

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

Order Instituting Rulemaking to Establish
Energization Timelines.

Rulemaking 24-01-018
(Filed January 25, 2024)

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 93 E)
BIANNUAL ENERGIZATION REPORT PURSUANT TO
DECISION 24-09-020**

(PUBLIC VERSION)

(ATTACHMENT A TO REPORT CONTAINS CONFIDENTIAL INFORMATION)

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Dated: September 30, 2025

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Pursuant to Ordering Paragraph 18 of Decision (“D.”) 24-09-020, issued September 17, 2024, Pacific Gas and Electric Company (“PG&E”) hereby files the public version of its second Biannual Energization Report (“Report”), dated September 30, 2025.

PG&E filed a concurrent filing of the confidential version of the Report. Attachment A to the Report (PG&E Biannual Energization Data Spreadsheet) contains confidential information as set forth in PG&E’s Motion for Leave to File Under Seal, dated September 30, 2025.

Respectfully Submitted,

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BIANNUAL ENERGIZATION REPORT

PURSUANT TO DECISION 24-09-020

September 30, 2025

Table of Contents

1. Report Summary	3
A. Background and Context.....	3
B. Report Structure	3
C. Energization Targets	4
D. Upstream Capacity Upgrades	6
E. Trending and Overall Report Findings	7
F. IOU Time & Customer Time Methodology	9
2. Required Supplemental Reporting.....	10
G. ESJ (Environmental & Social Justice) Barriers and Findings	10
H. Overall Costs.....	11
I. End-Use Category Review.....	12
3. Reporting Gaps	13
J. Data Gaps and Initiatives	13
K. Description Reference.....	17
L. Additional Reporting Disclaimers	20
M. Outlier Data.....	27
N. Exclusions	27
4. Data & Reporting Insights	28
O. Launched and Future Enhancements Overview	28
5. Conclusion	30

Biannual Energization Report

1. Report Summary

A. Background and Context

On September 17, 2024, the California Public Utilities Commission (Commission or CPUC) adopted D.24-09-020, *Decision Establishing Target Energization Time Periods and Procedure for Customers to Report Energization Delays* (the Decision). Ordering Paragraph 18 directs the utilities to each file and serve biannual energization reports to the CPUC every six months to demonstrate compliance with the statewide targets outlined in Section 7 (*Energization Targets*) of the Decision.¹ In accordance with the Decision, this report uses the Energization Data Reporting Template that was developed in consultation with Energy Division and stakeholders, and subsequently approved in Joint IOU Advice Letter 7430-E, et al., and Joint IOU Advice Letter 7430-E-A, et al.² Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide data in response to Decision 24-09-020, which establishes target energization time periods and procedures for customers to report energization delays. We acknowledge the importance of these measures in improving service delivery and customer satisfaction. Below, we provide our comments and data in response to the decision.

PG&E recognizes the legislative intent behind Senate Bill 410 and Assembly Bill 50 to enhance accountability and transparency in the energization process. We are committed to meeting the established targets and improving our processes to better serve our customers.

- **Data Reporting Period:** New Business Orders with Complete Applications from January 31, 2023, to June 30, 2025.
- **Reporting Data Compiled as of:** September 22, 2025.

B. Report Structure

For this second energization report, D.24-09-020 OP18 states the report must reflect data for all customer energization requests submitted as of January 31, 2023, to the best

¹ D.24-09-020, OP 18.

² https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_7430-E.pdf and https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_7430-E-A.pdf

of Pacific Gas and Electric Company's, San Diego Gas & Electric Company's, and Southern California Edison's (the large electric investor-owned utilities (IOUs)) abilities.

Since our March 2025 report, PG&E has made various efforts to improve the accuracy of reporting. These updates include increasing the accuracy of data collected, categorization of the new energization projects, and various process improvements.

After our March submission it was noted that Work Request by Others (WRO) should be removed from our reporting. After internal reviews we determined that this internal subcategory should not be included in our reporting unless it is in direct support of new business energization projects. We have further defined below what constitutes a WRO project under **Section 3L. Additional Reporting Disclaimers**. The removal of this subcategory meant the exclusion of 3,916 projects of which 1,568 were complete/energized.

Additional enhancements after our March submission included updates to the task-based bookends that measured Step 7: Construction. This update allowed for more accurate measurement of our internal construction timelines.

PG&E's reporting has been broken into three separate sections for both the Tariff and Main Panel Upgrade templates. These breakouts were produced to enhance the readability and comprehension of the report. Those sections are defined as:

- **In-Progress Projects***: New business applications submitted from 01/31/23-06/30/25 and not yet energized.
- **Energized Projects**: New business applications submitted from 01/31/23-06/30/2025 and energized through 06/30/2025.
- **Cancelled/Rejected Applications**: New business applications submitted from 01/31/23-06/30/2025 that were cancelled or rejected.

**Applications completed between 06/30/25 and the reporting date of 09/22/25 are not counted as Energized and have been moved back to the 'In-Progress' projects list to ensure alignment between our reporting and the joint IOUs.*

C. Energization Targets

PG&E is dedicated to achieving the average and maximum energization targets set forth in the decision. The average energization targets include the time the large electric

IOUs take to complete the steps of the energization processes that are fully within the large electric IOUs' control.³ Below are the average energization timelines PG&E achieved for Energized Projects. The following energization timelines exclude In-Progress Projects and Cancelled/Rejected Applications. Projects used to calculate the energization timelines are based on the 48% of applications submitted and energized 01/31/23-06/30/25.

- **Electric Rule 15**

- PG&E has no Rule 15-only jobs to report for this filing period as such jobs are uncommon.

- **Electric Rule 16***

- Total Projects Submitted from 01/31/23-06/30/25 and Energized Through 06/30/25: 6,718
- Average PG&E Energization Calendar Days: 118
- Average End to End Energization Cycle Calendar Days: 307
- Percent of Energized Jobs Under Maximum Energization Days: 98.1%

- **Electric Rule 29***

- Total Projects Submitted from 01/31/23-06/30/25 and Energized Through 06/30/25: 86
- Average PG&E Energization Calendar Days: 113
- Average End to End Energization Cycle Calendar Days: 508
- Percent of Energized Jobs Under Maximum Energization Days: 97.7%

- **Combined Electric Rules 15 & 16***

- Total Projects Submitted from 01/31/23-06/30/25 and Energized Through 06/30/25: 2119
- Average PG&E Energization Calendar Days: 117

³ D.24-09-020 FOF 2.

- Average End to End Energization Cycle Calendar Days: 389
- Percent of Energized Jobs Under Maximum Energization Days: 97.8%
- **Combined Electric Rules 15 & 29***
 - PG&E has no Combined Electric Rules 15 & 29 jobs to report for this filing period as such jobs are uncommon.
- **Main Panel Upgrades****
 - Total Projects Submitted from 01/31/23-06/30/25 and Energized Through 06/30/25: 27,742
 - Average PG&E Energization Business Days: 34
 - Average End to End Energization Cycle Business Days: 40
 - Percent of Completed Jobs Under Maximum Energization Days: 71%

D. Upstream Capacity Upgrades

The figures below are based on upstream capacity projects completed from 01/31/23 through 06/30/25. The timelines below reflect all of PG&E's upstream capacity work within the project types listed.

- **New Circuit/Circuit Upgrade Calendar Days***:** 871 calendar days
- **Substation Upgrade Calendar Days***:** 1,225 calendar days
- **New Substation Calendar Days:** PG&E had no new Substations completed within this filing period.

There were 16 customers that required upstream capacity upgrades that are now energized. The average time between their upstream capacity upgrades being identified and energization dates was 487 days. This is below the targets for circuit (684 days) and substation upgrades (1,021 days).

Average days and percent under maximum are based only on completed projects within the designated reporting window. The project reporting window and availability of some step data points may artificially lower overall elapsed project times, see **Section 1E. Trending and Overall Report Findings for more details.*

***Main Panel Upgrade projects are captured under annual blanket orders at PG&E making it difficult to delineate IOU and customer time at the project level, see **Section 3L. Additional Reporting Disclaimers - Main Panel Upgrade (MPU) Projects** for more details.*

****New business projects may have multiple associated upstream projects dependent on scope and project size. Dates referenced in PG&E's project level data represent the start of the first upstream capacity project and the date of the last completed upstream project. PG&E began maintaining complete historic logs of upstream projects to downstream work as of 2025. Previously these projects were tracked on a project-by-project basis with records cleared at completion.*

E. Trending and Overall Report Findings

PG&E remains committed to providing comprehensive insights into our performance and progress. Below is a summary of key trends, overall findings, and important data considerations.

Energization Timelines:

Between January 2023 and June 2025, PG&E observed relative stability in the number of days required to complete new business projects through energization. During this period, there was a slight decrease in the standard deviation of end-to-end job cycle times, indicating reduced variability in project completion times. PG&E controlled steps saw a modest increase in duration, early in the reporting window, which then leveled off by June 2025.

PG&E continues to prioritize enhanced customer communication, process improvements, and efficient project execution to reduce overall IOU controlled project durations. To achieve this mission, continued funding is paramount to our success. The additional funding via SB410 has been critical in stabilizing overall project timelines at PG&E. This SB410 funding expires at the end of 2026. To continue this stabilization and shift toward a decrease in overall end-to-end project days, we will need sufficient funding to meet compliance timelines and fulfill the steadily rising demand for energization and electrification in California.

Looking Forward:

We anticipate a potential increase in energization timelines due in part to limitations of the current reporting window (01/31/23–06/30/25). When accounting for jobs that are

submitted and energized within the 2.5-year window, energization phases may still statistically skew lower on average due to the exclusion of potentially longer running In-Progress projects. It is worth noting that roughly 48% of the jobs submitted within the reporting window were not complete by the 06/30/25 reporting capture date. This percentage represents potentially aging work that could result in a significant increase in overall job timelines.

Data Enhancements and Impact:

Other factors that will continue to increase PG&E's future energization timelines include implementation and adoption of more robust data collection methods and systems. Continued adoption of PG&E's enhanced Salesforce tool will improve the quantity and quality of data points used to measure the IOU Site Readiness step. Additional analysis and development of meter set date data will improve reporting within the Service Energization phase.

IOU Site Readiness is measured from the requested inspection date to the first available inspection date. This data is currently available for 6% (557 of 8,923) of energized jobs in the reporting window. This count will increase over time but only for projects submitted after March 2025 when internal tracking enhancements were launched. Service Energization is measured from construction complete to meter set. This data is available for 47% (4,198 of 8,923) of completed jobs in the reporting window. As we refine our processes to capture Service Energization data and adopt more robust tracking of IOU Site Readiness, we expect these improvements might increase PG&E's overall average energization calendar days.

Expanded Reporting Window:

Another factor that may contribute to increased timelines includes the planned expansion of the reporting window leading to the capture of longer-term jobs outside of the current window. These changes are expected to provide a more comprehensive overview of PG&E energization timelines and ensure compliance with reporting standards.

Commitment to Continuous Improvement:

PG&E remains focused on innovation and continuous improvement. Our future plans will require significant investments in technology, process enhancements, and customer engagement initiatives to ensure we meet and exceed regulatory expectations.

F. IOU Time & Customer Time Methodology

PG&E employs the following methodology to measure IOU (Investor-Owned Utility) time and Customer Time. This approach ensures accurate accounting and delineation of time across each of the energization steps.

Step Responsibility:

- PG&E Time is attributed to operational steps 2*, 4, 6, 7, and 8.
- Customer Time is limited to steps 1, 3, and 5.

PGE Methodology Principles:

1. Customer Overlap in Steps: When a customer step coincides with a PG&E step (e.g., a customer-related process occurs simultaneously with a PG&E process) this overlapping time is exclusively categorized as customer time and not attributed to PG&E time. This ensures that shared time is not double counted. This approach also enables PG&E to work concurrently with the customer, helping to accelerate cycle times and ensure consistent tracking through shared steps.
2. Concurrent PG&E Step Work: In cases where PG&E undertakes multiple overlapping steps concurrently (e.g., two PG&E processes happen at the same time), those overlapping days are not counted multiple times. Instead, they are aggregated as a single day within the total PG&E time count. This prevents inflating time metrics and maintains the integrity of the report.
3. Agency Time: When an agency/permitting time coincides with a PG&E step, this overlapping time is excluded from total IOU-Controlled Time. This overlapping period is excluded as agency activities involve factors outside the utility's sole control.

See section 3L. **Additional Reporting Disclaimers for context around Applicant Based Designs where total time is not within PG&E's control.*

By adopting this methodology PG&E ensures a clear distinction between the contributions of IOU and customer time, as well as fostering transparency and consistency in the measurement and reporting of time allocation.

2. Required Supplemental Reporting

G. ESJ (Environmental & Social Justice) Barriers and Findings

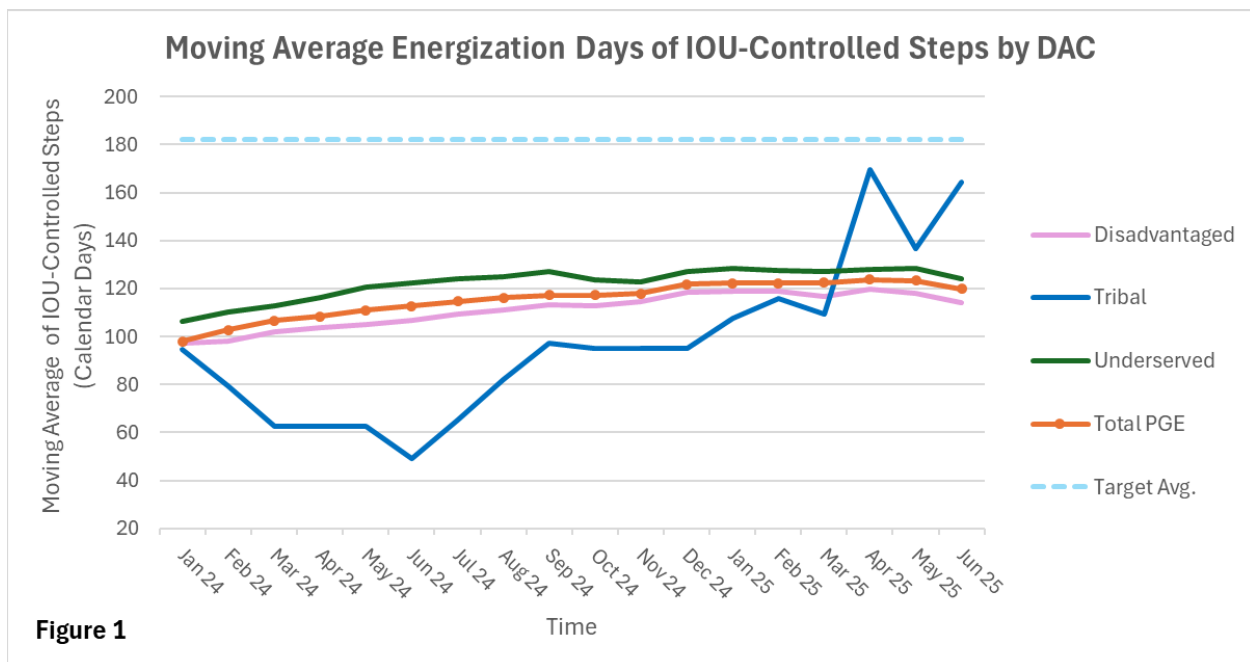


Figure 1: Monthly Energization Days (6-Month Moving Average) with IOU Controlled Steps for Disadvantage Community, Tribal Community, Underserved Community, and Total PG&E vs. Target Average (Jan 2024 - June 2025)

Figure 1 displays the six-month moving average of energization days with IOU Controlled Steps for Disadvantaged, Tribal, and Underserved Communities, along with total PG&E energization days, compared to the target average of 182 days. The use of a six-month moving average smooths short-term fluctuations, providing a clearer view of long-term trends. The last 6 months of 2023 have been removed from figure 1 because the typical energization lifecycle of a job may not be fully accounted for and could skew overall trending results. Large fluctuations in the trending of Tribal energization timelines are due to the small project population (19 projects).

H. Overall Costs

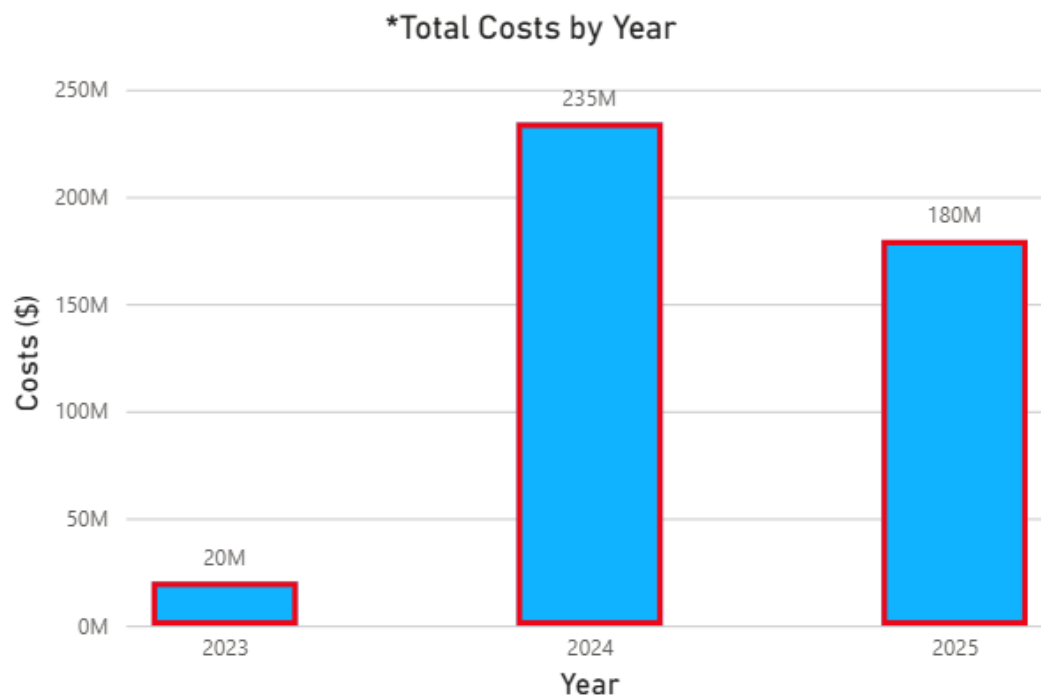


Figure 2

**Not representative of actual 2023, 2024, or 2025 PG&E Costs*

Figure 2: Annual Costs of Energized Jobs in 2023, 2024, and 2025

Figure 2 illustrates the costs for energized jobs in 2023, 2024 and 2025, reflecting expenses incurred at the time of energization in those years. These figures do not correspond to PG&E's actual new business project expenditures for the respective years but have been provided to ensure adherence to reporting requirements. Costs are presented at the time of energization, which often excludes expenditures reconciled during financial closure. Due to FERC accounting standards, financial closure can occur from six months to one year after energization. Additionally, customer payments made to PG&E at project initiation may result in negative total project costs in our provided datasets. A negative project accounting balance in the form of credit from the customer may not be fully reconciled until financial closure, which rarely occurs at the time of

energization. The reduction in total costs reported for 2023 and 2024, compared to PG&E’s March 2025 submission, is due to the removal of WRO projects, exclusion of outliers, and improvements in data accuracy. For additional details, please refer to **Section 3L. Additional Reporting Disclaimers - Costs at Time of Energization.**

I. End-Use Category Review

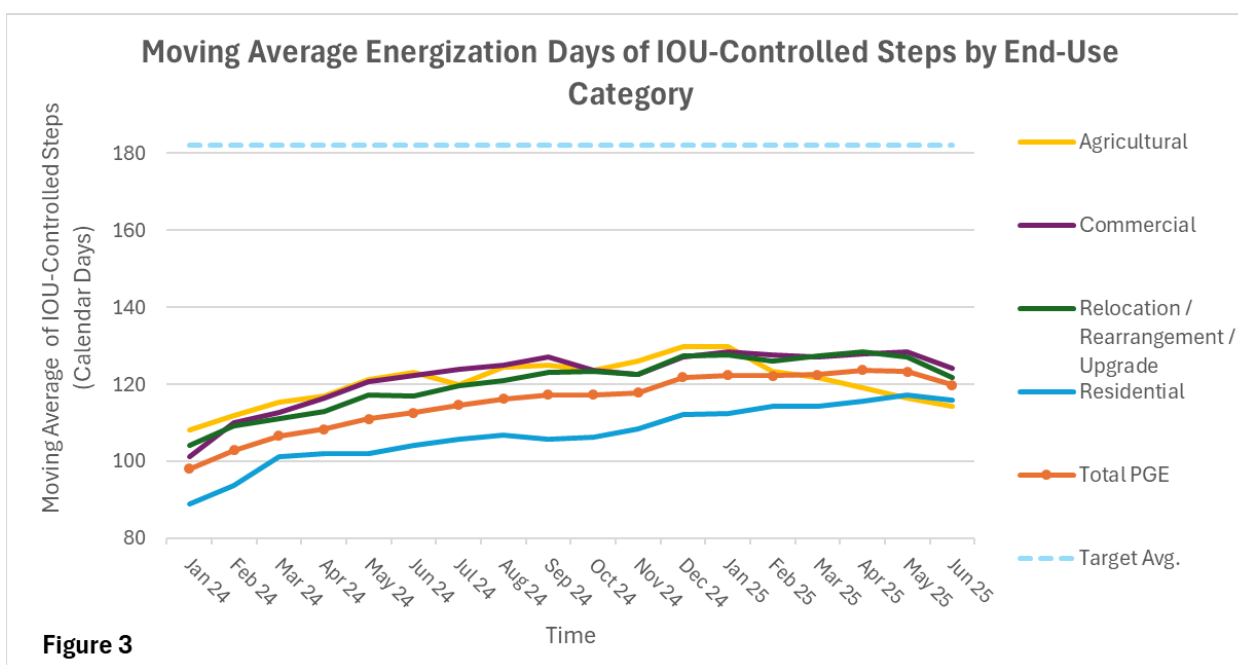


Figure 3: Monthly Energization Days (6-Month Moving Average) for IOU Controlled Steps for Residential, Commercial, Agricultural, Relocation/Rearrangement/Upgrade, and Total PG&E vs. Target Average (Jan 2024 – June 2025)

Figure 3 illustrates the six-month moving average of energization days for IOU Controlled Steps across four end-use categories (Residential, Commercial, Agricultural, and Relocation/Rearrangement/Upgrade). These averages are compared to total PG&E energization days and benchmarked against the 182-day target average. The application of a six-month moving average enhances trend visibility by reducing short-term fluctuations, providing a clearer view of long-term trends. The final 6 months of 2023 have been removed from figure 3 because the typical energization lifecycle of a job may not be fully accounted for and could skew overall trending results.

3. Reporting Gaps

J. Data Gaps and Initiatives

PG&E is committed to transparency and accountability in our reporting processes. Below PG&E has provided a reference table and detailed narrative explanation of information collected in our existing systems that does not currently meet the criteria adopted in Decision 24-09-020 and as such has been deemed non-reportable for this submission. To supplement our March report this table has been updated to reflect previously non-reportable fields as "Completed" when applicable.

Non-Reportable Table: *(See table below)*

Description Reference	Data Point	Delay Cause	Est. Date Available	Est. Reporting Date
1a	Total Site Capacity at Time of Customer's Application for Service (kW) -9I-	Working internally to source site level capacity data.	03-01-26	03-31-26
2a	Additional Capacity (kW) installed for future electric load deployment (as applicable) -11K-	Data not available; PG&E reviews and generally provides the amount of service request independent of future need.	Unknown	Unknown
3a	Project triggered for upstream capacity project (Yes/No) -13M-		Completed	Completed
3a	Date IOU identifies the need for an upstream capacity project and alerts customer of need for upstream capacity project (Date) -14N-		Completed	Completed

3a	Date IOU completes the upstream capacity project (Date) -15O-		Completed	Completed
3a	Time to complete upstream capacity project (Calendar Days) -16P-		Completed	Completed
4a	Did customer install additional capacity to support future load growth? (Yes or No) -20T-	Data not available; PG&E reviews and generally provides the amount of service requested independent of future need.	Unknown	Unknown
4b	Customer elected to install additional capacity to anticipate associated future load growth as indicated on customer's application (Yes or No) -24X-	Data not available; PG&E reviews and generally provides the amount of service requested independent of future need.	Unknown	Unknown
5a	Identify when in the energization process the customer requested a change in design or scope (Energization Step) -22V-	Pending tracking enhancement, rollout, and adoption by PG&E job representatives.	04-30-26	09-30-26
5b	Customer cancelled/delayed project (as needed) (Yes or No) -23W-	Customer cancelled jobs are reported on a separate template; customer "delay" requires further exploration.	Unknown	Unknown
6a	Estimated timing for when customer anticipates additional capacity necessary as indicated on customer's	Data not available; PG&E reviews and generally provides the amount of service requested independent of future need.	Unknown	Unknown

	application (Date) -25Y-			
6b	Total additional kW capacity for the necessary future upgrade as listed on customer's application (kW) -26z-	Data not available; PG&E reviews and generally provides the amount of service requested independent of future need.	Unknown	Unknown
7a	If full energization of applicant site not feasible in a timely manner, explanation whether load management/flexible service options were installed/utilized to provide applicant with timely service -27AA-		Completed	Completed
7a	Amount of load (kW) provided to applicant using flexible service options (kW) -28AB-		Completed	Completed
7a	At the time energization provided, remaining (or total) unserved load requested by the applicant (kW) -29AC-		Completed	Completed
7a	Estimate when full service will be provided to the applicant for customers using flexible service and/or receiving tiered load schedules (Date)		Completed	Completed

	-30AD-			
8a	For R15/R16 tariffs, the time the project was delayed due to customer requested change in design or change in project scope (Calendar Days) -37AK-	Pending tracking enhancement, rollout, and adoption by PG&E job representatives.	04-30-26	09-30-26
9a	Project Costs (\$\$\$) for all IOU equipment for upstream capacity projects: Electric Rule 15, Electric Rule 16, and Electric Rule 29/45 -41AO-	Pending confirmation of equipment cost definition.	02-28-26	03-31-26
10a	R15/R16/R29 Energization Reasoning as to why exceeded average/maximum Energization Target (Reasoning) -95CQ-	Pending verification, currently able to report reason identification for jobs exceeding maximum allowable days. Reason was determined based on steps exceeding the internal PG&E suggested average by 1 or more days.	12-31-25	03-31-26
11a	Location of project exceeding the maximum energization target: Location (circuit level) -96CR-	Working internally to source site level circuit data.	03-01-26	03-31-26
12a	IOU reason for rejection of application (Reason) -51AY-		Completed	Completed
13a	Amount of load (kW) provided to applicant using flexible service options (kW) -28AB-		Completed	Completed
14a	Timing for identifying need for R15/16/29/45	Pending additional exploration of task data to determine upgrade status.	02-28-26	03-31-26

	upgrade (Calendar Days) -31AE-			
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K. Description Reference

- 1a- Total Site Capacity at Time of Customer's Application for Service:** PG&E is currently undergoing data enhancements which will help to capture available capacity at the time of a customer's application based on transformer to line to meter (TLM) level data.
- 2a- Additional Capacity installed for future electric load deployment:** In adherence with CPUC regulations and programs, PG&E only installs capacity based on projected demand and regulatory guidelines to ensure grid reliability and efficiency. PG&E is focused on ensuring sufficient capacity to meet peak demand plus a reserve margin and does not typically install excess capacity.
- 3a- Mapping of New Business Order to Distribution Upstream Capacity (DUC) Project:**

As of March 2025, PG&E now maintains records for all upstream capacity projects and the relevant mapping to the downstream new business jobs. PG&E will continue to maintain a relational table which can map upstream projects from the downstream project which it supports for capacity constraint management. This new relationship mapping is reflected in our project level reporting.
- 4a- Customer installation of additional capacity to support future load growth:** In adherence with CPUC regulations and programs, PG&E only installs capacity based on projected demand and regulatory guidelines to ensure grid reliability and efficiency. PG&E is focused on ensuring sufficient capacity to meet peak demand plus a reserve margin, but it does not typically install excess capacity.
- 4b- Customer elected to install additional capacity to anticipate associated future load growth as indicated on customer's application:** PG&E does not support additional load requests on closed or ongoing orders; customers are asked to submit a new application if additional future load is needed.

- **5a- Identify when in the energization process the customer requested a change in design or scope:** Tracking systems for a customer requested scope/design change have been built out but are not yet fully implemented. This data tracking enhancement is pending additional verification and review before final deployment to PG&E staff.
- **5b- Customer cancelled/delayed project (as needed):** Customer cancelled projects are included under the Cancelled projects reporting template separate from the primary Energized and In-Progress work templates. In order to identify projects delayed by the customer, PG&E is exploring ways to implement the recently proposed “delay” definition. The majority of projects experience some form of a customer-based delay at some point in the energization process. Although these delays are common, PG&E does not ask customers to provide a cause for their own delay.

Per Energy Divisions recent request PG&E would like to clarify that a definition for how we measure IOU time is provided above in section **1F. IOU Controlled Time and Customer Time Methodology**. Additionally, we believe our time accounting process effectively quantifies IOU delays as part of the total project lifecycle. In relation to customer delays, we also believe that our time accounting process effectively quantifies time elapsed under the customer’s control. For additional context some examples of common customer-related delays include: customers failing to pass PG&E inspection, customers failing to obtain easements, and delays where the customer is responsible for permitting.

- **6a- Estimated timing for when customer anticipates additional capacity necessary as indicated on customer's application:** PG&E’s current intake application does not support additional future load requests. It only captures total load required. For additional future load, the customer must submit new or additional applications.
- **6b- Total additional kW capacity for the necessary future upgrade as listed on customer's application:** Similar to 6a, PG&E’s current application process does not support additional future load requests. It only captures total load required. For additional future load, the customer must submit new or additional applications.

- **7a- Load management/flexible service options:** The current process for customers who receive a Load Limit Letter from PG&E (in which the customer is informed that their full load cannot be served without grid upgrades) is for PG&E to also provide a brief overview of the Flex Connect Pilot with instructions on how to contact the team to determine eligibility.

Flex Connect is supported currently as a bridging solution to customers where PG&E is not able to serve their full load or generation and where the distribution constraint is at the point in the network with an available SCADA device to send real-time telemetry (e.g. Substation Bank, Feeder Head, or other available SCADA device). Flex Connect is not available to customers where the distribution grid constraint is at a conductor or other network point without a SCADA device.

PG&E is now able to query data for Load Limit Letters and can provide data for the following fields:

- "If full energization of applicant site is not feasible in a timely manner, explanation whether load management/flexible service options were installed/utilized to provide applicant with timely service"
 - "Amount of load (kW) provided to applicant using flexible service options (kW)"
 - "At the time energization provided, remaining (or total) unserved load requested by the applicant (kW)"
 - "Estimate when full service will be provided to the applicant for customers using flexible service and/or receiving tiered load schedules (Date)"
- **8a- For R15/R16 tariffs, the time the project was delayed due to customer requested change in design or change in project scope:** Per item 5a above, Tracking systems for a customer requested scope/design change have been built out but are not yet fully implemented. This data tracking enhancement is pending additional verification and review before final deployment to PG&E staff.
- **9a- Project Costs (\$\$\$) for all IOU equipment for upstream capacity projects: Electric Rule 15, Electric Rule 16, and Electric Rule 29/45:** PG&E is awaiting clarification for the recommended definition of "equipment" for upstream capacity projects to ensure we are capturing the correct cost elements.

- **10a- R15/R16/R29 Energization Reasoning as to why exceeded average/maximum Energization Target:** PG&E's interim solution for this field is to identify steps that exceed our suggested internal average step timelines. We continue to work with the joint IOUs on a practical and systematic approach to energization reasoning that can be implemented at scale. It's not viable at this point to identify reasons for every job exceeding the average recommended number of days on a per-project basis.
- **11a- Location of project exceeding the maximum energization target:** PG&E is working to source site-level project location data. We are working internally to identify circuit level tracking information that extends beyond the municipal level to capture circuit specific information associated with each job.
- **12a- IOU reason for rejection of application:** Application cancellation reason is recordable in PG&E's primary reference system for job management. This field is mandatory when cancelling applications and is currently accessible and used by job representatives during the application closure process. In PG&E's March submission we referenced an incomplete source to support reporting for rejection reason. We have updated this field to pull from a more robust and complete rejection cause list.
- **13a- Amount of load (kW) provided to applicants using flexible service options:** PG&E has completed an internal data improvement initiative to track flexible service option loads. With this enhancement PG&E is able to provide related results.
- **14a- Time for identifying need for R15/16/29/45 upgrade:** PG&E is working to identify a reliable method for tagging jobs that experience an upgrade to an R15/16/29/45 project type.

L. Additional Reporting Disclaimers

- **Disadvantage Community (DAC), Tribal Community, and Underserved Communities:** PG&E had an average ArcGIS accuracy score of 98% for all applications submitted since January 31, 2023. This represents a statistically valid sample of the overall population of new applications within the required reporting period.

- **Underserved Community Definition:** 1) Census tracts with median household incomes at or below 80 percent of the statewide median income; or 2) with a median household income at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted under Healthy and Safety Code Section 50093.
- **Costs at Time of Energization:** As required, PG&E has provided costs incurred at the time of energization. It is important to clarify that these costs do not fully capture the true costs associated with a completed new business project. It is critical to note that additional costs and internal accounting typically occur after the conclusion of the energization process, which is the final meter set. These costs could include worksite restoration, contracted labor expenses, delayed billing for internal labor, equipment expenses, and other costs.

Because of internal accounting procedures, there are also frequent occurrences where we may report a negative total value for job costs at time of energization. This occurs because payments by the customer to PG&E in the form of Contributions in Aid of Construction (CIAC) happen at the start of a project. This creates a negative project balance that is reconciled over the entire project lifecycle. Because projects are often not fully reconciled at time of energization, it is common to see negative project costs as of the energization date.

- **Total Staffing, Labor, and Material Cost:** SB 410 addresses the staffing needs of electrical corporations to ensure timely grid connections and energization of new facilities and housing developments. PG&E evaluates qualified staffing levels to ensure we have the necessary workforce to support these initiatives. PG&E has attached its Public Utilities (PU) Code § 935 Staffing Analysis Report, submitted in PG&E's 2027 GRC (A.25-05-009),⁴ as **Appendix 1** to this report. The attached PU Code § 935 Report provides details on the following: PG&E's workforce planning

⁴ A.25-05-009, Exhibit PG&E-4, Chapter 2, Attachment B, Public Utilities Code Section 935 Report. During the 2027 GRC discovery process, PG&E discovered an error in the underlying calculation used to scale the workforce commensurate with its GRC forecast. PG&E is preparing a corrected version of this report as part of the planned November 2025 errata submission. We will serve the corrected PU Code § 935 Staffing Analysis Report to this proceeding at that time.

and strategy, current staffing and adequacy to meet demand, and future staffing analysis.

- **Customer Allowances:** PG&E customers may be eligible for allowances related to new electrical utility construction as set forth by CPUC regulations. Eligible customers may select one of two options: a 10-year fully refundable option or a 50% upfront discount option.

As part of California's broader effort to reduce greenhouse gas emissions and promote building decarbonization, the electric line extension allowances set forth in Electric Rules 15 and 16 have been removed for Mixed-Fuel New Construction effective July 1, 2024. This change aims to encourage the adoption of all-electric buildings by incentivizing customers which supports California's clean energy future.

- **Customer Site Readiness and IOU Site Readiness Data:** PG&E's internal systems initially did not track all required fields necessary for energization timeline compliance. Because of this identified gap, PG&E has invested in a new system to comply with CPUC reporting requirements. PG&E launched a new Salesforce tool in March 2025 to address several previously missing data elements. Inspection dates prior to the launch of this tool in March 2025 will not be available and cannot be recovered. Once fully adopted, the Salesforce tool will allow PG&E to measure the time between an initial inspection request and the first available inspection date, which will satisfy the need to track Utility Site Readiness and better position us in tracking Customer Site Readiness. Salesforce inspection data is currently only available for a subset of jobs, but this dataset will continue to expand over time. Although we recognize that this is an incomplete dataset, only capturing inspection data on 6% of Energized jobs, 30% of In-Progress projects have complete Utility Site Readiness data. Moving forward we anticipate improvements in our data completeness percentages as not all projects will require inspection dates. For the purposes of this report, PG&E has provided the available elapsed time data for the Utility Site Readiness step. This improved data will allow for more robust tracking of this step and may result in increases to the amount of PG&E controlled time across all projects.

- **Meter Set Data:** PG&E has provided the available elapsed time data for the Service Energization phase. The current dataset captures Service Energization dates for 4,198 jobs from a total of 8,923 energized jobs (8,923 excludes outliers), or 47% of energized projects. Based on exploration of job estimate packages we believe at this time that an additional 1,682 or 19% of energized projects do not require a meter at all. This means the current gap in existing meter data is about 3,043 jobs or 34% of energized work. As we continue to review and refine our available internal meter set data, we plan to be able to provide more robust tracking of the Service Energization phase. For projects where a meter set date was not retrievable, we have substituted the construction complete date to signal project completion. Future enhancements to this data may result in an increase in total PG&E controlled time by an estimated 4 days based on current internal energization phase averages.
- **Additional Job Category “Relocation/Rearrangement/Upgrade”:** We have included an additional job category within our report that is unique to PG&E. Due to the scope of work completed under this grouping, we did not want to exclude this category from the completed report. PG&E is working to refine this category and potentially include it as a subset of the standard IOU groupings for future reporting.
- **Work Requested by Others (WRO):** After our March 2025 submission, we identified that we had included non-energization related WRO projects, a subcategory of work that was not subject to OIR requirements. This job type refers to projects that don't contribute directly to a customer energization.

Examples of this work include the following:

- Relocation/rearrangement of Overhead (OH) or Underground (UG) electric facilities which require replacement of OH/UG units of property to comply with agency or other individual customer requests.
- Relocation/rearrangement/removal of OH/UG electric distribution facilities at a 3rd parties request.
- Work which is 100% special facilities and does not fall under a standard new business service agreement.

As defined by PG&E, WRO refers to both energization and non-energization third party requested projects. As such we have refined the scope to include only WRO projects that directly support energization.

- **Main Panel Upgrade (MPU) Projects:** MPU projects are reported separately from the standard tariff projects because they do not follow the typical energization process from intake to meter set via a unique PG&E order. At this time PG&E captures these projects under annual blanket orders and as such cannot provide detailed energization timelines. PG&E's MPU reporting does not include several of the required reportable fields due to the internal order and notification structure we use to track Main Panel Upgrade projects. The project level detail represents end-to-end calendar and business days without detailed accounting of customer time. We expect that future reporting will include more robust and accurate project level timelines.
- **Applicant Based Designs:** Step 2: Design and Engineering is considered IOU-responsible time and therefore is accounted for as PG&E calendar days within our reporting. In instances where the job applicant elects to use a 3rd party designer for their project, the total elapsed days are not within PG&E's ability to control. Moving forward, in order to exercise additional control over applicant designed projects, PG&E is considering a policy to cancel jobs that take an unreasonable amount of time in the applicant design phase.
- **Residential EV Upgrades:** Residential electric vehicle upgrades are captured under varying maintenance activity types at PG&E depending on the scope of the project. Residential EV projects under this umbrella are included in our reporting and reflected in our aggregate timelines. For EV rate-based upgrades (MAT's 161/162) where customers already have existing service, the typical energization process from Intake through Energization does not take place for the vast majority of projects. For this reason, we have excluded MAT 161/162 projects as they do not represent new energization work.
- **Upstream Capacity and Load limiting:** Prior to March 2025 PG&E did not maintain historic mapping of upstream capacity projects to the downstream new business jobs impacted. As referenced above in **Section 3J. Data Gaps and Initiatives** under item **3a**, PG&E is undergoing a data enhancement project for

Distribution Upstream Capacity tracking. Additional data for this field is a result of a process improvement initiative which mapped downstream projects to the associated upstream capacity work impacting that project. This is an incomplete process as most projects are not a simple 1:1 relationship. A downstream project may be dependent on multiple upstream projects to provide the full requested load. In addition, projects can be broken down based on the project type as the geographic location (multiple circuits or regions). Upstream capacity projects are also frequently tied to multiple downstream projects making the maintenance of project mapping challenging and constantly evolving.

- At this time, we report on all active upstream projects that were triggered by a new business order post March 2025. Please note that:
 - Days reported in **Section 1D. Upstream Capacity Upgrades** are based on time from initiation to completion of upstream capacity upgrade projects completed in 2023-2025.
 - Upstream capacity upgrade costs for completed projects cannot be accurately associated with downstream work. PG&E does provide separate and robust reporting on capacity projects with aggregate project costs in separate capacity specific CPUC filings.

PG&E will make all efforts to effectively energize all customer requests as quickly as possible. If full capacity is not available on the customer requested date, PG&E will notify customers via a Load Limit Letter that their request is subject to temporary static load limits as a condition of initial energization until capacity upgrades are completed. An automated audit process is used to review actual customer loading against these limits. Depending on the nature of the grid constraint, PG&E may provide:

- **Seasonal limits (e.g., 2 seasonal peak values):** Seasonal limits allow for a customer to connect under constraints prescribed by seasonal demand peaks that define a constraint on the electric system. Customers will be responsible for managing below a defined load allowance during those peaks, while during other portions of the year a customer may have the ability to use up to their requested load.

- **Temporal limits (e.g., limits based on time of day):** Temporal limits define an hourly demand limit. This form of ‘flexible service’ requires the customer to manage demand behind the meter daily and meet the required limits.
- **Static limit (same value 24/7/365):** Static limits define a single year-round limit typically requiring the customer to ensure proper relay protection to prevent exceeding the load limit.
- **Combination of Values:** Typically, a combination of two seasonal limits and two temporal limits.

Additionally PG&E has enacted a Flex Connect pilot program, A flexible service connection, i.e., Flex Connect, is a bridging solution currently offered by PG&E on a pilot basis, where customers (e.g., EV fast charging stations) on capacity constrained circuits can receive “flexible” capacity—beyond their static planning load limit articulated in the “load limit letter”—prior to PG&E’s completion of infrastructure investments and upgrades. Flex Connect leverages PG&E’s Distributed Energy Resources Management System (DERMS) to connect to the customer’s energy management system. DERMS sends the customer automated day-ahead hourly limits based on available capacity on PG&E’s constrained equipment (e.g., feeder, bank). Flex Connect can be used to serve added load at existing customer sites, as well as load at new sites awaiting energization. For many customers in the Flex Connect program, full capacity is available most days and most hours of the year.

PG&E does not utilize a formal contract or bilateral agreement specific to customers taking service under a static or time-based load limit. Instead, PG&E issues a non-contractual notification letter—referred to as a Load Limit Letter — which outlines the interim service conditions under which a customer may receive limited electric service prior to the completion of necessary capacity upgrades. For this reason, the capacity listed under, “Amount of load (kW) provided to applicant using flexible service options (kW)” and “At the time energization provided, remaining (or total), unserved load requested by the applicant (kW)”, are a reflection of the lowest capacity allotted to the customer. Additionally, “Estimate when full service will be provided to the applicant for customers using

flexible service and/or receiving tiered load schedules (Date)" is referencing the year the upstream capacity project is estimated to be completed on.

M. Outlier Data

PG&E is committed to providing transparent reporting on the removal of any outlier data and the reasoning for their exclusion. This ensures the integrity and accuracy of our data analysis and reporting processes. PG&E identifies and excludes specific project types and data anomalies from energization aggregate reporting to ensure accuracy and consistency. All outliers are included in the project level reporting but are excluded from aggregate reporting, these outlier definitions only apply to general tariff projects.

- **Date Sequence Errors:** Any project step where the end date precedes the start date, or where earlier steps (e.g., Step 1) occur after the energization date (Step 8).
- **Incomplete Status Verification:** Projects marked as "complete" but missing construction or energization dates, preventing confirmation of closure. Without these dates, PG&E cannot confirm whether the projects are genuinely closed.

In the 'Tariff – Energized' tab of the Biannual Energization Data Spreadsheet (**Attachment A**), PG&E has included 1076 energized projects with date sequence errors and 57 energization projects with incomplete status verification (these outliers are not mutually exclusive; 13 projects overlap both outlier type). However, these projects have been excluded from the statistics reported in the 'Aggregate Summary' tab. To identify outliers included in the Energization Data Reporting Spreadsheet, please refer to the "Outlier" column in each tariff reporting tab.

N. Exclusions

Streetlights: Streetlights are categorized under Maintenance Activity Type 16O at PG&E. Per agreement with the joint IOU's in California, work involving streetlights has been excluded from this report.

Rule 13: Rule 13 jobs have been excluded due to their classification as temporary service work.

Rule 20: Government entity requested work (20a) has been excluded from the report as it's primarily classified under internal orders.

4. Data & Reporting Insights

O. Launched and Future Enhancements Overview

PG&E is committed to continuous improvement and transparency in our energization processes. Below is an update on launched and our planned future enhancements:

Launched Enhancements:

- **Customer Communication Automation:**
Automated emails now deployed across *Your Projects Customer Portal* and *Salesforce*, including welcome letters, cancellation notices, approval/rejection notifications, and CPUC escalation links.
- **Application Intake Improvements:**
Enhancements include automated cancellation workflows, Pass/Fail buttons with customer-facing comment boxes, and a centralized communication log.
- **Customer Experience Tools:**
New multilingual Customer Journey Maps (English, Spanish, Chinese) for New Building and Applicant Design projects, along with updated order/project status logic in the portal improve transparency and accessibility.
- **Salesforce Enhancements:**
Added fields and logic for customer readiness dates, sub-task checklists, phase timeline data points, and improved display/calculations.
- **Training & Job Aids:**
Updated internal reference guides in order to support data accuracy and staff adoption.
- **Stakeholder Engagement & Reporting:**
Hosting weekly readiness calls by PG&E division (including EV) that utilize new tools to strengthen collaboration and performance tracking.
- **Data & Process Automation:**
Continued investment in analytics and automation to streamline energization workflows and reduce manual effort.

Future Enhancements:

- Improved Customer Communication will be supported through the expansion of multilingual resources, such as Express Connections customer journey maps available in English, Spanish, and Chinese. Additionally, communication will be enhanced by implementing more automated and personalized email updates to keep stakeholders informed.
- Data-Driven Project Management will be strengthened by introducing enhanced dashboards which will improve forecasting and tracking capabilities. Outdated metrics like Customer On-Time Delivery will be replaced with more actionable indicators.
- Customer Portal Evolution and Building and Renovation Service Center (BRSC) will focus on providing more self-service tools, including features for escalation handling and contact management. The user experience will be streamlined through site revamps and clearer definitions of user roles and responsibilities.
- Pre-Project Planning Tools will offer greater visibility and support during the early stages of project development, helping teams prepare more effectively before formal application submission.

Constraints:

PG&E has identified several constraints that impact the deployment of infrastructure, which we are actively working to address:

- **Materials Availability:** Supply chain disruptions have affected the availability of some critical materials, leading to delays in project timelines.
- **Staffing Challenges:** There is a shortage of qualified personnel to handle the increased demand for infrastructure projects, necessitating enhanced recruitment and training efforts.
- **Permitting Delays:** Obtaining necessary permits from local, state, and federal authorities can be time-consuming, impacting project schedules.
- **Upstream Distribution Capacity Upgrades (DCU):** The need for upstream DCU to support new connections can introduce additional complexity and delays in the energization process.

- IT and Systems: Current tracking and reporting systems will require additional investment and upgrades in order to capture remaining reportable fields. Our primary systems of record (SAP and Salesforce) are still pending some enhancements to ensure accurate tracking of each energization step.

5. Conclusion

PG&E is committed to complying with the biannual reporting requirements of D.24-09-020 and providing detailed data to the Commission. As highlighted in **Section 3J. Data Gaps and Initiatives**, PG&E has made significant strides in addressing outstanding data gaps and continues to work to provide all required reportable fields. As we approach Phase 2 of the OIR, we look forward to working with the Commission to further refine those reporting requirements and ensure our processes and tools align with OIR standards. We will continue to track and report all necessary information to demonstrate our progress and identify areas for improvement. PG&E is dedicated to working collaboratively with the CPUC to achieve the goals outlined in D.24-09-020, and we are confident that our ongoing efforts will lead to improved energization timelines and enhanced customer satisfaction.

APPENDIX 1

PG&E's Public Utilities (PU) Code § 935 Staffing Analysis Report

This appendix is provided electronically in the form of a PDF attachment:

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
PUBLIC UTILITIES CODE SECTION 935 REPORT

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
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PUBLIC UTILITIES CODE SECTION 935 REPORT

TABLE OF CONTENTS

A. Executive Summary and Overview	2-1
B. Framework for this Report	2-2
1. Basis for Pub. Util. Code 935 Report: The Powering Up Californians Act	2-2
2. PG&E's Approach to the Pub. Util. Code 935 Report	2-3
C. PG&E's Current Workforce Planning and Staffing	2-5
1. Overview of Workforce Planning and Strategy	2-5
a. Long-Term Staffing Needs	2-6
b. Collective Bargaining Agreement Requirements	2-6
c. Regional Labor Needs	2-7
d. Other Budget Considerations	2-8
2. Deploying the Workforce	2-8
D. Current Staffing and Adequacy to Meet Demand	2-9
E. Future Staffing Analysis	2-12
F. Apprentice Pipeline Analysis	2-16
1. Lineworker Apprentice Program	2-17
2. Cable Splicer Apprenticeship	2-18
3. Electrician Apprenticeships	2-19
4. Electric Technician Apprenticeship	2-20
5. Distribution System Operator Apprenticeship	2-21
6. Metering System Technician Apprenticeship	2-22
G. Conclusion	2-23

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
PUBLIC UTILITIES CODE SECTION 935 REPORT

A. Executive Summary and Overview

Pacific Gas and Electric Company (PG&E) presents the following report on its current and potential future Electric Distribution staffing needs for work forecast in Exhibit (PG&E-4). PG&E submits this report in compliance with Public Utilities Code (Pub. Util. Code) Section 935.

PG&E's Electric Distribution organization currently employs over 10,700 coworkers, which includes approximately 5,100 International Brotherhood of Electrical Workers (IBEW) union-represented coworkers, and over 3,000 Engineers and Scientists of California (ESC) union-represented coworkers. Based on the 2027 General Rate Case (GRC) forecast for Electric Distribution presented in Exhibit (PG&E-4), PG&E's projects a potential need to increase the headcount for its internal workforce by approximately 1,300 employees by 2030 in order to match the forecasted volume of work. Lineworkers, engineers, apprentices (across several apprentice types), crew leads, estimators, and electricians account for the majority of the headcount increase. PG&E anticipates growing its linework, cable splicer, electrician, and distribution system operator apprentice pipelines to scale with the forecasted volume of work.

To the extent that work volumes changes, PG&E's headcount projections would similarly change. PG&E projects hiring plans multi-year and adjusts hiring plans on an annual basis based on workplan needs. Further, the hiring plans can be adjusted in-year as business needs arise or change.

The remainder of this report is divided into five sections:

- Section B – Framework for the Report: This section provides an overview of the Powering Up Californians Act, which requires this Pub. Util. Code Section 935 Report. This section further explains how PG&E has implemented Section 935 for this report.

- 1 • Section C – Overview of PG&E’s Workforce Planning and Strategy: This
- 2 describes PG&E’s current workforce planning process, strategy, and
- 3 deployment.
- 4 • Section D – Current Staffing and Adequacy to Meet Demand: This
- 5 discussion discusses existing staffing levels and how these levels are
- 6 generally adequate to meet overall electric distribution needs.
- 7 • Section E – Future Staffing Analysis: This section describes the
- 8 methodology for forecasting potential future staffing needs by job groupings,
- 9 based upon PG&E’s Electric Distribution forecasts in this GRC. The
- 10 analysis takes into consideration the type of electric distribution work
- 11 forecasted compared to the work PG&E’s workforce complete today.
- 12 • Section F – Apprentice Pipeline Analysis: This section describes PG&E’s
- 13 key apprentice programs that develop a pipeline for maintaining a
- 14 sufficiently-sized qualified workforce to carryout electric distribution work.
- 15 This section also discusses how PG&E plans to scale these apprenticeship
- 16 programs to meet future potential staffing needs.

17 **B. Framework for this Report**

18 **1. Basis for Pub. Util. Code 935 Report: The Powering Up**

19 **Californians Act**

20 In 2023, the California legislature enacted the Powering Up Californians

21 Act (Act) setting forth state policy that upgrades to the electrical

22 corporations’ distribution systems are critical to meet the state’s

23 decarbonization goals, comply with their obligation to serve customers, and

24 ensure that housing, businesses, and electric transportation vehicles can be

25 used without delays.¹ Part of the impetus for the Act was a rising concern

26 over electrical corporations’ ability to timely energize customer requests.²

27 As part of this policy, the legislature determined that electrical corporations

28 must recruit, train, and retain an adequately-sized qualified workforce to

29 complete the energization work to upgrade electrical distribution systems

30 and promptly connect customers without sacrificing other necessary

1 Pub. Util. Code § 933(a-d).

2 Pub. Util. Code § 932(a)(3-4).

activities to maintain the safety and reliability, such as wildfire mitigation, inspection and maintenance activities, and other critical work.³ The Act also finds that the California Public Utilities Commission shall require the electrical corporation to have adequate qualified staffing and maintain a pipeline of apprentices to achieve these policies.⁴

To ensure that electrical corporations meet this workforce policy, the Powering Up Californians Act, Section 935, requires electrical corporations to include in each GRC application a detailed analysis of its current qualified staffing level and future required staffing level for each job classification needed to carry out the advanced planning, engineering, and construction of electrical distribution systems needed to promptly energize customers, while still completing other required work.⁵

2. PG&E's Approach to the Pub. Util. Code 935 Report

While most provisions in the Powering Up California Act focus on the funding and timely completion of *energization* work (customer connections and capacity projects), Section 935 addresses staffing needs for both *energization* work and other electric work for maintaining safety and reliability. PG&E therefore assessed staffing needs not by a specific type of electric distribution work, but instead assessed those needs holistically across its full portfolio of electric distribution work. This is because labor resources work across electric distribution programs and PG&E must constantly evaluate the need to adjust its use of resources (internal and external) for that work. For instance, a lineworker may work on New Business capital projects (energization), distribution maintenance, or system operations. As a result, the staffing-level analysis presented in this Report includes the labor that supports energization work, as well as other electric distribution work. PG&E believes that this captures the intent of the statute to ensure that electrical corporations retains a sufficiently-sized qualified workforce to timely energize customers without sacrificing the other activities completed by the workforce.

³ Pub. Util. Code § 933(e).

⁴ Pub. Util. Code § 935(b-c).

⁵ Pub. Util. Code § 935(a).

1 In addition, while PG&E's advanced planning, engineering, and
2 construction activities are generally performed by its asset management,
3 estimating, and construction groups, respectively, numerous other job
4 groups that may not fit squarely in these three categories are critical parts of
5 planning, building, and maintaining PG&E's electric distribution system. To
6 provide a detailed analysis, this report includes 32 different job groupings
7 that perform the planning, engineering, construction, and more. These
8 groupings are consistent with how PG&E categorizes job titles (and
9 associated job identification codes) at the enterprise level. The specific job
10 titles in the Electric Distribution organization associated with each job
11 grouping is provided in Appendix 1.

12 This Report provides an overview of PG&E's workforce planning
13 approach to illustrate key considerations for meeting total workforce needs.
14 The potential staffing needs identified in this Report could be met through a
15 combination of strategies, such as training labor, recruiting trained labor, or
16 taking actions to retain existing trained labor that is at risk of departing. The
17 appropriate strategy for a specific job position varies, depending on the
18 geographic location and urgency of staffing needs. However, PG&E
19 provides additional information on how it would scale its apprenticeship
20 pipeline to maintain a sufficiently-sized qualified workforce to meet future
21 increased demand for electric distribution work.

22 In summary, PG&E's approach to this Pub. Util. Code Section 935
23 report is intended to be fully-inclusive of all electric distribution staffing
24 needs to complete forecasted electric investments for our distribution grid
25 through 2030. PG&E is mindful of the volume of its GRC showing, including
26 this Section 935 Report, and the capacity and resource limitations the
27 Commission and parties may have in reviewing the materials. Accordingly,
28 PG&E has streamlined its showing to make this report more accessible to
29 the Commission and parties rather than present the possible volume of
30 information that could be considered relevant to its requests and
31 proposals. PG&E expects parties to seek additional information of interest
32 through discovery and PG&E is prepared to respond to data requests, hold
33 workshops, as well as submit additional testimony and add other information

to add to the evidentiary record as may be of interest to parties, consistent with Commission Rule 13.

C. PG&E's Current Workforce Planning and Staffing

1. Overview of Workforce Planning and Strategy

PG&E examines its hiring needs annually based on the company's workplan needs. Investment planning teams select workplans (scope and timing) and establish financial targets based on the company's risk prioritization, regulatory requirements, and other strategic goals (such as maintaining affordability). Once the work and budget are determined, the specific departments assigned the work determine whether any headcount adjustments are necessary. Requests for additional headcount are analyzed by workforce planning and strategy teams to determine whether the additional headcount request satisfies various criteria, including: (1) long-term hiring needs; (2) collective bargaining agreements with IBEW and ESC, (3) regional staffing needs, and (4) other budget considerations. These factors are discussed in greater detail below.

PG&E's staffing-level analyses generally are only completed for departments that complete programmatic, planned work.⁶ The analyses must be completed to ensure that the work can be executed by internal resources in alignment with the scope, timing and budget established for the work. PG&E utilizes its existing workforce to meet forecasted and priority needs; any residual, larger, or complex/specialized work is assigned to qualified contractors.

PG&E has enhanced its work-planning process in recent years to consider multi-year investment needs and opportunities to bundle work activities to drive cost efficiencies. This multi-year workplan view has presented the added benefit of visibility for longer-term hiring needs. PG&E is in the process of developing a more centralized and longer-term labor resource planning approach. This will enhance PG&E's ability to leverage its apprenticeship programs, which are multi-year training programs to meet

⁶ Certain work is generally excluded from staffing-level analyses if the staffing levels necessary to complete the work are subject to annual fluctuations due to the emergent nature of the work. Examples of these type of programs include emergency response and emergent maintenance work.

1 future needs for a trained workforce. Lastly, the visibility into longer-term
2 workforce needs enables PG&E to stage its hiring and recruitment efforts
3 over time. In other words, when PG&E anticipates a need to hire 1,000
4 employees (for example), not all hiring would necessarily occur in one year,
5 but would be staged over multiple years. The timing of hiring for each job
6 category would be based on the urgency and recruitment needs of that
7 position.

8 **a. Long-Term Staffing Needs**

9 When there is an increase in a particular work activity in the
10 near-term, PG&E first considers whether the level of work activity will
11 remain long-term before hiring additional staff. This ensures that any
12 additional headcount will not sit idle or be subject to layoffs if the level of
13 work activity is likely to decrease in the future. Instead, PG&E will use
14 contract labor to meet short-term staffing needs to complete the work.

15 When work levels indicate that additional staff is warranted in the
16 long-term, PG&E scales the workforce linearly from its existing
17 60 percent internal/external ratio. On average, PG&E utilizes contract
18 labor to supplement approximately 40 percent of planned work, typically
19 larger or complex/specialized work.

20 The rationale for using external labor for a portion of the work is
21 because the volume of staff needed throughout the year varies by
22 season and emergent events. As a result, PG&E plans for internal
23 staffing that is sufficient to address work needs in the lowest demand
24 periods, and not the highest demand periods. PG&E does not hire
25 internal staff above what is needed to execute work during the lowest
26 demand periods, otherwise PG&E staff would sit idle in the low demand
27 periods, which is not in the interest of affordability. As a result, contract
28 labor is core aspect of PG&E's workforce strategy. Contract labor
29 enables PG&E to quickly scale the workforce as needed.

30 **b. Collective Bargaining Agreement Requirements**

31 PG&E has three collective bargaining agreements (CBA). The
32 IBEW-Clerical CBA governs the terms of employment for customer
33 service, clerks, and job positions that are more administrative in nature.

1 The IBEW-Physical CBA governs the terms of employment for field
 2 employees such as lineworkers and electricians. The ESC CBA
 3 governs the terms of employment for engineers, project managers,
 4 contract administrators, and other technical specialists. Each CBA
 5 (including modifications to the CBA through letter agreements)
 6 determines the skills and qualifications necessary for each
 7 union-represented position, as well as the line of progression for
 8 employees.⁷ Certain high-skill or safety-critical positions require
 9 completion of multi-year training programs or apprenticeships, which
 10 include on-the-job training. The IBEW-Physical CBA also establishes
 11 standards for on-the-job training, including how many trained employees
 12 (journey workers) are on a worksite relative to trainees (apprentices) to
 13 ensure adequate oversight and teaching opportunities (i.e., Training
 14 Labor Ratio).

15 The terms of each CBA are an important factor in the strategy and
 16 rate at which PG&E can adjust its overall headcount. For example,
 17 PG&E can only hire apprentice workers to the extent there are journey
 18 workers available to train the apprentices in accordance with the
 19 Training Labor Ratio. While PG&E prefers to develop its workforce
 20 through its apprentice programs, when trained labor is needed
 21 immediately, PG&E may opt for hiring trained labor or seek to retain
 22 existing trained personnel (if they are seeking alternate positions).

23 **c. Regional Labor Needs**

24 PG&E's workforce resides in communities throughout our service
 25 territory, which expands across central and northern California.
 26 Employees are assigned to regional offices, service centers, or service
 27 yards. When assessing workforce needs, PG&E takes into
 28 consideration where the work demand is regionally. If work demand is
 29 growing in a region, the ability to hire apprentices to meet that demand
 30 is limited by the number of journey workers assigned to that service yard
 31 to remain compliant with the Training Labor Ratio. However, if work

7 A line of progression is the sequence of trainings and job levels to advance responsibilities and, often, pay.

1 demand is flat or decreasing in a region but is fully staffed with trained
2 labor, PG&E may not offer apprentice positions because there is not
3 local workforce need.

4 **d. Other Budget Considerations**

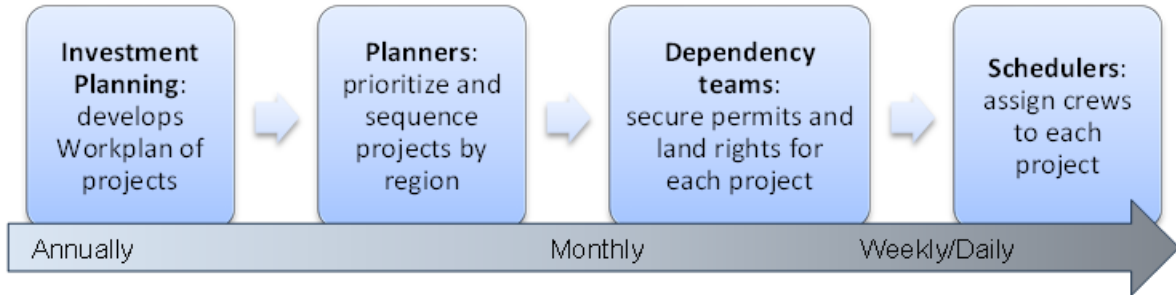
5 When a department requests additional headcount, a portion of the
6 costs to accommodate additional headcount impacts the budgets of
7 other organizations. For instance, additional headcount for lineworkers
8 requires additional trucks, equipment, and IT support. Additional
9 headcount also impacts medical and other benefits budgets. Thus, the
10 timing and rate of headcount increases must be coordinated with the
11 budget and ability of other functional areas and departments to support
12 the additional headcount.

13 On a related note, when an organization has persistent charges to
14 overtime orders (thus increasing costs), PG&E prioritizes hiring in these
15 areas. For example, if we plan for overtime hours in the annual budget
16 but the overtime hours exceeds the planned amount at year-end, and
17 this continues for two or three years, we focus on increasing headcount
18 in those areas. For example, recorded data for distribution system
19 operator positions indicates overtime spending above PG&E's budget
20 goals, and therefore we have a goal of adding 80 distribution system
21 operator roles. Adding internal labor in these scenarios is less costly for
22 our customers compared to paying overtime.

23 **2. Deploying the Workforce**

24 PG&E's workplans identify by region and order number all planned work
25 to be completed in an upcoming year. The workplans provide visibility on
26 the amount of work that will be performed in the region, and whether
27 contract resources will be necessary to supplement any regional work. To
28 the extent that additional external labor resources are needed, PG&E's
29 sourcing department will utilize existing agreements with labor contractors to
30 procure bids for short-term labor needs.

**FIGURE 2B-1
WORKFORCE DEPLOYMENT**

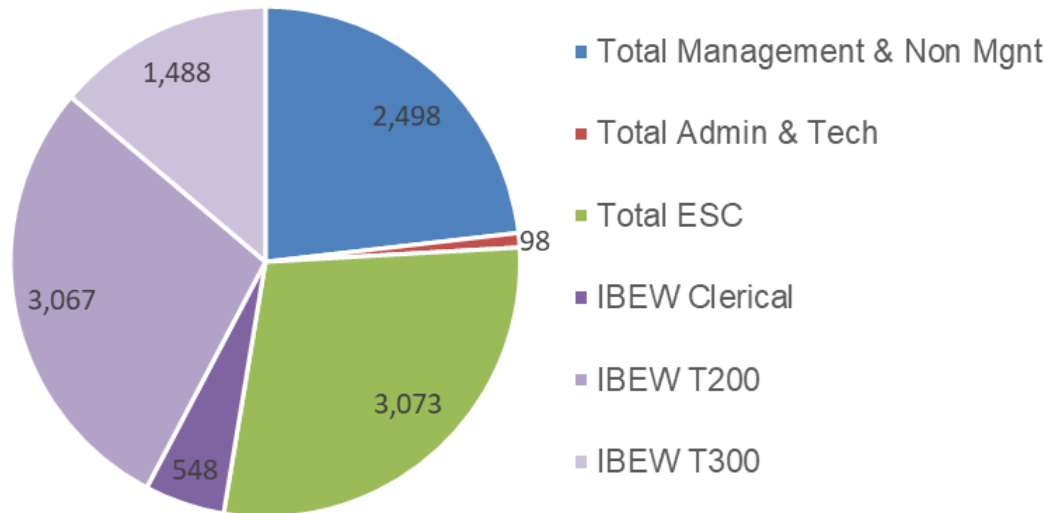


The orders associated with a project are then sequenced and scheduled. Estimating planners view workplans to determine the timeline and sequence for estimators to complete their work. The construction planners sequence the orders in each region to align with priorities and regional needs for completing work. A dependencies team uses the workplan along with the estimating and construction's sequencing plans to develop a plan for securing permits and acquiring land rights (if needed). Schedulers then assign crews (either internal or external) to complete the work per the CBA. Schedulers must take into consideration the crew size needed for a project, and that all labor ratios meet the CBAs and letter agreements. Figure 2B-1 shows this workforce deployment process at a high-level, including the general frequency of the activity.

D. Current Staffing and Adequacy to Meet Demand

PG&E's workforce supporting Electric Distribution activities includes over 10,700 employees, including approximately 5,100 IBEW-represented employees and over 3,000 ESC-represented employees.

**FIGURE 2B-2
2025 YEAR-TO-DATE ELECTRIC DISTRIBUTION WORKFORCE**



Note: Year-to-Date is as of April 20, 2025.

1 PG&E's overall workforce supporting Electric Distribution has steadily grown
 2 since 2020 to keep pace with the level of work required. Table 2B-1 shows the
 3 change in staffing by job grouping between 2020-2025 (year to date).⁸
 4 Lineworkers, Utility Workers, Coordinators, Engineers, and Analyst/Specialists
 5 have all grown more than 30 percent since 2020 and have seen the greatest
 6 amount of net growth within the electric organization. Other job groupings, such
 7 as cable splicers, clerical workers, field technicians, and technicians, have
 8 remained steady or decreased despite overall electric distribution work level
 9 increasing over the 2020-2025 period.

⁸ Table 2B-1 includes job groupings that appear to have no or few employees. This is because that job grouping primarily serves other functional areas within the company, and not electric distribution.

TABLE 2B-1
ELECTRIC DISTRIBUTION WORKFORCE
(NUMBER OF EMPLOYEES)

Line No.	Job Grouping	2020	2021	2022	2023	2024	TYD 2025	Change Since 2020	Percent Change Since 2020
1	Associate Distribution Engineer	234	227	236	268	257	248	14	6%
2	Analysts/Specialists	1,056	1,201	947	1,337	1,289	1,386	330	31%
3	Apprentice	589	618	621	597	621	649	60	10%
4	Cable Splicer	52	47	47	44	50	52	0	0%
5	Clerical	788	771	785	783	789	737	(63)	(8)%
6	Coordinators	145	167	176	184	203	205	60	41%
7	Craft Worker	132	171	179	160	164	166	34	26%
8	Crew Leader	551	561	569	578	594	596	45	8%
9	Dispatcher	53	56	53	59	62	64	11	21%
10	Electric Line Assistant	19	37	39	69	78	66	47	247%
11	Electricians	269	257	260	265	269	270	1	0%
12	Engineer	746	839	871	949	980	986	240	32%
13	Equipment Operator	111	122	121	123	139	138	27	24%
14	Estimator	532	539	567	654	634	624	92	17%
15	Field Service Representative	—	—	—	—	—	—	N/A	N/A
16	Field Technician	391	424	331	408	380	371	(20)	(5)%
17	Inspectors	196	186	184	232	254	250	54	28%
18	Land and Environment	376	404	395	408	403	408	32	9%
19	Leadership	296	315	305	361	398	462	166	56%
20	Line Worker	572	558	666	737	794	797	225	39%
21	Materials Worker	1	1	1	2	1	1	0	0%
22	Mechanic	3	2	3	4	4	5	2	67%
23	New Business Representative	278	344	340	335	332	322	44	16%
24	Project Manager	227	265	219	210	221	265	38	17%
25	Safety and Security	18	19	14	15	19	21	3	17%
26	Scientists	61	63	61	61	65	67	6	10%
27	Service Representative	3	4	1	1	1	1	(2)	(67)%
28	Supervisor – Back Office	132	147	140	165	150	162	30	23%
29	Supervisor – Frontline	492	510	525	566	550	578	86	17%
30	System Operator	168	175	192	192	198	197	29	17%
31	Technician	130	140	136	131	127	121	(9)	(7)%
32	Troubleshooter	402	400	402	414	425	424	22	5%
33	Utility Worker	117	128	92	138	145	152	35	30%
34	Grand Total	9,140	9,713	9,424	10,403	10,555	10,799	1,639	18%

As described above, PG&E constructs, operates, and maintains the electric distribution system using a combination of internal and external labor—typically at a 60/40 splits. This ratio ensures PG&E’s internal workforce is not idle during low-demand periods during a year. PG&E can scale contract resources as needed to meet seasonal or emergent demand.

While PG&E was not able to keep pace with customer energization requests beginning in 2022 (thus prompting the Powering Up Californians Act), the backlog of work is being primarily driven by funding constraints. For example, in 2022, the imputed adopted GRC funding for new business energization work (MWC 16) was \$480 million, but PG&E incurred \$817 million to keep up with demand as much as possible within the overall financial constraints of the

1 company. Contract labor resources can scale to complete the backlog of
2 projects—a short-term surge in resources—however, the ability to finance and
3 pay for these resources is limited.

4 For this reason, pursuant to Section 937 of the Powering Up Californians
5 Act, PG&E requested additional funding for energization-related work, above the
6 initial funding levels authorized in the 2023 GRC.⁹ PG&E's request was
7 adopted in Decision (D.) 24-07-008, which established a memorandum account
8 with interim rate relief subject to an annual cap. Even this additional funding
9 was insufficient to meet customer connection demand. Therefore, PG&E filed a
10 subsequent motion requesting an increase to the annual caps based on
11 forecasts that the energization demand and costs substantially exceed the
12 annual caps.¹⁰ As of May 1, 2025, this motion is still pending.

13 While insufficient funding is the primary reason PG&E has not been able to
14 keep-up with demand, PG&E recognizes that additional qualified labor is needed
15 to meet increased energization work, and set an internal goal to hire 100
16 lineworkers each year for the next 5 years to meet this demand. As PG&E works
17 to meet all demand related to energization, continued focus on work related to
18 wildfire, reliability, and other programs continue to be monitored and executed to
19 ensure PG&E is meeting all requirements utilizing internal and external
20 resources.

21 **E. Future Staffing Analysis**

22 The 2027 GRC presents PG&E's proposed risk-informed, multi-year Electric
23 Distribution forecasts for work necessary to safely and reliably construct,
24 operate, and maintain the electric distribution system. For purposes of analyzing
25 future potential staffing needs, PG&E uses these forecasts as the basis for level
26 of Electric Distribution work that will be required through 2030. Thus, the
27 following analysis identifies the potential long-term staffing needs during this
28 period. To the extent that authorized funding differs from PG&E's forecasts, the
29 level of work required and the associated staffing needs will change.

⁹ See D.24-07-008, p. 4.

¹⁰ PG&E Motion to Increase 2025 and 2026 Energization Cost Caps, (October 4, 2024).
Rulemaking 24-01-018.

In this analysis, PG&E first determined the annual percentage of capital expenditures by MWC Groupings (Distribution Projects, Distribution Maintenance, Distribution Support Services, New Business, System Operations, Transmission & Substation, and Vegetation Management) (See Table 2B-2). The MWCs assigned to each MWC Grouping are provided in Appendix 2. This methodology provides granularity regarding the annual percentage changes in labor hours expected by job type based on the type and level of work forecast in the GRC. For example, total labor hours for Electric Distribution, year over year, will increase in 2025, 2027, and 2030 and decrease in 2026, 2028, and 2029 based upon PG&E's 2025-2030 Electric Distribution forecast. MWC Groupings align to the organizations accountable for managing budgets and headcount within Electric Distribution.

**TABLE 2B-2
YEAR OVER YEAR FORECASTED SPEND CHANGE BY MWC GROUPING**

Line No.		2025 FCST %	2026 FCST %	2027 FCST %	2028 FCST %	2029 FCST %	2030 FCST %
1	Distribution Projects & Hardening	33%	1%	(20)%	(28)%	(3)%	9%
2	Electric Dist Maintenance	3%	(7)%	134%	5%	5%	5%
3	Distribution Support Services	14%	(2)%	(29)%	(10)%	0%	21%
4	New Business*	(3)%	(20)%	117%	28%	(39)%	25%
5	System Operations & Inspections	(26)%	(3)%	14%	2%	2%	3%
6	Transmission & Substation	19%	20%	29%	8%	15%	7%
7	Veg Management	(14)%	(1)%	(15)%	1%	(1)%	(1)%
8	Grand Total	2%	(3)%	32%	(3)%	(7)%	10%

Note: New Business forecast uses the Alternative Forecast amounts presented in Exhibit (PG&E-4), Chapter 10, Section G.1, to capture the high-case scenario of potential work.

Next, PG&E identified recorded data for labor hours (standard and overtime) by job identification code charged to each MWC in the Electric Distribution portfolio in 2024. There are over 370 job identification codes relevant to Electric Distribution, so the codes were consolidated into 32 job groupings used at the enterprise-level for workforce planning. PG&E then scaled the labor hours for each job grouping corresponding to the annual forecast changes by the MWC groupings shown above in Table 2B-2.

The change in labor hours for each job grouping is then multiplied by 60 percent to maintain the internal/external labor ratio. Labor hours were then

converted to available hours to be charged to electric distribution work by applying a Productive Capacity Factor to assumed annual hours of 2,080 per employee. This accounts for the time not spent working directly on energization or other electric distribution work such as training, safety meetings, travel time, etc.. Table 2B-3 shows the results from this analysis: the annual incremental change in headcount by job grouping from 2025-2030 based on PG&E's Electric Distribution forecasts. Table 2B-4 shows the total incremental headcount for each job category by MWC Grouping.

TABLE 2B-3
CHANGE IN HEADCOUNT BY JOB GROUPING BASED ON 2027 GRC REQUEST

Line No.	Job Grouping	2025	2026	2027	2028	2029	2030	Net Total
1	Associate Distribution Engineer	5	(2)	28	(2)	0	5	34
2	Analysts/Specialists	(2)	(1)	29	(6)	(1)	20	39
3	Apprentice	1	(10)	137	21	(23)	32	158
4	Cable Splicer	1	(1)	10	2	(4)	3	11
5	Clerical	0	0	0	0	0	0	0
6	Coordinators	0	(3)	18	8	(14)	6	15
7	Craft Worker	0	1	6	1	1	2	11
8	Crew Leader	0	(3)	118	22	(12)	28	153
9	Dispatcher	(5)	0	2	0	0	1	(2)
10	Electric Line Assistant	(2)	(3)	25	5	(5)	5	25
11	Electricians	13	15	35	12	15	14	104
12	Engineer	35	14	64	5	16	36	170
13	Equipment Operator	4	(3)	27	2	(8)	7	29
14	Estimator	19	(8)	112	(5)	3	20	141
15	Field Technician	(16)	(1)	23	4	1	8	19
16	Inspectors	(14)	0	26	0	4	8	24
17	Land and Environment	13	(3)	12	(2)	(14)	13	19
18	Leadership	2	0	(2)	(2)	0	1	(1)
19	Line Worker	(9)	(27)	238	37	(52)	50	237
20	Materials Worker	0	0	0	0	0	0	0
21	Mechanic	0	0	1	0	0	0	1
22	New Business Representative	0	(3)	15	7	(15)	6	10
23	Project Manager	23	6	0	(13)	7	9	32
24	Safety and Security	0	0	0	0	0	0	0
25	Scientists	1	0	0	(1)	0	1	1
26	Service Representative	0	0	0	0	0	0	0
27	Supervisor- Back Office	1	0	(2)	(2)	0	1	(2)
28	Supervisor- Frontline	1	1	0	(1)	1	2	4
29	System Operator	(3)	(1)	21	3	(1)	5	24
30	Technician	4	(1)	1	0	(3)	6	7
31	Troubleshooter	(21)	(3)	23	4	(3)	6	6
32	Utility Worker	7	2	28	5	(1)	9	50
33	Grand Total	58	(34)	995	104	(108)	304	1,319

TABLE 2B-4
NET CHANGE IN HEADCOUNT BETWEEN 2026-2030
BY MWC GROUPING BASED ON 2027 GRC REQUEST

Line No.	Job Grouping	Distribution Projects & Hardening	Maintenance	Support Services	New Business	System Ops & Inspections	Transm & Subs.	Veg Mangt
1	Associate Distribution Engineers	(3)	37	0	2	(1)	1	0
2	Analysts/Specialists	(10)	39	(4)	7	(10)	29	(11)
3	Apprentice	(7)	113	0	29	(8)	31	0
4	Cable Splicer	(7)	6	0	4	0	2	0
5	Clerical	0	0	0	0	0	0	0
6	Coordinators	0	4	0	11	0	0	0
7	Craft Worker	0	4	0	1	(1)	7	0
8	Crew Leader	(5)	89	0	23	(8)	53	0
9	Dispatcher	0	0	0	0	(3)	0	0
10	Electric Line Assistant	(1)	21	0	5	(1)	0	0
11	Electricians	0	2	0	4	0	99	0
12	Engineer	(9)	54	(8)	10	(3)	127	0
13	Equipment Operator	(3)	25	0	7	(1)	1	0
14	Estimator	(12)	148	0	6	(3)	3	0
15	Field Technician	(1)	12	(1)	4	(10)	16	0
16	Inspectors	(3)	19	0	2	(11)	16	0
17	Land and Environment	(7)	10	(2)	12	(1)	8	(2)
18	Leadership	(1)	0	0	0	0	0	0
19	Line Worker	(11)	211	0	52	(14)	3	(1)
20	Materials Worker	0	0	0	0	0	0	0
21	Mechanic	0	0	0	0	0	2	0
22	New Business Representative	(1)	0	0	11	0	0	0
23	Project Manager	(10)	7	0	0	0	35	0
24	Safety and Security	0	0	0	0	0	0	0
25	Scientists	(1)	2	0	0	0	0	0
26	Service Representative	0	0	0	0	0	0	0
27	Supervisor- Back Office	(1)	0	0	0	0	0	0
28	Supervisor- Frontline	(1)	0	(1)	0	(1)	5	0
29	System Operator	(1)	16	0	3	(3)	9	0
30	Technician	(1)	7	(3)	3	0	2	0
31	Troubleshooter	(1)	12	0	4	(11)	2	0
32	Utility Worker	(2)	18	0	6	(1)	29	0
33	Grand Total	(99)	856	(19)	206	(91)	480	(14)

1 In years where the analysis shows a decrease in need for a particular job
2 category, PG&E plans to hold headcount flat (i.e., PG&E does not plan to reduce
3 the internal workforce for this reason). Instead, in these instances, PG&E
4 reduces the amount of contract labor (i.e., PG&E would use fewer external
5 workers). These annual variations in workforce needs illustrates one of the
6 benefits of utilizing external contractors as part of the overall workforce strategy:
7 contract labor allows PG&E to maintain a steady internal workforce. The net
8 total headcount (2025-2030) represents the long-term incremental headcount
9 need based on this 2027 GRC request.

10 Lastly, while this analysis is based on scaling labor based on the 2027 GRC
11 cost forecasts, PG&E existing staffing plans warrant adjustments to the analysis

1 provided above. We plan to keep headcount steady for several job categories
 2 (analysts/specialists, leadership, safety/security, scientists, and supervisor-back
 3 office). With these adjustments, PG&E's future potential labor needs decrease,
 4 indicating an internal headcount increase of 1,282 employees compared to 2024
 5 headcount levels. See Table 2B-5 below for details.

TABLE 2B-5
ADJUSTMENTS TO 2027 GRC REQUEST-BASED HEADCOUNT FORECAST

Line No.		2025	2026	2027	2028	2029	2030	Net Total
1	2027 GRC Forecast Headcount	58	(34)	995	104	(108)	304	1,319
2	Job Groupings that will not be Scaled	2	(1)	25	(11)	(1)	23	37
3	Adjusted Headcount	56	(33)	970	115	(107)	281	1,282

Note: This is the net of lines 2, 18, 24, 25, and 27 in Table 2B-3.

6 As described above, PG&E will use an "all of the above approach" (recruit,
 7 train, and retain) to increase its workforce to meet the level of work, tailored to
 8 the specific job position and region.

9 **F. Apprentices Pipeline Analysis**

10 A critical component of PG&E's staffing strategy is establishing an adequate
 11 pipeline of qualified labor to meet future staffing needs. Qualified labor, in this
 12 instance, refers to job positions that require completion of an apprenticeship or
 13 other formal training program, as required by CBAs. Formal apprenticeship
 14 programs have been created between PG&E and the IBEW for specific job
 15 positions that the Joint Apprenticeship Training Committee (JATC)¹¹ designated
 16 as warranting formal, multi-year training programs, including classroom and
 17 on-the-job training, given the safety risks and public impacts inherent in the
 18 work. The JATC seeks California state approval of the apprenticeship programs
 19 to certify that the programs meet the curriculum criteria established by the state.
 20 There are six job positions in PG&E's electric distribution portfolio requiring
 21 completion of a JATC-approved and state-approved apprenticeship:
 22 (1) lineworkers, (2) cable splicers, (3) electricians, (4) electric technicians,

¹¹ The Joint Apprentice Training Committee (JATC) is an eight-person committee with four members from IBEW and four members from PG&E. The terms of a specific apprenticeship are set forth in the Apprenticeship Administrative Manual.

(5) distribution system operators, and (6) metering system technicians. PG&E continuously works with IBEW to ensure the apprentice pipeline remains full and in compliance with the CBAs (and letter agreements) to accommodate future staffing needs.

PG&E and ESC also developed formal multi-year training programs for certain job positions. These training programs are designed by the Joint Training Committee (JTC).¹² To date, there are three job categories with formal training programs: (1) estimators, (2) new business representatives, and (3) mapping technicians. These training programs do not have Job Training Ratios that restrict the volume of potential trainees, and therefore a pipeline analysis was not completed.

1. Lineworker Apprentice Program

The Linework Apprentice Program consists of 8 six-month modules, totaling four years. The CBA includes a multi-prong Training Labor Ratio. In the first two years of on-the-job training, Line Worker Apprentices are not allowed to work on electrified wires (Cold Apprenticeship) given the safety risks associated with live wires. However, once the apprentice has successfully completed the first two years of training, they will have sufficient training to begin working on electrified lines. As a result, in the remaining two years (Years 3 and 4) of on-the-job training, Line Worker Apprentices can work on electrified wires (Hot Apprenticeship). The current CBA requires that for every Cold Apprentice on a crew, there must be at least one journey worker. However, a crew can have two Hot Apprentices per journey worker.

PG&E tracks and monitors Lineworker addition and attrition to ensure there are a sufficient amount of qualified electrical workers able to support work demands related to energization. Consistent with the 2023 GRC and Section 5.6.1 of the 2020 GRC Settlement Agreement, PG&E keeps the Apprentice Lineman Training Program filled to the maximum extent, consistent with safe crew staffing ratios. The program provides a skilled and qualified workforce to maintain electric system reliability and provide safe

¹² The JTC is an eight-person committee with four members from ESC and four members from PG&E. The terms of each training program are set forth in an Administrative Manual.

service to customers. PG&E commits to continue this agreement through the 2027 GRC cycle. For additional information on PG&E's apprenticeship programs, see Exhibit (PG&E-7), Chapter 1.

PG&E's forecast of future staffing needs presented in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of lineworkers in the apprentice program by 262 positions between 2025-2030. Based on PG&E's existing workforce, there is a sufficient level of journey workers to meet the linework Training Program Ratios for Hot and Cold Apprentices, as there are currently two journey lineworkers per apprentice. Lineman journey workers include all job positions in the line of progression from the lineman apprentice. This means PG&E can continue to scale its apprentice pipeline based on the current percentage of journey worker linemen in the workforce (62 percent). Using these assumptions, PG&E would need 644 apprentice lineworkers in the training pipeline by 2030 to sustain future workforce needs, accounting for 493 current apprentices as of March 2025 and then adding 151 positions by 2030.

**TABLE 2B-6
LINEWORKER APPRENTICE PIPELINE ANALYSIS**

Line No.	Lineworkers	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	493	38%	151	644
2	Journey ^(a)	800	62%	245	1,045
3	Total	1,293	100%	396	1,689
4	Ratio	2:1			2:1

(a) Includes all journey workers in the line of progression that have completed the lineworker apprenticeship.

2. Cable Splicer Apprenticeship

Cable splicers are trained to connect and repair electric wires to other wires, transformers, junction boxes, and other equipment in predominantly PG&E's networked underground systems, but may also perform these activities for overhead systems or stations. This training requires

7 six-month modules, totaling 3.5 years. The CBA requires a 1:1 apprentice cable splicer to journey worker cable splicer Training Labor Ratio.

PG&E's future staffing needs forecast in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of cable splicers in the apprenticeship program by 2 positions between 2025-2030. Based on PG&E's existing workforce, there is overall sufficient journey workers to meet the cable splicer Training Program Ratio, as there are currently 6 cable splicer journey workers per apprentice. This means PG&E can continue to scale its apprentice pipeline based on the current percentage of journey worker cable splicers in the workforce (85 percent). Using these assumptions, PG&E would need 11 apprentice cable splicers in the training pipeline by 2030 to sustain future workforce needs, accounting for 9 current apprentices as of March 2025 and then adding 2 positions by 2030.

**TABLE 2B-7
CABLE SPLICER APPRENTICE PIPELINE ANALYSIS**

Line No.	Cable Splicers	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	9	15%	2	11
2	Journey ^(a)	52	85%	9	61
3	Total	61	100%	11	72
4	Ratio	6:1			6:1

(a) Includes all journey workers in the line of progression that have completed the cable splicer apprenticeship.

This pipeline analysis focuses solely on staffing needs based on the forecast of future work proposed in the 2027 GRC. PG&E also has a letter agreement with IBEW to commit to fill no less than six Apprentice Cable Splicer positions in 2025, and if specific training curriculums are completed by late 2025, to also fill no less than six positions in 2026 and 2027.

3. Electrician Apprenticeships

Electricians have the skills and training necessary to inspect and maintain electrical equipment including but not limited to, power transformers, instrument and control transformers, circuit breakers,

disconnect switches, relays, and ancillary control systems. This training requires 8 six-month modules, totaling 4 years. The CBA requires a 1:1 apprentice electrician to journey worker Training Labor Ratio.

PG&E's future staffing needs forecast in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of electricians in the apprenticeship program by 20 positions between 2025-2030. Based on PG&E's existing workforce, there is overall sufficient journey workers to meet the electrician Training Program Ratio, as there are currently 4 electrician journey workers per apprentice. This means PG&E can continue to scale its apprentice pipeline based on the current percentage of journey worker electricians in the workforce (81 percent). Using these assumptions, PG&E would need 84 apprentice electricians in the training pipeline by 2030 to sustain future workforce needs, accounting for 64 current apprentices as of March 2025 and then adding 20 positions by 2030.

**TABLE 2B-8
ELECTRICIAN APPRENTICE PIPELINE ANALYSIS**

Line No.	Electric	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	64	19%	20	84
2	Journey ^(a)	270	81%	84	354
3	Total	334	100%	104	438
4	Ratio	4:1			4:1

(a) Includes all journey workers in the line of progression that have completed the electrician apprenticeship.

4. Electric Technician Apprenticeship

Electric technicians are responsible for performing work involving an extremely high degree of complexity, including troubleshooting, repairing, calibrating, and maintaining components of protective relay systems; substation and electric utility protection systems; station automation and supervisory control and data acquisition (SCADA) systems. Electric Technicians must first complete the Electrician Apprenticeship. Thereafter, the coworker is eligible to complete the Electric Technician Apprenticeship

The Electric Technician apprenticeship is 5 six-month modules, totaling 2.5 years. The CBA also requires a 1:1 apprentice electrician tech to journey worker Training Labor Ratio.

PG&E's future staffing needs forecast in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of Electric Technicians in the apprenticeship program by two positions between 2025-2030. Based on PG&E's existing workforce, there is overall sufficient journey workers to meet the electric technician Training Program Ratio, as there are currently 3 electrician journey workers per apprentice. This means PG&E can continue to scale its apprentice pipeline based on the current percentage of journey worker electric technicians in the workforce (73 percent). Using these assumptions, PG&E would need 24 apprentice electric technicians in the training pipeline by 2030 to sustain future workforce needs, accounting for 22 current apprentices as of March 2025 and then adding 2 positions by 2030.

**TABLE 2B-9
ELECTRIC TECHNICIAN APPRENTICE PIPELINE ANALYSIS**

Line No.	Electric Technicians	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	22	27%	2	24
2	Journey ^(a)	59	73%	5	64
3	Total	81	100%	7	88
4	Ratio	3:1			3:1

(a) Includes all journey workers in the line of progression that have completed the electric technician apprenticeship.

5. Distribution System Operator Apprenticeship

Distribution system operators are responsible for monitoring and controlling the distribution system, including shifting loads to accommodate maintenance work or respond to emergencies, issue clearances, and promptly restore service. This training requires 5 six-month modules, totaling 2.5 years. The CBA requires a 1:1 apprentice distribution system operator to distribution system operator Training Labor Ratio, until an apprentice has the proficiency to perform duties without supervision.

PG&E's future staffing needs forecast in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of distribution system operators in the apprenticeship program by 4 positions between 2025-2030. Based on PG&E's existing workforce, there is overall sufficient system operators to meet the Training Program Ratio, as there are currently 6 distribution system operator journey workers per apprentice. This means PG&E can continue to scale its apprentice pipeline based on the current percentage of journey workers in the workforce (85 percent). Using these assumptions, PG&E would need 40 apprentice Distribution System Operators in the training pipeline by 2030 to sustain future workforce needs, accounting for 36 current apprentices as of March 2025 and then adding 4 positions by 2030.

**TABLE 2B-10
DISTRIBUTION SYSTEM OPERATOR APPRENTICE PIPELINE ANALYSIS**

Line No.	System Operators	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	36	15%	4	40
2	Journey ^(a)	199	85%	20	219
3	Total	235	100%	24	259
4	Ratio	6:1			6:1

(a) Includes all journey workers in the line of progression that have completed metering system technician apprenticeship.

6. Metering System Technician Apprenticeship

Metering System Technicians install, program, test, calibrate, troubleshoot, and repair all types of electric/electronic circuits, components and devices related to billing measurement. This training includes 6 six-month modules, totaling 3 years. The CBA does not require a specific Training Labor Ratio, as apprentices may work alone or under indirect supervision on jobs for which the employee has been trained and instructed.

PG&E's future staffing needs forecast in Section E indicates that to scale PG&E's workforce based on forecasted work, PG&E must increase the number of Metering System Technicians in the apprenticeship program by 1 position between 2025-2030. Since there is no Training Program Ratio

for this apprenticeship, PG&E can continue to scale its apprentice pipeline based on the current percentage of journey workers in the workforce (91 percent). Using these assumptions, PG&E would need 26 apprentice Metering System Technicians in the training pipeline by 2030 to sustain future workforce needs, accounting for 25 current apprentices as of March 2025 and then adding 1 position by 2030.

TABLE 2B-11
METERING SYSTEM TECHNICIAN APPRENTICE PIPELINE ANALYSIS

Line No.	Metering System Tech.	YTD Actuals	Percent of total FTE's	Increase	2030 Total Fcst
1	Apprentice	25	9%	1	26
2	Journey ^(a)	261	91%	11	272
3	Total	286	100%	12	298
4	Ratio	10:1			10:1

(a) Includes all journey workers in the line of progression that have completed metering system technician apprenticeship.

G. Conclusion

Regardless of the ultimate volume and type of work that is approved in the 2027 GRC, PG&E expects continued demand for electric distribution work and a need to increase its staffing levels, including apprenticeships. The order of magnitude for increasing certain job types will be determined at the appropriate time taking into consideration local work demand, local staffing levels, and financial investment plans.

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
APPENDIX 1
JOB TITLES BY JOB GROUPING

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
APPENDIX 1
JOB TITLES BY JOB GROUPING

Associate Distribution Engineers

Assoc Disbn Engineer Local Electric
 Assoc Disbn Engineer Local Gas
 Assoc Dsbn Engr - Elec - Provisional

Assoc Dsbn Engr - Gas - Provisional
 Associate Distribution Engineer - Elec
 Associate Distribution Engineer - Gas

Analysts/Specialists

(Nuc) Procurement Specialist - ESC
 (Nuc) Procurement Specialist - ESC, Sr
 (Nuc) Procurement Specialist, Sr. Adv
 (Nuc) Procuremnt Tech Speclst, Sr Advsnng
 Asset & Maintenance Planner
 Asset & Maintenance Planner, Senior
 Asset Management Specialist, Principal
 ATS Technical Specialist, Expert
 ATS Technical Specialist, Senior
 Aviation Operations Specialist, Expert
 Aviation Operations Specialist, Senior
 Business Analyst
 Business Analyst, Expert
 Business Analyst, Principal
 Business Analyst, Senior
 Business Operations Specialist, Expert
 Business Performance Analyst, Expert
 Business Performance Analyst, Senior
 Business Process Analyst
 Business Process Analyst, Expert
 Business System Specialist
 Business System Specialist, Associate
 Business System Specialist, Expert
 Business System Specialist, Senior
 Category Leader, Expert
 Category Leader, Principal
 Category Leader, Senior
 Compliance & Risk Consultant
 Compliance & Risk Consultant, Expert
 Compliance & Risk Consultant, Principal
 Compliance & Risk Consultant, Senior
 Compliance Data Analyst, Expert
 Construction Manager
 Construction Manager, Expert
 Construction Manager, Principal
 Construction Manager, Senior
 Contract Lifecycle Manager
 Contract Lifecycle Manager, Senior
 Contract Pricing Analyst, Expert

Contract Specialist
 Contract Specialist, Expert
 Contract Specialist, Senior
 Corrosion Specialist, Expert
 CRE Business Partner, Principal
 CRE Program Manager, Principal
 Cultural Resource Specialist
 Cultural Resource Specialist, Senior
 Cultural Resource Speclst, Sr Cnsltng-ESC
 Cust Care Information Sys Analyst, Prn
 Cust Care Operations Specialist
 Cust Care Operations Specialist, Senior
 Data Engineer, Expert
 Data Scientist, Senior
 Data Steward
 Database Analyst, Expert
 DCPH HH Procurement Specialist
 Distrib Training & Simulation Spec, Sr
 EGI Account Representative - ESC
 EGI Business Analyst - ESC, Sr
 EGI Contract Manager - ESC
 EGI Interconnection Manager - ESC, Asc
 Electric Compliance Specialist, Expert
 Electric Compliance Specialist, Prn
 Electric Construction Specialist, Expert
 Electric Construction Specialist, Senior
 Electric Program Manager, Expert
 Electric Program Manager, Principal
 Electric Program Manager, Senior
 Electric Quality Control Specialist, Exp
 Electric Quality Control Specialist, Sr
 Energy Diversion Investigator
 Energy Diversion Specialist
 Energy Mgmt System Specialist
 Facilities Planner, Senior
 Facilities Program Manager, Principal
 Fleet IS Specialist, Senior
 FMO Resource Analyst, Expert
 Gas Program Manager, Principal

GIS Analyst
 GIS Analyst, Senior
 HH EGI Account Representative - ESC
 HH EGI Interconnection Mgr - ESC
 HH EGI Interconnection Mgr - ESC, Asc
 HH EGI Interconnection Mgr - ESC, Sr
 Hiring Hall Scheduler in Training - ESC
 Inspection Review Specialist, Expert
 Inspection Review Specialist, Senior
 Insulation Tester
 Intern
 Investment Recovery Specialist, Expert
 Investment Recovery Specialist, Senior
 ISO/FERC Regulatory Analyst, Principal
 Land Planning Analyst - ESC
 Lean Specialist, Expert
 Metering Project Specialist, Expert
 Metering Project Specialist, Senior
 Not assigned
 Operations Data Analyst, Expert
 Operations Data Analyst, Principal
 Operations Data Analyst, Senior
 Operations Performance Manager
 Operations Performance Manager, Expert
 Operations Performance Manager, Prn
 Operations Performance Manager, Senior
 Permit Facilitator, Career - ESC
 PIO Information Systems Analyst, Sr-ESC
 Product Manager
 Product Manager, Principal
 Product Manager, Senior
 Product Owner, Principal
 Program Manager
 Program Manager, Expert
 Program Manager, Principal
 Program Manager, Senior
 Project Architect-GOLD CIRCLE
 Project Management Anlst-Env-ESC, Sr
 Project Surveyor
 Protection Specialist, Expert
 Protection Specialist, Principal
 Quality & Improvement Specialist
 Quality and Improvement Specialist, Sr
 Quality Assurance Auditor, Exp
 Quality Assurance Auditor, Sr
 Real Estate Technical Specialist II
 Real Estate Transaction Specialist, Exp

Regulatory Analyst
 Regulatory Analyst, Expert
 Regulatory Analyst, Principal
 Regulatory Analyst, Senior
 Rental and Pool Administrator, Senior
 Risk & Compliance Analyst, Expert
 Rotational Development Program Trainee
 Safety Program Manager, Principal
 Safety Specialist, Expert
 SCADA Specialist
 SCADA Specialist, Expert
 SCADA Specialist, Senior
 Scheduler - ESC
 Scheduler in Training - ESC
 Senior Land Technical Specialist
 Service Solutions Specialist, Senior
 Site Operations Manager, Principal
 Site Operations Manager, Senior
 Sr Mapping Tech-Elec Pass Expert Test
 Strategic Analyst
 Strategic Analyst, Expert
 Strategic Analyst, Principal
 Substation Test Specialist
 Substation Test Specialist, Assoc
 Substation Test Specialist, Senior
 Supervisor, Vegetation Management Ops
 Supplier Responsibility, Expert
 Supplier Responsibility, Principal
 Supply Chain Program Consultant, Expert
 Supply Chain Program Consultant, Senior
 Technical Assistant, Specialist
 Technical Remediation Cslt, Principal
 Technical Specialist I
 Technical Specialist II
 Technical Writer, Expert
 Training & Simulation Specialist, Expert
 Training & Simulation Specialist, Senior
 Transmission Planning Eng, Sr Advsn-ESC
 Transmission Training Specialist, Prn
 Vegetation Program Manager
 Vegetation Program Manager, Senior
 Work & Resource Analyst, Principal
 Work & Resource Analyst, Senior
 Work Methods & Procedures Specst, Exp
 Work Plan Portfolio Specialist, Prn
 Workstream Program Specialist, Expert
 Workstream Program Specialist, Senior

Apprentice

Appr Cable Splicer Hired after 1-1-15
Appr Cable Splicer-GC Hired after 1-1-15
Apprentice Electrical Technician
Apprentice Electrical Technician - GC
Apprentice Electrician - GC
Apprentice Electrician-Electric & Hydro

Apprentice Line Worker
Apprentice Line Worker - GC
Apprentice Line Worker - Transmission
Apprentice Metering System Technician
Apprentice System Operator

Cable Splicer

Cable Splicer
Cable Splicer - GC
Cable Splicer - GC - SF/PN/DA/SJ
Cable Splicer - SF/PN/DA/SJ

Night Cable Splicer - SF/PN/DA/SJ
Transmission Underground Troubleshooter
Unassigned Cable Splicer
Unassigned Cable Splicer - SF/PN/DA/SJ

Clerical

Accounting Clerk
Administrative Clerk, Senior
Director's Assistant
First Field Clerk
Hiring Hall Operating Clerk - Exper
Hiring Hall Operating Clerk - Inexp
Hiring Hall Reprographics Opr B - Inexp
Hiring Hall Routine Field Clerk - Inexp
Operating Clerk

Operating Clerk-Typist
Parts Clerk
Reprographics Oper (1/1/2023 and After)
Reprographics Oper (Before 1/1/2023)
Routine Field Clerk
Senior Accounting Clerk I
Senior Operating Clerk I
Senior Operating Clerk I-II

Coordinators

M&C Coordinator - Electric
M&C Coordinator - Electric - SF/PN/DA/SJ
M&C Coordinator - Electric Transmission
M&C Coordinator - ElecTrnsmn-
SF/PN/DA/SJ

New Business Liaison-Elec Crew Fmn(PIO)
New Business Liaison-Electric
New Business Liaison-Lineworker (PIO)
Transmission Outage Coordinator

Craft Worker

AWS Certified Welder
Building Technician
Certified Welder
Critical Facilities Lead
Critical Facility Technician
Fieldperson - Tower
HH Night Electric T&D Assist - Inexp
Hiring Hall Machinist-Experienced
Hiring Hall Painter B - Inexperienced
Lead Carpenter
Lead Driver

Machine Shop Leader
Machinist
Night Electric Transm & Dsbn Assistant
Painter - Materials Distribution
Painter A - GC Field
Painter B - GC Field
Painter-Utility Worker
PIO Electric Transm & Dsbn Assistant
Street Light Maintenance Person (PIO)
Towerperson
Truck Driver Light - Materials

Crew Leader

Building Crew Leader
Cable Crew Leader
Cable Crew Leader - SF/PN/DA/SJ
Electric Crew Leader
Electric Crew Leader - SF/PN/DA/SJ
Electric Crew Leader - Transmission
Electric Crew Leader, Service
Electric Crew Leader-Trnsmn-SF/PN/DA/SJ
Electric Maintenance Crew Leader
Garage Crew Lead
Garage Crew Lead - DCP
Garage Working Leader
GC Crew Lead A - GC Station
GC Crew Lead A - Overhead
GC Crew Lead A - Underground
GC Crew Lead B
GC Crew Lead B I&C

GC Crew Leader A - Overhead-SF/PN/DA/SJ
GC Crew Leader A - UG - SF/PN/DA/SJ
Lead Electrical Technician
Materials Handler -Hired before 2009
Metering Technician Crew Leader
Night Cable Crew Leader
Night Cable Crew Leader - SF/PN/DA/SJ
Underground Constr Crew Leader-Electric
Working Leader (PIO)
Working Leader A - Non-Climbing
Working Leader B - GC Station
Working Leader B I&C (Non-Climbing)
Working Leader B-Crane Surveyor
Working Leader C
Working Leader D
Working Leader-Gas GC

Dispatcher

Sr. System Dispatcher (PIO)
System Dispatcher
System Dispatcher (PIO)
W&R Dispatcher - Electric
W&R Dispatcher - Metering

W&R Dispatcher in Training - Metering
W&R Dispatcher-in-Training - Electric
W&R Relief Dispatcher - Electric
W&R Relief Dispatcher Metering

Electric Line Assistant

Electric Line Assistant-Electric T&D

HH Electric Line Assistant - Inexp

Electricians

Electric Shop Leader
Electrician
Electrician - Electric & Hydro
Electrician - GC

Electrician - Switching
Hiring Hall Electrician - Exper
Traveling Electric Shop Leader
Unassigned Electrician - Elec & Hydro

Engineer

ATS Engineer
ATS Engineer, Associate
ATS Engineer, Expert
ATS Engineer, Principal
ATS Engineer, Senior
Automation Engineer, Principal-ESC
Automation Engineer, Senior Advising-ESC
Automation Engineer, Senior-ESC
Automation Engineer, Sr Consulting-ESC
Automation Engineer-ESC
Civil Engineer, Principal
Civil Engineer-Prj Engg
Civil Engineer-Prj Engg, Senior
Civil Engineer-Prj Engg, Sr-GOLD CIRCLE
Civil Engineer-Prj Engg-GOLD CIRCLE

Civil Engr-Prj Engg, Sr Cnsltng-GOLD CIR
Corrosion Engineer
Corrosion Engineer, Expert
Corrosion Engineer, Principal
Design Drafter
Design Engineer
Drafter
EGI Interconnection Manager - ESC
EGI Interconnection Manager - ESC, Sr
Elec Distribution Ops Engineer
Elec Distribution Ops Engineer, Asc
Elec Distribution Ops Engineer, Senior
Elec Distribution Ops Engineer-GOLD CIR
Elec Distributn Ops Engr,Senior-GOLD CIR
Elec Stds and Strategy Engineer

Elec Stds and Strategy Engineer, Asc
 Elec Stds and Strategy Engineer, Sr
 Elec Stds and Strategy Engr, Sr. Adv
 Elec Stds and Strategy Engr, Sr. Cnslt
 Elec Stds and Strgy Eng, SrAdv-GLD CIR
 Elec Stds and Strgy Eng, SrCnslt-GLD CIR
 Elec Stds and Strgy Engr, Sr-GOLD CIR
 Electrc Engr-Prj Engg, Sr Cnsltng-GLDCIR
 Electric Distribution Engineer
 Electric Distribution Engineer, Asc
 Electric Distribution Engineer, Senior
 Electric Distribution Engineer, Sr Clt
 Electric Distribution Engineer, Sr. Adv
 Electric Distribution Engineer-GOLD CIR
 Electric Engineer, Principal
 Electrical Engr-Prj Engg, Sr
 Electrical Engr-Prj Engg, Sr Cnsltng
 EMS Operations Systems Engineer
 EMS Operations Systems Engineer, Assoc
 EMS Operations Systems Engineer, Senior
 EMS Operations Systems Engineer, Sr Adv
 EMS Ops Systems Integ Engineer
 EMS Ops Systems Integ Engineer, Sr
 EMS SCADA Engineer
 EMS SCADA Engineer, Senior
 Engineering Assistant I
 Engineering Assistant II
 Engineer-Prj Engg, Asc
 Field Engineer - ESC
 Field Engineering Technician
 Fleet Analyst, Senior
 Fleet Engineer
 Fleet Engineer, Expert
 Fleet Engineer, Senior
 Gas Transmission Engineer, Expert
 GIS Application Engineer
 Grid Innovation Engineer
 Grid Innovation Engineer, Expert
 Grid Innovation Engineer, Principal
 Grid Innovation Engineer, Senior
 Hiring Hall Design Drafter
 Hiring Hall Field Engineer - ESC
 Industrial Power Engineer
 Maintenance & Constr Engr
 Maintenance & Constr Engr, Sr
 Maintnce & Constr Engr, Sr-GOLD CIR
 Maintnce & Constr Engr, Sr Advsg-GLD CIR
 Maintnce & Constr Engr-GOLD CIRCLE

Operations Systems Engineer
 Operations Systems Engineer, Associate
 Operations Systems Engineer, Expert
 Operations Systems Engineer, Principal
 Operations Systems Engineer, Senior
 Power Quality Engineer, Associate-ESC
 Power Quality Engineer, Senior-ESC
 Power Quality Engineer-ESC
 Power Quality Engr, Sr Consulting-ESC
 Protection Engineer
 Protection Engineer - GOLD CIRCLE
 Protection Engineer, Asc
 Protection Engineer, Sr
 Protection Engineer, Sr - GOLD CIRCLE
 Protection Engineer, Sr Cnsltng
 Protection Engr, Sr Cnsltng-GOLD CIRCLE
 RAS Operations Engineer
 RAS Operations Engineer, Associate
 RAS Operations Engineer, Expert
 RAS Operations Engineer, Senior
 RAS Operations Engineer, Senior Advising
 Senior Design Drafter
 Senior Design Engineer
 Senior Engineering Assistant
 Senior Field Engineering Technician
 Sr Engg Est Permit Facilitator - E (PIO)
 Substation Engineer-Prj Engg
 Substation Engineer-Prj Engg, Asc
 Substation Engineer-Prj Engg, Sr
 Substation Engineer-Prj Engg-GOLD CIRCLE
 Substation Engr-Prj Engg, Sr-GOLD CIR
 Supervisor, Operations Systems
 System Protection Engr, Expert (500kv)
 System Protection Engr, Principal
 Transm Line Engineer-Prj Engg
 Transm Line Engineer-Prj Engg, Asc
 Transm Line Engineer-Prj Engg, Sr
 Transm Line Engineer-Prj Engg-GOLD CIR
 Transm Line Engr-Prj Engg, Sr-GOLD CIR
 Transmission Operations Engineer - ESC
 Transmission Ops Engineer, Asc - ESC
 Transmission Ops Engineer, Sr - ESC
 Transmission Ops Engineer, Sr Adv - ESC
 Transmission Ops Engineer, Sr Cslt - ESC
 Transmission Planning Engineer, Asc-ESC
 Transmission Planning Engineer, Sr-ESC
 Transmission Planning Engineer-ESC
 Transmission Planning Engineer, Sr Cslt-ESC

Equipment Operator

Backhoe Operator - Gas
Construction Operator-GC Gas
Crane Operator - GC Field-Not Gas
Miscellaneous Equipment Operator-Not Gas

Senior Construction Operator-GC Gas
Tractor Operator-Not Gas
Transm & Dsbn Equipment Opr - Transm
Transmission & Distribution Equip Opr

Estimator

Engineering Estimator - E, Local
Engineering Estimator - Electric
Engineering Estimator - Gas
Hiring Hall Engg Estimator - Electric
Hiring Hall Engineer Estimator - Elec
Hiring Hall Senior Eng Estimator-E,Local
Senior Engineering Estimator - Electric

Senior Engineering Estimator - Gas
Senior Engineering Estimator ADE - Elec
Senior Engineering Estimator ADE - Gas
Senior Engineering Estimator-E, Local
Senior Engineering Estimator-E, Local PT
Senior Engineering Estimator-G, Local

Field Technician

Distribution Line Technician
Distribution Line Technician-SF/PN/DA/SJ
Electrical Technician
Electrical Technician - GC
HH Routine Meter Person - Experience
Hiring Hall Installer Meter Reader-Exper
Hiring Hall Installer Meter Reader-Inexp
Lead Electrical Technician-GC
Meter Maintenance Person

Metering Electronics Technician
Metering Systems Technician
PIO Electric Field Meterperson
PIO Lead Electrical Technician
PIO Routine Meter Person
PIO Unassigned Electrical Technician
Unassigned Electrical Technician
Unassigned Metering Systems Technician

Inspectors

Civil Construction Inspector
Compliance Inspector
Compliance Inspector - SF/PN/DA/SJ
Compliance Inspector UG - SF/PN/DA/SJ
Construction Inspector
Crane Surveyor
Crane Surveyor in Training
HH Line Construction Inspector - GC
Hiring Hall Compliance Inspector
Lead Contractor Inspector - GC
Lead Contractor Inspector-GC-SF/PN/DA/SJ

Lead Inspector
Lead Pipeline Inspector-CWI
Mechanical Inspector
Not assigned
PIO Inspector
Pipeline Inspector CWI
Pre-Utility Inspector
Transmission Construction Inspector, Sr
Utility Construction Inspector
Utility Inspector-Underground
Vegetation Operations Inspector

Land and Environment

Chief of Party
Consulting Environmental Field Spec, Sr
Environmental and Safety Compliance, Exp
Environmental Field Specialist
Environmental Field Specialist, Senior
Environmental Policy Specialist, Expert
Environmental Policy Specialist, Prn
HH Environmental Fld Specialist, Sr-Exp
Land Agent
Land Agent, Principal

Land Consultant - Surveying, Expert
Land Consultant-EP&P, Principal
Land Consultant-Land Acquisition, Expert
Land Consultant-Land Acquisition, Prn
Land Consultant-Land Acquisition, Senior
Land Consultant-Property Management
Land Consultant-Property Management, Prn
Land Consultant-Property Mgmt, Expert
Land Consultant-Property Mgmt, Sr
Land Planner

Land Planner, Principal
Land Planner, Senior
Land Surveyor, Principal
Land Surveyor, Senior
Land Technician
Lead Land Technician

Leadership

Dir, Vegetation Mgmt Quality Control
Director, Applied Technology Services
Director, Compliance
Director, Electric Engineering Services
Director, Electric Program Management
Director, Performance Improvement
Director, Service Planning & Design
Director, Transmission Grid Operations
Director, Transmission Ops Support
Manager, ADMS
Manager, Applied Technology Services
Manager, ATS Quality and Improvement
Manager, Business Analysis
Manager, Construction Management
Manager, Elec. Transmission Planning
Manager, Electric Compliance
Manager, Electric Distribution Planning
Manager, Electric Program Management
Manager, Electric Project Management
Manager, Environmental
Manager, Environmental Programs
Manager, Facilities
Manager, Government Relations
Manager, Grid Innovation Engineering
Manager, Grid Operations
Manager, Maintenance & Construction
Manager, Materials
Manager, Nuclear Supply Chain
Manager, Operations Systems
Manager, Product Management
Manager, Regional Fleet Operations
Manager, Remediation

Line Worker

Hiring Hall Line Worker - Division
Hiring Hall Line Worker Rubber Glov-Div
Line Worker
Line Worker - GC
Line Worker - GC - SF/PN/DA/SJ
Line Worker - SF/PN/DA/SJ

Principal Right-of-Way Agent
Right of Way Agent
Senior Land Agent
Senior Land Technician
Senior Right of Way Agent
Traffic Control Design Specialist

Manager, Sourcing Portfolio
Manager, Substation Design & Technology
Manager, Supplier Diversity
Manager, System Protection Engineering
Manager, Transmission Training
Manager, Vegetation Management Ops
Mgr, Elec. Trans Asset Development
Mgr, Strategy, Innovatn and Partnership
Program Manager, Chief
Senior Director, Corporate Real Estate
Senior Manager, Business Finance
Senior Manager, Business Systems
Senior Manager, Corporate Sustainability
Senior Manager, CRE Program
Management
Senior Manager, Operations Systems
Senior Manager, Remediation
Senior Manager, Sourcing Portfolio
Sr Dir, Cust Experience & Reg Strategy
Sr Dir, Electric Engineering Services
Sr Manager, Applied Technology Services
Sr Manager, Electric Compliance
Sr Manager, Electric Program Management
Sr Manager, Grid Innovation Engineering
Sr Manager, LCE Planning and Operations
Sr Manager, Product Management
Sr Manager, Regulatory Proceedings
Sr Mgr, Elec. Transmission Planning
Sr Mgr, Electric Project Management
Sr Mgr, Strat, Innovatn and Partnership
Sr Mgr, Substation Automation & SCADA
Strategic Analyst, Chief

Line Worker - Transmission
Line Worker - Transmission - SF/PN/DA/SJ
Line Worker, Service
Not assigned
Unassigned Line Worker
Unassigned Line Worker - SF/PN/DA/SJ

Materials Worker

HH Materials Handler 2009 or Later-Exp
HH Materials Handler 2009 or Later-Inexp
Hiring Hall Materials Handler - GC - Exp
Hiring Hall Materials Handler - GC - Inx
Materials Distribution Flow Coord, Sr

Materials Handler - GC
Materials Handler - Hired 2009 or Later
Materials Leadperson
Outage Materials Handler

Mechanic

Building Mechanic
Equipment Mechanic
Equipment Mechanic - DCP
Equipment Mechanic - GC
Field Garage Mechanic A

Field Garage Mechanic B
Lead Building Mechanic
Station Mechanic
Station Mechanic (PIO)
Utility Equipment Mechanic - Helms

New Business Representative

HH New Business Representative
Hiring Hall Senior New Business Rep
New Business Representative

Not assigned
Senior New Business Representative

Project Manager

Business Project Manager, Expert
Business Project Manager, Principal
Consulting Remediation Project Manager-ES
HH Project Manager, Sr-ESC
IT Project Manager, Expert
IT Project Manager, Senior
Product Manager, Expert
Proj Mgr BSEngr-ESC, Sr Cnsltng-GOLD
CIR
Project Controls Analyst, Expert - ESC
Project Controls Analyst-ESC
Project Controls Analyst-ESC, Sr
Project Manager BSEngr-ESC - GOLD CIR
Project Manager BSEngr-ESC, Asc-GOLD
CIR

Project Manager BSEngr-ESC, Sr-GOLD
CIR
Project Manager ESC, Asc -GOLD CIRCLE
Project Manager ESC, Sr-GOLD CIRCLE
Project Manager ESC-GOLD CIRCLE
Project Manager, Asc-ESC
Project Manager, Sr-ESC
Project Manager-ESC
Project Mgr ESC, Sr Cnsltng-GOLD
CIRCLE
Remediation Project Manager-ESC
Remediation Project Manager-ESC, Senior
Technical Project Manager, Expert
Technical Project Manager, Senior

Safety and Security

Field Safety Specialist, Expert

Scientists

Aquatic Biologist, Senior - ESC
Chemist, Expert
Chemist, Senior
Consulting Scientist-ESC, Sr
Environmental Scientist - ESC

Environmental Scientist, Senior - ESC
Environmental Scientist, Sr Cnsltng -ESC
Terrestrial Biologist - ESC
Terrestrial Biologist, Senior - ESC

Service Representative

Senior Service Representative 2

Supervisor- Back Office

Supervisor, Area Fleet Operations
Supervisor, Business Analysis
Supervisor, Dispatch & Scheduling
Supervisor, Elec. Distribution Planning
Supervisor, Elec. Transmission Planning
Supervisor, Electric Compliance
Supervisor, Electric Program Management

Supervisor, Electric Project Management
Supervisor, Fleet Engineering
Supervisor, Operations Support
Supervisor, Performance Improvement
Supervisor, Property Management
Supervisor, Support Services
Supv, Investment Recovery Specialist

Supervisor – Frontline

Supervisor, Applied Technology Services
Supervisor, Automation Engineering
Supervisor, Construction
Supervisor, Corrosion Engineering
Supervisor, EGI Operations
Supervisor, Elec Distribution Ops
Supervisor, Electric Constrctn Engrng
Supervisor, Electric Distribution
Supervisor, Electric M&C Shift
Supervisor, Engineering Services
Supervisor, Environmental
Supervisor, Facilities
Supervisor, Field Metering
Supervisor, Grid Innovation Engineering
Supervisor, Grid Operations
Supervisor, Land Rights

Supervisor, Land Surveying
Supervisor, Maintenance
Supervisor, Materials
Supervisor, Nuclear Materials
Supervisor, Operations Engineering
Supervisor, Power Quality
Supervisor, Protection Support
Supervisor, Public Safety & Regulatory
Supervisor, Restoration Field Ops
Supervisor, SCADA Operations
Supervisor, Service Planning & Design
Supervisor, Substation Test
Supervisor, System Operations & Control
Supervisor, System Protection Engrng
Supv-Superintendent, Materials
Supv-Superintendent, Nuclear Materials

System Operator

Assistant System Operator
Large Format Oper (1/1/2023 and After)

Lead System Operator
System Operator

Technician

Engineering Tech I
Engineering Technician II
Expert Mapping Technician - Electric
Hiring Hall Engineering Technician I
Hiring Hall Insulation Tester
Lead Mapping Tech-Elec Pass Expert Test
Lead Mapping Technician - Electric
Mapping Technician - Electric

PIO Senior Instrument Technician
Prin Mapping Tech-Elec Pass Expert Test
Principal Mapping Technician - Electric
Senior Engineering Technician
Senior Insulation Tester
Senior Mapping Technician - Electric
Senior Mapping Technician I - Electric
Technologist

Troubleshooter

Transmission Troubleshooter
Transmission Troubleshooter-SF/PN/DA/SJ
Trnsmn UG Troubleshooter-SF/PN/DA/SJ
Troubleshooter

Troubleshooter - SF/PN/DA/SJ
Underground Troubleshooter -
SF/PN/DA/SJ

Utility Worker

Hiring Hall Utility Worker - Electric

Hiring Hall Utility Worker- Inexp

Hiring Hall Utility Worker T300 - Exper

Hiring Hall Utility Worker T300 - Inexp

Traveling Utility Worker-Materials

Utility Worker - Elec Mt Dsbn

Utility Worker - Electric Maintenance

Utility Worker - GC

Utility Worker – Tower

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 2

ATTACHMENT B

APPENDIX 2

MWCs IN EACH MWC GROUPING

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 2
ATTACHMENT B
APPENDIX 2
MWCs IN EACH MWC GROUPING

Distribution Projects & Hardening

Capital: 6, 8, 10, 30, 49, 56, 3U

Expense: EW

Distribution Support Services

Capital: 5, 21

Expense: AB, BK, CY, FZ, GE, IG, IS, JV, LJ, OM, OS, WF

Electric Distribution Maintenance

Capital: 7, 2A, 2B, 2C, 2F

Expense: KA, KB, KC

New Business

Capital: 16

Expense: EV

System Inspections & Operations

Capital: 17, 25, 63, 95

Expense: AR, BA, BF, BH, DD, EY, GA, HG, HY, IF, IU

Veg Management

Expense: HN

Transmission & Substation

Capital: 9, 46, 48, 54, 58, 59

Expense: GC, HX

ATTACHMENT A

PG&E BIANNUAL ENERGIZATION DATA SPREADSHEET

Due to the size of this attachment, the public version of this attachment is provided electronically in the form of an Excel spreadsheet, accessible at the location indicated below and will also be filed via mixed media with the Commission's Docket Office.

1. Search Public Case Documents: <https://pgera.azurewebsites.net/Regulation/search>
2. Select "Establish Energization Timelines OIR [R.24-01-018]" from the case dropdown menu
3. Select "PGE" as the party to narrow the search criteria
4. Select date range "09/30/25 to 09/30/25"
5. Click Search