan – Q3 2027 • Perform V&V Q4 2027
3.7 - Require Utilities to Create Pending Loads Category in the DPP	Utilities are directed to provide pending load data and include the source of the data in the annual known load tracking filing, as part of the GNA/DDOR or successor report and orally reported during the DPAG or successor workshop (Page 76)	Attend workshop. One Time. Estimated Q1/Q2 2025 Verify and validate pending load data and source in annual reports and DPAG or successor workshop. Annual starting 2025-2026. • Develop draft IPE Plan for V&V of Pending Loads – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026

3.8 – Require Utilities to Develop Prioritization Methods Beyond the Current Consideration of Project Need Dates	Utilities to report how projects identified throughout the distribution planning horizon have been prioritized for execution. This decision also requires inclusion of this information in the annual GNA/DDOR or a successor report instead of the previously required Advice Letter (83)	Verify and validate the process used by utilities to prioritize projects for execution. Annual starting 2024-2025 cycle. • Develop draft IPE Plan for V&V of prioritization methodology – Q2 2025 • Finalize IPE plan – Q3 2025 • Perform V&V Q3 2025
3.9 – Require Utilities to Consider Distribution Planning Results in Other Distribution Work	Utilities to consider distribution planning results in other distribution work aka Integrated planning (Page 83) A workshop shall be held by Utilities during the third quarter of 2025 to present Utility proposals for integrated planning and solicit feedback from stakeholders on issues presented, including cost containment considerations. A second workshop shall be held by Utilities no more than eight weeks following the first workshop to present updated proposals based on feedback from the first workshop. (Page 86)	Attend workshop. One Time. Estimated Q3/Q4 2025. Verify and validate that integrated planning projects meet the established requirements. Annual starting 2026-2027. • Develop draft IPE Plan for V&V of integrated distribution planning – Q2 2027 • Finalize IPE plan – Q3 2027 • Perform V&V Q3 2027
3.11 – Require Utilities to Prepare a Load Flexibility DPP Assessment	Require Utilities to Prepare a Load Flexibility DPP Assessment. (Page 98)	Review EIS Part 2 studies and attend workshop. One Time. Estimated Q1 2026.
3.15 – Require Utilities to Include Metrics to Evaluate Equity in Utility Distribution Plan Reporting	Require Utilities to Include Metrics to Evaluate Equity in Utility Distribution Plan Reporting (Page 119) The Commission clarifies that while these metrics are requested for evaluation purposes, there is no framework wherein equity metrics are used for forecasting or planning distribution. The intention of this proposal is an annual evaluation of equity in distribution planning and does not involve modifying the planning process based on equity considerations. (Page 123)	Support the ED and the IOUs in finalizing and standardizing the tracking and reporting of the Equity Metrics. One Time. Estimated Q2 2025. Verify and validate equity metrics calculated by the utilities and reported by the utilities annually. Annual starting 2025-2026 DPP cycle. • Develop draft IPE Plan for V&V of equity metrics – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026

3.16 – Require Utilities to Include Metrics to Track Project Execution in Utility Distribution Plan Reporting	Require Utilities to Include Metrics to Track Project Execution in Utility Distribution Plan Reporting (Page 123) *also see Table 12 and Table 13. Table 12 * Additional Details for All Ongoing and Prior Three Years Completed Distribution Capacity Projects Table 13* Additional Project Execution Tracking Data	Support the ED and the IOUs in finalizing and standardizing the tracking and reporting required to track project execution based on Table 12, 13, and the requirements of R24-01-018 (Appendix B - Decision Establishing Target Energization Time Periods And Procedure For Customers To Report Energization Delays). One Time. Estimated Q2 2025 Verify and validate the project execution data and metrics submitted by the utilities. Annual starting 2024-2025 DPP cycle. • Develop draft IPE Plan for V&V of project execution metrics – Q2 2025 • Finalize IPE plan – Q3 2025 • Perform V&V Q3 2025
3.18 - Require Utilities to Facilitate Better Coordination and Data Sharing Between the DPP and Transportation Electrification Planning	Require Utilities to Facilitate Better Coordination and Data Sharing Between the DPP and Transportation Electrification Planning (Page 135)	Verify and validate how TEPP outputs are used in DPP. Annual starting 2025-2026 earliest. • Develop draft IPE Plan for V&V of TEPP coordination – Q2 2026 • Finalize IPE plan – Q2 2026 • Perform V&V Q3 2026

Appendix B DPAG Survey and Comment Responses

SDG&E solicited feedback from the DPAG during their DPAG meeting on September 18, 2026, and also solicited comments by email. SDG&E received written comments provided by Stakeholders on September 25, 2026, and provided their response on October 5, 2026. This response is attached below.

DISTRIBUTION PLANNING ADVISORY GROUP (DPAG) FOLLOW-UP
HIGH DER FUTURE RULEMAKING – R.21-06-017
SDG&E RESPONSE TO QUESTIONS ON 9/18/26 DPAG MEETING
DATE RECEIVED: SEPTEMBER 25, 2026
DATE RESPONDED: OCTOBER 5, 2026

Energy Division (ED)

1) **(All IOUs)** Please explain further how known loads that are partially energized are represented within the known load tracking data. How does the tracking data represent the amount of initially requested load energized, and the amount of initially requested load which remains to be served?

SDG&E Response:

Please explain further how known loads that are partially energized are represented within the known load tracking data:

Known Loads that are partially energized are classified as "Energized" in the Known Load Tracking Data – Status column. The Expected Load Amount (MW) will exceed the Actual Load Amount (MW), reflecting that the customer load is being energized in phases as operations ramp up (see Appendix 4 of SDG&E's 2025-2026 GNA/DUPR).

How does the tracking data represent the amount of initially requested load energized, and the amount of initially requested load which remains to be served?

As a preliminary matter, SDG&E does not necessarily utilize the amount of "initially requested load" that a customer is seeking to energize in the DPP. SDG&E reviews energization requests and based on information provided by the customer and other factors, determines the amount of load that is expected to be added – the "Expected Load Amount (MW)." For Known Loads that are energized in phases, the difference between the Expected Load Amount (MW) and Actual Load Amount (MW) can indicate that only a portion of the originally anticipated load has materialized and that additional load growth or future load additions are expected as customers ramp up their operations. The difference between these fields provides visibility of the amount of originally anticipated load that remains to be added.

a. How do you treat partially energized known load into a subsequent DPEP cycle? How does the utility know and prevent double count the investment planning needed to serve the full load of the customer? For example, a 10 MW known load that gets 75% energized. How is this project counted in the following year?

SDG&E Response:

How do you treat partially energized known load into a subsequent DPEP cycle?

When a customer is energized but is not yet utilizing the full anticipated capacity, the remaining load is modeled to ramp up over multiple years based on expected customer growth, project phasing, and development timing. As load materializes, the incremental MWs are incorporated through the spread-year assumptions used in SDG&E's forecasts.

This approach allows SDG&E to distinguish between the initial energization date and the ultimate realization of the customer's full originally anticipated load, while continuing to reflect the remaining expected load in the planning process.

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How does the utility know and prevent double count the investment planning needed to serve the full load of the customer? For example, a 10 MW known load that gets 75% energized. How is this project counted in the following year?

SDG&E continues to track incremental load additions as they materialize through the Known Load Tracking Data, which allows SDG&E to capture the difference between originally anticipated energization and full load realization.

If a 10 MW known load was originally anticipated and only 7.5 MW is energized, the load is identified as Energized, with an Expected Load Amount of 10 MW, and an Actual Load Amount of 7.5 MW. The remaining 2.5 MW will continue to be tracked and reflected in subsequent forecast years based on the applicable spread-year assumptions and updated customer information. Because the remaining amount is associated with the same known load record and related planning need, it is not treated as a separate 10 MW request. As a result, the load is not double counted in the subsequent years.

b. How does the Known Load tracking data indicate which requests lead to additional investment planning needs, and which requests can be served by existing capacity?

SDG&E Response:

Known loads that are associated with distribution upgrade projects are tracked through the Known Load Tracking Data using the associated DUPR ID. A known load with a DUPR ID indicates that the load contributed to an identified planning need and is linked to a planned distribution upgrade project. Known Loads that can be accommodated without a distribution upgrade project do not have an associated DUPR ID. Whether a known load request can be accommodated with existing system capacity depends on several factors, including whether the load contributes to a capacity deficiency and whether no-cost or low-cost solutions are available to address the need.

2) **(SCE)**
Not applicable to SDG&E.

3) **(SCE)**
Not applicable to SDG&E.

4) **(PG&E)**
Not applicable to SDG&E.

5) **(SDG&E)** SDG&E reports only Category B1 Pending Loads (PL) in the 10-year planning horizon, therefore the Base and High scenarios remain identical. What is SDG&E's methodology for differentiating between Category B1 PLs, and B2 and C PLs?

SDG&E Response:

SDG&E follows the criteria in Table 2 of Resolution E-5413 for Pending Loads to categorize four types of Pending Loads. As stated in SDG&E's 2026 GNA DUPR Table 1, Category B1 Pending Loads refers to medium-confidence projects based on less detailed customer plans as compared to Category A. Category B2 refers to study-based pending loads and SDG&E did not identify any within the 10-year planning horizon. Similarly, Category C may also be study-based, however it does not meet the minimum criteria of Pending Load Category B2, or it is based on preliminary customer plans. All Pending Loads tracked for the 2025-2026 GNA/DUPR 10-year planning horizon met the minimum criteria for Pending Load Category B1.

6) **(All IOUs)** In the DPAG presentations, grid needs and planned investments were summarized by distribution service: Capacity, Voltage, Reliability (Back-tie), Resiliency, and for PG&E, "Other." Are any Planned Investments or Planned Solutions in the GNA/DUPR mainly driven by reliability performance, for example circuits identified through reliability metrics such as those reported in the Annual Electric Reliability Report?
    a. If so, how are these projects identified or distinguished in the GNA/DUPR, such as by distribution service category, primary driver, or project type?
    b. If reliability-driven investments are planned or tracked through another process or regulatory filing, please identify it.

SDG&E Response:

The four listed distribution services ("Capacity, Voltage, Reliability (Back-tie), Resiliency") were identified by the Commission in D.16-12-036. For each planned distribution solution included in SDG&E's GNA/DUPR report, SDG&E identifies the distribution service(s) provided. Distribution projects that improve reliability performance outside of these four services are not identified through SDG&E's annual Distribution Planning Process (DPP) and are not included in SDG&E's annual GNA/DUPR. As described in SDG&E's GNA/DUPR and DPAG presentation, SDG&E's Planned Solutions in the GNA/DUPR are mainly driven by load growth and the resulting capacity deficiencies.

a. N/A.
b. Distribution projects that improve reliability performance may be identified through analysis outside of the DPP. These processes can include emergency response actions, near-term overload management efforts, wildfire mitigation, aging infrastructure replacement, and mitigation for sub-standard circuit performance. These investments are tracked and reported in SDG&E's General Rate Case.

7) **(All IOUs)** The project prioritization methods presented in the DPAG presentations reference reliability-related factors to different degrees. How are reliability considerations, such as historical outage performance or outage risk on specific circuits, factored into your prioritization of distribution planning projects, and what data or metrics inform that assessment?

SDG&E Response:

SDG&E's DPAG presentation did not reference reliability-related factors as project prioritization criteria. Rather, as described in SDG&E's GNA/DUPR and presented in DPAG, SDG&E's distribution planning projects are implemented based on the identified need date; i.e., all mitigation solutions are considered to have equivalent priority. For each proposed solution, SDG&E evaluates the project scope and anticipated implementation timeline to determine the appropriate initiation and execution schedule. Distribution planning projects are prioritized to ensure timely mitigation of forecast deficiencies; reliability performance-related considerations are addressed through separate reliability programs and are not a factor in the prioritization of distribution planning projects.

8) **(All IOUs)** Please confirm what, if any, changes were made to the proposed scenario planning Decision Logic Framework intended for the 2026-2027 DPEP cycle when compared to the Decision Logic Frameworks approved for the 2025-2026 DPEP cycle.

SDG&E Response:

Per Resolution E-5414, Ordering Paragraph 5, SDG&E was not required to produce a Decision Logic Framework for the 2025 – 2026 DPEP cycle, therefore this question is not applicable to SDG&E.

9) **(All IOUs)** Please explain the relationship between the Annual Electric Reliability Reporting Metrics and the GNA/DUPR. Are the investments needed to remediate the worst performing circuits and other reliability performance metrics integrated into the GNA/DUPR? If yes, explain how. If not, explain why and what other process is used to address the reliability metrics.

SDG&E Response:

There is no relationship between the Annual Electric Reliability Reporting metrics and the GNA/DUPR. They serve distinct purposes and are not directly linked.

The GNA/DUPR is the utilities' annual assessment of future distribution system deficiencies identified through the distribution planning process. These deficiencies are primarily driven by load growth and increasing capacity needs. While the solutions implemented to address these deficiencies may also provide reliability benefits, the GNA/DUPR is not intended to, and does not, evaluate or report reliability performance metrics.

In contrast, the Electric System Reliability Annual Report is a data-driven assessment of how reliably SDG&E's electric system performed during the applicable reporting year based on reliability data. The report documents historical system performance rather than future distribution system needs. The investments needed to ensure the safe and reliable operation of SDG&E's electric system are ultimately authorized and funded through the GRC process.

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SDG&E RESPONSE TO QUESTIONS ON 9/18/26 DPAG MEETING
DATE RECEIVED: SEPTEMBER 25, 2026
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Public Advocates Office (Cal Advocates)

1. Actual Load Amount and Derating

SDG&E states: "Actual Load Amount reflects the magnitude of the new service that SDG&E plans to provide as of when SDG&E internally disseminates the load forecast for the current DPP cycle, and adjusted for known loads with successive load additions spanning multiple years."

a. Does SDG&E derate known loads when adding them into the forecast?
b. If so, under what circumstances does SDG&E derate known loads when adding them into the forecast?
c. If so, how does SDG&E select the derated value which is added to the forecast?
d. Does SDG&E continue to track Known Load projects after they are energized?

SDG&E Response:

a. No, once a known load is established and tracked, SDG&E does not derate the load amount when adding it to the forecast.

b. N/A.

c. N/A.

d. Yes, SDG&E continues to track known load projects after initial energization to reflect remaining incremental load additions, phased development, or spread-year assumptions. Once the project is fully energized and reflected in actual load, it will no longer be reported as a future known load addition in the subsequent DPP cycles.

2. Deferrals

SDG&E reports 68 deferred known loads and 145 MW of deferred service. This represents known loads which were present in both the 2025 and 2026 Known Loads databases and now have a later in-service date.

a. What are the key reasons why deferrals occur?
b. How many deferred known loads were deferred due to customer behavior, such as customers delaying their application or not being ready to energize on the initial timeline?
c. How many deferred known loads were deferred due to project delays from SDG&E, such as SDG&E's capacity or energization work taking longer than originally planned?

SDG&E Response:

a. Although the metric adopted by the Commission uses the term "deferral", it does not necessarily indicate that projects have been "deferred". Rather, this metric reflects changes to an energization project's planned in-service date (ISD), which is what SDG&E monitors to ensure the projected

load impacts are accurately incorporated into forecasting years. Changes to the ISD can result from a variety of factors, including customer-driven requests, utility-driven schedule adjustments, or third-party influences such as permitting and regulatory approvals.

b. SDG&E does not track the reason for known load deferral.

c. As discussed in SDG&E's September 2026 Biannual Energization Target Reporting Narrative, SDG&E cannot reliably attribute project delays to specific causes because customer-driven and IOU-controlled time cannot yet be discretely separated. However, SDG&E's analysis demonstrates meaningful reductions in end-to-end energization timelines across multiple tariff categories, indicating that projects initiated under the post-Decision framework are being completed more quickly than projects initiated prior to Decision 24-09-020.

3. Planned Investments

SDG&E's planned investments have increased noticeably in the 2026 GNA-DUPR cycle. SDG&E identified planned investments in its 2021, 2022, 2023, 2024, 2025, and 2026 GNAs.

a. What factors in SDG&E's GNA and DUPR are driving the overall increase in planned investments across GNA cycles?

SDG&E Response:

SDG&E's planned projects as reported in the DUPR increased from 12, 17, 19, 16, and 22 projects in the 2021 through 2025 DPP cycles, respectively, to 29 projects in the 2025-2026 DPP cycle. The 2025 – 2026 DPP covers a 10-year planning horizon, compared to the prior DPP cycles, which only cover five years. It is therefore reasonable to expect an increase in the overall number of planned projects. When comparing the first five years of the 2025 – 2026 DPP, SDG&E identified 26 planned projects that are necessary to mitigate potential grid issues. While this does represent an increase relative to prior cycles, SDG&E does not consider an increase of 4 projects from the previous cycle particularly "noticeable." The general trend of projects for the 2025 – 2026 DPP mirrors that of previous cycles, with a greater need for projects in the short term (Y2 of the planning horizon), with a decline in projects in Y3 through the end of the planning horizon. This is because there is greater certainty for project need in the near term, with less certainty as the horizon extends out. Contributing factors to the increase may include continued growth in the number and magnitude of Known Loads compared to prior planning cycles.

Appendix C Copy of the IPE Plan

Note: The IPE Plan for SDG&E is attached below.



Final IPE Plan for 2025-2026 DPEP Cycle - San Diego Gas & Electric

Submitted to California Public Utility Commission

August 17, 2026

Submitted by:

Resource Innovations

Sundar Venkataraman

Barney Speckman

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Appendix B Updated Scope of Work Dated March 4, 2025 ..... B-1

1 Introduction and Background

The Independent Professional Engineer (IPE) services for the 2025-2026 Distribution Planning and Execution Process (DPEP) is per CPUC decision (D.18-02-004), Administrative Law Judge's Ruling (R. 14-08-013) issued May 7, 2019, and Administrative Law Judge's Ruling Modifying DIDF (R.14-08-013) issued April 13, 2020 which defined the original IPE scope of work (Appendix A). This original scope of work has been modified by subsequent orders and rulings, as well as updates to the scope of work made by the Energy Division on March 4, 2025, which modifies the original scope and includes additional scope items to support the High DER proceeding. This updated scope of work is included as Appendix B. Further revisions made to this scope of work are discussed in Section 3.1 of the IPE Plan and reflected in Table 3-1.

The schedule for the IPE Verification and Validation (V&V) process in this cycle will follow the Administrative Law Judges' ruling setting schedule for the 2026-2027 Distribution Planning and Execution Process cycle[1] issued on April 20, 2026 and is shown below:

- Draft IPE Plan due week of May 18, 2026.
- Final IPE Plan due August 17, 2026.
- IPE Preliminary Analysis of GNA/DUPR Data Adequacy for all three IOUs due September 4, 2026.
- IPE Distribution Planning Advisory Group (DPAG) report for each IOU presenting GNA/DUPR review findings and Verification & Validation outcomes due November 6, 2026.
- IPE Post DPAG Report covering all three IOUs, comparing their filings, reviewing compliance, and making recommendations for process improvements due March 15, 2027.

[1] The ALJ ruling issued on April 20, 2026, provided the schedule for both the 2025-2026 and 2026-2027 DPEP cycles.

2 Description of the Plan

2.1 Definitions Used in the Plan and Other Deliverables

To facilitate understanding of the IPE scope of work, the following definitions are included and will be used in the Plan and throughout all of the IPE work products and deliverables.

> Verification – Is a review performed by the IPE during which an independent check is performed to determine if the results produced were developed using data assumptions and business processes that were defined and described by the utility or are based upon standard industry approaches that do not have to be defined and described. In other words, "Did the IOU follow their own processes correctly as defined and described by the IOU?"
>
> Validation – Is a review performed by the IPE during which an independent assessment is performed of the appropriateness of the approach taken by the utility to perform a task from an engineering, economics, and business perspective. In other words, "Are the processes implemented by the IOU the best way to identify all necessary planned solutions and investments. And to what extent were the IOU methodologies appropriate and effective?"

The IPE Plan covers the business processes that the IOUs use to identify which distribution or sub-transmission projects are recommended to proceed to implementation. One of the core purposes of the plan is to answer the question - Are the IOUs identifying every project that will be needed to provide the new or additional service requirements of their customers early enough to provide the service in a timely manner.

The business processes in the Plan are organized generally in the order that they are performed. Starting with capturing the peak load values for each circuit, using the CEC IEPR forecasts to develop utility specific system level values which are then disaggregated to the circuit level, adjusted for known and pending loads and then used to determine if there is an overload or other issue during the planning period. For circuits that have a need, the best planned investment is selected. Scenario planning, if applicable, is used to analyze three scenarios – Low, Base and High Scenarios, the results of which are incorporated into a final proposed set of planned solutions and planned projects.

3 IPE Plan

The heart of the IPE Plan is the material contained in Table 3-1. This table lists the business processes, roles of the utility and IPE, target timing and information requirements for each business process in the IPE scope. Listed below is a more detailed description of the contents:

- IOU Business Process / IPE Review Step – This column includes a number for each business process included in the table. To make it easier for readers who will be looking at more than one utility IPE Plan, the process was started with the same numbering for all three utilities and that set of numbers was maintained as much as possible. In cases where additional steps needed to be added to accommodate a utilities specific unique process a letter was added to the previous number. For example, the step after Step 3 was added and was number Step 3a. For cases where steps are not needed, they will be spelled out in the table.
- Business Process / IPE Review Step Description – This column contains a general description of the business process being reviewed.
- Plan for 2025-2026 DPEP Cycle – This column includes several types of information:
  - A brief description of what the review will include and whether it would include a review of a subset of the total number of elements (i.e., circuits) or all elements and what is being examined.
  - Roles which include the role of the utility overall and the role of the IPE for both the verification and validation review. For one or both reviews, an indication is provided in most cases, for what the IPE will be checking for or confirming in the review.
    Note that there are generally two approaches to performing a verification. The first is a demonstration wherein the utility develops the necessary spreadsheet or other mechanism to show how the business process developed the results of interest and the IPE performs a walk through to view the demonstration by the utility. The second approach is wherein the IPE develops a spreadsheet or other mechanism to calculate the results of interest using data provided by the utility and then compares the results to the utilities' numerical results.
- Target Timing – This column includes a target timing for the reviews in the business process in this row or in the timing that data will be provided to the IPE.
- Data/Information Requirements – This column includes the data or information that the IPE needs to perform its review and in some cases the date the information is required.

3.1 Revisions to the IPE Plan for this Cycle

As per the updated IPE Scope of Work, the following verification and validation steps will be skipped in this cycle since SDG&E has confirmed that the business process they used in these steps are the same as those used in the prior cycle and there is no other reason to believe that this step should be included in this year's review.

- Steps 5-7 - Convert Peak Growth to 8760 Profile, Determine Net Load and Peak Load
- Steps 9-11 - Initial Comparison to Equipment Ratings, Evaluate No Cost Solutions and Comparison to Equipment Ratings after No Cost Solutions
- Step 14 - Development of capital costs for the planned investments.
- Step 19 - Compare 2025 forecast loads with actual loads

These steps are not being removed permanently from the IPE scope. In addition, as indicated earlier, these steps are only skipped in this cycle since the utility states that the business process for these steps have not changed from the prior cycle and the ED/IPE do not think there is any other reason to include them in this V&V cycle. These steps have been included in the table below and will be followed only if the process used by the utility for this cycle is different than used in the previous cycle.

As in the last cycle, Step 13 (Development of Planned Investments using Planned Standards) will be retained in this cycle to verify and validate the process used by the utilities to determine whether a planned project identified in a previous cycle is still needed based on the results of the current cycle.

In addition, the verification and validation of the following steps related to the identification and prioritization of Candidate Deferral Opportunities (CDOs) will be no longer required. However, these steps are left in the IPE plan to preserve the numbers assigned to subsequent steps to avoid any confusion.

- Step 15 - Development of Candidate Deferral Projects
- Step 17 - Prioritization of Candidate Deferral Projects into Tiers
- Step 16 - Development of operational requirements for CDOs
- Step 18 - Calculation of LNBAs for planned projects
- Step 25 - Track solicitation results to inform next cycle.

In addition, based on inputs from the ED, the following steps will be skipped in this cycle.

- Step 21 - Review plan for changes to the planning process for the next cycle

- Step 22 - Review implementing of planning standard and/or planning process.
- Step 23- Review list of internally approved capital projects (created in other distribution planning workstreams).

Two steps (Steps 27 and 28) which were added in the last cycle will also be included in this cycle.

- Step 27 – Review Methodology used for Prioritization of Planned Projects
- Step 28 - Review Project Execution Tracking Data and Metrics

IPE V&V steps for 2025-2026 DPEP Cycle are shown starting on the following page.

Note: Resolution E-5413 established pending load categories A, B1, B2 and C.[1] For the 2025-2026 DPEP cycle, SDG&E only identified Category B1 pending loads within the planning horizon. As no category B2 or C pending loads are present and since B2 or C pending loads have to be present for hot spots to be applied[2], no hot spots were identified for 2025-2026 DPEP cycle. Additionally, SDG&E indicated that because Base and High scenarios differ only in Pending Load categories B2 and C, there is no distinction between the Base and High scenarios for the 2025-2026 DPEP cycle. The V&V plan shown in the table below reflects the above assumptions.

[1] Resolution E-5413 Table 1 at 19.

[2] Resolution E-5414 Table 1 at 14.

Table 3-1: SDG&E IPE Review for 2025-2026 DPEP Cycle

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	PROCESSES TO DEVELOP STARTING POINT LOAD, SYSTEM LEVEL VALUES AND DISAGGREGATE TO CIRCUIT LEVEL			
1	Collect 2025 actual circuit loading and adjust for weather as needed	Perform verification for 8-10 circuits jointly selected by the IPE and SDG&E: check results including normalization to typical weather day. Examine weather adjustment factors/relationships for SDG&E regions. Perform validation of the process. Roles: SDG&E to provide the 2025 peak load for selected circuits within their territory. SDG&E to also provide data for weather adjustment factors such as temperatures HDD, CDD, historical feeder/substation loads and other data, as applicable, that are used for the calculation of weather-adjusted peak loads, as well as a description of the general procedure used for calculating weather-adjusted peak loads if it has changed from the past cycle. Verification:	Selection of feeders by June 30. The information requested in the "Data/ Information Requirements" by July 10.	▪ Description of business process used to develop weather-normalized peak loads for each circuit if it is different from what was used in the last cycle. ▪ 2025 peak load and the day and hour the peak load occurred for selected circuits. ▪ 8760 hourly loads before and after removal of data errors, data drops and load transfers from SCADAScrubber for selected circuits.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		IPE to verify that the weather-adjusted peak loads calculated using the data and information provided by SDG&E matches reasonably well with the values produced by SDG&E for the circuits examined. Validation: IPE to review the business process for reasonableness and consistent with the objectives of the DPEP process.		▪ Data for weather adjustment factors such as temperatures, HDD, CDD, historical feeder loads and other factors. ▪ General procedure used for calculating weather-adjusted peak loads if it is different from what was used in the last cycle.
2	Determine load and DER annual growth at the system level used in the DPEP including the use of IEPR forecasts, known loads, pending loads and econometric/spatial loads.	Perform verification and validation of how system-level, annual load and DER growth forecasts are developed by SDG&E using the CEC IEPR forecasts. Perform verification and validation of how the known load and pending loads are removed from the IEPR forecast. Perform V&V on all aspects of this process. Roles: SDG&E to provide the spreadsheets used for calculating the year-to-year, cumulative change in system-level load by class, as well as the year-to-	Description and links to IEPR forecasts provided by July 17. Spreadsheet used for calculating system-level load and DER capacity growth by July 17.	▪ Provide the spreadsheet that uses the CEC IEPR forecast as the starting point and calculates year-to-year change in load (and the CEC 8760 hourly files used for calculating DER growth forecasts) used in the next steps. ▪ Identify which IEPR forecasts are being

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		year change in DER capacity used in the next steps. Verification: IPE to verify the calculations performed by SDG&E. IPE to compare output results of this process are the same as those used in the next step of the process (Step 3). Verify that the system level load and DER capacity calculated by the IPE matches reasonably well with those provided by SDG&E. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		used for load and all DERs. ▪ Provide description of the process if different than used in the last cycle, particularly on how the spatial/economic loads are developed for all the planning years.
3	Disaggregate load and DER annual growth to the circuit level	Perform verification for all circuits and validation of the process. Roles: SDG&E to provide the inputs and outputs, as well as a general description of the processes used for disaggregating system-level load (changes) to	SDG&E to provide material requested in "Data/ Information Requested" by July 17.	▪ Inputs and outputs, as well as a general description of the process used for disaggregating system-level load to circuit-level loads and further

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		circuit-level and further at a class level (Domestic, Commercial, Industrial) using LoadSEER if this process has changed from the last cycle. SDG&E to provide the inputs and outputs, as well as a general description of the processes used for disaggregating system-level DER capacity to circuit-level capacity if this process has changed from the last cycle. Verification: IPE to verify that load and DER capacity forecast for selected circuits match with those used in subsequent steps of the load forecasting process (starting in Step 4). Validation: IPE to review the business process for reasonableness and consistency with the objectives of the DPEP.		at a class level (Domestic, Commercial, Industrial) using LoadSEER, if different from the process used in the last cycle. ▪ Inputs and outputs, as well as a general description of the process used for disaggregating system-level DER capacity to circuit-level capacity, if different from the process used in the last cycle.
3a	Check sum of all disaggregated load and DERs same as CEC	Perform V&V on this aggregation for all circuit values, as well as cross check values used in other verification checks. Roles:		Use data from previous step.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	IEPR System Level values	SDG&E provides the needed information from the previous step. Verification: Verify that the sum of the loads (by class) and DER capacities at the circuit level matches reasonably well with the system level value from Step 2. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
4a	Gather Known Load data that is used in Step 2	Perform V&V for Known Loads included in Step 2. Roles: SDG&E to provide circuit-level known load additions by customer class and type for all circuits that were used to make the adjustments to the CEC IEPR forecast in Step 2. Verification:	SDG&E to provide the requested information by July 17.	▪ SDG&E to provide circuit-level known load additions by customer class and type for all circuits that add up to the total known load values for each year used in Step 2.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		IPE to verify that the sum of the circuit-level known load additions by customer class matches with the system-level values in Step 2. IPE to verify that the circuit-level known load additions for selected circuits match with those used in Step 2. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
4b	Determine Hot Spots	Review the approach, process used and results of the application of the Hot Spot methodology used to determine whether B2 and C loads can exceed the IEPR cap under certain conditions. Verification: SDG&E provides information/demo on its hot spot analysis and results.		▪ Detailed description of the approach and process used to determine whether a bus/circuit is considered a Hot Spot in this DPEP cycle.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
				▪ Demonstration of the approach and process used.
4c	Gather Pending Loads data used in Step 2	Perform V&V for Pending Loads included in Step 2. Roles: SDG&E to provide circuit-level pending load additions by customer class and type for all circuits that were used to make the adjustments to the CEC IEPR forecast in Step 2. Verification: IPE to verify that the sum of the circuit-level pending load additions by customer class matches the system-level values in Step 2. IPE to verify that the circuit-level pending load additions for selected circuits match those used in LoadSEER (Starting with Step 5).	SDG&E to provide the requested information by July 17.	▪ SDG&E to provide circuit-level pending load additions by customer class and type for all circuits that add up to the total pending load values for each year used in Step 2.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
5	Convert peak growth of load to 576 profile as needed (Skipped in this cycle)	Perform V&V for a subset of circuits (8-10 circuits) selected by the IPE. Roles: SDG&E to provide 576- hourly profile for loads (Corporate Forecast, Adjustment for Load Growth) from LoadSEER for the subset of circuits. SDG&E to also provide typical load shapes for load classes (COM, IND, and DOM). Verification: IPE to use Corporate Forecast from Step 3, known loads from Step 4 and the corresponding 576-hourly profile for loads (Corporate Forecast, typical load shapes for load classes) and verify it against the data provided by SDG&E.	SDG&E and IPE to select the circuits for this analysis by July 17. SDG&E to provide the requested LoadSEER data by July 17.	▪ SDG&E to provide 576-hourly profile for loads (Corporate Forecast, Adjustment for Load Growth) for the subset of circuits. ▪ SDG&E to also provide typical load shapes for all load classes (COM, IND, and DOM).

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		Verify that the 576-hourly forecast load profiles calculated match reasonably well with those provided by SDG&E for a subset of circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
5a	Convert DER growth to 576 profile as needed (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide 576- hourly profile for DERs (Load adjustments for EV, EE, ES, PV) from LoadSEER for the subset of circuits. SDG&E to also provide typical load shapes for all the DERs, by classes as applicable. Verification: IPE to use DER forecast from Step 3 and the typical DER profiles to develop the 576-hourly profiles for DER adjustments and verify it against the data provided by SDG&E.	SDG&E to provide the requested LoadSEER data by July 17.	▪ SDG&E to provide 576-hourly profile for DERs (Load adjustments for EV, EE, ES, PV) from LoadSEER for the subset of circuits. ▪ SDG&E to also provide typical load shapes for all the DERs, by classes as applicable. ▪ SDG&E to also provide information on how these typical DER load profiles were developed.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		Verify that the 576-hourly load adjustment profiles calculated for EV, EE, ES and PV match reasonably well with those provided by SDG&E for a subset of circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
5b	Convert base forecast and Weather normalization adjustment of load to 576 profile as needed (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide 576- hourly profile for base (load) forecast and weather normalization adjustment from LoadSEER for the subset of circuits. SDG&E to also provide typical load shapes associated with base forecast and weather normalization adjustment. Verification: IPE to use load forecast from Step 8 and the typical profiles provided by SDG&E to develop the 576-hourly profile for loads (for base forecast and	SDG&E to provide the requested LoadSEER data by July 17.	▪ SDG&E to provide 576-hourly profile for base forecast and weather normalization adjustment from LoadSEER for the subset of circuits. ▪ SDG&E to also provide typical load shapes associated with base forecast and weather normalization adjustment.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		weather normalization adjustment) and verify it against the data provided by SDG&E. Verify that the 576-hourly base and weather normalization load profiles calculated match reasonably well with those provided by SDG&E for a subset of circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
6	Derive net load profile (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide 576- hourly net load profile for the subset of circuits before incorporating load transfers, phase transfers, and corrections for data errors. Verification:	No additional data required.	

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		IPE to use the results of Steps 5, 5a and 5b to calculate net load profile and compare with the profile provided by SDG&E. Verify that the 576-hourly net load profiles calculated match reasonably well with those provided by SDG&E for a subset of circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
7	Determine net peak load (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide the peak load forecast (Before Project Forecast) for the subset of circuits for the peak load hour. Verification: IPE to verify the value provided by SDG&E against the value obtained for the peak day from the 576 hourly net load profile developed in Step 6. IPE to	SDG&E to provide the requested LoadSEER data by July 17.	▪ SDG&E to provide the adjusted peak load forecast (Before Project Forecast) for the subset of circuits for the peak load hour

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		also verify that the peak load values used in Step 9 match with the values obtained in this step for a subset of circuits. Verify that the peak value of the 576-hourly net load profile matches reasonably well with the value provided by SDG&E for selected circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
8	Adjust for "extreme weather."	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide the P95 load forecasts (Base Forecast, Corporate Forecast and Adjustment for Weather Normalization) for selected number of circuits. SDG&E also to provide data for weather adjustment factors such as temperatures, historical feeder/substation loads and other data that are used for the calculation of weather-adjusted peak loads in LoadSEER, as well as a description of the	Performed along with Step 1	▪ Description of business process used to develop P95 peak loads for each circuit, if different from the process used in the last cycle. ▪ General procedure used by LoadSEER for calculating weather-adjusted peak loads, if different from the

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		general procedure used by LoadSEER for calculating weather-adjusted peak loads if this process has changed from the last cycle. Verification: IPE to use the data and the procedure provided by SDG&E to independently verify the P95 load forecasts developed by LoadSEER. If the IPE is not able to verify the peak load forecasts due to the complexity of calculations or lack of data and/or documentation, SDG&E will demonstrate the tool used, its inputs and outputs. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		process used in the last cycle. ▪ P95 load forecasts (Base Forecast, Corporate Forecast and Adjustment for Weather Normalization) for selected number of circuits. SDG&E also to provide data for weather adjustment factors such as temperatures, historical feeder/substation loads and other data that are used for the calculation of weather-adjusted peak loads in LoadSEER
	PROCESSES TO DETERMINE CIRCUIT NEEDS AND DEVELOP GNA			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
9	Initial comparison to equip. ratings to determine if ratings exceeded (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles: SDG&E to provide equipment ratings for a subset of circuits selected by the IPE. Verification: IPE to compare the net peak load from Step 7 before any load transfers, phase transfers and compare it with the rating to determine if there is an overload (and the overload matches with the value calculated by SDG&E). Verify that the overloads calculated by the IPE match reasonably well with those provided by SDG&E for a subset of circuits. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.	SDG&E to provide requested information by July 17.	▪ SDG&E to provide equipment ratings for a subset of circuits selected by the IPE.
10	Incorporate load transfers, phase	Perform V&V for a subset of circuits selected by the IPE.	SDG&E to provide	SDG&E to provide the LoadSEER before and after

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	transfers, correct data errors (Skipped in this cycle)	Roles: SDG&E to demonstrate how it makes adjustments to load forecasting based upon phase transfers, data error corrections and load transfers. Demonstration will include what data is relied upon to predict the impact of making the proposed changes (i.e., phase transfer). Verification: IPE to verify the process reflected in the SDG&E demonstration is consistent with the SDG&E process description and the result are the same as used in subsequent steps in process of developing the GNA. IPE to also verify the before and after load profiles for both the circuits where the load is transferred from, and the load is transferred to. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.	requested information by August 10.	load profiles for both the circuits where the load is transferred from and the load is transferred to, as well as the amount of load (MW) that was transferred.
11	Final comparison to	Perform V&V for a subset of circuits selected by the IPE.		Data provided in Step 9.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	equip. ratings to determine if ratings exceeded (Skipped in this cycle)	Roles: SDG&E provided the needed information in the prior steps. Verification: IPE to compare the net peak load from Step 8 after any load transfers, phase transfers and compare it with the rating to determine if there is an overload (and the overload matches with the value calculated by SDG&E). Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		
12	Compile GNA tables showing need amount and need timing, etc. (per IOU's documented planning	Perform V&V on development of GNA table entries for select circuits also confirming that planning standard/process was followed as appropriate. Roles: SDG&E to provide confidential version of Planned Investment table in Excel format that can be filtered by the IPE.	SDG&E to provide requested information by August 31.	▪ Confidential GNA tables in Excel format ▪ Copy of planning standard if different than one used in the last cycle. ▪ This step focuses upon an analysis concerning

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	standards and/or planning process)	SDG&E to provide list of planning standards/criteria that were used in the development of the GNA tables. Verification: IPE to review projects in the GNA report are consistent with the information verified in the previous steps and planning standards/criteria. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		whether planning standards that lead to the identification of needs were followed. It does not include review of the planning standards, themselves.
	PROCESSES TO DEVELOP PLANNED INVESTMENTS AND COSTS			
13a	Develop recommended Planned Projects (follow the IOU's documented planning	Perform V&V for a subset of projects selected by the IPE confirming that planning standard/process was followed. IPE to verify the process to identify the current set of solutions and planned projects identified in the DPP. Roles:	SDG&E to provide requested information by August 31.	▪ Description of process used to develop proposed planned project to address identified need for distribution projects if

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	standards and/or planning process)	SDG&E to demonstrate/describe process used to determine recommended planned solution for a subset of projects. SDG&E to demonstrate the application of the process in developing the planned investment for selected projects. Verification: IPE to verify the SDG&E demonstration reflects the description of the process provided by SDG&E. IPE to verify that results shown in the demonstration follow the described process are same as included in DDOR. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DPEP.		the process is different from the last cycle.
13b	Develop solution for single investment plan			▪

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	(Not applicable to SDG&E for this cycle)			
13c	Determine if planned solutions/projects identified in previous cycles continue to be needed and are the appropriate solution to meet the need	Perform V&V for a subset of projects (up to 10) randomly selected by the IPE confirming that planning standard/process was followed. SDG&E to demonstrate/describe how it determined which projects identified in previous cycles are still needed and that the proposed solutions continue to be the appropriate solutions to meet the need or that project scope has been modified or the project is no longer needed and has been removed from the plan.	SDG&E to provide a description of the process in early September. Demonstration to be completed by early September.	▪ Description of the process used to confirm that existing planned solutions and projects are 1) still needed as is, 2) needed but scope has changed or 3) no longer needed, if different from last cycle. ▪ Description of the process to used revise the scope in the event the scope needs to be modified and the process used for solutions or projects that are no longer needed, if different from last cycle. ▪ Data set containing all planned solutions and

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
				projects with an indication of the results of the confirmation process for each to include whether each project was a) still needed as is, b) scope needs to change (timing), c) scope needs to change sizing, project non longer needed, d) project retained because it is too late in the project to cancel etc.
14	Estimate capital cost for each Planned Investment (Skipped in this cycle)			
	PROCESSES TO DEVELOP CANDIDATE DEFFERAL LIST AND PRIORITIZE			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
15	Development of Candidate Deferral Projects list through application of screens (timing and technical) (removed, no longer required)			
16	Development of operational requirements (daily, monthly annually etc.) (removed, no longer required)			
17	Prioritization of candidate deferral projects into Tiers (removed, no longer required)			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
18	Calculate LNBA ranges and values for all planned investments (removed, no longer required)			
19	Compare 2025 load forecast and actuals at circuit level for selected number of distribution circuits (Skipped in this cycle)			
20a	Analyze known load tracking dataset and verify the calculation of known load metrics	The IPE to calculate the metrics mentioned on pages 31 and 32 of the 2023 IPE Post-DPAG Report and verify against the metrics calculated by the utility that are provided in their narrative related to the known load tracking dataset included in the GNA-DDOR report.	SDG&E to provide requested information by September 15.	▪ Excel version of the known load tracking dataset included in their 2026 GNA-DUPR report. ▪ Information on the calculation of metrics

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		Roles: SDG&E to provide the Excel version of the known load tracking dataset included in their 2026 GNA-DUPR filing. SDG&E to also provide information on how they calculated the metrics (for example, Excel workbook showing the formula used for calculating the metrics or something similar) that were included in their narrative of the known load tracking dataset. Verification: IPE to analyze the known load tracking dataset provided in the 2026 GNA-DUPR filing and verify the known load metrics calculated by the utility. Validation: IPE to review the approach and process used by the utility to calculate the metrics using known load tracking dataset.		(Excel workbook showing the formula used for calculating the metrics or something similar) that were included in their narrative of the known load tracking dataset.
20b	Analyze pending load tracking dataset.	The IPE to review the pending loads tracking data format, definitions, and processes and reporting that the utility used in the 2025/26 DPEP cycle		• Excel version of the pending load tracking dataset included in their

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	Review categorization of PL and supporting information.	Roles: SDG&E to provide the Excel version of the pending load tracking dataset included in their 2026 GNA-DUPR filing. SDG&E to demonstrate/provide document on the process used for categorization of PL into A, B1, B2 and C and supporting information, where applicable. Verification: IPE to analyze the pending load tracking dataset provided in the 2026 GNA-DUPR report Validation: IPE to review the approach and process used by the utility to populate pending load tracking dataset.		2026 GNA-DUPR report. • Categorization results (table with pending load showing which PL category that it belongs to). ▪ For 10 randomly selected pending loads by the IPE and IOU, provide supporting information for each criteria that needs to be met for inclusion in its category.
	Other IPE Work			
21	Optional - Review plan for changes to the			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
	planning process for the next cycle. (skipped, no longer required)			
22	Review implementing of planning standard and/or planning process (skipped, no longer required)			
23	Review list of internally approved capital projects (skipped, no longer required)			
24	Respond to and incorporate DPAG comments	Include in Final IPE Report.	Complete by November.	

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
25	Track solicitation results to inform next cycle (removed, no longer required)			
26	Treating confidential material in the IPE report	Confidentiality – the following steps will be followed to ensure that the IPE Reports treat confidential material consistent with the rules and procedures of the CPUC. The dates provided for these steps are tentative and will be finalized based on discussions with SDG&E. a. The IPE will hold an early meeting with IOU (and potentially the ED) to discuss process for SDG&E to flag those items they intend to request Confidentiality treatment and on what basis. IPE may provide feedback to ED in lieu of having the ED attend the meeting with the IOU and IPE. Discussion to be held by September 15. b. Date: October 20, 2026 - The IOU will review all the documents[1] sent to the IPE		

[1] Documents refers to any document provided to the IPE by the IOU that was not included in the IOU's public version of the GNA/DDOR reports. These documents will be included as attachments to the body of the IPE report as required by a CPUC ruling.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		for the V&V process for confidential information and highlight any information (in addition to information that is already highlighted) that is confidential. The IOU will also develop an equivalent set of documents with the confidential information redacted. At the end of this process, there should be a set of confidential documents that can be included as a part of the confidential IPE DPAG report and a set of public documents. c. IPE will provide the confidential version of the body of the draft IPE Report to the IOU by October 20, 2026 (the body of the report to include all but the documents provided in previous item) for final IOU confidentiality review. d. IOU checks the draft confidential report for confidentiality and correctness and provides their comments/markups by October 30, 2026. e. After review and signoff, the IPE produces the final confidential and draft reports by November 3, 2026.		

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
		f. IOU requests CPUC confidential treatment using standard procedures. g. IOU files public version of the IPE report based on the schedule provided by the CPUC - November 6, 2026 h. IOU files revised public report if CPUC rejects any requests for confidential treatment; otherwise, process is complete, and no further action is needed.		
27	Review Methodology used for Prioritization of Planned Projects	Perform verification and validation of the process, if any, used by utilities to prioritize planned projects for execution. Roles: Utility to provide the process, if any, used by utilities to prioritize planned projects for execution. Utility also to provide the results of the prioritization, if applicable. Verification and Validation: The verification and validation process will be determined after discussions with the utility.	Late September/Early October	TBD

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025-2026 DPEP Cycle	Target Timing	Data/Information Requirements
28	Review Project Execution Tracking Data and Metrics	Perform verification and validation of the projection execution tracking data. Roles: Utility to provide the projection execution tracking data. Verification and Validation: The verification and validation process will be determined after discussions with the utility.	Late September/Early October	TBD

Appendix A CPUC 4/13/20 Ruling Excerpts

Attachment A
Listing of Schedule and IPE-Specific Reforms for the 2020-2021 DIDF Cycle

1. IPE-specific reforms for the 2020-2021 DIDF Cycle are implemented within the IPE Scope of Work presented in Attachment B.

2. IOU contracts with the IPE for the full scope of work identified in Attachment B shall be executed by the IOUs to allow for IPE Plan development to begin as soon as possible, ideally on or before **April 17, 2020**.

3. The IOUs shall work with the IPE and Energy Division to develop IPE Plans specific to each IOU such that the IPE can submit the Draft IPE Plans to Energy Division for review on or before **May 15, 2020**.

4. The IPE scope of work may be modified by Energy Division as needed for the IPE to successfully complete each assignment. The IOUs will promptly submit a Tier 1 Advice Letter to notice changes in scope should a scope change differ significantly from the scope described in Attachment B. Minor changes should not necessitate an Advice Letter filing.

5. As required by Energy Division on an annual basis, Pre-DPAG and Post-DPAG activities may include workshops; new, re-opened, suspended, or modified working groups (e.g., Distribution Forecast Working Group); and IOU presentations and deliverables.

6. During the Post-DPAG period and in consultation with the IPE, Energy Division may identify exemplary GNA/DDOR documentation components, analytical approaches, or data strategies implemented by one or more IOUs and require that each IOU implement the reform in future DIDF cycles.

Attachment B
IPE Scope of Work for DIDF Implementation

Term

- January 1st each year to July 31st the following year with the term subject to update by Energy Division if needed to support each DIDF cycle.

Pre-DPAG Period

- Develop an ***IPE Plan*** for each IOU describing the GNA/DDOR review process and detailed approach to Verification and Validation of all data used by the IOUs to prepare their DIDF filing materials.
    - Verification and Validation will include a thorough investigation of the following IOU processes, among others:
        - Collecting circuit loadings and performing weather adjustments;
        - Determining load and DER annual growth on the system level;
        - Disaggregating load and DER annual growth to the circuit level;
        - Checking sum of all disaggregated load and DERs against system-level values;
        - Adding incremental known loads to circuit level forecasts;
        - Developing load, DER, and net load profiles and determining net peak loads;
        - Adjusting for extreme weather;
        - Comparisons to equipment ratings to determine if ratings will be exceeded;
        - Incorporating load transfers, phase transfers, correcting data errors;
        - Compiling GNA tables showing need amount and timing; and
        - Following the IOU's planning standard and/or planning process.
    - GNA/DDOR report review will include an in-depth analysis of the following IOU steps, among others:
        - Developing recommended solutions (planned investments);
        - Implementing the IOU's planning standards and/or planning process;
        - Estimating capital costs for planned investments;

  - Developing list of candidate deferral projects through application of screens (timing and technical);
  - Developing operational requirements;
  - Prioritization of candidate deferral projects into tiers;
  - Calculating LNBA values; and
  - Comparing prior-year forecast and actuals at circuit level for candidate deferral projects.
- Work directly with the IOUs and Energy Division to develop draft plans as needed. Development of the draft IPE Plans may include, among other activities:
  - Meeting with the IOUs and Energy Division to identify and understand each business process and tool used to complete their GNA/DDOR filings.
- Facilitate or participate in stakeholder workshops to receive feedback on the IPE Plans.
- Review and incorporate comments in the final IPE Plans.
- Submit final IPE Plans to Energy Division and the IOUs with recommendations for future improvements to the plans.
- Other technical support assignments as defined by Energy Division to ensure the IPE and Energy Division will receive from the IOUs the data and cooperation necessary to complete the required evaluation of the GNA/DDOR filings.

DPAG Period

- Participate in all workshops and meetings during the DPAG period. Prepare and deliver presentations or handouts as requested by Energy Division (*e.g.*, final IPE Plan presentations).
- Develop an ***IPE Preliminary Analysis of GNA/DDOR Data Adequacy*** for all three IOUs.
- Review any comments on the preliminary analysis that may be received and discuss the results with Energy Division.

- Facilitate meetings with Energy Division and the IOUs to correct data inadequacies and prepare further documentation and provide technical support as needed.
- Fully implement each IPE Plan as defined in the final IPE Plans.
- Develop an ***IPE DPAG Report*** for each IOU presenting GNA/DDOR review findings and Verification & Validation outcomes.
- Submit the draft reports to Energy Division for review and (if necessary) to the IOUs to check for confidential information that may be included or to clarify specific details.
- Circulate the final IPE DPAG Reports to stakeholders (public and confidential versions).
- Other technical support assignments as defined by Energy Division to ensure the DPAG process is successfully completed.

Sample Size

- The scope of review conducted by the IPE for each IOU process may encompass the full set of circuits/projects or a subset/sample of circuits or projects. Where sampling is determined to be appropriate by the IPE in consultation with Energy Division, the size of the sample set for each case will be determined by the IPE based on the application of engineering judgement.

Post-DPAG Period

- Develop a single ***IPE Post-DPAG Report*** covering all three IOUs; comparing their current and prior filings; evaluating DIDF DER procurement, operational, cost, and contingency planning outcomes; reviewing IOU compliance; and making recommendations for process improvements and DIDF reform.
- Coordinate with and support the Independent Evaluator (IE) with IE activities and the development of IE reports as needed.
- Submit the draft report to Energy Division for review and (if necessary) to the IOUs to check for confidential information that may be included.

- Submit the final report to Energy Division and prepare public versions as needed.
- Support Energy Division with their review of DIDF reform comments, including comments on any IPE tasks.
- Support Energy Division's review of RFO materials and RFO outcomes.
- Attend RFO and procurement meetings and provide technical support as requested by Energy Division.
- Coordinate with the Independent Evaluator to support their evaluation and provide technical support at the discretion of Energy Division.
- Other technical support assignments as defined by Energy Division to develop and evaluate potential DIDF reforms and track and evaluate deferral opportunities that may be subject to ongoing review in other proceedings (e.g., pursuant to General Order 131-D).

List of IPE DIDF Deliverables

1. ***IPE Plan*** for each IOU describing the GNA/DDOR review process and approach to Verification & Validation for the underlying data.
2. ***IPE Preliminary Analysis of GNA/DDOR Data Adequacy*** for all three IOUs.
3. ***IPE DPAG Report*** for each IOU presenting GNA/DDOR review findings and Verification & Validation outcomes.
4. ***IPE Post-DPAG Report*** covering all three IOUs, comparing their filings, reviewing compliance, and making recommendations for process improvements and DIDF reform.

(end of Attachment B)

Appendix B Updated Scope of Work Dated March 4, 2025

Proposed IPE Scope of Work (Draft)

Proposed Changes to Current Scope of Work

Current IPE Scope	Recommendations
Step 1 - Collect 2024 Actual Circuit Loading and adjust/normalize for weather as needed	Keep in future cycles
Step 2 - Determine Load and DER Annual Growth on System Level	Keep in future cycles
Step 3 - Disaggregate Load and DER Annual Growth to the Circuit Level	Keep in future cycles
Step 3a - Check sum of all disaggregated load and DERs same as CEC IEPR System level values	Keep in future cycles
Step 4 - Add Incremental Load Growth Projects to Circuit Level Forecasts (those loads not in CEC forecast)	Keep in future cycles
Step 5 - Convert DER growth load to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 5 - Convert peak of load to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 5 - Convert base forecast and weather normalization adjustment to 8760 or 576 profile as needed	Recommend skipping unless process changed.
Step 6 - Derive net load profile	Recommend skipping unless process changed.
Step 7 - Determine net peak load	Recommend skipping unless process changed.
Step 8 - Adjust for extreme weather	Keep in future cycles
Step 9 - Initial comparison to equipment ratings to determine if ratings exceeded	Recommend skipping unless process changed.
Step 10 - Evaluate no cost solutions - incorporate load transfers, phase balancing, correct data errors	Recommend skipping unless process changed.
Step 11 - Comparison to equipment ratings to determine if ratings exceeded	Recommend skipping unless process changed.
Step 12 - Compile GNA tables showing need amount and need timing, etc (consistent with IOU's documented planning standards and/or planning process	Keep in future cycles
Step 13 - Develop Recommended solution and generate list of Planned Investments (follow the IOU's documented planning standards and/or planning process)	Keep in future cycles

Step 14 - Estimate capital cost for candidate deferral projects	Eliminate
Step 15 - Development of Candidate Deferral Projects list through application of screens (timing and technical)	Eliminate
Step 16 - Development of operational requirements for CDO (daily, monthly, annually, etc)	Eliminate
Step 17 - Prioritization of Candidate Deferral Projects into Tiers	Eliminate
Step 18 - Calculation of LNBA ranges and values for all planned projects.	Eliminate
Step 19 - Compare 2023 Forecast and Actuals at Circuit Level [proposed change would increase from ~10% of circuits to include all circuits if possible]	Keep in future cycles
Step 20 - Analyze known load tracking dataset and verify the calculation of known load metrics	Keep in future cycles
Step 22 - Review implementing of planning standard and/or planning process	Eliminate
Step 23 - Review list of internally approved capital projects	Eliminate
Step 24 - Respond to and incorporate DPAG comments	Keep in future cycles
Step 25 - Track solicitation results to inform next cycle	Eliminate
Step 26 - Treating confidential material in the IPE report	Keep in future cycles

Proposed Additions to IPE Scope of Work

Decision	New items	IPE Scope
3.1-Allow Utilities to Use Bottom-Up, Known Load Data to Determine Growth	Definition of Reliable Bottom-up Data (as well as, Customer energization Request, Known Load, Pending Load etc.) (Page 42) Note: Decision 3.1 allows Utilities to use reliable bottom-up data to estimate total load growth in a given year, even if it exceeds the forecasted load growth based on the IEPR for that year. Further, this decision directs that, in years without reliable bottom-up data, total growth should correspond to the forecast amount and not be adjusted downwards.	Annual verification and validation for the use of known loads already being performed as a part of Step 2 of the current V&V process. No new steps required.
3.2 – Require Utilities to Improve Method for Setting Caps on Load Growth from IEPR data.	IOU to work with CEC and CPUC to staff in developing proposals for the method and accounting for discrepancies between the system and circuit level. (Page 43) Decision 3.2 further focuses on developing proposals for the method and accounting for discrepancies between the system and circuit level (forecasts). The forecast at the system level (IEPR) is a coincident peak load forecast and is not necessarily equal to the sum of the peak loads on all the circuits. So, a methodology needs to be devised to develop circuit level forecasts that takes this into account. This decision approves, with one modification, the recommendation to require Utilities to submit Advice Letters proposing how they will improve their methods for setting caps on load growth based on the IEPR forecasts and other data. Utilities shall file Tier 3 Advice Letters. (Page 47)	Verify and validate IOUs' use of methodology for accounting for discrepancies between the system and circuit level load forecasts in the DPP. Annual starting 2025-2026 cycle. Annual verification and validation of methods for setting caps on load growth from IEPR data already covered under Step 2 of the current V&V process. No new steps required.
3.4 – Require Utilities to Expand the DPP Forecast Horizon to Align with IEPR and Expand the Planning Horizon to 10 Years.	To ensure transparency, utilities shall provide a description of the thermal capacity evaluation methodology in the annual GNA report (Page 55)	No new steps required to verify the expanded DPP planning horizon. The current V&V will be extended from 5 years to 10 years. Annual starting 2025-2026 cycle.

3.5 – Require Utilities to Use Scenario Planning to Improve Forecasting and Disaggregation	Workshops to develop scenario planning methodology and process. (Page 59) Utilities shall develop scenario planning capabilities that enable them to: (1) analyze multiple forecasts; (2) identify capacity deficiencies for each scenario and report them in the annual GNA; and (3) develop one investment plan informed by the multiple scenarios and reported in the DDOR or successor filing. (Page 61)	Attend workshop. One Time. Estimated Q1 2025 Verify and validate each DPP scenario and how utilities create one investment plan informed by multiple scenarios in the annual DPEP. Annual starting 2025-2026 cycle. • Develop draft IPE Plan for V&V of scenario planning – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026
3.6 - Require Utilities to Improve Disaggregation Methodology for Load Growth	Require Utilities to Improve Disaggregation Methodology for Load Growth (Page 62) This decision adopts the recommendation to require Utilities to improve disaggregation methodologies for load growth and distributed energy resources but delays implementation to the 2027 GNA and the 2026-2027 DPP cycle. To track progress toward improved disaggregation in the interim, Utilities shall report annually in the GNA on the development of advanced disaggregation methodologies and present these at the annual Distribution Forecast Working Group workshops or successor workshops. (Page 65)	Verify and validate the improved disaggregation methodology. Annual starting 2026-2027 cycle. Q3 2027. • Develop draft IPE Plan for V&V of improved disaggregation methodology – Q2 2027 • Finalize IPE plan – Q3 2027 • Perform V&V Q4 2027
3.7 - Require Utilities to Create Pending Loads Category in the DPP	Utilities are directed to provide pending load data and include the source of the data in the annual known load tracking filing, as part of the GNA/DDOR or successor report and orally reported during the DPAG or successor workshop (Page 76)	Attend workshop. One Time. Estimated Q1/Q2 2025 Verify and validate pending load data and source in annual reports and DPAG or successor workshop. Annual starting 2025-2026. • Develop draft IPE Plan for V&V of Pending Loads – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026

3.8 – Require Utilities to Develop Prioritization Methods Beyond the Current Consideration of Project Need Dates	Utilities to report how projects identified throughout the distribution planning horizon have been prioritized for execution. This decision also requires inclusion of this information in the annual GNA/DDOR or a successor report instead of the previously required Advice Letter (83)	Verify and validate the process used by utilities to prioritize projects for execution. Annual starting 2024-2025 cycle. • Develop draft IPE Plan for V&V of prioritization methodology – Q2 2025 • Finalize IPE plan – Q3 2025 • Perform V&V Q3 2025
3.9 – Require Utilities to Consider Distribution Planning Results in Other Distribution Work	Utilities to consider distribution planning results in other distribution work aka Integrated planning (Page 83) A workshop shall be held by Utilities during the third quarter of 2025 to present Utility proposals for integrated planning and solicit feedback from stakeholders on issues presented, including cost containment considerations. A second workshop shall be held by Utilities no more than eight weeks following the first workshop to present updated proposals based on feedback from the first workshop. (Page 86)	Attend workshop. One Time. Estimated Q3/Q4 2025. Verify and validate that integrated planning projects meet the established requirements. Annual starting 2026-2027. • Develop draft IPE Plan for V&V of integrated distribution planning – Q2 2027 • Finalize IPE plan – Q3 2027 • Perform V&V Q3 2027
3.11 – Require Utilities to Prepare a Load Flexibility DPP Assessment	Require Utilities to Prepare a Load Flexibility DPP Assessment. (Page 98)	Review EIS Part 2 studies and attend workshop. One Time. Estimated Q1 2026.
3.15 – Require Utilities to Include Metrics to Evaluate Equity in Utility Distribution Plan Reporting	Require Utilities to Include Metrics to Evaluate Equity in Utility Distribution Plan Reporting (Page 119) The Commission clarifies that while these metrics are requested for evaluation purposes, there is no framework wherein equity metrics are used for forecasting or planning distribution. The intention of this proposal is an annual evaluation of equity in distribution planning and does not involve modifying the planning process based on equity considerations. (Page 123)	Support the ED and the IOUs in finalizing and standardizing the tracking and reporting of the Equity Metrics. One Time. Estimated Q2 2025. Verify and validate equity metrics calculated by the utilities and reported by the utilities annually. Annual starting 2025-2026 DPP cycle. • Develop draft IPE Plan for V&V of equity metrics – Q2 2026 • Finalize IPE plan – Q3 2026 • Perform V&V Q3 2026

3.16 – Require Utilities to Include Metrics to Track Project Execution in Utility Distribution Plan Reporting	Require Utilities to Include Metrics to Track Project Execution in Utility Distribution Plan Reporting (Page 123) *also see Table 12 and Table 13. Table 12 * Additional Details for All Ongoing and Prior Three Years Completed Distribution Capacity Projects Table 13* Additional Project Execution Tracking Data	Support the ED and the IOUs in finalizing and standardizing the tracking and reporting required to track project execution based on Table 12, 13, and the requirements of R24-01-018 (Appendix B - Decision Establishing Target Energization Time Periods And Procedure For Customers To Report Energization Delays). One Time. Estimated Q2 2025 Verify and validate the project execution data and metrics submitted by the utilities. Annual starting 2024-2025 DPP cycle. • Develop draft IPE Plan for V&V of project execution metrics – Q2 2025 • Finalize IPE plan – Q3 2025 • Perform V&V Q3 2025
3.18 - Require Utilities to Facilitate Better Coordination and Data Sharing Between the DPP and Transportation Electrification Planning	Require Utilities to Facilitate Better Coordination and Data Sharing Between the DPP and Transportation Electrification Planning (Page 135)	Verify and validate how TEPP outputs are used in DPP. Annual starting 2025-2026 earliest. • Develop draft IPE Plan for V&V of TEPP coordination – Q2 2026 • Finalize IPE plan – Q2 2026 • Perform V&V Q3 2026



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Appendix D Data Received from SDG&E

The IPE received many sets of data from SDG&E to perform its verification and validation. In most cases these data sets are spreadsheets, PDFs, Power Point presentations or Word documents as listed below.

- 1.8.Weather Adjustment Factors_2026 (Public).xlsx
- 1.2025 Circuits Peak Loads_6.26.2026(Public).xlsx
- 1.SCADAScrubber Circuit Loads_6.26.26(Public).xlsx
- 2. CEC 2024 Hourly Forecast - SDGE - Local_Reliability - 7.10.2026.xlsx
- 2.CED 2024 Load Modifiers - Local Reliability_7.10.2026 (Public).xlsx
- 2.CED 2024_SDGE DER Growth_7.10.2026(Public).xlsx
- 2.CED SDGE DER Growth_9.17.2026(Public).xlsx
- 3.Distribution Forecast Disaggregations_10.08.2026_v2(Public).xlsx
- 4.Known & Pending Loads_7.10.2026(Public).xlsx
- Appendix 6 - SDG&E Project Execution Table 2026.xlsx
- Step 12 - GNA Tables 2026 Public.xlsx
- 1.8 Weather Analysis Methodology.7.7.2026.docx