BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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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, 2025

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Pursuant to the *Administrative Law Judges' Ruling Setting Schedule for the 2025-2026 Distribution Investment Deferral Framework Cycle* dated March 6, 2025 (the "Ruling"), San Diego Gas & Electric Company ("SDG&E") hereby submits into the record of this proceeding the Independent Professional Engineer SDG&E 2025 Distribution Planning Advisory Group ("DPAG") Report dated November 6, 2025 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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ATTACHMENT A

INDEPENDENT PROFESSIONAL ENGINEER SDGE 2025 DPAG REPORT

resource innovations

Public Independent Professional Engineer SDGE 2025 DPAG Report

Submitted to California Public Utilities Commission Energy Division and SDGE

Date: November 6, 2025

Contents

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 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 of 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 to Modernize the Electric Grid for a High Distributed Energy Resources Future (R.21-06-017)5 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, Decision 24-10-030 eliminated the DIDF solicitations process. The decision focused on measures intended 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 March 2025, the ALJ issued a ruling that set the schedule for the 2025-26 DIDF cycle as shown in Table 1-1 below.

Table 1-1 Proposed DPAG Schedule for 2025-26 DIDF Cycle (Partial table from the March 2025 ALJ Ruling)

Activity	Date
Pre-DPAG 2025	
Pre-DPAG meetings and workshops, including Draft IPE Plans review	May-June 2025
DPAG 2025	
IOU GNA/DUPR filings Final IPE Plans Circulated	August 15, 2025
IPE Preliminary Analysis of GNA/DUPR data adequacy circulated	September 5, 2025
DPAG meetings with each IOU	Mid to Late September 2025 (*actual date September 8, 2025)
Participants provide questions and comments to IOUs and IPE	September 26, 2025
IOU responses to questions	October 6, 2025

Follow-up IOU meetings via webinar (Optional)	Week of October 13, 2025 (*actual date October 17, 2025)
IPE DPAG Reports	November 6, 2025
Post-DPAG 2025 and 2026	
IPE Post-DPAG Report (covering all three Utilities)	March 15, 2026

Independent Professional Engineer

The California Public Utilities Commission (Commission) rulings direct Pacific Gas and Electric Company, San Diego Gas & Electric Company, 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 Independent Professional Engineer (IPE) services for the 2025-26 Distribution Investment and Deferral Framework (DIDF) Process 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. 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 A.

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:

In step 1, IPE developed a draft IPE Plan working with the Energy Division and SDG&E by mid-May 2025.

[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.

The Plan was distributed to the service list and also discussed at the CPUC Distribution Forecasting Working Group meeting - both in an attempt to obtain stakeholder feedback on the plan.

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 15, 2025.

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 best planned investment is selected.

In every DIDF 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
- 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

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 the October 2024 Decision.

[2] SDG&E confirmed that the business process for these steps have not changed from prior cycles. Hence, the IPE will not perform a verification and validation of Steps 6 and 7.

- 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

In addition, based on inputs from the ED, the following steps were also 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
- Step 25 - Track solicitation results to inform next cycle

Two new steps were added specifically for this cycle referred to as Steps 27 and 28. A description of the two new steps can be found in the IPE plan in Attachment C.

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

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

The CPUC, in a previous decision, approved the four services proposed by the Competitive Solicitation Framework Working Group (CSFWG) and directed the utilities to consider these services in the GNA/DDOR process. The four services as 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.
- 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 15, 2025. 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:

- Conference calls with SDG&E held to review material, respond to IPE questions, and perform Verification and/or Validation Demonstration walk-throughs as described in the IPE Plan and whose results are described later in the report.
- Participation in SDG&E's DPAG Webinar (September 18, 2025).

- 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 2025 and 2024 reports. Observations, comments, and recommendations 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 2025 and 2024 reports. Observations, comments, and recommendations that result from the Validation review with respect to the DUPR Report are included in this section.

- **Section 4** – Known Load Tracking Data and Metrics, which reviews the known load tracking data and the known load metrics calculated by the utilities.

- **Section 5** – IPE Recommendations

- **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** - Comments Received from the DPAG Members and IOU and IPE 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 (formerly DDOR) 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 2024-2025 DPP cycle on August 15, 2025 as required by the CPUC. SDG&E's 2025 GNA/DUPR report is organized similar to last year's report under the sections shown below. This year's report also includes a new appendix containing the project execution table.

- Distribution Planning Process
- SDG&E's Distribution Resources Planning Assumptions and GNA Scope
- GNA Results
- DUPR Planned Investment Results
- Known 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 – 2025 Known Load Tracking Data
- Appendix 5 – DUPR – Planned Investments
- Appendix 6 – Project Execution Table

2.1.1. Distribution Planning Process

SDG&E's distribution planning process, which remains unchanged from the prior cycle, begins with assessing the historical peak load review for circuits and banks. SDG&E then 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.

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 also 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 then 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 then 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 needs, as well as capacity needs at the line segment level.

SDG&E then 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 Resources 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 2025 GNA.

SDG&E's Distribution Resources Planning Horizon

SDG&E's 2025 GNA covers the 2025-2029 five-year planning horizon. 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 2023 IEPR Local Reliability Scenario[3] consisting of the system-level baseline demand forecast, Additional Achievable Energy Efficiency (AAEE) scenario 2, Additional Achievable Fuel Substitution (AAFS) scenario 4, and Additional Achievable Transportation Electrification (AATE) scenario 3,[4] for the SDG&E distribution service area as the starting point for forecasting circuit-level loads. SDG&E used a process to adjust the CEC's forecast for known load additions and identify remaining load to be disaggregated in the forecasting models. In this cycle, SDG&E used all the known loads, with the exception of Transport 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.

SDG&E performs weather normalization for each circuit by assessing the circuit's historical daily maximum load and the historical Temperature-Humidity Index (THI) derived from a nearby weather station. This weather normalization factor is then applied to the forecast load growth on each circuit. The process used by SDG&E for weather normalization 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

[3] As per CPUC Energy Division's August 2024 approval of the Joint IOUs' submittal in June 2024 regarding the IEPR datasets to use in the 2024-25 GNA/DUPR.
[4] As described further below, SDG&E used only the Light Duty (LD) EV forecast element of the AATE scenario 3. The Medium Duty and Heavy Duty (MD/HD) elements were replaced with SDG&E's own study-based ("bottom-up") forecast of MD/HD EV charging loads.

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 switching (AAFS) as a starting point for modeling these load modifiers.

For the 2024-25 DPEP, SDG&E uses the following 2023 IEPR Local Reliability Scenario documents to develop DER growth at the circuit level:

- CEDU 2023 Baseline Forecast – SDGE
- CED 2023 Hourly Forecast – SDGE – Local Reliability
- 2023 AAEE Hourly Impacts – SDGE – Scenario 2
- 2023 AAFS Hourly Impacts – SDGE – Scenario 4
- 2023 AATE Hourly Impacts – SDGE – Scenario 3 (Light Duty TE only)

In this cycle, SDG&E used a bottom-up forecast for the MD/HD TE loads. The methodology that SDG&E used is described in detail in its GNA/DUPR report and was also presented at the May 2025 DFWG workshop. The bottom-up MD/HD TE forecast exceeded the corresponding Scenario 3 IEPR forecast. SDG&E used the full bottom-up MD/HD TE in the DPEP with a portion of this load counted as Pending Loads. SDG&E defined Pending Loads as the amount by which SDG&E's bottoms-up forecast of MD/HD TE load exceeded the CEC IEPR's forecast of MD/HD TE loads after accounting for the portion of MD/HD TE loads that qualify as Known Loads.

SDG&E uses the SPIDER (Spatial Penetration & Integration of Distributed Energy Resources) model to disaggregate the above-mentioned system-level DER forecasts. The system-level incremental 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.

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 2025 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 2025 GNA deficiencies addressed through load transfers and phase balancing are shown in Table 2-1. Twenty four of the 52 needs were solved through load transfers and phase balancing.

Table 2-1: SDG&E GNA deficiencies solved via load transfers and phase balancing

GNA_ID	Facility ID	Solution
GNA_2025_001	2025_0132	Load Transfers
GNA_2025_002	2025_0282	Load Transfers
GNA_2025_003	2025_0140	Load Transfers
GNA_2025_005	2025_0251	Load Transfers
GNA_2025_007	2025_0677	Load Transfers
GNA_2025_010	2025_0261	Load Transfers
GNA_2025_011	2025_0361	Load Transfers
GNA_2025_018	2025_0081	Load Transfers
GNA_2025_019	2025_0639	Load Transfers
GNA_2025_023	2025_0898	Load Transfer
GNA_2025_028*	2025_0867	Load Transfer
GNA_2025_031	2025_0244	Load Transfer
GNA_2025_035	2025_0985	Load Transfer
GNA_2025_036	2025_0849	Load Transfer
GNA_2025_037	2025_0965	Load Transfer
GNA_2025_044	2025_0634	Load Transfer
GNA_2025_046	2025_0621	Load Transfer
GNA_2025_047	2025_0690	Load Transfer
GNA_2025_052	2025_0745	Load Transfer
GNA_2025_014	2025_0121	Phase Balancing
GNA_2025_021	2025_0814	Phase Balancing
GNA_2025_024	2025_0120	Phase Balancing
GNA_2025_040, GNA_2025_050	2025_0399	Phase Balancing

Note: It was previously identified that GNA_2025_028 could be addressed through a previously initiated planned project. However, it was later confirmed that the need can be resolved via load transfer.

GNA Scope

SDG&E's 2025 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. Also, according to SDG&E, none of their Pre-Application and Post-Application projects include distribution components that address a distribution need identified through the distribution planning process, and none can be deferred by DERs since all are associated with transmission projects that are not subject to deferral by DERs through the DIDF.

GNA Refinements

SDG&E's 2025 GNA identified refinements subsequent to the internal dissemination of the distribution load forecast and prior to the publication of the GNA/DUPR on August 15, 2025. These refinements included the addition or deferral of five needs and the removal of five needs identified earlier in the cycle as shown in the table below.

Table 2-2: SDG&E GNA Refinements

GNA_ID[5]	Facility ID[6]	Solution[7]
N/A	2025_0398	GNA removed due to cancellation of the known load request.
N/A	2025_0816	GNA removed due to change of known load request.
N/A	2025_0740	GNA removed due to changes in system configuration.
N/A	2025_0320	GNA removed due to changes in system configuration.
N/A	2025_0889	GNA removed due to change of known load request.
GNA_2025_022	2025_0100	GNA deferred due to change of known load request.
GNA_2025_016	2025_0071	GNA adjusted due to change of known load request.
GNA_2025_025	2025_0942	GNA advanced due to changes in system configuration.
GNA_2025_044	2025_0634	GNA added due to new known load request.
GNA_2025_034	2025_0879	GNA deferred due to changes in system configuration.

[5] "GNA_ID" is an identifier used to track grid needs identified the DPP.
[6] "Facility ID" identifies the existing or planned distribution facility with a recognized grid need requiring mitigation.
[7] "Solution" in the context of this table refers to the specific refinement of the initially identified grid need.

2.2. Changes to GNA for 2025

There are no changes in data formats between SDG&E's 2025 GNA and SDG&E's 2024 GNA.

2.3. Discussion of GNA Results

SDG&E's 2025 GNA identified a total of 52 needs related to distribution capacity at the substation bank, circuit and line segment levels with 10 circuits having a back-tie (reliability) need in addition to a capacity need. SDG&E has indicated in prior cycles that a back-tie need is included for any traditional project that would potentially provide additional back-tie capability. The back-tie need is not based on a separate analysis of the need for such a back-tie capability. A detailed discussion of SDG&E's back-tie analysis can be found in Section 2.4 of the 2021 IPE report. Table 2-3 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.

Equipment Type	Distribution Service				Total
	Peak Thermal	Voltage	Back-Tie	Microgrid	
Substation Bank	12	0	0	0	12
Circuit	31	0	10	0	31
Line Segment	9	0	0	0	9
Totals	52	0	10	0	52

Table 2-4 shows the dates by which the mitigation measures are anticipated to be in place. Table 2-5 shows the actual list of needs from the 2025 GNA report. All the needs shown in the table are new needs driven by growth in demand, of which 12 are due to specific loads and the remaining 40 due to general demand growth. Twenty five of the 52 needs are in the first three years of the forecast with the remaining 27 needs in the fourth and fifth years.

Table 2-3: Summary of the Number of Grid Needs[8] by Distribution Service Type and Equipment Type

Equipment Type	Distribution Service				Total
	Peak Thermal	Voltage	Back-Tie	Microgrid	
Substation Bank	12	0	0	0	12
Circuit	31	0	10	0	31
Line Segment	9	0	0	0	9
Totals	52	0	10	0	52

Table 2-4: Summary of the Number of Grid Needs by Anticipated Upgrade Date

In-Service Date	Distribution Service				Total
	Peak Thermal	Voltage	Back-Tie	Microgrid	
2025	12	0	1	0	12
2026	10	0	1	0	10
2027	3	0	2	0	3
2028	12	0	2	0	12
2029	15	0	4	0	15
Totals	52	0	10	0	52

Table 2-5: 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_2025_001	2025_0132	OLD TOWN	60	Thermal	Demand Growth	6/1/2029
GNA_2025_002	2025_0282	SAMPSON	80	Thermal	Demand Growth	6/1/2028
GNA_2025_003	2025_0140	OLD TOWN	136	Thermal	Specific Load	6/1/2029
GNA_2025_004	2025_0062	KETTNER	137	Thermal	Specific Load	6/1/2028
GNA_2025_005	2025_0251	OTAY	153	Thermal	Demand Growth	6/1/2028
GNA_2025_006	2025_0397	CHOLLAS WEST	160	Thermal, Backtie	Demand Growth	6/1/2028
GNA_2025_007	2025_0677	ESCONDIDO	183	Thermal	Demand Growth	6/1/2029

[8] 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.

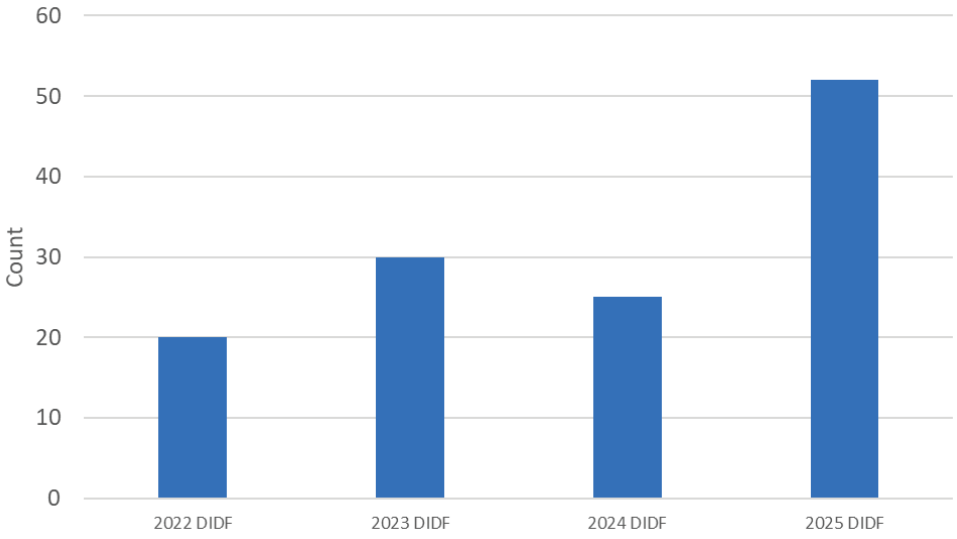
GNA_2025_008	2025_0530	MELROSE	207	Thermal	Demand Growth	6/1/2029
GNA_2025_009	2025_0503	CANNON	304	Thermal, Backtie	Demand Growth	6/1/2029
GNA_2025_010	2025_0261	PARADISE	325	Thermal	Demand Growth	6/1/2028
GNA_2025_011	2025_0361	URBAN	424	Thermal	Demand Growth	6/1/2025
GNA_2025_012	2025_0293	SAN YSIDRO	463	Thermal, Backtie	Demand Growth	6/1/2029
GNA_2025_013	2025_0237	IMPERIAL BEACH	532	Thermal, Backtie	Demand Growth	6/1/2029
GNA_2025_014	2025_0121	MISSION	702	Thermal	Demand Growth	6/1/2028
GNA_2025_015	2025_0488	SPRING VALLEY	731	Thermal, Backtie	Demand Growth	6/1/2028
GNA_2025_016	2025_0071	MESA HEIGHTS	774	Thermal	Specific Load	6/1/2026
GNA_2025_017	2025_0348	TELEGRAPH CANYON	940	Thermal	Demand Growth	6/1/2029
GNA_2025_018	2025_0081	MESA RIM	952	Thermal	Demand Growth	6/1/2025
GNA_2025_019	2025_0639	BERNARDO	1026	Thermal	Demand Growth	6/1/2029
GNA_2025_020	2025_0557	OCEANSIDE	1079	Thermal, Backtie	Specific Load	6/1/2026
GNA_2025_021	2025_0814	RANCHO MISSION VIEJO	1242	Thermal	Specific Load	4/1/2026
GNA_2025_022	2025_0100	MIRA SORRENTO	1447	Thermal	Specific Load	6/1/2028
GNA_2025_023	2025_0898	STATION F	F3132	Thermal	Demand Growth	6/1/2029
GNA_2025_024	2025_0120	Mission	701	Thermal	Demand Growth	6/1/2025
GNA_2025_025	2025_0942	MELROSE	ME3031	Thermal	Demand Growth	6/1/2026
GNA_2025_026	2025_0944	MORRO HILL	MH30	Thermal	Demand Growth	6/1/2026
GNA_2025_027	2025_0866	OLD TOWN	OT32	Thermal	Specific Load	6/1/2026
GNA_2025_028	2025_0867	PACIFIC BEACH	PB3031	Thermal	Demand Growth	6/1/2028
GNA_2025_029	2025_0878	VINE	VN3233	Thermal	Specific Load	6/1/2029
GNA_2025_030	2025_0707	MONSERATE	233	Thermal	Demand Growth	6/1/2025
GNA_2025_031	2025_0244	MONTGOMERY	718	Thermal	Specific Load	6/1/2026
GNA_2025_032	2025_0295	SAN YSIDRO	1202	Thermal, Backtie	Demand Growth	6/1/2029
GNA_2025_033	2025_0558	OCEAN RANCH	1406	Thermal, Backtie	Specific Load	6/1/2027
GNA_2025_034	2025_0879	BORDER	BD3132	Thermal	Demand Growth	6/1/2028
GNA_2025_035	2025_0985	SAN MARCOS	SM3031	Thermal	Demand Growth	6/1/2026
GNA_2025_036	2025_0849	GENESEE	GE3031	Thermal	Demand Growth	6/1/2029
GNA_2025_037	2025_0965	CHICARITA	CC4041	Thermal	Demand Growth	6/1/2029
GNA_2025_038	2025_0209	BORDER	535	Thermal, Backtie	Demand Growth	6/1/2027
GNA_2025_039	2025_0487	SPRING VALLEY	730	Thermal	Demand Growth	6/1/2025
GNA_2025_040	2025_0399	CHOLLAS WEST	163	Thermal, Backtie	Demand Growth	6/1/2025
GNA_2025_041	2025_0699	LILAC	353	Thermal	Demand Growth	6/1/2028
GNA_2025_042	2025_0871	ROSE CANYON	RN3132	Thermal	Demand Growth	6/1/2029
GNA_2025_043	2025_0895	SAN YSIDRO	SYO3132	Thermal	Demand Growth	6/1/2027
GNA_2025_044	2025_0634	BERNARDO	543	Thermal	Specific Load	1/1/2026
GNA_2025_045	2025_0714	Pala	239	Thermal	Specific Load	6/1/2026

GNA_2025_046	2025_0621	Ash	456	Thermal	Demand Growth	6/1/2025
GNA_2025_047	2025_0690	Felicita	474	Thermal	Demand Growth	6/1/2025
GNA_2025_048	2025_0624	Avocado	520	Thermal	Demand Growth	6/1/2025
GNA_2025_049	2025_0703	Lilac	1023	Thermal	Demand Growth	6/1/2025
GNA_2025_050	2025_0399	Chollas West	163	Thermal	Demand Growth	6/1/2025
GNA_2025_051	2025_0536	Melrose	206	Thermal	Demand Growth	6/1/2025
GNA_2025_052	2025_0745	SAN MARCOS	296	Thermal	Demand Growth	6/1/2028

2.4. GNA Observations, Conclusions and Recommendations

- The total number of grid needs in the 2025 GNA was significantly higher than those observed in the past cycles. In this cycle there were 52 needs compared to 25, 30 and 20 needs in the 2024, 2023 and 2022 GNAs respectively. The increase in the number of needs is primarily due to the increase in forecast load growth as discussed later in this section. 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



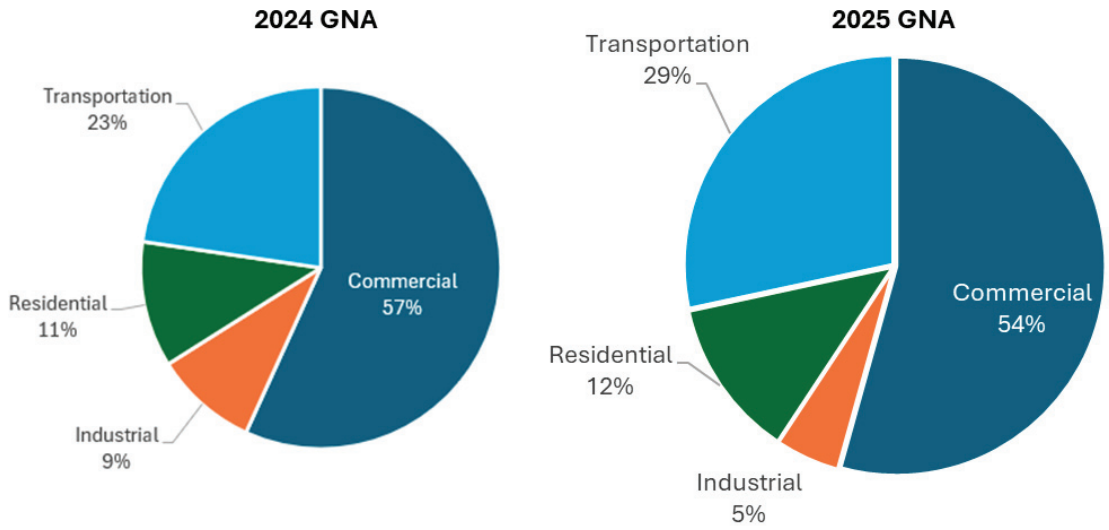
- As observed in the last cycle, all the needs in this cycle were also capacity needs. In this cycle, there were 27 needs in the fourth and fifth years of the forecast compared to only nine in the 2024 GNA.

- Of the 52 needs in this cycle, 12 needs or 30% of all needs are specifically associated with Known Loads and the remaining 40 were primarily due to general demand

growth. In the past two cycles, approximately 50% to 60% of the needs were primarily due to Known Loads. 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 316 MW in the 2024 GNA to 433 MW in the 2025 GNA. While there was an increase in known loads across all the categories going from 2024 to 2025, the majority of this increase was due to Commercial and Transportation Electrification-related loads. A pie chart of the total known load additions by customer type is shown in the Figure 2-2 below for the 2024 and 2025 GNAs.

Figure 2-2: Known Load Customer Types and Load (MW) in the 2024 and 2025 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 transitioned to a new methodology for accounting for any differences between the IEPR forecast and known load requests in 2023 GNA cycle. SDG&E's methodology compares the IEPR forecast and the sum of the known loads on an annual basis (not on a cumulative basis) and assigns spatial load to the extent the annual IEPR forecast exceeds the annual sum of the known loads. (Known Loads are always modeled in the DPP analysis using the customer's indicated in-service year and circuit location.) The results of this new methodology can be clearly observed in Figure-2-4. It can be seen that in the first two years of the forecast (2025 and 2026), there are no spatial loads assigned to circuits since the sum of the known loads for that year exceeds the IEPR forecast.

Starting the third year (2027), spatial loads are assigned to circuits since the sum of the known loads in those years is lower than the IEPR forecast. When compared to the old methodology, this methodology has the effect of moving known loads to outer forecast years (2035 to 2040, in this cycle), such that the cumulative GNA forecast matches with the cumulative IEPR growth forecast by the last year of the forecast period, similar to the methodology used in the past.

Figure-2-3: Cumulative load forecast growth for the 12-year forecast period

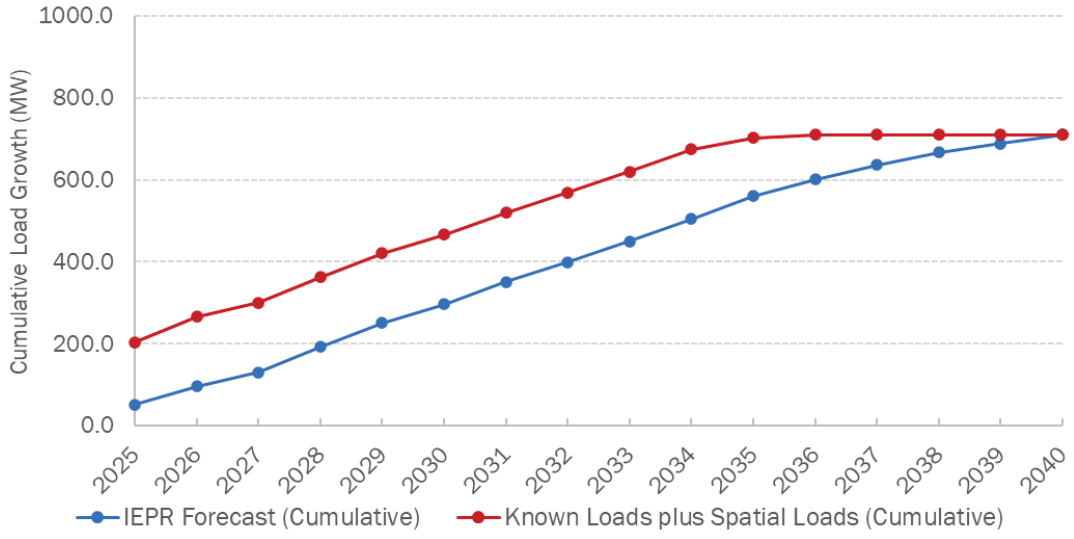
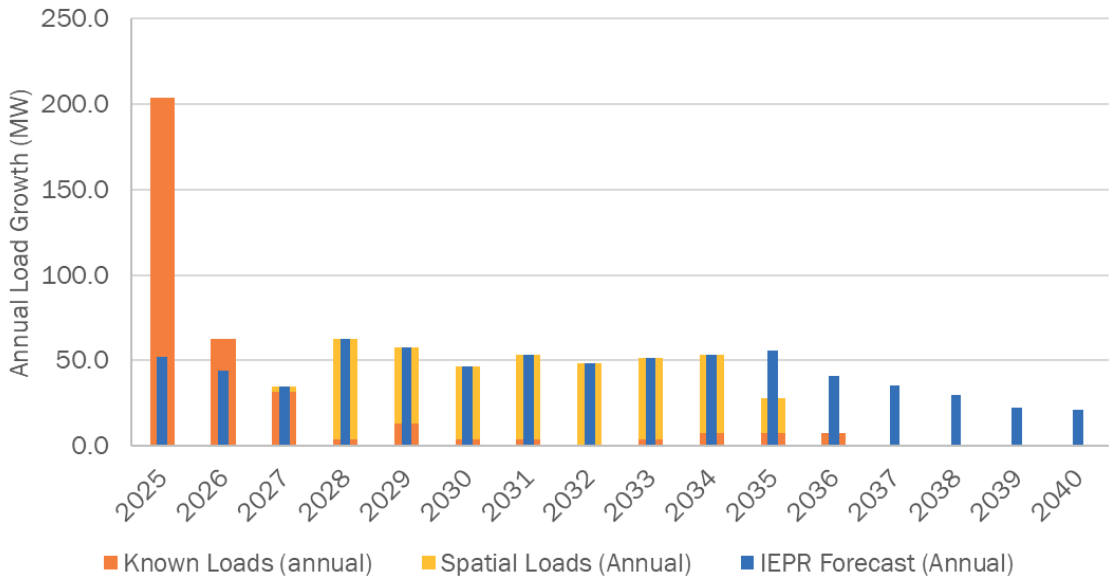


Figure-2-4: Annual load forecast growth for the 12-year forecast period



3. Review of DUPR Results – Planned Investments

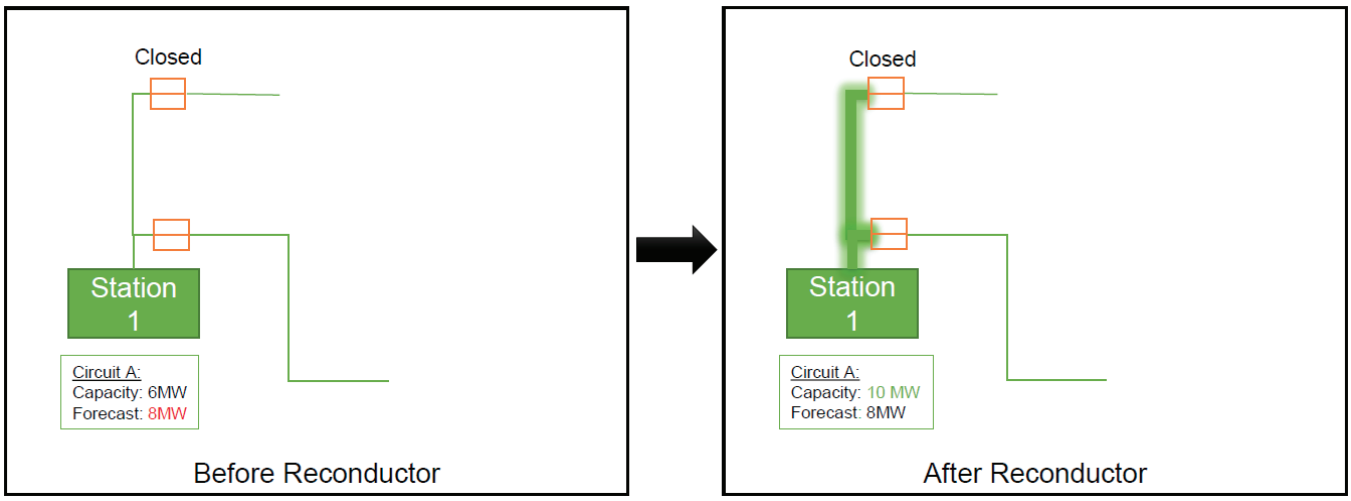
The DUPR begins with SDG&E's distribution planning engineers reviewing the needs identified in the GNA to determine the least cost, best fit and just-in-time solution to mitigate them. Typically, the least cost solution to resolve identified needs is to utilize existing equipment, which can also allow 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 52 needs identified in this cycle, 23 were addressed using load transfers and phase balancing. Two needs (GNA_025_039 and GNA_025_048) were addressed prior to the GNA/DUPR filings and three needs (GNA_2025_051, GNA_2025_029 and GNA_2025_027) were addressed as part of projects identified in previous cycles.

SDG&E's 2025 DUPR provides an overview of 22 planned investments associated with the remaining 24 needs identified in the 2025 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 2029. The planned projects are as follows: (i) Three new substation bank projects, (ii) Ten new circuit projects, (iii) Four projects that involve reconductoring, and (iv) Five projects that involve transferring load to another circuit with new 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 which is a conductor rated at 6MW is reconductored using a larger (10 MW) size conductor as show in in Figure 3-1.

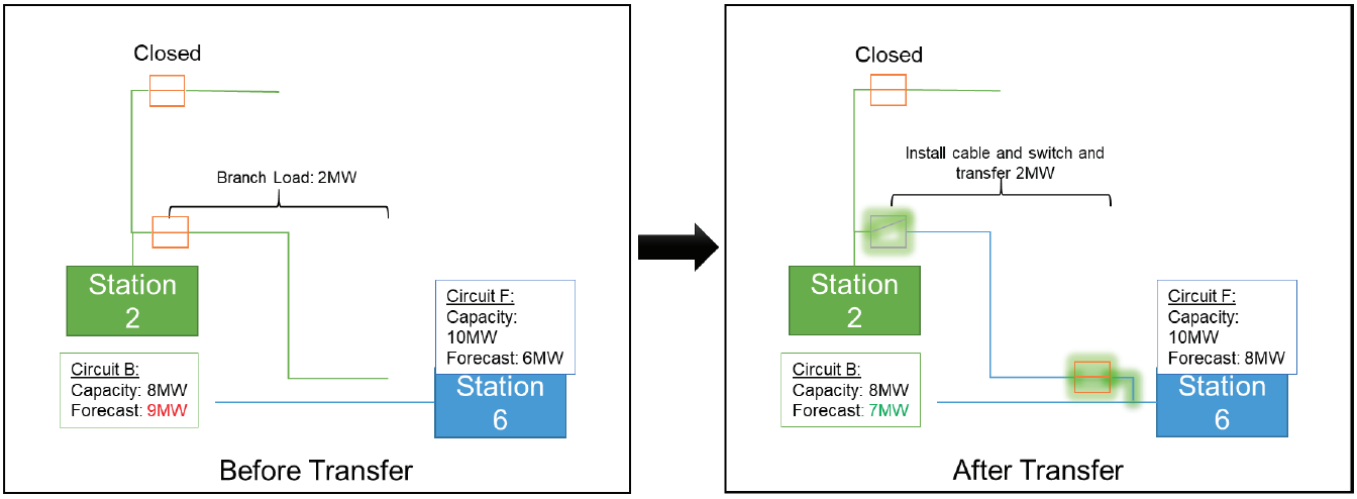
Figure 3-1: Figure showing an example project that involves reconductoring



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.

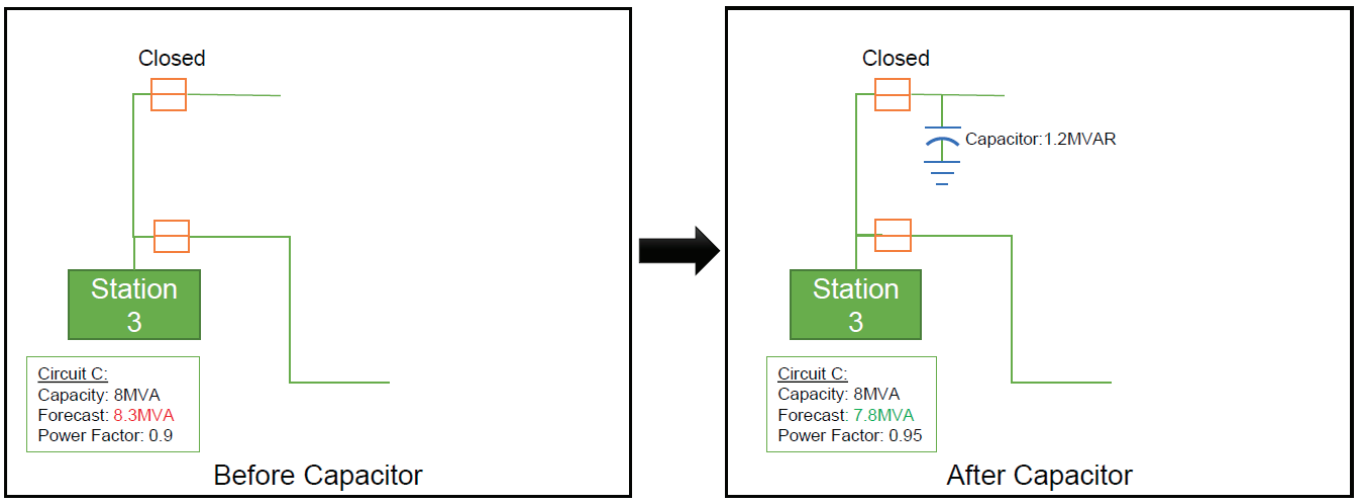
Figure 3-2: Figure showing an example project that involves a load transfer



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 project that involves a new capacitor



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 project that involves a new circuit

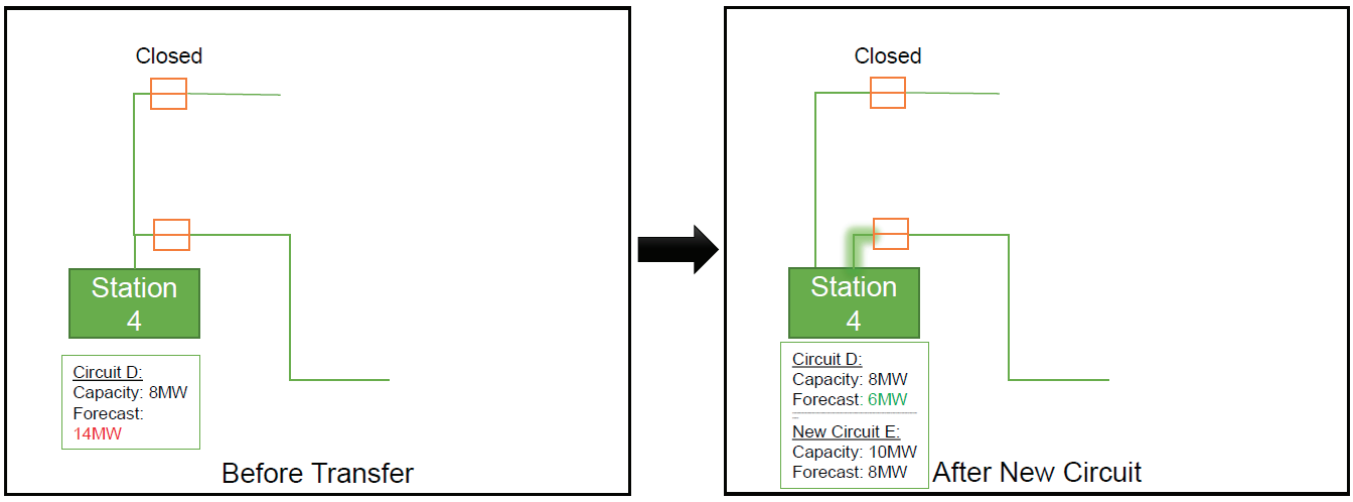


Table 3-1: Planned Investments

GNA ID	DUPR ID	Facility ID	Substation	Bank / Circuit	Description	Equipment Involved	In-Service Date
GNA_2025_040	DUPR_2025_03	2025_0399	CHOLLAS WEST	163	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2026
GNA_2025_015	DUPR_2025_05	2025_0488	SPRING VALLEY	731	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2028
GNA_2025_033, GNA_2025_026	DUPR_2025_06	2025_0558	OCEAN RANCH	1406	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2026
GNA_2025_020	DUPR_2025_07	2025_0557	OCEANSIDE	1079	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2026
GNA_2025_012	DUPR_2025_11	2025_0293	SAN YSIDRO	463	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2029
GNA_2025_013	DUPR_2025_12	2025_0237	IMPERIAL BEACH	532	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2029
GNA_2025_032	DUPR_2025_14	2025_0295	SAN YSIDRO	1202	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2029
GNA_2025_006	DUPR_2025_16	2025_0397	CHOLLAS WEST	160	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2028
GNA_2025_009	DUPR_2025_17	2025_0503	CANNON	304	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2029
GNA_2025_038	DUPR_2025_21	2025_0209	BORDER	535	New Circuit	Circuit Breaker, UG Cable, Switch	6/1/2027
GNA_2025_034	DUPR_2025_04	2025_0879	BORDER	BD3132	New Substation Bank	Substation Bank	6/1/2029
GNA_2025_043	DUPR_2025_09	2025_0895	SAN YSIDRO	SYO3132	New Substation Bank	Substation Bank	6/1/2029
GNA_2025_042	DUPR_2025_22	2025_0871	ROSE CANYON	RN3132	New Substation Bank	Substation Bank	6/1/2029
GNA_2025_016	DUPR_2025_02	2025_0071	MESA HEIGHTS	774	Reconductoring	UG Cable	6/1/2026
GNA_2025_049	DUPR_2025_08	2025_0703	Lilac	1023	Reconductoring	OH Conductor	6/1/2026
GNA_2025_041	DUPR_2025_19	2025_0699	LILAC	353	Reconductoring	UG Cable	6/1/2028
GNA_2025_045	DUPR_2025_20	2025_0714	Pala	239	Reconductoring	OH Conductor	6/1/2026
GNA_2025_004	DUPR_2025_01	2025_0062	KETTNER	137	Transfer with New Equipment	UG Cable	6/1/2028
GNA_2025_022	DUPR_2025_10	2025_0100	MIRA SORRENTO	1447	Transfer with New Equipment	Switch	6/1/2028
GNA_2025_017	DUPR_2025_13	2025_0348	TELEGRAPH CANYON	940	Transfer with New Equipment	Switches	6/1/2029
GNA_2025_008, GNA_2025_025	DUPR_2025_15	2025_0942	MELROSE	ME3031	Transfer with New Equipment	Switches	6/1/2026
GNA_2025_030	DUPR_2025_18	2025_0707	MONSERATE	233	Transfer with New Equipment	OH Conductor	6/1/2025

3.1. DUPR Report Planned Investments - Observations, Conclusions and Recommendations

The 2025 DUPR had 22 planned investments compared to 16 planned investments in the 2024 DDOR. The table below summarizes the project types for the two years.

Table 3-2: Comparison of 2024 and 2025 Planned Project Types

Project Type	2025 DUPR	2024 DDOR
New Substation Bank	3	2
New Circuit	10	6
Reconductor Circuit	4	4
Transfer with new equipment	5	3
New Equipment (Fuse)	0	1

4. IPE Recommendations

I. As performed in the previous cycle, the IPE plans to review the Known Load Metrics for all three IOUs in its Post-DPAG Report to be completed in March 2026, i.e., the 2026 Post-DPAG report with a focus on Known Load materialization. It is important to understand whether Known Loads materialize considering data from multiple years, since they are an important component of the distribution planning process.

II. The IPE recommends that, in addition to the Known Loads, the IOUs annually track Pending Loads similar to Known Loads since these loads could have similar impacts to Known Loads. The IPE also recommends that, in addition to the Known Load metrics, metrics for Pending Loads be calculated similar to those for Known Loads. Further, these metrics should be separately calculated for each Pending Load category (A, B, C etc.). In addition, combined metrics for all the loads used in planning, (i.e., Known Loads and Pending Loads that were used in the Base Case) should also be calculated. The exact format for reporting the Pending Load data and the metrics that need to be calculated should be jointly developed by the Energy Division and the IOUs.

III. The IPE recommends that the Pending Loads identified using studies be updated periodically (ideally, annually) and that the source (i.e., customer study name) be provided in the Pending Load tracking data mentioned above.

IV. The IPE would like to reiterate the recommendation made in the last cycle (2025 Post-DPAG Report) that the IOUs calculate system-level, as well as a TE-specific materialization metrics similar to what the IPE has calculated in the 2025 Post-DPAG report and include these new metrics in the GNA/DUPR report.

V. The IPE would also like to reiterate the recommendation made in the last cycle that the Commission suspend the requirement for calculating Known Loads Metrics 14-16 related to service deferral, cancellation and reduction rate by forecast year since these metrics have shown limited value.

VI. The IPE plans to review and compare in the 2026 Post-DPAG report, the methodologies used by the IOUs to confirm that planned projects 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 DPP cycle. The IPE gathered some information as a part of Step 13 in this cycle and will use this information, as well as other information gathered from the utilities to perform this review.

5. Known 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 describing the implications of the calculated metrics.

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

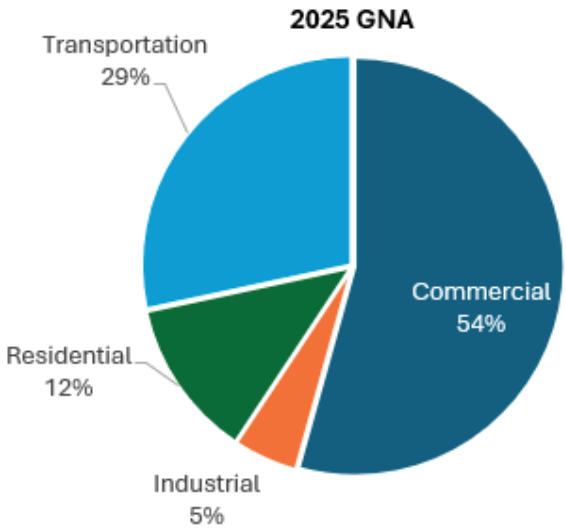
SDG&E provided the Known Load Tracking Data as Appendix 4 and the Known Load Tracking Metrics in Section 5 of their report.

5.1. Known Load Tracking Data

SDG&E's 2025 Known Load Tracking Data reflects known loads as of the end of the first quarter of 2025 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 2025. This dataset is complete and contains data for all the fields requested in the June 2022 Reform order. In this cycle, SDG&E added a new subcategory, "supercharger" under the Transportation type.

The 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 describing 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), the non-TE and TE Known Loads increased by 27% and 72% respectively. Most of the increase in the non-TE Known Loads came from Residential and Commercial loads while Industrial loads decreased. Table 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	2024-25 DPEP Cycle for the Twelve Year Forecast Horizon (2025-2036)	2023-24 DPEP Cycle for the Twelve Year Forecast Horizon (2024-2035)	Percentage Change from 2023-24 Cycle
Commercial	235.6	179.5	31%
Industrial	21.6	29.3	-26%
Residential	53.4	35.5	50%
Transportation	123.1	71.7	72%
Total Non-TE	310.7	244.3	27%
Total with TE	433.7	316.0	37%

- **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 2024 DPP cycle that have been reported for the 2025 DPP cycle with a later in-service year. SDG&E calculated that 117 MW out of 316 MW or 37% of the Known Loads (in MW) in the 2024 cycle were deferred in the 2025 cycle. For comparison, this metric was 45% in the last. SDG&E also reported deferral rate by customer category (Metric 7) which showed rates of 27%, 67%, 47% and 31% 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. SDG&E also cautioned that the small sample size might limit the usefulness of this metric.

- **Metric 8: Cancellation Rate Total (%)** – SDG&E interpreted this metric as measuring the number of known loads included in the 2024 DPP cycle that have been reported in this 2025 DPP cycle's known load data as being cancelled. SDGE calculated a cancellation rate of 11%, i.e., 15 Known Loads as being cancelled out of the total of 132 reported Known Loads in the 2024 Tracking Data. For comparison, this metric was at 7% 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 2024 DPP cycle that have been reported in the 2025 DPP cycle with an increased load amount.

SDG&E calculated an increase of 2%, i.e., for the Known Loads that were reported in both the 2024 and 2025 cycles, there was an increase of 6.25 MW. For comparison, this metric was 8% 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.

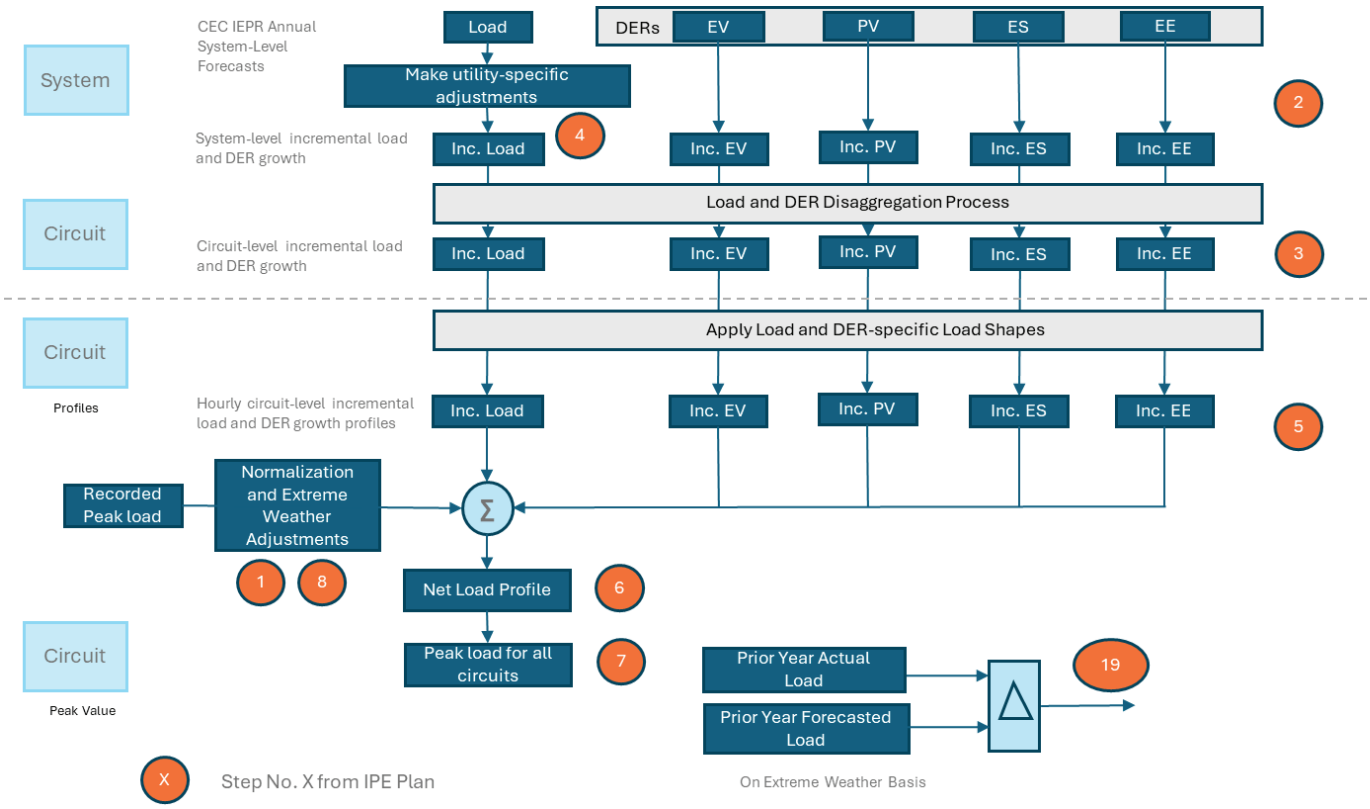
- **Metric 12: Service Request Amount Decrease Rate Total and Average Amount (%, MW or MVA)** – SDG&E interpreted this metric as measuring the total and average changed load amount of known loads reported for the previous 2024 DPP cycle that have been reported in the 2025 DPP cycle with a decreased load amount. SDG&E calculated a decrease of 3% in this cycle compared to less than 0.5% in the last cycle.

6. Verification Approach and Results

The results of the step-by-step verification process followed by the IPE is 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 Steps 1 through 8 and 19 in the review process.

- Step 1, 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
- Steps 5, 6 and 7 verify and validate the process used for developing the 576 hourly loads profile and the peak load forecast for each circuit
- Step 19 compares, on a circuit-by-circuit basis, the recorded 2024 peak load with the forecast 2024 peak load obtained from the 2024 GNA-DDOR.

Figure 6-1: Business Steps Overview



A summary of the verification and validation steps that were performed and the ones 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 DIDF
Steps 1 and 8 - Collect 2024 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 4 - Add Incremental Load Growth Projects to Circuit Level Forecasts (those loads not in CEC forecast)	Performed

Steps 5-7 - Convert Peak Growth to 576 Profile, Determine Net Load and 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 13 - Develop Recommended Solution	Performed
Step 14 - Estimate Capital Cost for Candidate Deferral Projects	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
Step 18 - Calculate LNBA Values	No longer required due to the elimination of DIDF solicitation requirement
Step 19 - Compare 2023 Forecast and Actuals at Circuit Level for statistically meaningful number of distribution circuits	Performed
Step 20 - Analyze known 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 2024 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 2024 actual circuit loading data from 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. Finally, SDG&E uses an internal tool to develop 1-in-2 weather adjusted peak load for each circuit using the peak load from the SCADA data. SDG&E used a new methodology starting in the 2024 GNA cycle for performing weather normalization which is discussed in this section.

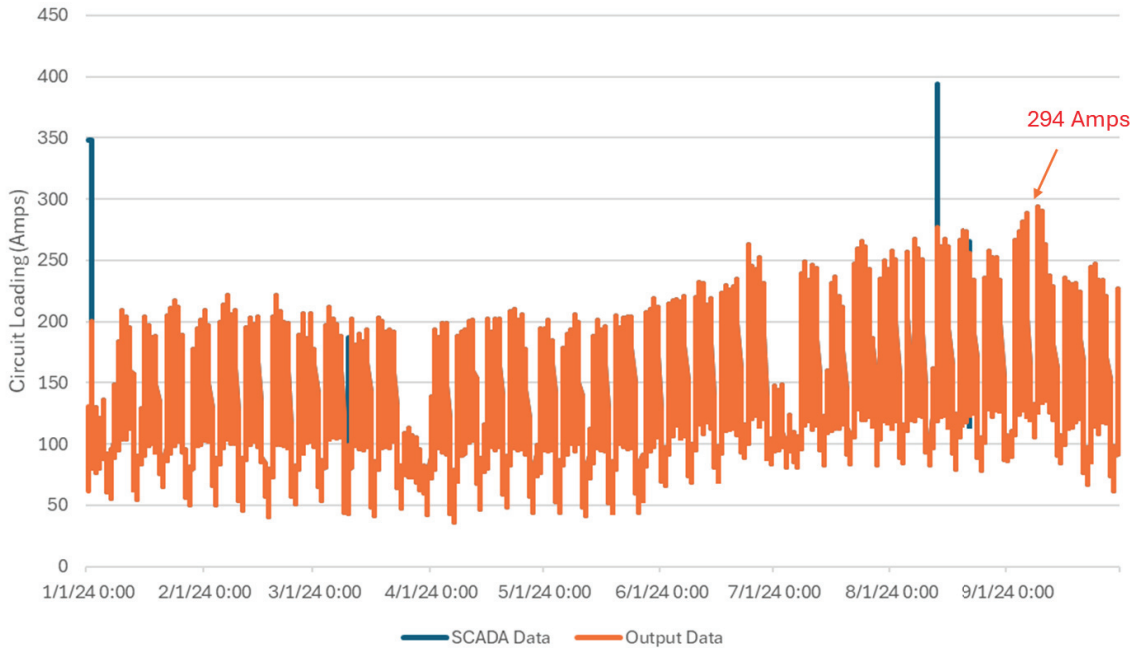
Verification: The IPE collected the observed peak load data for selected circuits that will be used in the verification of subsequent steps. This is shown in Table 6-2. This table also shows the equipment rating and the capacity with Alternate Service. SDG&E indicated that "Capacity with Alternate Service" 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 (redacted)

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 2024 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



The IPE also verified the process used by SDG&E to normalize the peak load for 1-in-2 weather. SDG&E performs weather normalization for each circuit by assessing the circuit's historical daily maximum load and the historical Temperature-Humidity Index (THI) derived from a nearby weather station. These variables are incorporated into a linear regression model that uses more than 10 years of data to estimate the weather normalization factor. The results from IPE's verification are shown in Table 6-3.

Table 6-3: Weather Normalized Peak Loads for Select Circuits (redacted)

Facility ID	Facility Code	Peak Loading from SCADA Data (Amps)	Normalization Factor	Normalized Peak Calculated by IPE (Amps)	Normalized Peak used in the GNA (Amps)
	A		0.96		
	B		0.96		
	C		0.93		
	D		0.96		
	E		0.97		
	F		0.96		
	G		1.08		
	H		0.97		
	I		0.96		

The SCADA peak loads and the weather normalization factor (in the form of a multiplier) are then input to LoadSEER. LoadSEER uses this information, 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.

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 for determining system-level load and DER forecasts is summarized below. There were no changes to the process when compared with the last cycle.

- 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 Switching (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. In prior cycles, SDG&E would obtain the Baseline Peak Load values from the CEC IEPR Peak Load Summary file which is no longer published by the CEC.
- 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 MHDEVs.
- SDG&E compares the Baseline Load Growth value for each forecast year with the Known Load MW value for that year. The Known Load MW value for a year is the sum of all the known loads, except the Transportation Electrification (TE) Known Loads.
- If the Known Load MW value 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. This process is the same as the one that SDG&E used in the last cycle.
- The Econometric Load is then allocated to customer classes (residential, industrial, and commercial) proportional to their forecast annual energy consumption.
- Any difference between the Cumulative IEPR Baseline Load Growth forecast and the Cumulative Known Load MW value (without EVs) at the end of the forecast period is resolved by reducing the Econometric Loads in the last few years of the forecast. In this cycle, Econometric Loads from 2035 to 2040 were removed for this purpose.
- Starting last cycle, SDG&E also used a similar process to reconcile the differences between LDV Load Growth values from IEPR with the LDV TE Known Loads. Using this methodology, SDG&E determines the Econometric LDV TE loads at the system level.
- In this cycle, SDG&E used a bottom-up forecast for the MD/HD TE loads instead of the MH/HD EV from the IEPR forecast. SDG&E used the full bottom-up MD/HD TE in the DPEP with a portion of this load designated as Pending Loads. SDG&E defined Pending Loads as the amount by which SDG&E's bottoms-up forecast of MD/HD TE

load exceeded the CEC IEPR's forecast of MD/HD TE loads after accounting for the portion of MD/HD TE loads that qualify as 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 2023 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 6-4. 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 6-5.

As discussed earlier, SDG&E reconciles the IEPR Baseline Load Growth values with the non-TE Known Loads and Econometric Load Growth. Figure-2-4 showed the results of the reconciliation. Similarly, SDG&E also reconciles LDEV and MDHD EV load Growth values. Figure 6-3 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 that the IEPR LDEV Load Growth forecast, LDEV Econometric Load Growth is added in every year of the forecast.

Figure 6-4 shows the reconciliation of SDG&E's MDHD EV forecast. In this plot, the blue line is SDG&E's bottom-up MDHD EV forecast and the green bar is the MDHD EV Known Loads. Both the forecast and the Known Loads are discrete loads that are tied to a customer's location (for example, fleet electrification). SDG&E includes all the MDHD EV Known loads in a given year plus any forecast MDHD EV load that are in addition to the Known Loads. For example, if in a given year there are three MDHD EV Known Loads pertaining to customers A, B and C and three MDHD EV forecast loads pertaining to customers B, C and D, SDG&E will model the Known Loads A, B and C and load D in the forecast for that year. By year three of the forecast, there is much more forecast load in addition to the MDHD EV Known Loads in those years. These forecast loads are modeled in year 3 in addition to the Known Loads in that year.

As mentioned earlier, SDG&E defined Pending Loads as the amount by which SDG&E's bottoms-up forecast of MD/HD TE load exceeded the CEC IEPR's forecast of MD/HD TE loads after accounting for the portion of MD/HD TE loads that qualify as Known Loads. In other

words, the entire bar shown in yellow in Figure 6-4 is not the Pending Load. As shown in Figure 6-5, the portion in dark grey is the pending load. In this figure, the red line is the IEPR MDHD EV forecast, which is not used in the forecast in any way, except to identify the portion of the forecast load that will be called as pending load (dark grey) and the portion that will be called Econometric Load (purple). This distinction is important because the Econometric load would have been added anyway to reconcile the difference between Known Loads and the IEPR forecast and only the portion that is above the IEPR forecast (grey bar) is defined as the pending load.

Figure 6-3: Annual and Cumulative LD EV Loads

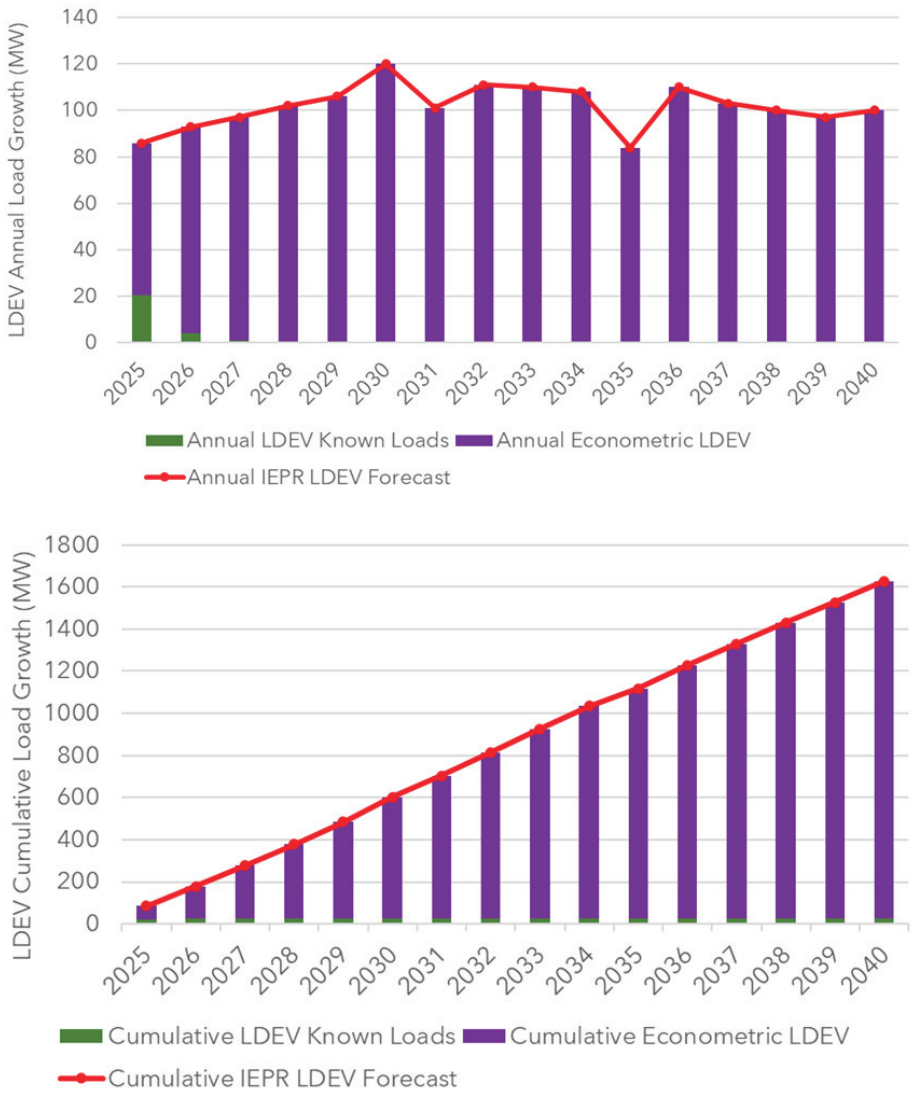


Figure 6-4: Annual and Cumulative MDHD EV Loads

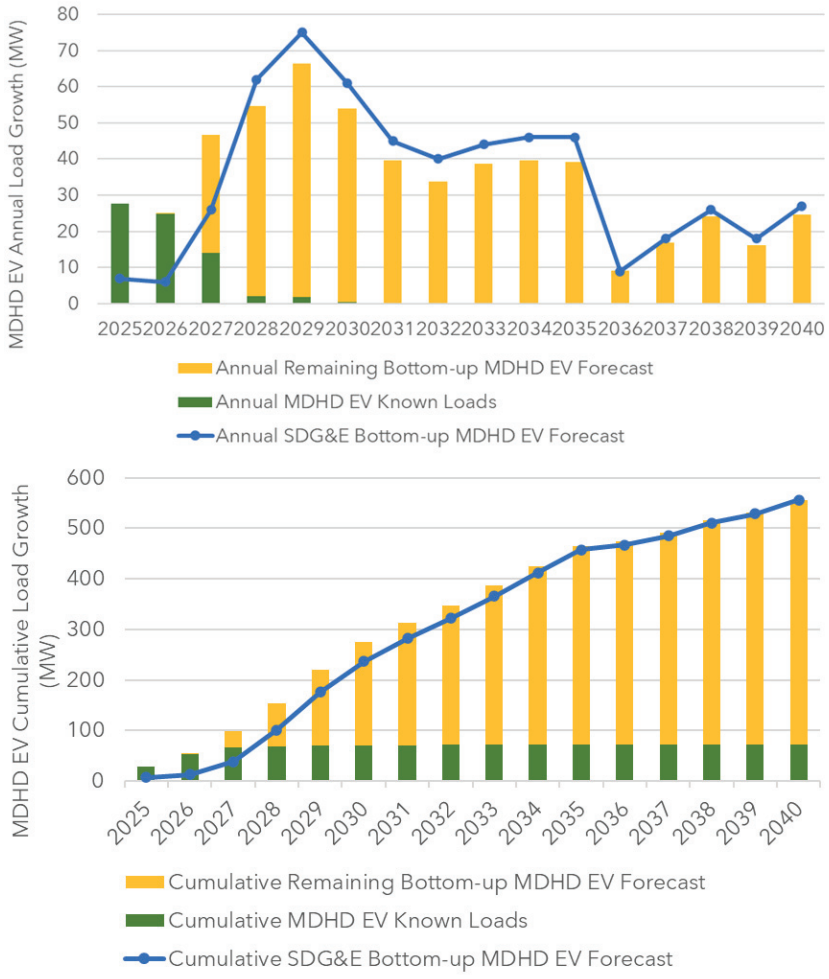


Figure 6-5: Annual MDHD EV Econometric and Pending Loads

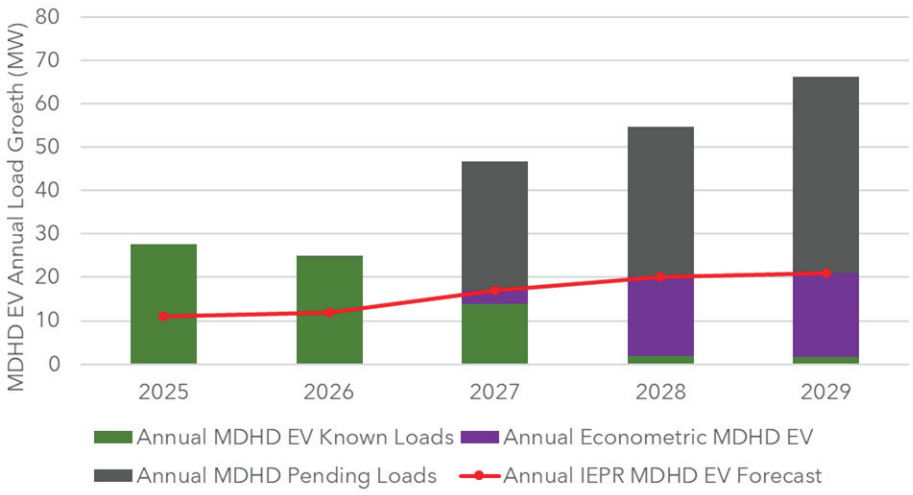


Table 6-4: Developing Annual System-level Load and EV peak load forecasts from CEC IEPR forecast

#	IEPR Baseline Load Growth		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
1	UNADJUSTED_CONSUMPTION		5498	5545	5580	5614	5667	5719	5769	5820	5870	5923	5976	6025	6069	6105	6132	6152	6171
2	Estimated Transmission Loss		113	113	113	113	114	115	120	126	131	136	142	147	152	157	162	167	171
3	CLIMATE_CHANGE		15	20	29	30	40	46	48	56	60	64	70	82	84	88	96	103	110
4	Baseline Load Growth (Incremental)			**52**	**44**	**34**	**62**	**57**	**47**	**54**	**49**	**52**	**54**	**56**	**41**	**35**	**30**	**22**	**21**
5	Baseline Load Growth (Cumulative)			52	96	130	193	250	297	350	399	450	504	560	601	636	666	688	709
6	Known Load Additions Totals (Incremental)			**204**	**62**	**32**	**4**	**13**	**4**	**4**	**0**	**4**	**8**	**8**	**8**	**0**	**0**	**0**	**0**
7	Known Load Additions Totals (Cumulative)			204	266	298	301	315	319	323	323	326	334	341	349	349	349	349	349
8	Spatial Allocation Incremental			**0**	**0**	**3**	**59**	**44**	**43**	**50**	**49**	**48**	**46**	**20**	**0**	**0**	**0**	**0**	**0**
9	Spatial Allocation Cumulative			0	0	3	61	106	148	198	246	294	340	360	360	360	360	360	360
10	DOM Load Growth Cumulative	0.360		0	0	1	22	38	53	71	89	106	123	130	130	130	130	130	130
11	COM Load Growth Cumulative	0.611		0	0	2	38	64	91	121	150	180	208	220	220	220	220	220	220
12	IND Load Growth Cumulative	0.029		0	0	0	2	3	4	6	7	8	10	10	10	10	10	10	10

#	IEPR LDEV	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
13	IEPR LDEV Incremental		**86**	**93**	**97**	**102**	**106**	**120**	**101**	**111**	**110**	**108**	**84**	**110**	**103**	**100**	**97**	**100**
14	IEPR LDEV Cumulative		86	179	276	378	484	604	705	816	926	1034	1118	1228	1331	1431	1528	1628
15	LD Known Loads Incremental		**20**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16	LD Known Loads Cumulative		20	24	26	26	26	26	26	26	26	26	26	26	26	26	26	26
17	Disaggregate Incremental LDEV		**66**	**89**	**96**	**102**	**106**	**120**	**101**	**111**	**110**	**108**	**84**	**110**	**103**	**100**	**97**	**100**
18	Disaggregate Cumulative LDEV		66	155	250	352	458	578	679	790	900	1008	1092	1202	1305	1405	1502	1602

#	IEPR MDHD	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
19	SDG&E MDHD Forecast Incremental		**7**	**6**	**26**	**62**	**75**	**61**	**45**	**40**	**44**	**46**	**46**	**9**	**18**	**26**	**18**	**27**
20	SDG&E MDHD Forecast Cumulative		7	13	39	101	176	237	282	322	366	412	458	467	485	511	529	556
21	MDHD Known Loads Incremental		**28**	**25**	**14**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
22	MDHD Known Loads Cumulative		28	53	67	69	70	71	71	71	72	72	72	72	72	72	72	72
23	Disaggregate Incremental MDEV		**0**	**0**	**33**	**53**	**65**	**53**	**39**	**34**	**38**	**39**	**39**	**9**	**17**	**24**	**16**	**25**
24	Disaggregate Cumulative MDEV		0	0	33	85	150	203	243	276	315	354	393	402	419	443	459	484

Table 6-5: Calculation of System-Level DERs to Disaggregate in LoadSEER

DERs	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Additional Achievable Fuel Switching (AAFS)	20	49	79	96	114	101	115	118	104	96	79	93	117	113	102	75
Additional Achievable Energy Efficiency (AAEE)	-25	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6	-3	-3	-1	-1	0
Behind-the-Meter Energy Storage (ES)	-11	-12	-13	-16	-17	-17	-14	-12	-7	-2	-2	0	0	0	-1	0
Behind-the-Meter PV (PV)	-118	-120	-127	-133	-134	-135	-127	-121	-104	-71	-57	-37	-37	-37	-35	-36

6.1.3. Disaggregate Load and 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 then 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 then 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 five DERs: Additional Achievable Energy efficiency (AAEE), Photovoltaics (PV), Energy Storage (ES), Light Duty Electric Vehicles (EV),[9] and Additional Achievable Fuel Switching (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 also presented at the Distribution Forecast Workgroup (DFWG) Meeting in May 2025.

Verification: The IPE obtained circuit-level load and DER growth forecasts for all circuits from SDG&E. 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 6-6 to Table 6-11 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.

[9] For the 2024-2025 DPP cycle, SDG&E prepared a study-based ("bottom-up") Medium Duty/Heavy Duty (MD/HD) EV load forecast. This forecast contains location detail sufficient to identify the specific circuits/substations at which these MD/HD EV loads are forecast to materialize. Accordingly, no disaggregation of the IEPR MD/HD EV system-level forecast is needed or used.

Table 6-6: Load growth forecast verification at the feeder level

System-level load growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Commercial	0.0	0.0	1.7	37.5	64.5	90.5	120.8	150.4	179.8	207.8	220.2	220.2	220.2	220.2	220.2	220.2
Residential	0.0	0.0	1.0	22.1	38.0	53.3	71.2	88.7	106.0	122.5	129.8	129.8	129.8	129.8	129.8	129.8
Industrial	0.0	0.0	0.1	1.8	3.0	4.3	5.7	7.1	8.4	9.8	10.3	10.3	10.3	10.3	10.3	10.3
Total	0.0	0.0	2.7	61.4	105.5	148.1	197.7	246.2	294.2	340.1	360.4	360.4	360.4	360.4	360.4	360.4
Sum of circuit-level load growth forecast calculated by the IPE (MW)																
Commercial	0.0	0.0	1.7	37.5	64.5	90.5	120.8	150.5	179.8	207.9	220.3	220.3	220.3	220.3	220.3	220.3
Residential	0.0	0.0	1.0	22.1	38.0	53.4	71.2	88.7	106.0	122.5	129.8	129.8	129.8	129.8	129.8	129.8
Industrial	0.0	0.0	0.1	1.8	3.0	4.3	5.7	7.1	8.4	9.8	10.3	10.3	10.3	10.3	10.3	10.3
Total	0.0	0.0	2.7	61.4	105.5	148.1	197.7	246.2	294.2	340.1	360.4	360.4	360.4	360.4	360.4	360.4

Table 6-7: EE growth forecast verification at the feeder level

System-level EE growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total	-25	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6	-3	-3	-1	-1	0
Sum of circuit-level EE growth forecast calculated by the IPE (MW)																
Commercial	-15	-8	-7	-7	-7	-6	-5	-5	-5	-5	-4	-2	-2	-1	-1	0
Residential	-8	-4	-4	-4	-4	-3	-3	-3	-3	-3	-2	-1	-1	0	0	0
Industrial	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0	0
Total	-25	-13	-12	-11	-11	-10	-8	-8	-8	-8	-6	-3	-3	-1	-1	0

Table 6-8: ES growth forecast verification at the feeder level

System-level ES growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total	-11	-12	-13	-16	-17	-17	-14	-12	-7	-2	-2	0	0	0	-1	0
Sum of circuit-level ES growth forecast calculated by the IPE (MW)																
Commercial/ Industrial	-11	-12	-13	-16	-17	-17	-14	-12	-7	-2	-2	0	0	0	-1	0
Total	-11	-12	-13	-16	-17	-17	-14	-12	-7	-2	-2	0	0	0	-1	0

Table 6-9: PV growth forecast verification at the feeder level

System-level PV growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total	-118	-120	-127	-133	-134	-135	-127	-121	-104	-71	-57	-37	-37	-37	-35	-36
Sum of circuit-level PV growth forecast calculated by the IPE (MW)																
RES/COM/IND	-118	-120	-127	-133	-134	-135	-127	-121	-104	-71	-57	-37	-37	-37	-35	-36
Total	-118	-120	-127	-133	-134	-135	-127	-121	-104	-71	-57	-37	-37	-37	-35	-36

Table 6-10: EV growth forecast verification at the feeder level

System-level EV growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
MHDEV	0.0	0.2	32.6	52.7	64.5	53.4	39.3	33.5	38.4	39.3	39.1	9.2	16.9	24.1	16.1	24.6
LDEV	65.7	89.0	95.8	102.0	106.0	120.0	101.0	111.0	110.0	108.0	84.0	110.0	103.0	100.0	97.0	100.0
Sum of circuit-level EV growth forecast calculated by the IPE (MW)																
MHDEV	0.0	0.2	32.6	52.7	64.5	53.3	39.3	33.5	38.4	39.3	39.1	9.2	16.9	24.1	16.1	24.6
LDEV	65.7	88.9	95.8	102.0	106.0	120.0	101.0	111.0	110.0	108.0	84.0	110.0	103.0	100.0	97.0	100.0

Table 6-11: AAFS growth forecast verification at the feeder level

System-level AAFS growth forecast from CEC (MW)																
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
AAFS	20	49	79	96	114	101	115	118	104	96	79	93	117	113	102	75
Sum of circuit-level AAFS growth forecast calculated by the IPE (MW)																
AAFS	20	49	79	96	114	101	115	118	104	96	79	93	117	113	102	75

6.1.4. Add Known 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 Load Growth Projects (known loads) in load forecasting process.

Process: Known load additions could be embedded in the CEC forecast or incremental to the CEC forecast. SDG&E does not have any loads that it considers to be "incremental" to the CEC forecast (as that term is used by SCE). Embedded known loads are subtracted from the CEC forecast in coming up with the system-level forecasts that are allocated to the circuits as verified in Step 2. Examples of known 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 load additions by customer class at the circuit level, which are shown in Table 6-12. We then compared the cumulative circuit-level load by customer class with the system-level values used in Step 2. These values matched exactly.

Table 6-12: Known load additions by customer class

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Grand Total
Commercial	135.6	47.4	25.5	3.8	13.3	4.0	4.0		3.5	7.6	7.6	7.6	259.8
Industrial	29.8	5.7											35.4
Residential	38.2	9.3	6.3										53.8
TE (LDV & MDHD EV)	48.1	28.9	15.2	2.0	1.8	0.5	0.2	0.2	0.2	0.2			97.4
TOTAL without TE	203.6	62.3	31.7	3.8	13.3	4.0	4.0	0.0	3.5	7.6	7.6	7.6	349.0
TOTAL with TE	251.7	91.2	46.9	5.7	15.1	4.5	4.2	0.2	3.8	7.9	7.6	7.6	446.4

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 2023 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 2023 Hourly Forecast - SDG&E Local Reliability Forecast)

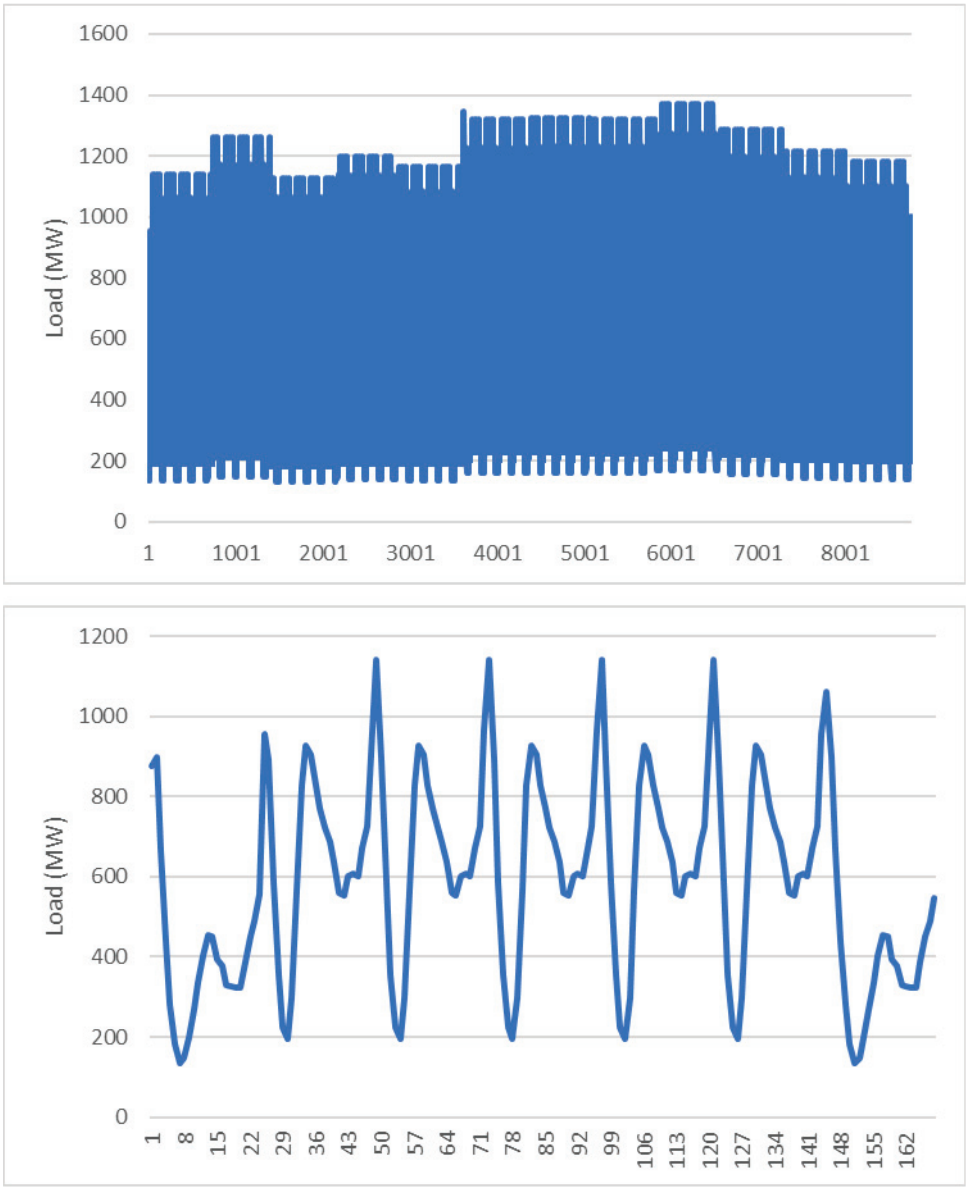


Figure 6-7: Typical MDHDEV Load Profile (Source: CED 2023 Hourly Forecast - SDG&E Local Reliability Forecast)

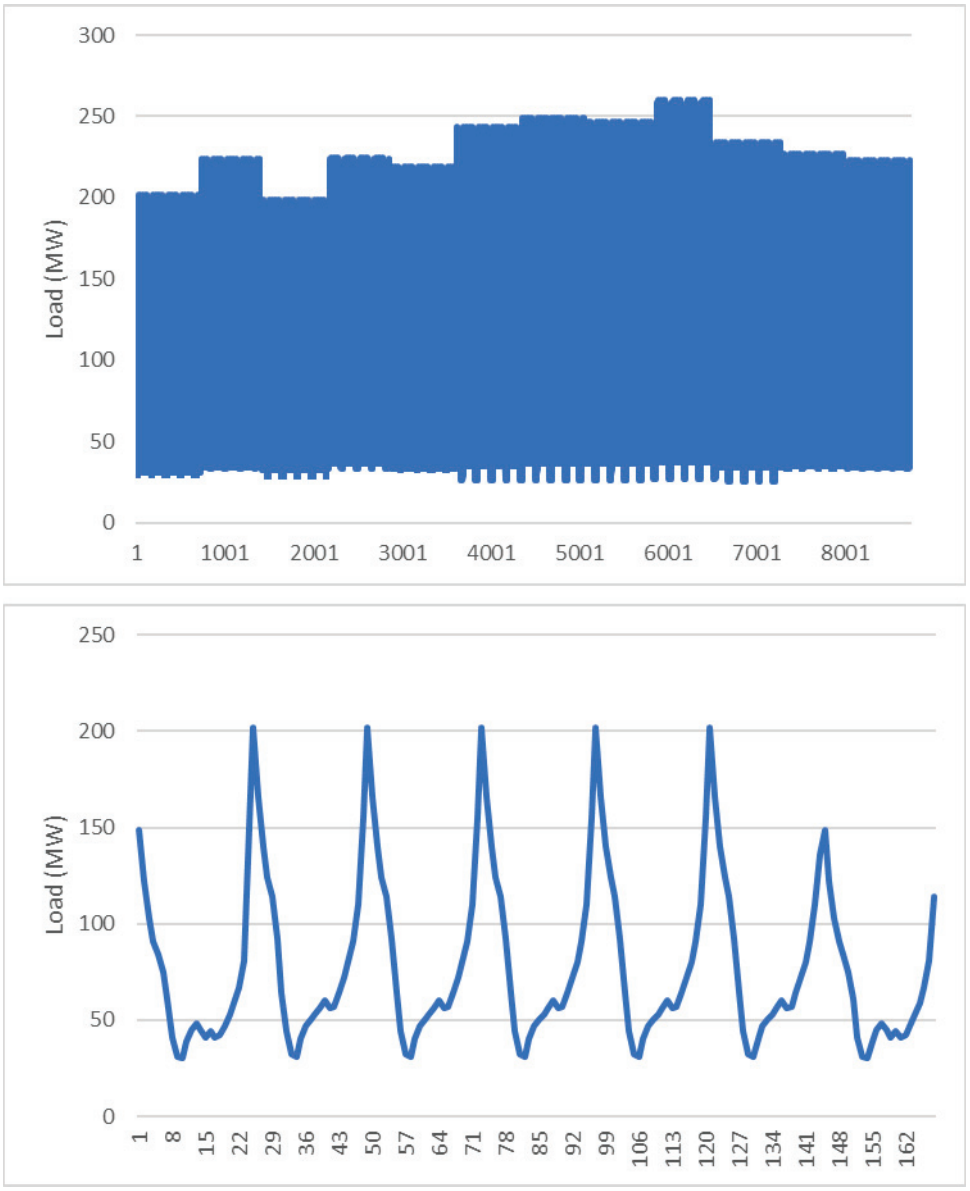


Figure 6-8: Typical BTM-PV Load Profile (Source: CED 2023 Hourly Forecast - SDG&E Local Reliability Forecast)

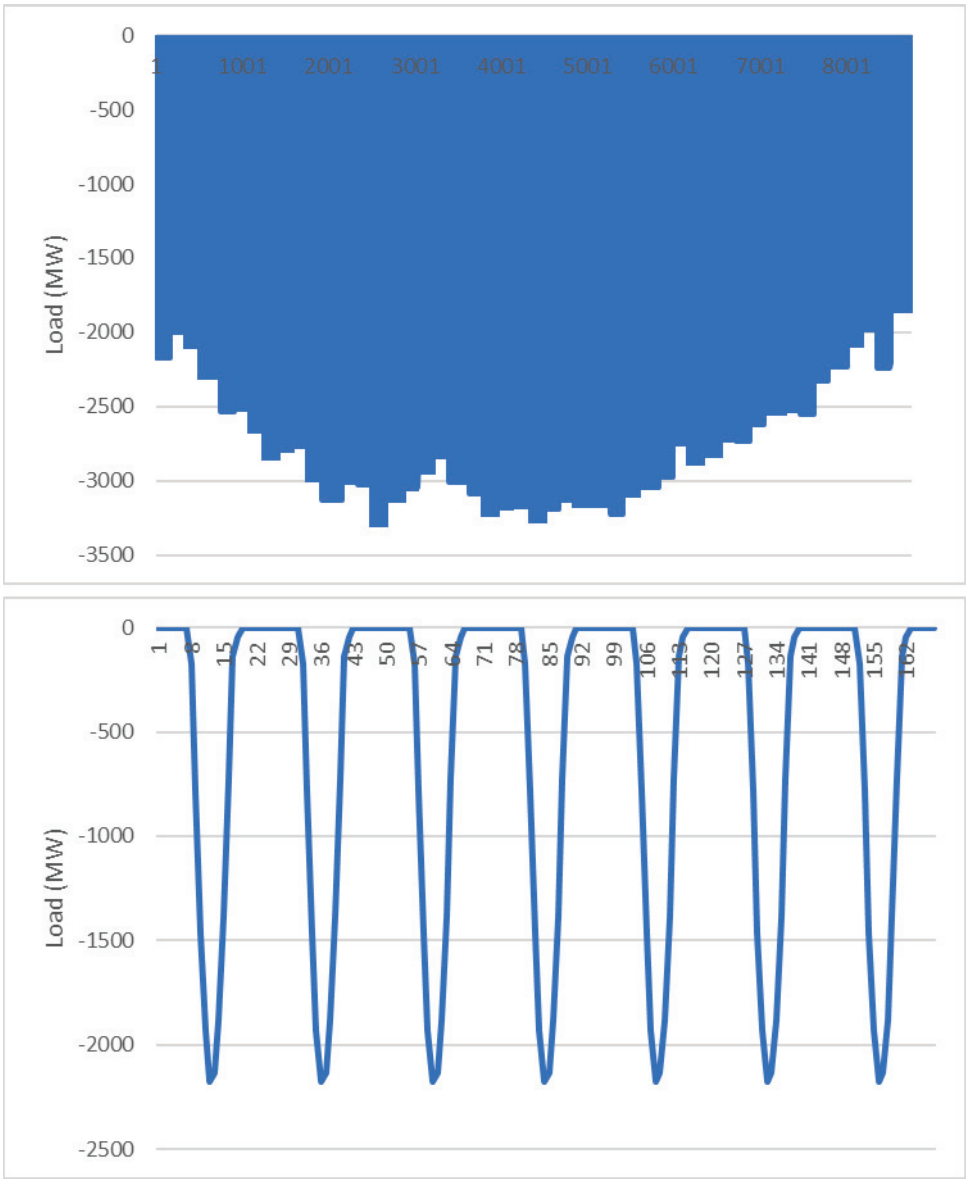


Figure 6-9: Typical BTM-ES (Non-Res) Load Profile (Source: CED 2023 Hourly Forecast - SDG&E Local Reliability Forecast)

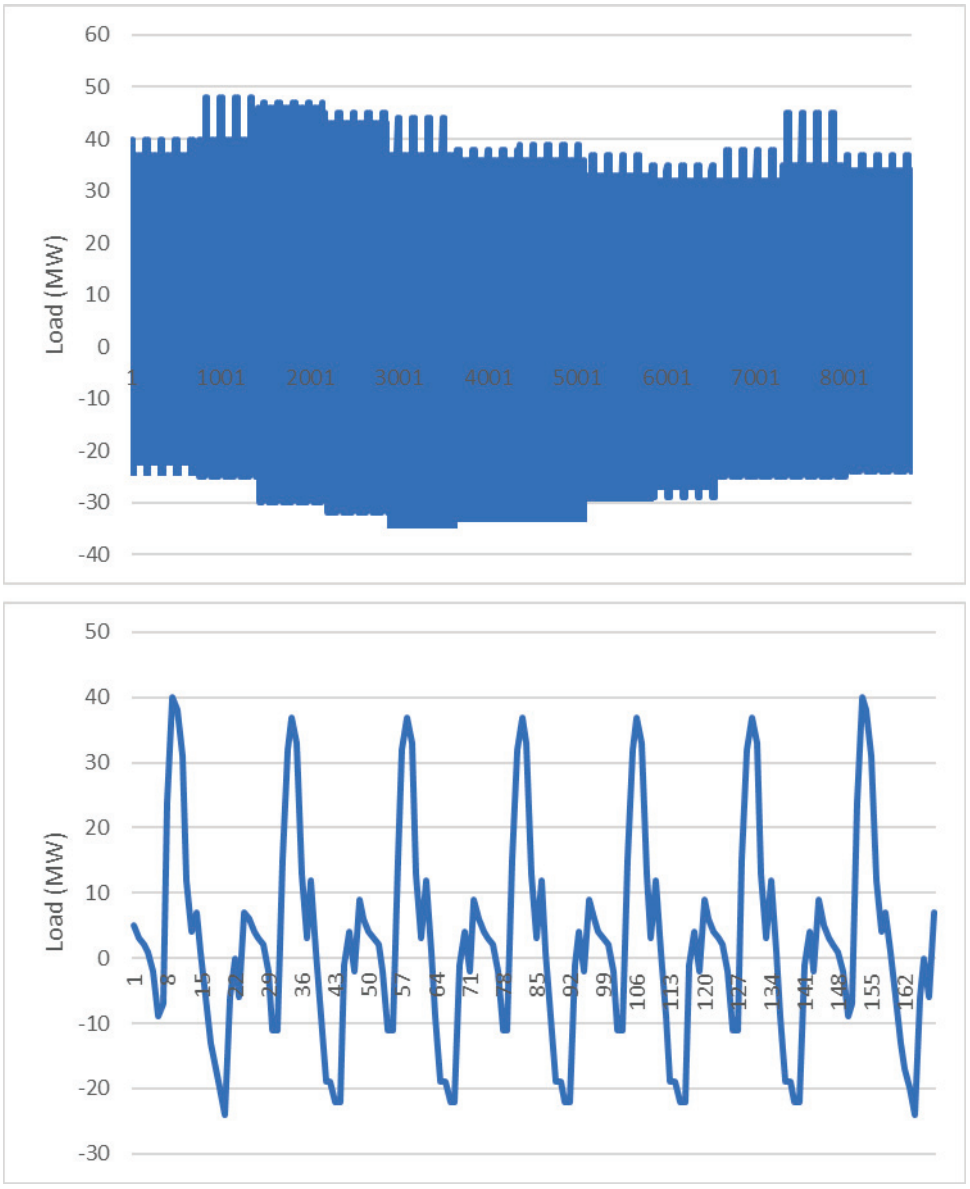


Figure 6-10: Typical AAEE Load Profile (Source: CED 2023 Hourly Forecast - SDG&E Local Reliability Forecast)

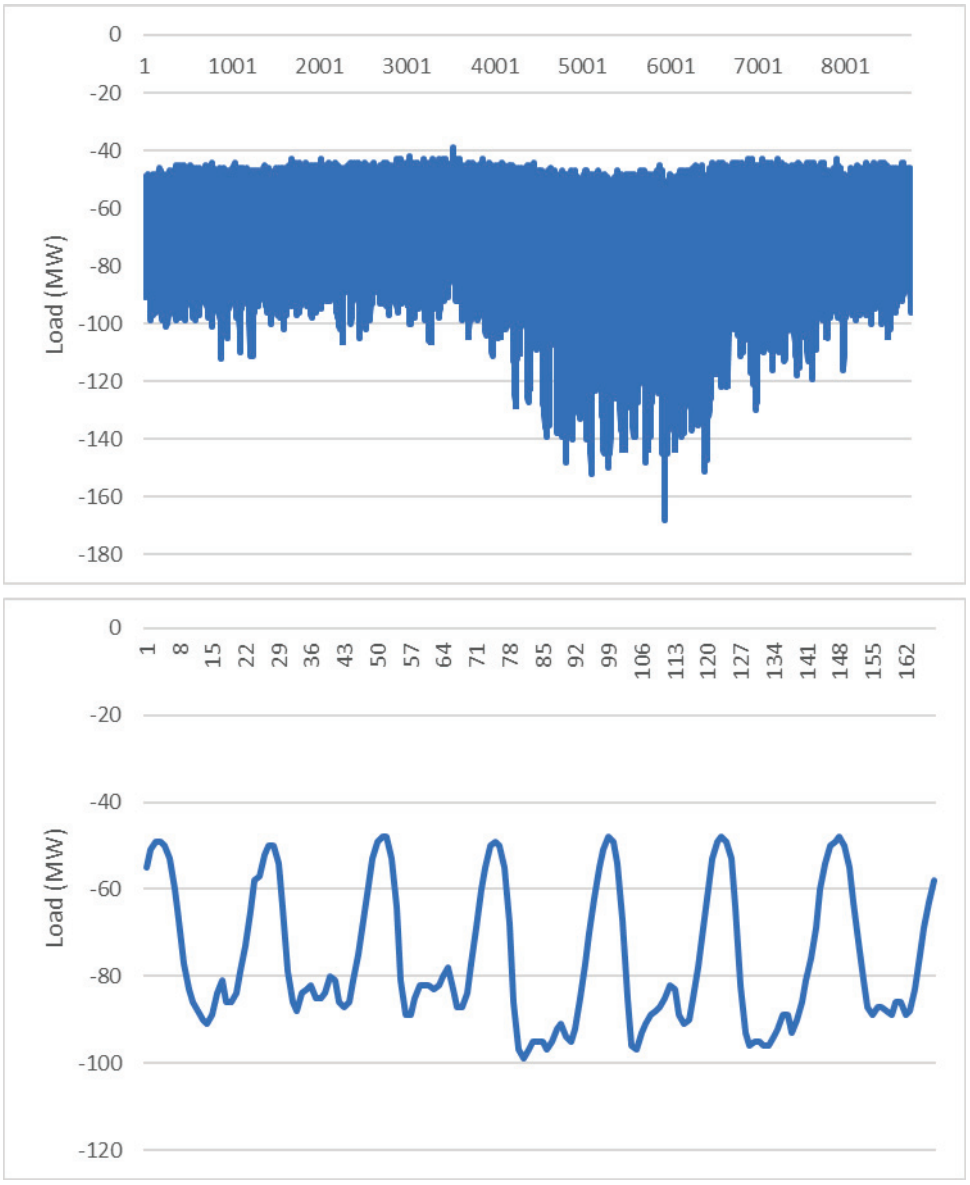
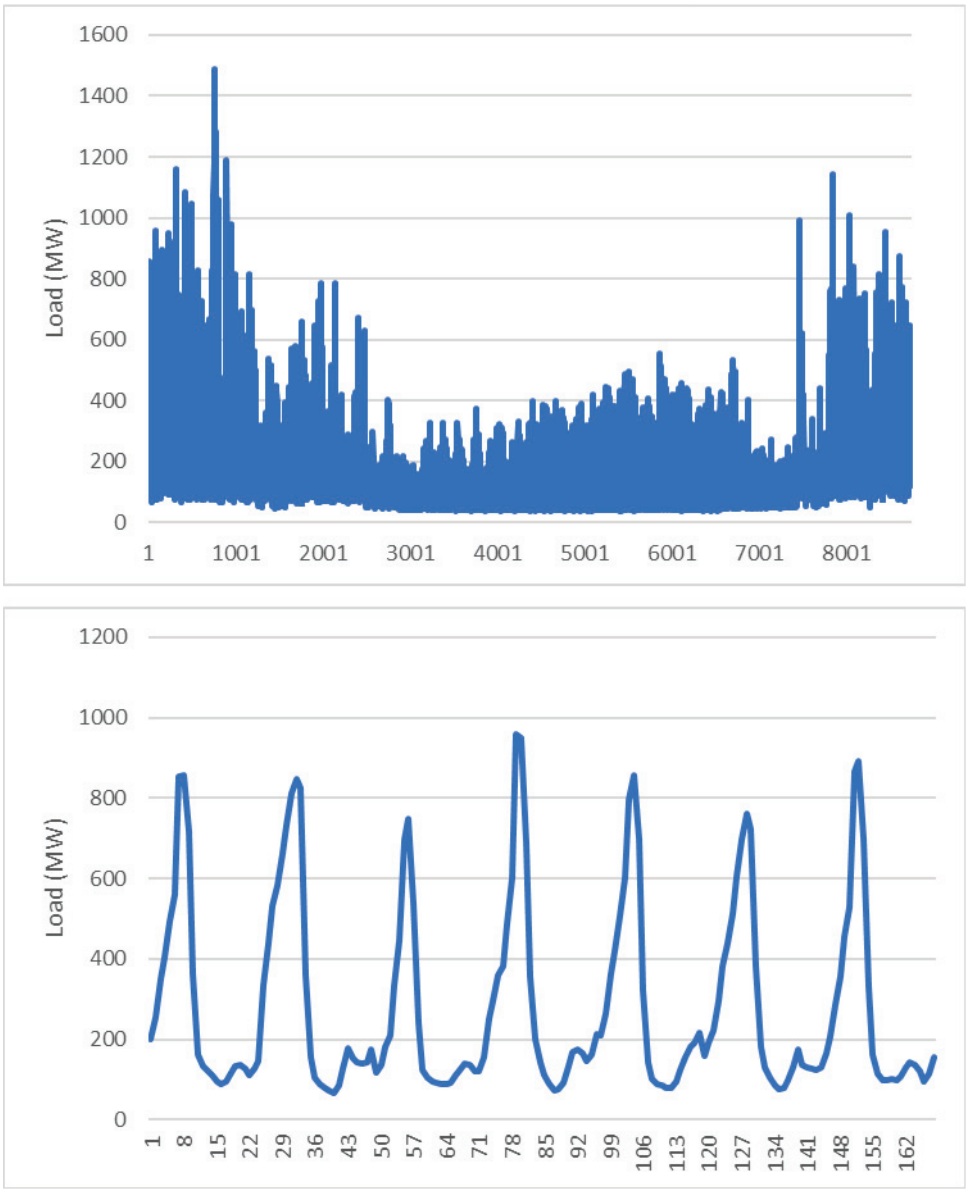


Figure 6-11: Typical AAFS Load Profile (Source: CED 2023 Hourly Forecast - SDG&E Local Reliability Forecast)



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 DPP cycles are still needed and the appropriate solution or investment when considered using the current DPP load, DER and other DPP assumption. 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.

As an example, in the 2024-2025 DPP cycle, SDG&E included a commercial customer's Known Load with an in-service date of Q2 2025. Subsequently, the customer revised their energization timeline to Q1 2026. SDG&E became aware of this revision in April 2025, and then reassessed the associated distribution upgrade using Synergi modeling and updated the load forecast used in the 2024-2025 DPP cycle. As a result, the previously planned upgrade's timeline was deferred to align with the customer's revised schedule.

SGE&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.

SDG&E also provided project examples where projects identified in prior cycles are later leveraged to address new grid needs that have emerged in the current cycle. During the 2024 – 2025 DPP cycle, a grid need was identified on a circuit. The planning engineer determined that a previously initiated DDOR project, originally intended to address an overload on the adjacent circuit, can also mitigate the new need through a circuit cut-over.

The IPE plans to gather information on specific projects in the next cycle for verifying this process.

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, the verification and validation of these steps were skipped in this cycle.

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

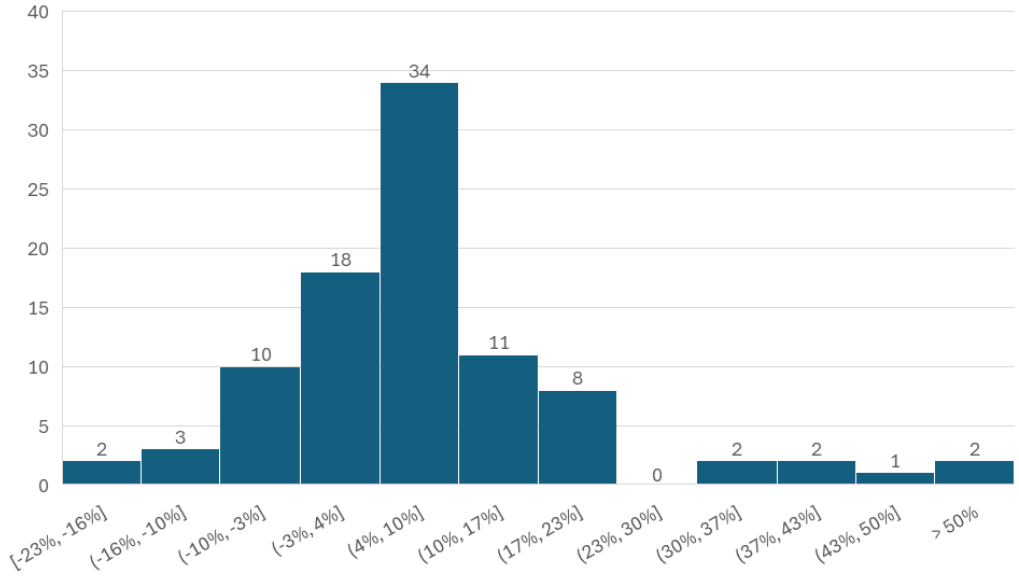
Purpose: To verify the calculation of LNBA performed by SDG&E for the planned projects. As per the IPE Plan, this step is no longer required.

6.4.5. Compare 2024 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.

Verification: As in the prior cycle, the IPE obtained the forecast peak load for year 2024 for 10% of all circuit circuits from the 2024 GNA and the actual 2024 adjusted to 1-in-2 weather condition from SDG&E. SDG&E was not able to provide the actual 2024 peak load that was adjusted to a 1-in-10 weather condition since this value is not available in LoadSEER. Figure 6-12 shows the comparison where the difference between the forecast and actual expressed as percentage (of forecast) is shown as a histogram. It can be seen that for the majority of the sample circuits (69 out of 93 circuits), similar to the observation in the last cycle, the error is positive, i.e., forecast is higher than actuals. This is because we were comparing forecast loads that are based on 1-in-10 weather conditions with normalized peak loads which were under 1-in-2 weather conditions. The results of this type of comparison are highly dependent upon the weather conditions during the year, as well as transfers and G-1 included in the forecasts. The IPE will review if any changes are to be made to this step based on the availability of data to conduct the verification.

Figure 6-12: Histogram of Difference between Forecast and Actual Loads



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

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

Verification: The IPE obtained the 2025 Known 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 no longer have 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 and the SDG&E Follow-Up DPAG meeting to respond to questions raised by stakeholders. 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 DIDF cycle.

6.7. Methodology Used for Prioritization of Planned Projects

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

Verification: This is the first cycle where SDG&E has provided the project execution tracking data. In accordance with Decision D.24-20.030, only the planned projects from this cycle were included in the project execution table. Information on all on-going planned projects, as well as completed projects from the past three cycles, will be included in the project execution tracking data starting with the next cycle.

The project execution data contained information on the 22 planned projects from this cycle. Project scoping had started on all projects and were completed on 12 of the 22 projects[10]. In its report, SDG&E stated that scoping is not a one-time activity; it often continues throughout the project lifecycle. SDG&E also stated that the design phase is rarely linear and may require multiple revisions to accommodate evolving project requirements, permitting constraints, or sourcing considerations.

[10] The IPE noted and brought to SDG&E's attention that one project had an initiation date of 05/2023. SDG&E indicated that the initiation date was not for that project but another project on the same circuit and that the error will be fixed going forward.

As agreed upon with the Energy Division, SDG&E did not provide any information for the following two fields in the tracking data:

- (Column Y) Was Actual Peak Load (adj. to 1-in-10) from the most recent cycle higher than the rating of the original infrastructure (Y/N)?
- (Column Z) Was the 5-year Forecast Peak Load (adj. to 1-in-10) from the most recent cycle higher than the rating of the original infrastructure (Y/N)?

SDG&E included two new columns related to project execution data in the Known Load Tracking Data as requested by Energy Division.

- "DUPR ID" was added to provide DUPR IDs for projects that the known loads are dependent on in the 2025 DUPR table
- "Energization request date" was provided for known loads with DUPR ID

The IPE plans to perform a more thorough verification of the project execution data once sufficient information is provided in the upcoming cycles.

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, 2025 and also solicited comments by email. SDG&E received written comments provided by Stakeholders on September 26, 2025 and provided their response on October 6, 2025. 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 9/18/25 DPAG MEETING
DATE RECEIVED: SEPTEMBER 26, 2025
DATE RESPONDED: OCTOBER 6, 2025

Energy Division (ED)

1. (All IOUs) For future DPAG meetings, Energy Division would prefer to host the meeting platform to allow recordings. The recordings will be used within CPUC and shared elsewhere only with the IOUs approval. ED will also provide the recordings to the IOUs and IPE. Please let us know your thoughts on this?

   SDG&E Response:

   SDG&E has no objection to the Energy Division hosting the meeting platform. SDG&E is also comfortable with Energy Division recording the meetings provided the recordings are not shared with parties other than the CPUC and its consultants unless specifically authorized by SDG&E.

2. (SDG&E and PG&E) Have you observed any recent influx of EV cancellations compared to the previous year?

   SDG&E Response:

   SDG&E has not observed a significant increase in cancellations of Rule 45 or Rule 15/16 projects related to electric vehicle (EV) infrastructure compared to the previous year. However, some recent cancellations have occurred following SDG&E's submission of Advice Letter 4705-E, which proposed modifications to Rule 45 to discontinue acceptance of new applications due to reaching the approved program funding cap.

   In accordance with CPUC Decision (D.) 24-12-074,[1] SDG&E submitted a Tier 2 Advice Letter requesting approval to implement a funding cap of $7.58 million on capital spending and recovery under Rule 45 and the Electric Vehicle Infrastructure Memorandum Account (EVIMA). As a result of these modifications, SDG&E closed the Rule 45 tariff to new applications and began terminating Rule 45 contracts for projects that had not received a Notice to Proceed (NTP) as of August 20, 2025.

   While these changes have led to some Rule 45 project cancellations, they are primarily attributable to the funding limitations imposed by the CPUC-adopted cap, rather than a broader trend of increased cancellations.

[1] Decision Addressing the 2024 Test Year General Rate Cases of Southern California Gas Company and San Diego Gas & Electric Company (issued December 23, 2024).

3. PG&E and SDG&E did not provide the public data supporting the reports in Excel file format. PG&E and SDG&E should make that data available in excel format like they historically have.

   SDG&E Response:

   SDG&E included PDF versions of the public GNA/DUPR Excel spreadsheets as attachments to Appendices 4, 5, and 6 in the official filing package submitted and hosted on the CPUC's proceeding page for the Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future. Additionally, SDG&E provided confidential GNA/DUPR Excel spreadsheets to the Energy Division and IPE in support of the reports. SDG&E makes public versions of the Excel spreadsheets available to stakeholders upon request. This has SDG&E's standard approach for the past few DPP cycles.

Cal Advocates

1. **Grid Needs:** SDG&E identified the following number of grid needs in its 2021,[2] 2022,[3] 2023,[4] 2024,[5] and 2025 GNAs.[6]

[2] See SDG&E 2023 GNA and DDOR, August 15, 2023. Available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=517613904.

[3] See SDG&E 2022 GNA and DDOR, August 16, 2022. Available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=496592463.

[4] See SDG&E 2023 GNA and DDOR, August 15, 2023. Available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=517613904.

[5] See SDG&E 2024 GNA and DDOR, August 15, 2024. Available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=538140375.

[6] See SDG&E 2025 GNA and DUPR, August 15, 2025. Available at: https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=576179691.

In-Service Date					Total
2021	2022	2023	2024	2025	
0	17	0	0	2	19

In-Service Date					Total
2022	2023	2024	2025	2026	
0	16	4	0	0	20

Anticipated Upgrade Date					Total
2023	2024	2025	2026	2027	
5	15	9	1	-	30

Anticipated Upgrade Date					Total
2024	2025	2026	2027	2028	
1	9	6	5	4	25

Anticipated Upgrade Date					Total
2025	2026	2027	2028	2029	
12	10	3	12	15	52

a. What key factors in SDG&E's GNA are driving the overall increase in grid needs across GNA cycles (e.g., from 19 in SDG&E's 2021 GNA to 52 in SDG&E's 2025 GNA)?

SDG&E Response:

As an initial matter, SDG&E understands that the tables shown above provide the total number of grid needs identified in (i) the 2021 GNA/DDOR submittal across the 2021-2025 planning horizon, (ii) the 2022 GNA/DDOR submittal across the 2022-2026 planning horizon, (iii) the 2023 GNA/DDOR submittal across the 2023-2027 planning horizon, (iv) the 2024 GNA/DDOR submittal across the 2024-2028 planning horizon, and (v) the 2025 GNA/DUPR submittal across the 2025- 2029 planning horizon.

a. It is not always meaningful to compare the number of grid needs identified across different planning cycles. In some cases, even when fewer needs are identified, individual projects may have larger scopes. That said, SDG&E agrees there is a general upward trend in the number of projects driven by load growth and emerging capacity needs. Key

factors driving the increase in the total number of grid needs in the 2025 GNA/DUPR submittal compared to the 2021 GNA/DDOR submittal include California's aggressive climate goals and requirements. These goals and requirements are resulting in plans to add increasing numbers of Electric Vehicles, more electric heat pumps, and a growing number of gas to electric appliance conversions. The impact of these factors is showing up in a larger number of Known Loads in the 2025 GNA/DUPR compared to earlier cycles. In addition to the increase in the number of Known Loads, the total megawatt (MW) amounts associated with these Known Loads has also grown steadily across the last few cycles.

The California Energy Commission's (CEC) 2023 Integrated Energy Policy Report (IEPR) demand forecast, which SDG&E uses as the starting point for developing the circuit level forecasts used in the 2024-2025 Distribution Planning Process (DPP) cycle, is reflecting a notable increase in forecast electricity demand compared to the 2019 IEPR demand forecast which was used in the 2020-2021 DPP cycle. This is especially the case in sectors influenced by policy mandates such as EV adoption and zero-emission building standards.

Main contributors to the increase in forecast IEPR loads between the 2019 IEPR and the 2023 IEPR include but are not limited to:

- The 2023 IEPR forecast formally adopted the Additional Achievable Fuel Substitution (AAFS) scenario which contributes to large portion of load growth forecast.[7] The 2019 IEPR did not include an AAFS load forecast component.[8]

- Compared to the 2019 IEPR, the 2023 IEPR Update reflects a significant upgrade in electricity demand forecasting methodologies including more detailed projections of Light Duty (LD) EV adoption, charging behavior, and associated electricity consumption.[9]

[7] Adopted 2023 Integrated Energy Policy Report with Errata, 23-IEPR-01, February 14, 2024. CEC later issued a revision to its 2023 IEPR AAFS 4 component.

[8] Adopted 2019 Integrated Energy Policy Report, 19-IEPR-01. May 6, 2020.

[9] The 2023 IEPR Update also upgraded the demand forecasting methodology for the Medium Duty/Heavy Duty EV category. However, for the 2024-2025 DPP cycle, SDG&E used its own study-based forecast of MD/HD EV charging loads. SDG&E's study-based methodology is superior to that used by the CEC for the reasons set forth in SDG&E's August 29, 2025 *Proposal for System-Level Adjustments to the Integrated Energy Policy Report Forecast Pursuant to Decision 18-02-004*.

Additionally, as requested by ED at the 2024 Demand Forecast Working Group (DFWG) meeting, SDG&E's 2025 GNA includes an early implementation framework for Pending Loads for inclusion in the 2024–2025 DPP cycle to account for customer applications that have not yet materialized but are expected to drive future demand. In August 2024, ED agreed with SDG&E's proposed early implementation framework. SDG&E's pending load framework includes utilization of the bottoms-up forecasting results for the MD/HD TE load component. This component contributes to the increase in grid needs in the 2025 GNA compared to the 2021 GNA.

b. What key factors in SDG&E's GNA are driving the increase in number of grid needs in the same year across GNA cycles (e.g., for year 2025, increasing from 2 grid needs in SDG&E's 2021 GNA to 12 grid needs in SDG&E's 2025 GNA)?

SDG&E Response

While key factors driving the increase in year 2025 grid needs between the 2020-2021 DPP cycle and the 2024-2025 DPP cycle include those described in SDG&E's response to Cal Advocates' question 1.a, another significant factor is the difference in year 2025 Known Loads between the 2020-2021 DPP cycle and the 2024-2025 DPP cycle. Unsurprisingly, Known Loads are concentrated in the earlier years of each planning cycle since customers naturally focus on their nearer-term electrical needs such as those that need to be met by the end of the current year, not those that may be four or more years in the future.

c. What is the annual count of grid needs by anticipated upgrade date for 2025-2029 when pending loads are omitted from SDG&E's distribution planning forecast?

SDG&E Response:

In response to the Energy Division's request for early implementation of the Pending Loads proposal (as set forth in the March 13, 2024 Staff Proposal),[10] SDG&E's 2024-2025 DPP cycle used the CEC's 2023 IEPR load forecast with the exception that SDG&E used its own study-based forecast of MD/HD charging loads in lieu of the CEC's. SDG&E's forecast provides a reliable basis for identifying distribution needs and determining mitigation for those needs to support the state's climate goals and requirements. A load forecast that omits MD/HD charging loads would create a significant and unacceptable planning gap. SDG&E has not performed distribution planning analysis using a load forecast

[10] *Staff Proposal for the High DER Proceeding*, section 3.3.7, p. 73-77.

that excludes MD/HD charging loads as doing so would not provide meaningful results.

Note that the extent to which Pending Loads are incorporated in future load forecasts used in the DPP is dependent on the Commission's disposition of the Joint IOUs' Pending Loads Advice Letter 4676-E, filed on June 27, 2025. As of October 6, 2025, this filing remains under Commission review.

2. **Planned Investments:** SDG&E's planned investments have increased noticeably in the 2025 GNA-DUPR cycle, corresponding with early implementation of pending loads in distribution planning. SDG&E identified the following planned investments in its 2021,[11] 2022,[12] 2023,[13] 2024,[14] and 2025 GNAs.[15]

In-Service Date					Total
2021	2022	2023	2024	2025	
0	10	0	0	2	12

In-Service Date					Total
2022	2023	2024	2025	2026	
0	13	4	0	0	17

In-Service Date					Total
2023	2024	2025	2026	2027	
0	11	7	1	0	19

In-Service Date					Total
2024	2025	2026	2027	2028	
0	5	4	3	4	16

In-Service Date					Total
2025	2026	2027	2028	2029	
1	7	1	5	8	22

[11] See SDG&E 2021 GNA and DDOR.

[12] See SDG&E 2022 GNA and DDOR.

[13] See SDG&E 2023 GNA and DDOR.

[14] See SDG&E 2024 GNA and DDOR.

[15] See SDG&E 2025 GNA and DUPR.

a. What is the annual count of planned investments by in-service date for 2025-2029 when pending loads are omitted from SDG&E's distribution planning forecast?

SDG&E Response:

In response to the Energy Division's request for early implementation of the Pending Loads proposal (as set forth in the March 13, 2024 Staff Proposal),[16] SDG&E's 2024-2025 DPP cycle used the CEC's 2023 IEPR load forecast with the exception that SDG&E used its own study-based forecast of MD/HD charging loads in lieu of the CEC's. This load forecast provides a reliable basis for identifying distribution needs and determining mitigation for those needs -- including planned investments where low-cost operational solutions such as load transfers and phase balancing are not available -- to support the state's climate goals and requirements. A load forecast that omits MD/HD charging loads would create a significant and unacceptable planning gap. SDG&E has not performed distribution planning analysis using a load forecast that excludes MD/HD charging loads as doing so would not provide meaningful results.

Note that the extent to which Pending Loads are incorporated in future load forecasts used in the DPP is dependent on the Commission's disposition of the Joint IOUs' Pending Loads Advice Letter 4676-E, filed on June 27, 2025. As of October 6, 2025, this filing remains under Commission review.

b. What key factors in SDG&E's GNA are driving the overall increase in planned investments across GNA cycles (e.g., from 12 in SDG&E's 2021 GNA to 22 in SDG&E's 2025 GNA)?

SDG&E Response:

See SDG&E's responses to Cal Advocates' questions 1.a and 1.b. Although SDG&E's responses to Cal Advocates' questions 1.a and 1.b are with respect to the increasing number of grid needs, the same factors are driving the increase in the number of planned investments.

3. **Incremental Known Loads:** In its GNA-DUPR, SDG&E states, "With the exception of Transportation Electrification (TE) known loads, SDG&E's forecast of known new loads

[16] *Staff Proposal for the High DER Proceeding*, section 3.3.7, p. 73-77.

(*e.g.*, specific requests for new load) are deducted from the CEC system load growth forecast. . . TE known loads are deducted directly from the CEC IEPR's TE system-level load growth forecast, which is obtained from both the baseline and AATE components."[17] Furthermore, SDG&E states that its "Pending Loads for the 2024-2025 DPP are effectively the amount by which SDG&E's bottoms-up forecast of MD/HD TE load exceeds the CEC IEPR's forecast of MD/HD TE loads after accounting for the portion of MD/HD TE loads that qualify as Known Loads."[18]

a. Does SDG&E categorize any known loads as incremental to the IEPR forecast? If yes, what methodology does SDG&E use to categorize known loads as incremental to the IEPR forecast? If not, why does SDG&E not categorize known loads as incremental vs. embedded?

SDG&E Response

All Known Loads are modeled in SDG&E's forecasts and in the DPP since SDG&E's obligation to serve requires that all customer loads be energized.

In practice, it is not possible to determine whether a specific Known Load is incremental to the IEPR forecast. This limitation stems from the lack of granular or locational specificity in the IEPR forecast, which prevents a direct comparison at the level of individual customer energization requests.

However, conceptually, Known Loads may be considered incremental to the IEPR forecast when the aggregated load from all Known Loads exceeds the total load growth forecast in the IEPR across the entire forecast horizon. In such cases, the "incremental" portion would be represented by the numerical difference between the two datasets. From this conceptual standpoint SDG&E's 2024-2025 DPP cycle does not have Known Loads that are "incremental" to the 2023 IEPR forecasts.

In order to prevent the aggregate amount of Known Loads already accounted for in SDG&E's forecasts and in the DPP from being double-counted through the IEPR forecasts, SDG&E did the following two things in the 2024-2025 DPP cycle:

- To maintain consistency with CEC's IEPR load forecast for the 2024-2025 DPP cycle's 2025-2040 forecast horizon, Known Loads are, with the exception of Transportation Electrification (TE) MD/HD Known Loads, aggregated and deducted from the CEC system load growth forecast. On an annual basis, the total MW amount of Known Loads (excepting TE MD/HD Known Loads) for years 2025 and 2026 exceed

[17] SDG&E 2025 GNA and DUPR at 10.

[18] SDG&E 2025 GNA and DUPR at 13.

the annual MW amount of load growth from the IEPR forecast. Hence, SDG&E deducts the exceeded amount from the IEPR forecasts in the outer years of the forecast horizon. This maintains consistency with IEPR's aggregate load growth across the 16-year forecast horizon.

- MD/HD TE Known Loads are treated differently because SDG&E's bottoms-up forecasts include locational detail, allowing for direct comparison between the study results and MD/HD TE Known Loads. When there is overlap, SDG&E removes the bottom-up forecast load amount from the MD/HD forecast to avoid double-counting. The MD/HD IEPR forecasts were not used in the DPP, other than as a baseline value to establish the estimated Pending Load amount.

4. **Incremental Pending Loads:** In its GNA-DUPR, SDG&E states, "Pending Loads are the amount by which SDG&E's bottoms-up forecast of MD/HD TE load exceeds the CEC IEPR's forecast of MD/HD TE loads after accounting for the portion of MD/HD TE loads that qualify as Known Loads."[19] Also, SDG&E explains that it is "reporting on the "Pending Loads" used in the identification of grid needs and the development of planned solutions."[20]

   a. How does SDG&E coordinate with the California Energy Commission (CEC) to determine if its MD/HD TE loads are incremental to the IEPR? Please specify any public processes, workshops, filings, etc. that SDG&E uses to coordinate with the CEC.

      SDG&E Response:

      Since SDG&E's DPP replaces the CEC's MD/HD TE load forecast with SDG&E's study-based MD/HD TE load forecast in its entirety, there is no possibility of double-counting MD/HD TE loads.

      As indicated in SDG&E's response to Cal Advocate's question 3.a, SDG&E reduces its study-based MD/HD TE charging load forecast by the amount of MD/HD load that qualifies as Known Loads. This reduced amount, when compared to the IEPR forecast of MD/HD loads, reveals the amount of SDG&E's study-based MD/HD load forecast that can be considered "incremental" to the IEPR. No "coordination" with the CEC is needed to determine this "incremental" amount.

   b. How does SDG&E evaluate the confidence level of its MD/HD TE load forecast?

[19] SDG&E 2025 GNA and DUPR at 14.

[20] SDG&E 2025 GNA and DUPR at 14.

SDG&E Response

SDG&E's bottom-up MD/HD EV charging load forecast is more comprehensive, current and locationally-detailed, therefore more accurate than the corresponding IEPR load forecast component.

SDG&E's Tier 2 Advice Letter 4711-E [21] provides the following explanation in support of using SDG&E's own MD/HD EV charging load forecast.

- SDG&E's updated MD/HD EV load forecast will account for state and federal policy changes occurring in 2025 that affect EV adoption rates in the MD/HD sector. The adopted 2024 IEPR load forecast was developed in 2024 using some data inputs that predate 2023 and therefore does not reflect the recent shifts in MD/HD vehicle electrification policies.
- SDG&E's updated MD/HD EV load forecast uses expected miles driven values that are consistent with national data. Based on SDG&E's research, the vehicle miles traveled (VMT) 2024 IEPR assumptions used were sourced from the historical VMT trends from EMission FACtors (EMFAC) 2021.
- SDG&E's updated study-based MD/HD EV load forecast is based on the existing MD/HD trucking facilities in the SDG&E distribution service area. The EV adoption for each of these facilities is then determined by the regulations, adoption history, and the total cost of ownership relevant to the type of vehicle each facility uses.

Overall, SDG&E has a high level of confidence in its internally developed MD/HD EV charging load forecast, which is considered more accurate and locally representative than the corresponding component in the IEPR forecast.

c. What data does SDG&E publish that would allow stakeholders to verify if a specific pending load is incremental to the IEPR forecast?

SDG&E Response:

Pending loads in the 2024-2025 DPP refer to the portions where SDG&E's bottom-up MD/HD forecast exceeds IEPR forecast, after accounting for the amount of MD/HD TE loads that qualify as Known Loads. To calculate or verify the amount of pending loads, three primary data sources are used: IEPR forecast, Known Loads, and SDG&E's MD/HD forecast.

[21] Advice Letter 4711-E, Proposal for System-Level Adjustments to the Integrated Energy Policy Report Forecast Pursuant to Decision 18-02-004. August 29, 2025.

- The 2023 IEPR system-level forecast of MD/HD EV charging loads can be found from the CEC website.

- MD/HD EV charging loads that qualify as Known Loads are included with the Known Load tracking data in Appendix 4 of 2024-2025 GNA Report/DUPR. This data set is available to the CPUC as confidential data. Because publishing individual customer Known Load data would reveal private customer information, it is not provided publicly.

- SDG&E's study-based forecast of system level MD/HD EV charging loads that remain after deducting MD/HD loads that qualify as Known Loads, is included with the Pending Load data in Appendix 4 of 2024-2025 GNA Report/DUPR.

d. How does SDG&E forecast MD/HD TE loads to account for high uncertainty, given the nascency of the MD/HD industry?

SDG&E Response:

Uncertainty is inherent in load forecasting. Uncertainty is reduced to the extent forecasting inputs and methodologies are improved. As indicated in SDG&E's response to Cal Advocates' question 4.b, SDG&E's forecast of MD/HD TE charging loads improves upon the 2023 IEPR's MD/HD load forecast. Additionally, the DPP is repeated annually which allows for the use of more current inputs and potential adjustments to earlier-identified distribution needs and solutions. Finally, SDG&E does not make major financial commitments until required by distribution upgrade lead times. This provides flexibility to accommodate uncertainties in forecast loads. Most distribution upgrades have short lead times, usually under three years.

5. **Known Load Cancellations and Deferrals:** SDG&E's known loads tracking tables show that known loads can change significantly from year to year.[22] Additionally, SDG&E's service deferral tracking tables show that significant amounts of known loads may be deferred to later in-service years (37% of MW and 35% of known load projects).[23]

a. What are the reasons SDG&E or a customer would defer a known load?

[22] SDG&E 2025 GNA and DUPR at 24-25.

[23] SDG&E 2025 GNA and DUPR at 30-31.

SDG&E Response:

SDG&E does not "defer" Known Loads. After consulting with SDG&E on the customer's specific interests and needs, the customer may decide to modify its energization request which can include delaying the date for energization. There are many reasons why a customer might decide to delay its energization date. Delays typically occur in response to evolving customer priorities or changes in their project timelines. Reasons include permitting challenges, difficulty in securing necessary environmental permits and lead times for the customer's equipment.

b. What are the reasons SDG&E or a customer would cancel a known load?

SDG&E Response:

SDG&E does not "cancel" Known Loads. There are many reasons why a customer might decide to cancel their energization request. Cancellations typically occur in response to evolving customer interests and needs.

c. How often is a known load deferred when a planned investment that addresses that known load is already in-flight?

SDG&E Response:

SDG&E does not track instances where a planned upstream distribution capacity upgrade necessary to energize a Known Load is "in-flight" and the customer delays its originally-requested load energization date.

d. How does SDG&E account for the uncertainty of known loads in its planning?

SDG&E Response:

SDG&E's obligation to serve requires that SDG&E put the infrastructure in place necessary to energize Known Loads on the timeline specified by the customer and for the amount of load specified by the customer. While consultations with a customer may result in the customer making changes to both the timeline and amounts of requested load energization, SDG&E does not unilaterally make any changes to requested timelines or energization amounts to account for the possibility that a customer might later change, or even abandon, its planned load addition.

Known Loads are dynamic and primarily driven by customer service requests, which can vary significantly in timing, scope, and magnitude. SDG&E continuously

monitors changes to known loads — including removals, additions, and modifications in load amounts—throughout the planning cycle.

The ongoing tracking is reflected in the annual GNA/DUPR. These reports include data tables that capture refinements to Known Loads during the corresponding reporting period. Additionally, SDG&E's Known Load Tracking Report, included as an Appendix to the GNA/DUPR, reflects Known Loads as input to the current DPP cycle. These reports document SDG&E's efforts to collect and use the most up-to-date information for investment planning, while maintaining flexibility to adapt to evolving customer needs.

e. Does SDG&E track deferrals for MDHD loads? If so, what percentage of the TE load deferrals are MDHD loads?

SDG&E Response:

SDG&E tracks load deferrals attributable to MDHD TE segments. Based on the Known Load Metrics provided in SDG&E's 2025 GNA/DUPR, 6 of the 8 total TE-related deferrals were associated with MDHD loads, indicating that 75% of TE deferrals were driven by MDHD.

f. Is there any correlation between rate of deferral and size of the load project?

SDG&E Response:

As stated in SDG&E's response to Cal Advocates' question 5.a, customers may delay the date at which their Known Loads are to be energized. These deferrals are driven by customer-specific timing and priorities, and there is no observable correlation between the number of deferrals and the size or scope of the associated load projects. Each case is unique and situational.

6. IEPR vs. Bottom-Up Forecast

How does SDG&E reconcile its DPAG slide 17 reconciled with its DFWG slide 38? For example, in 2026, SDG&E's DPAG slide 17 shows that MDHD known loads are much higher than the IEPR forecast. However, in SDG&E DFWG slide 38, the MDHD energy forecast is lower than the IEPR forecast.

SDG&E Response:

As SDG&E explained at the DPAG workshop, the graph on DFWG slide 38 and graph

DPAG slide 17 are not displaying the same data and should not be compared; reconciliation is not necessary:

- DFWG Slide 38 presents a comparative analysis of SDG&E's cumulative MD/HD TE energy forecast in GWh against the 2024 IEPR MD/HD energy forecast's cumulative projection over the 16-year planning horizon, not accounting for the impact of Known Loads.

- In contrast, DPAG Slide 17 provides a graph of SDG&E's annual MD/HD TE peak forecast compared against the 2023 IEPR MD/HD annual peak load growth, reflecting reductions in both forecasts made due to overlaps with Known Loads.

a. Regarding SDG&E's DPAG slide 17, does SDG&E plan according to the total capacity amounts shown for each year? For example, is SDG&E planning to meet a MDHD forecast peak load of approximately 46 MW in 2027?

SDG&E Response:

SDG&E's 2024-2025 DPP identifies the upstream distribution capacity infrastructure necessary to energize Known Loads (including MD/HD EV charging loads that qualify as Known Loads), as well as all other forecast loads, for each year of the five-year (2025-2029) planning horizon. This infrastructure would therefore accommodate the 46 MW of forecast MD/HD EV charging load in year 2027.

b. Regarding SDG&E's DPAG slide 17, why does the MDHD incremental forecast increase significantly from about 25 MW in 2026 to about 47 MW in 2027?

SDG&E Response:

The reason SDG&E's study-based MD/HD EV charging load forecast (in MW terms) in 2027 is higher than IEPR's 2027 MD/HD forecast despite having similar energy demands, is due to the following reason:

- Forecast TE load is not reduced in the year that the Known Load is planned to be energized. It is instead, reduced from the year that the corresponding vehicle charging facility was forecasted to energize. For 2027, the Known Load amount is reduced from the forecast TE amount in the future year and not in 2027, thus reflecting a higher amount for 2027. However, that Known Load amount is reduced from the Forecasted TE outer year that the facility was forecasted to energize.

- Due to the large number of Known Loads in 2025 and 2026, Forecast TE load in years 2025 and 2026 were deferred to year 2027. This conservative approach was taken to avoid forecasting significantly over both the IEPR and SDG&E MD/HD EV forecasts because the Known Load amounts in 2025 and 2026 exceeded both forecasts significantly.

7. **Distribution Capital per Customer Metric:** SDG&E reports the following spending amounts in its GNAs/DDORs.

Year	Distribution Capital per Customer
2021	Not reported
2022	$290
2023	$342
2024	$321
2025	Not reported

a. Please provide the distribution capital per customer for 2021 and 2025 (or estimate if pending GRC authorization).

SDG&E Response:

The "Distribution Capital per Customer" metric is based on SDG&E's 2024 GRC Decision, which authorized costs for the years 2022, 2023, and 2024. Data for 2025 is not available, as both the actual capital expenditures and the actual number of customers for that year are not yet known.

For 2021, SDG&E is using the 2021 adjusted recorded electric distribution capital (provided in the 2024 GRC as an additional capital data point), divided by the historical customer count for that year. Please note that this estimate is not derived using the same methodology as the 2022–2024 values which are based on authorized capital expenditures from the 2024 GRC.

$$\frac{\$464{,}936{,}000}{1{,}489{,}949\ customers} = \$312/\text{customer}$$

b. What key factors are driving the overall increase in SDG&E's distribution capital per customer?

SDG&E Response:

See SDG&E's responses to Cal Advocates' questions 1.a and 1.b. Although SDG&E's responses to Cal Advocates' questions 1.a and 1.b are with respect to the increasing number of grid needs, the same factors are driving the overall increase in per-customer distribution capital spend.

Appendix C Copy of the IPE Plan

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

Final IPE Plan for 2025-26 DIDF Cycle - San Diego Gas & Electric

Submitted to California Public Utility Commission

August 15, 2025

Submitted by:

Resource Innovations

Sundar Venkataraman

Barney Speckman

Contents

1 Introduction and Background

The Independent Professional Engineer (IPE) services for the 2025-26 Distribution Investment and Deferral Framework (DIDF) Process 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.

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 2025-2026 Distribution Investment Deferral Framework cycle issued on March 6, 2025 and is shown below:

- Draft IPE Plan due week of May 19, 2025.
- Final IPE Plan due August 15, 2025.
- IPE Preliminary Analysis of GNA/DUPR Data Adequacy for all three IOUs due September 5, 2025.
- IPE Distribution Planning Advisory Group (DPAG) report for each IOU presenting GNA/DUPR review findings and Verification & Validation outcomes due November 6, 2025.
- IPE Post DPAG Report covering all three IOUs, comparing their filings, reviewing compliance, and making recommendations for process improvements due March 16, 2026.

The draft IPE Plan for 2025/2026 DIDF cycle was distributed to stakeholders on May 23, 2025to facilitate stakeholder comments prior to finalizing the IPE Plan.

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.

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 2025/26 DIDF 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.

- 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.

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. 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.

The Energy Division has requested that Step 13 (Development of Planned Investments using Planned Standards) 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. We will finalize the data and information that needs to be gathered in this step once we have a discussion with the utilities about their process.

In addition, the verification and validation of the following steps related to the identification and prioritization of Candidate Deferral Opportunities (CDOs) will be skipped in this cycle.

- 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

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.
- Step 25 - Track solicitation results to inform next cycle.

Two new steps have been added specifically for this cycle referred to as Steps 27 and 28. An outline of the V&V plan for these steps have been included in the draft plan. The IPE will finalize the data and information that needs to be gathered in this step once we have a discussion with the utilities about their process related to these steps.

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

IPE V&V steps for 2025/26 DIDF Cycle are shown starting on the following page.

Table 3-1: SDG&E IPE Review for 2025/26 DIDF Cycle

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
	PROCESSES TO DEVELOP STARTING POINT LOAD, SYSTEM LEVEL VALUES AND DISAGGREGATE TO CIRCUIT LEVEL			
1	Collect 2024 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 2024 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 the June 30. The information requested in the "Data/ Information Requirements" by July 5.	▪ Description of business process used to develop weather-normalized peak loads for each circuit if it is different from 2024-25 DIDF. ▪ 2024 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 2025/26 DIDF 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 DIDF 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 2024-25 DIDF.
2	Determine load and DER annual growth on system level	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-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	Description and links to IEPR forecasts provided by July 5. Spreadsheet used for calculating system-level load and DER capacity growth by July 5.	▪ 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 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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 DIDF.		used for load and all DERs. ▪ Provide description of the process if different than used in 2024-25 DIDF, 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 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	SDG&E to provide material requested in "Data/ Information Requested" by July 5.	▪ Inputs and outputs, as well as a general description of the process used for disaggregating system-level load to circuit-level loads and further at a class level (Domestic, Commercial, Industrial) using LoadSEER, if different from the

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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 DIDF.		process used in the 2024/25 DIDF 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 2024/25 DIDF cycle.
3a	Check sum of all disaggregated load and DERs same as CEC IEPR System Level values	Perform V&V on this aggregation for all circuit values, as well as cross check values used in other verification checks. Roles: SDG&E provides the needed information in the previous step. Verification:		Use data from previous step.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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 DIDF.		
4	Add known loads to circuit level forecasts	Perform V&V for a subset of circuits selected by the IPE. 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. SDG&E to also provide information, if applicable, on how forecasted loads (pending loads) are used in the planning process. Verification:	SDG&E to provide the requested information by July 5.	▪ 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. ▪ SDG&E to also provide information, if applicable, on how forecasted loads (pending loads) are used in the planning process.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF 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 LoadSEER (Starting with Step 5). Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
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).	SDG&E and IPE to select the circuits for this analysis by July 10. SDG&E to provide the requested	▪ 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 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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. 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 DIDF.	LoadSEER data by July 10.	
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.	SDG&E to provide the requested LoadSEER data by July 10.	▪ 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

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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. 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 DIDF.		all the DERs, by classes as applicable. ▪ SDG&E to also provide information on how these typical DER load profiles were developed.
5b	Convert base forecast and Weather normalization adjustment of load to 576 profile as needed	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	SDG&E to provide the requested LoadSEER data by July 10.	▪ SDG&E to provide 576-hourly profile for base forecast and weather normalization adjustment from LoadSEER for the subset of circuits.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
	(Skipped in this cycle)	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 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 DIDF.		▪ SDG&E to also provide typical load shapes associated with base forecast and weather normalization adjustment.
6	Derive net load profile (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. Roles:	No additional data required.	

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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: 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 DIDF.		
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 requested LoadSEER data by July 10.	▪ 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 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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 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 DIDF.		
8	Adjust for "extreme weather."	Perform V&V for a subset of circuits selected by the IPE. Roles:	Performed along with Step 1	▪ Description of business process used to develop P95 peak loads for each circuit, if

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
	Please note that process is completed after Step 4.	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 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:		different from the process used in the 2024-25 DIDF. ▪ General procedure used by LoadSEER for calculating weather-adjusted peak loads, if different from the process used in the 2024-25 DIDF. ▪ 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

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		used for the calculation of weather-adjusted peak loads in LoadSEER
	PROCESSES TO DETERMINE CIRCUIT NEEDS AND DEVELOP GNA			
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.	SDG&E to provide requested information by July 10.	▪ SDG&E to provide equipment ratings for a subset of circuits selected by the IPE.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
10	Incorporate load transfers, phase transfers, correct data errors (Skipped in this cycle)	Perform V&V for a subset of circuits selected by the IPE. 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.	SDG&E to provide requested information by August 10.	SDG&E to provide the LoadSEER before and after 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.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
11	Final 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 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 DIDF.		Data provided in Step 9.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
12	Compile GNA tables showing need amount and need timing, etc. (per IOU's documented planning standards and/or planning process)	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 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 DIDF.	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 2024/25 DIDF cycle. ▪ This step focuses upon an analysis concerning 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			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
13	Develop recommended solution and generate list of Planned Investments (follow the IOU's documented planning standards and/or planning process)	Perform V&V for a subset of projects selected by the IPE confirming that planning standard/process was followed. This step will include two processes – 1) the process that SDG&E used to confirm that planning solutions or 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 DPP cycle; 2) the process to identify the current set of solutions and planned projects identified in the DPP. [This V&V process for this step will be updated based on the inputs from SDG&E] Roles: 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.	SDG&E to provide requested information by August 31.	▪ (1) Description of process used to confirm that planned solutions and planned investments identified in earlier DPP cycles are still needed and the appropriate solution or investment when considered using the current DPP load, DER and other DPP assumptions. ▪ (2) Description of process used to develop proposed planned project to address identified need for distribution projects if the process is different from the last cycle.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		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 DIDF.		
14	Estimate capital cost for each Planned Investment (Skipped in this cycle)	Perform V&V for a subset of projects selected by the IPE. Roles: SDG&E to provide the cost breakdown for the planned projects. The breakdown should include direct material, labor, and other costs by equipment, as well as indirect material, labor, and other costs at a project level.	SDG&E to provide requested information by September 15.	▪ SDG&E to provide the cost breakdown for the planned projects. The cost breakdown should include direct material, labor, and other costs by equipment, as well as indirect material, labor, and other costs at a project level. ▪ SDG&E supporting information for costs.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		SDG&E to describe the Expected Accuracy Level (as defined by AACE or by another method that describes the expected accuracy range in terms of % lower and higher than the estimate) of the capital costs for the projects included in the DDOR. If the Expected Accuracy is different for different projects, SDG&E to provide the accuracy range for each project.[1] SDG&E to provide supporting cost information for a subset of projects. Verification: IPE to verify the project costs provided by SDG&E against other sources such as rate case filings. IPE to verify the total project level costs provided by SDG&E with those included in the DDOR. Validation:		▪ SDG&E to provided expected accuracy level of the cost estimates.

[1] During the course of implementing the IPE Plan, the ED in coordination with the IPE will seek to understand the effort and cost associated with improving the accuracy of capital cost estimates (i.e., from a Class 4 estimate accuracy to a Class 3 estimate accuracy).

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
	PROCESSES TO DEVELOP CANDIDATE DEFFERAL LIST AND PRIORITIZE			
15	Development of Candidate Deferral Projects list through application of screens (timing and technical) (skipped, no longer required)	Perform V&V for all projects put through the screening process. Roles: SDG&E to provide confidential version of Planned Investment table in Excel format that can be filtered by the IPE. SDG&E to describe the process it used to develop its Candidate Deferral Projects. Verification: IPE to use the Excel tables to develop a list of Candidate Deferral Projects following the process described by SDG&E. IPE to verify its result (list of Candidate Deferral Projects) match the SDG&E results included in the DDOR.	SDG&E to provide requested information by September 15.	▪ SDG&E to provide Candidate Deferral calculation process. ▪ Confidential version of Planned Investment table in Excel format that can be filtered by the IPE.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
16	Development of operational requirements (daily, monthly annually etc.) (skipped, no longer required)	Perform V&V for a subset of candidate deferral projects selected by the IPE. Roles: SDG&E to provide description of the process used to determine operational requirements. (Required load, months and hours needed, duration of call and number of calls per year). Verification: IPE to utilize description 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) Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.	SDG&E to provide requested information by September 15.	▪ SDG&E to provide description of how operational requirements are established if different from the process used in the 2024/25 DIDF cycle.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
17	Prioritization of candidate deferral projects into Tiers (skipped, no longer required)	Perform V&V on prioritization process for all candidate deferral projects. Roles: SDG&E to provide a version of the Excel spreadsheet containing the formula used, if applicable, that is used to determine the metrics and components used to rank the Candidate Deferral Projects overall and into tiers. SDG&E to provide active version of spreadsheet (if one is used) used to rank and select candidate deferral projects for procurement using the SOC or PP procurement programs. Verification: IPE to verify that spreadsheet is consistent with the description of the prioritization metrics, components and tier ranking process and SOC and PP ranking/selection process. IPE to verify that Excel results match the recommended Candidate Deferral Projects overall rankings and placement into tiers and	SDG&E to provide requested information by September 15.	▪ Demonstrate active spreadsheet that calculates prioritization metrics, components and ranks projects on those results. To include spreadsheets for prioritization of CDOs and for ranking/selecting PP projects ▪ Description of the IOU standardized prioritization metrics, components and tier ranking methodology and process and SOC and PP ranking selection process if different from the last cycle.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		recommended for RFO, SCO or PP procurement included in the DDOR and presented at the DPAG meetings. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
18	Calculate LNBA ranges and values for all planned investments (skipped, no longer required)	Perform V&V for a subset of projects selected by the IPE. Roles: SDG&E to provide a spreadsheet (containing the formula) used for calculating all LNBA range values that are included in the DDOR. This includes the assumptions behind general inputs such as discount rates, inflation factors, revenue requirement multiplier and book life. SDG&E to also provide an active spreadsheet that calculates all LNBA metrics used in the project prioritization process (if different than values in the spreadsheet previously listed).	SDG&E to provide requested information by September 30.	▪ SDG&E to provide the spreadsheet(s) used for calculating the LNBA ranges for planned projects and LNBA metric(s) used for prioritization, as well as provide the assumptions behind general inputs such as discount rate, inflation factors, revenue requirement multiplier and book life.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		Verification: IPE to verify the LNBA values by independently calculating these values using the formula used in the E3 LNBA calculator and the input assumptions provided by SDG&E. Verify that the LNBA values calculated independently using the using the formula used in the E3 LNBA calculator matches reasonably well with those provided by SDG&E. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF.		
19	Compare 2024 load forecast and actuals at circuit level for selected number of distribution circuits	Perform comparison of forecasted and actual loads for a statistically meaningful number of distribution circuits to be selected by the IPE in conjunction with SDG&E. If the above data for all the circuits is available, IPE to perform the comparison for all circuits. Roles:	SDG&E to provide requested information by September 30.	▪ SDG&E to provide recorded 2024 peak load (adjusted to 1-in-10) for the circuits selected for this step.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		SDG&E to provide recorded 2024 load (adjusted to 1-in-10) from the 2025 Distribution Planning Process. SDG&E to also provide feedback on the comparison process and suggestions for improvement, if any. IPE to obtain the forecasted 2024 load from the 2024 GNA-DDOR filing for all the circuits. Verification: IPE to compare the recorded 2024 peak load (adjusted to 1-in-10) provided by SDG&E with the forecasted 2024 peak load obtained from the 2024 GNA-DDOR by the IPE and analyze the results. Validation: IPE to review the business process for reasonableness and consistency with objectives of the DIDF		
20	Analyze known load tracking dataset and verify the calculation of	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	SDG&E to provide requested information by September 15.	▪ Confidential version of the known load tracking dataset included in their 2024-25 GNA-DUPR filing.

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
	known load metrics	to the known load tracking dataset included in the GNA-DDOR report. Roles: SDG&E to provide the confidential version of the known load tracking dataset included in their 2025 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 2025 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.		▪ SDG&E to provide a description of the data included in their most recent tracking data set. ▪ Information on the calculation of metrics (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.
	Other IPE Work			

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
21	Optional - Review plan for changes to the planning process for the next cycle (2025/26 DIDF) (skipped, no longer required)	In this optional step, the IPE will review the planned changes to the planning process in response to the 2024 DIDF reform or any decisions from the High DER Phase 1-Track 1 Proceeding. The data/information required for this step will be determined based on discussions with SDG&E.		
22	Review implementing of planning standard and/or planning process (skipped, no longer required)	No further review is planned for the 2025/2026 DIDF cycle.		
23	Review list of internally approved capital projects (skipped, no longer required)	No further review is planned for the 2025/2026 DIDF cycle.		

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
24	Respond to and incorporate DPAG comments	Include in Final IPE Report.	Complete by November.	
25	Track solicitation results to inform next cycle (skipped, no longer required)	Part of IPE Post-DPAG Report follow-on activities in coordination with the IE.		
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.		

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		b. Date: October 20, 2025 - The IOU will review all the documents[2] sent to the IPE 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, 2025 (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		

[2] 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 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
		their comments/markups by October 30, 2025. e. After review and signoff, the IPE produces the final confidential and draft reports by November 3, 2025. 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 – DIDF Advice Letters submitted – November 6, 2025 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	Perform verification and validation of the process, if any, used by utilities to prioritize planned projects for execution.	Late September/Early October	TBD

IOU Business Process / IPE Review Step	Business Process / IPE Review Step Description	Plan for 2025/26 DIDF Cycle	Target Timing	Data/Information Requirements
	Planned Projects	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.		
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_8.6.25 (Public)_IPE.xlsx
- 1.2024 Circuits Peak Loads_7.18.25(Public).xlsx
- 1.SCADAScrubber Circuit Loads_7.18.25(Public).xlsx
- 2.CED 2023 Hourly Forecast - SDGE - Local Reliability_7.18.25.xlsx
- 2.CED 2023 Load Modifiers - Local Reliability_7.18.25 (Public).xlsx
- 2.CED 2023_SDGE DER Growth_7.18.25(Public).xlsx
- 3.Distribution Forecast Disaggregations_8.6.25 (Public)_IPE.xlsx
- 4.Specific Loads_Final_7.18.25(Public).xlsx
- 19.Forecasted Vs Actual (Public).xlsx
- 20. 2025 Known Load Metrics Sheet_9.19.25(Public).xlsx