Transmission Project Review (TPR) Process

CPUC Energy Division Staff Comments on Pacific Gas and Electric Company's (PG&E) May 2025 TPR Process Cycle
September 30, 2025

As part of the Transmission Project Review (TPR) Process approved by the California Public Utilities Commission (CPUC) in Resolution E-5252, the Energy Division Staff of the CPUC (CPUC Staff) provide these comments to Pacific Gas and Electric Company (PG&E) on its May 2025 TPR Process cycle.

Introduction

On May 1, 2025, PG&E issued its May 2025 TPR Process Project Spreadsheet, along with numerous project Advance Authorizations (AA) or reauthorized AAs and Business Cases (BC). The May 2025 TPR Process Project Spreadsheet, based on data pulled from PG&E systems on March 11, 2025, included 2,614 discrete projects or programs. Overall, the total capital expenditures reported in May 2025 were largely unchanged from PG&E's November 2024 TPR Project Spreadsheet.

PG&E's transmittal letter noted numerous updates to the Project Spreadsheet in response to Stakeholder feedback, including how it populates the data field indicating the reason for a change in in-service dates and its naming conventions to reflect new project governance documents.[1]

The Project Spreadsheet contains 258 new programs and projects, with 31 being Investment Codes and 227 being Planning Orders.[2] These total $2.97 billion in "Current Projected Total or Actual Final Costs." Twenty-six of the programs and projects, each greater than $20 million in total projected costs, represent $2.1 billion of the total $2.97 billion. CPUC Staff also note PG&E's continued "prioritization" of significant projects beyond the 2029 time frame. CPUC Staff remain concerned about the impact of project delays on system reliability and the interconnection of new generators.

During this TPR Review Period, PG&E provided information on several CAISO competitively-bid projects that are nearing completion (e.g., LS Power Round Mountain), as well as four additional projects to interconnect LS Power projects in Collinsville, Manning, Newark, and Metcalf Substations. CPUC Staff assessed other significant new projects like the North Dublin-Vineyard Reconductoring and PG&E's Electric Grid Modernization Program to understand the timing of PG&E's activities going forward. CPUC Staff also reviewed projects

[1] See PG&E's May 1, 2025 TPR Process Transmittal Letter, pages 2 to 3.
[2] PG&E's May 1, 2025 TPR Process Transmittal Letter, at page 6, indicates there are 238 new projects, but the CPUC's project count includes newly created POs that were previously reported as "Investment Codes" in the new project count.

subject to "prioritization" and conducted more detailed assessments of projects subject to delayed completion.

Summary of the May 2025 TPR Process Project Spreadsheet

Table 1 and Figure 1 show, by Major Work Category (MWC), the actual capital expenditures and percentage of total capital expenditures for work conducted from 2020 to 2024. [3] Transmission MWCs represent more than half of PG&E's capital expenditures from 2020 to 2024 (58.4%), with "Replace Lines, Poles and Structures" and "Line Preventative Work" representing nearly 40% of all actual capital spending in the TPR Project Spreadsheet. In the Substation MWCs, representing 30.2% of the 2020 to 2024 capital expenditures, Station Capacity is the largest at 9.7%. Work Requested by Others (WRO) and IT/Security MWCs represent 6.8% and 6.3% of the actual 2020 to 2024 capital expenditures.

Table 1: Actual Capital Expenditures by Functional Category and MWC ($000) – 2020 to 2024

MWC	MWC Description	No. of Projects 2020 to 2024	2020	2021	2022	2023	2024	Sum of 2020 to 2024	Percentage of 2020 to 2024 Total
Transmission		**704**	**666,870**	**901,303**	**930,721**	**776,355**	**671,977**	**3,947,226**	**54.8**
60	Line Capacity	154	52,232	48,478	120,877	75,379	55,366	352,332	4.9
70	Replace Line Poles and Structures	100	257,047	289,549	311,940	342,256	276,997	1,477,789	20.5
71	Replace Line ROW Access	12	19,910	30,705	24,731	15,174	25,782	116,301	1.6
72	Replace Line Underground	13	5,319	3,765	2,520	1,629	10,286	23,520	0.3
92	Emergency Line Response	37	62,346	151,835	76,819	52,104	36,903	380,007	5.3
93	Line Preventative Work	252	190,324	267,558	311,239	262,550	263,603	1,295,274	18.0
94 (T)	ET Reliability - Transmission	136	79,692	109,413	82,595	27,262	3,040	302,003	4.2
Substation		**971**	**422,108**	**490,013**	**472,163**	**356,182**	**434,968**	**2,175,434**	**30.2**
61	Station Capacity	261	149,470	121,646	108,868	132,959	187,618	700,562	9.7
64	Replace Substation Breakers	55	22,676	17,427	16,867	5,927	8,504	71,400	1.0
65	Replace Substation Equipment - Emergency	95	30,859	63,189	45,150	49,859	44,818	233,875	3.2
66 (Sub)	Replace Substation Other Equipment	39	35,503	39,214	34,517	5,669	5,131	120,035	1.7
67	Electric System Automation	136	36,553	52,505	53,078	51,657	79,185	272,978	3.8
68	Replace Substation Transformers	31	37,726	61,439	59,332	27,203	9,230	194,930	2.7
94 (Sub)	ET Reliability - Substation	58	59,222	101,101	102,285	48,888	70,848	382,343	5.3
3F	System Protection	296	50,099	33,493	52,065	34,020	29,634	199,311	2.8
IT/Security		**201**	**89,212**	**84,119**	**74,389**	**84,447**	**124,620**	**456,787**	**6.3**
2F	IT Infrastructure and Technology	64	37,221	33,454	40,153	29,491	48,938	189,257	2.6
3N	Security	15	6,098	17,242	10,412	14,540	22,575	70,867	1.0
63	Electric Systems Operations	70	26,766	21,370	16,253	38,701	43,990	147,080	2.0
66 (Sec)	Replace Substation Other Equipment	52	19,127	12,052	7,571	1,715	9,116	49,583	0.7
Other		**20**	**23,673**	**24,949**	**59,467**	**15,052**	**8,617**	**131,758**	**1.8**
5	Tools	4	4,956	5,360	5,189	4,050	5,219	24,774	0.3
12	Environmental	2	835	410	204	190	416	2,054	0.0
21	Operations Support	9	10,254	9,155	14,628	5,456	2,456	41,948	0.6
23	Manage Buildings	5	7,628	10,025	39,447	5,356	526	62,982	0.9
3R*	Battery	NA	NA	NA	NA	NA	NA	-	-
Work Requested by Others		**415**	**56,339**	**26,450**	**91,024**	**136,771**	**177,922**	**488,507**	**6.8**
82	Work Requested by Others	415	56,339	26,450	91,024	136,771	177,922	488,507	6.8
	Total	**2,311**	**1,258,202**	**1,526,834**	**1,627,764**	**1,368,807**	**1,418,103**	**7,199,711**	**100.0**

[3] Both Figure 1 and Figure 2 reflect smaller MWCs as "Remaining Nine MWCs." These MWCs are primarily in the "Other" category.

Figure 1:

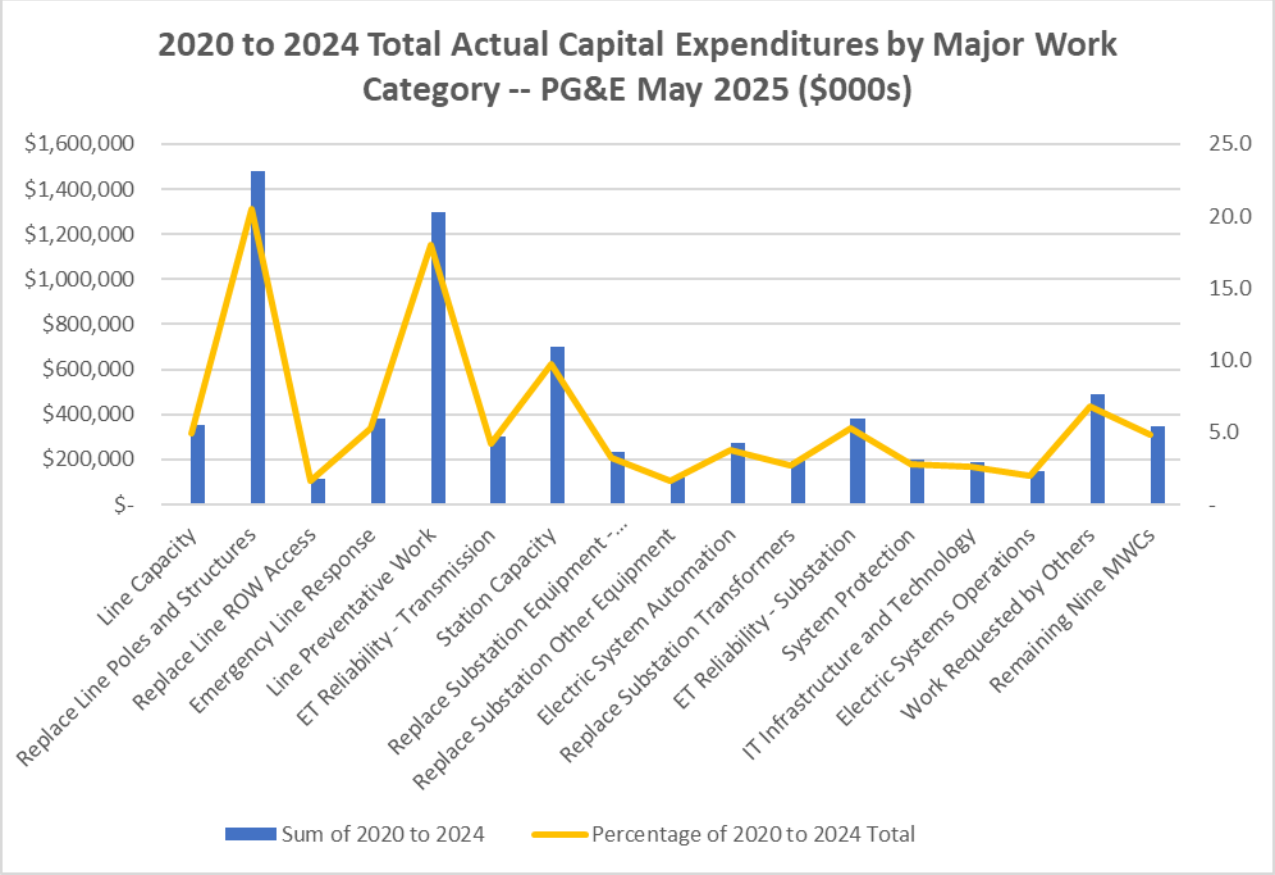


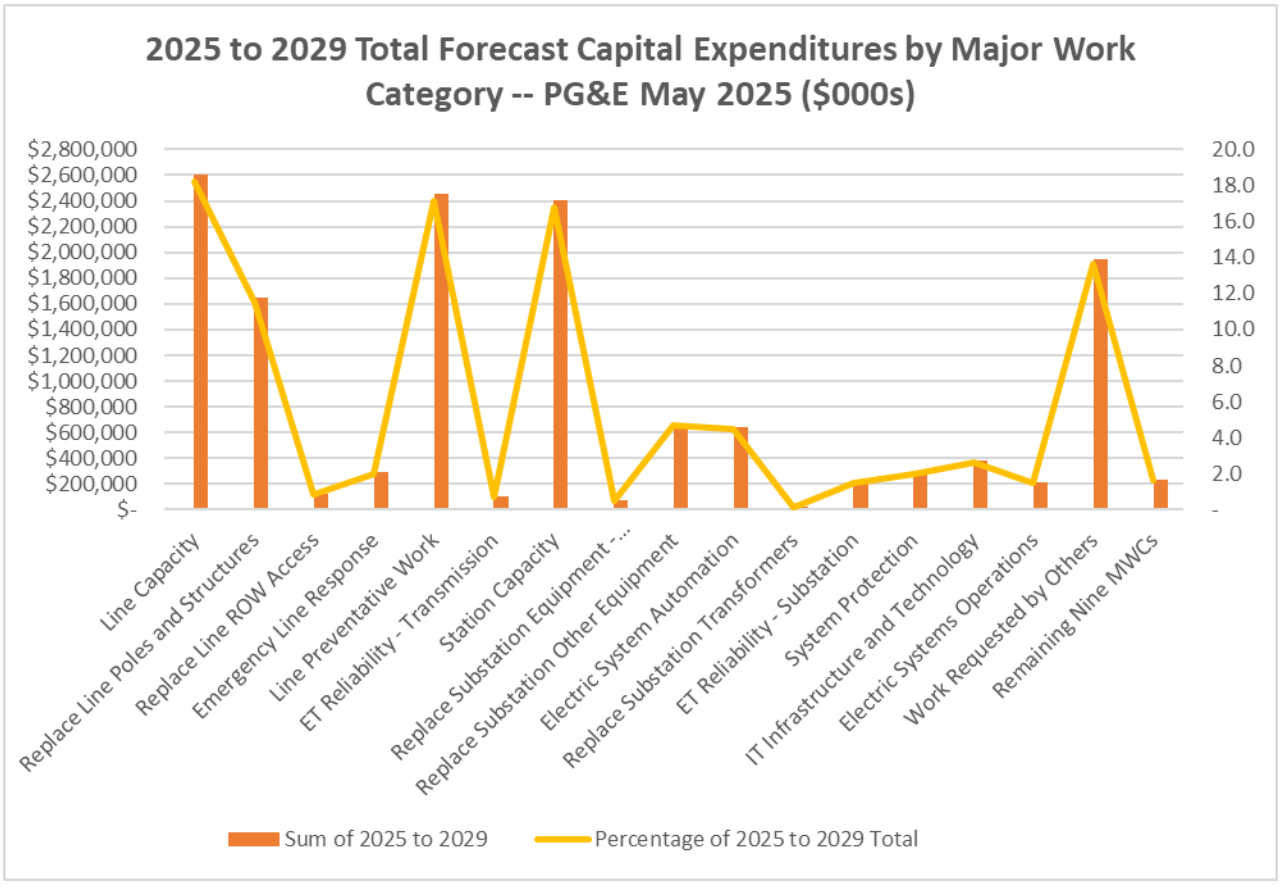
Table 2 and Figure 2 show, by Functional Category and MWC, the capital expenditures and percentage of the total capital expenditures for forecast work to be conducted from 2025 to 2029. [4]

[4] While 2025 information is reported in the "Forecast," a portion of 2025's capital expenditures are based on actuals for the January to March 2025 period.

Table 2: Forecast Expenditures by Functional Category and MWC

MWC	MWC Description	No. of Projects 2025 to 2029	2025	2026	2027	2028	2029	Sum of 2025 to 2029	Percentage of 2025 to 2029 Total
Transmission		**524**	**716,981**	**1,060,652**	**1,556,014**	**1,976,025**	**1,973,496**	**7,283,169**	**50.9**
60	Line Capacity	153	111,298	318,721	715,603	881,048	579,455	2,606,125	18.2
70	Replace Line Poles and Structures	97	302,790	248,593	290,192	351,461	456,694	1,649,730	11.5
71	Replace Line ROW Access	8	28,252	20,294	30,088	25,574	16,574	120,781	0.8
72	Replace Line Underground	15	10,555	11,551	6,275	4,167	27,199	59,747	0.4
92	Emergency Line Response	19	44,794	63,007	60,426	60,426	60,774	289,426	2.0
93	Line Preventative Work	181	190,487	374,856	451,765	653,350	782,141	2,452,599	17.1
94 (T)	ET Reliability - Transmission	51	28,806	23,631	1,665	-	50,659	104,761	0.7
Substation		**634**	**628,289**	**878,362**	**1,032,917**	**928,539**	**900,626**	**4,368,733**	**30.5**
61	Station Capacity	231	325,069	591,124	573,589	501,616	409,952	2,401,349	16.8
64	Replace Substation Breakers	41	14,783	12,325	14,791	16,231	16,962	75,091	0.5
65	Replace Substation Equipment - Emergency	53	72,769	86,661	159,910	147,766	208,574	675,680	4.7
66 (Sub)	Replace Substation Other Equipment	23	5,987	748	15,000	15,000	15,000	51,735	0.4
67	Electric System Automation	128	118,891	149,105	152,974	119,126	102,898	642,994	4.5
68	Replace Substation Transformers	18	3,196	3,022	4,600	4,600	5,500	20,918	0.1
94 (Sub)	ET Reliability - Substation	30	36,028	8,907	47,547	59,702	64,058	216,242	1.5
3F	System Protection	110	51,567	26,471	64,505	64,500	77,681	284,724	2.0
IT/Security		**114**	**116,486**	**102,342**	**147,851**	**145,900**	**144,600**	**657,179**	**4.6**
2F	IT Infrastructure and Technology	25	32,072	893	-	-	-	32,966	0.2
3N	Security	9	7,482	4,310	6,400	6,400	6,400	30,992	0.2
63	Electric Systems Operations	40	40,687	67,439	89,828	100,500	82,200	380,654	2.7
66 (Sec)	Replace Substation Other Equipment	40	36,244	29,699	51,623	39,000	56,000	212,567	1.5
Other		**16**	**1,190**	**11,629**	**11,643**	**11,652**	**18,193**	**54,306**	**0.4**
5	Tools	4	273	5,357	5,357	5,357	5,466	21,810	0.2
12	Environmental	2	161	174	186	191	197	910	0.0
21	Operations Support	9	756	6,097	6,100	6,103	12,529	31,586	0.2
23	Manage Buildings	1	1	-	-	-	-	1	0.0
3R*	Battery	NA	NA	NA	NA	NA	NA	-	-
Work Requested by Others		**344**	**286,179**	**346,079**	**383,116**	**459,665**	**476,926**	**1,951,964**	**13.6**
82	Work Requested by Others	344	286,179	346,079	383,116	459,665	476,926	1,951,964	13.6
	Total	**1,632**	**1,749,124**	**2,399,064**	**3,131,541**	**3,521,781**	**3,513,841**	**14,315,352**	**100.0**

Figure 2:



For the forecast period of 2025 to 2029, the distribution of capital expenditures is similar to the 2020 to 2024 "actuals," with Transmission at 50.9% and Substation at 30.5%. Work Requested by Others is a bit higher, at 13.6%, whereas 2020 to 2024 "actuals" were 6.8% of the total.

May 2025 New Projects

While PG&E indicates in its transmittal letter that there are "238 new projects…, with 31 being Investment Codes and 207 being POs," [5] the actual number of new project lines in the TPR Project Spreadsheet is 258. This difference in the number of new projects stems from projects previously reported by Investment Code but that have now been formally initiated and assigned a PO, which are now among CPUC Staff's "new project" count. Several new projects are low-cost, generation interconnection metering-related projects and location-specific shunt-splice projects. However, significant new WRO projects associated with new data centers also are included, along with the three North Dublin-Vineyard reconductoring projects.

The 258 newly added programs and projects total $2.97 billion in "Current Projected Total or Actual Final Costs." Table 3 provides the total number of new POs with 2020 to 2029 capital expenditures by MWC totaling $1.81 billion - 61% of all new program and project costs. Please note these amounts are lower than the "Current Projected Total or Actual Final Costs" because they do not include capital expenditures in the post-2029 period.

Table 3: New POs by Functional Category and MWC

MWC	MWC Name	Total Number of New Projects	Sum of 2020 to 2029 Capital Expenditures ($000)
Transmission		**88**	**634,894**
60	Line Capacity	17	418,620
70	Replace Lines Poles and Structures	20	58,058
93	Line Preventative Work	38	106,564
94 (T)	ET Reliability – Transmission	13	51,652
Substation		**104**	**640,098**
61	Station Capacity	20	334,860
64	Replace Substation Breakers	11	3,342
65	Replace Substation Equipment – Emergency	17	191,149
66 (Sub)	Replace Substation Other Equipment	2	1,362
67	Electric System Automation	22	102,721
68	Replace Substation Transformers	3	1,204
3F	System Protection	29	5,460

[5] See PG&E's May 1, 2025 TPR Process Transmittal Letter, page 6.

MWC	MWC Name	Total Number of New Projects	Sum of 2020 to 2029 Capital Expenditures ($000)
IT / Security		**20**	**312,857**
2F	IT Infrastructure and Technology	12	41,611
3N	Security	3	14,962
63	Electric Systems Operation	5	256,284
Other		**2**	**17,062**
21	Operations Support	2	17,062
Work Requested by Others		**44**	**206,072**
82	Work Requested by Others	44	206,072
Total		**258**	**1,810,984**

Table 4 identifies each of the new programs and projects with capital expenditures or "Current Projected Total or Actual Final Cost" in excess of $50 million, totaling $1.47 billion and accounting for 49% of all new program and project costs. This continues a pattern from the previous PG&E TPR cycle (and other utilities' TPR cycles) where in big-ticket projects make up a significant share of the total new project costs.

Table 4: New Projects with Capital Expenditures Greater than $50 Million

Planning Order	Project Name	Sum of 2020 to 2029 Capital Expenditures ($000)	Current Projected Total or Actual Final Cost ($000)
5811681	North Dublin-Vineyard Recond OH Seg 1	30,000	50,000
5811682	North Dublin-Vineyard Recond UG Seg 1	30,000	50,000
5811680	North Dublin-Vineyard Recond UG Seg 2&3	30,000	50,000
EX113780	Exchequer: Rebuild Substation	50,000	56,000
5811932	Tesla-Newark 230kV #2 Rec	36,074	56,074
5811929	CLEAR LAKE 60KV REINFORCEMENT	69,465	69,465
5812671	Cond. Segment Replacement	40,000	70,001
5811564	Vaca-Plainfield 60 kV Line Reconductoring	43,000	85,000
5811552	RIO OSO_W_SACRAMENTO 115KV LINE RECON	84,787	106,297
EX130294	Targeted Conductor Mitigation	38,546	109,155
EX114096	San Jose A Rebuild	126,400	126,400
5811930	Crazy Horse Canyon - Salinas - Soledad #1 and #2 115 kV Line Reconductoring	65,000	135,000
5813144	San Jose B 230kV GIS	129,314	148,664
EX130198	MWC 65 Emergency Preparedness, CEM T-Sub	146,100	149,300
58112067	SAN JOSE A - SUBSTATION REBUILD BUS UPG	22,785	206,416
5560199	Electric Transmission Operations Upgrade	252,325	323,534
TOTAL		1,193,796	1,467,772

Projects Removed from the May 2025 TPR Project Spreadsheet

The Project Spreadsheet removed 155 POs or Investment Codes that were included in November 2024 TPR Project Spreadsheet. Of note:

- "Investment Codes" associated with 53 new projects identified in the "New Projects" section are among the "removed" projects. PG&E has formally kicked off these projects, assigning POs and eliminating the the Investment Codes. Specific Investment Codes deleted include those for the Clear Lake 60 kV Reinforcement, North Dublin-Vineyard Reconductoring, and Crazy Horse Canyon-Salinas projects, among others.
- The "Martin BUS EXT_CPUC LIC/PER" PO, part of the Egbert Switching Station project, appears to have been removed from the TPR Project Spreadsheet. PG&E indicated that this PO was not included "because this order is cancelled. There are no actual or forecasted expenditures for this PO."[6]
- The "Gates Bk 12 Conduit/Trench Failure Repl" PO was removed from the TPR Project Spreadsheet, consistent with earlier agreement by PG&E to remove these costs from transmission rates, given the trench failure was caused by a subcontractor's imprudent actions, and to charge the costs to shareholders.
- 13 POs related to PG&E's Transmission SCADA Replacement Program (TSRP) program forecastsalso removed.
- POs representing "direct assigned" generator interconnection costs were also removed because the customer paid the costs of the project.

Table 5 summarizes the number of removed projects by functional category and MWC.

[6] See PG&E's Response to TPR-Process_DR_ED_011-Q016, subpart b, July 9, 2025.

Table 5: Summary of Projects Removed from May 2025 TPR Project Spreadsheet

MWC	MWC Name	Total Number of Projects	Sum of 2020 to 2029 Capital Expenditures ($000)
Transmission		**49**	**602,704**
60	Line Capacity	15	437,701
70	Replace Lines Poles and Structures	2	8,713
71	Replace Line ROW Access	1	78
93	Line Preventative Work	22	144,382
94 (T)	ET Reliability – Transmission	9	11,830
Substation		**53**	**191,153**
61	Station Capacity	14	64,538
64	Replace Substation Breakers	3	2,348
65	Replace Substation Equipment – Emergency	2	1,019
66 (Sub)	Replace Substation Other Equipment	2	7
67	Electric System Automation	6	14,819
68	Replace Substation Transformers	1	14,625
3F	System Protection	25	93,797
IT / Security		**19**	**164,003**
2F	IT Infrastructure and Technology	6	8,986
3N	Security	1	0
63	Electric Systems Operation	12	155,017
Work Requested by Others		**34**	**5,116**
82	Work Requested by Others	34	5,116
Total		**155**	**962,976**

On Hold Projects

As first discussed at PG&E's February 2025 TPR Stakeholder Meeting, beginning August 1, 2024, PG&E implemented the automated pausing of AFUDC within its fixed asset financial system, if certain criteria were met and capital expenditures to date on a project were less than $15 million.

The May 2025 TPR Project Spreadsheet indicates that 155 POs have been placed "on hold," with a Current Projected Total or Actual Final Cost of $1.48 billion. This number is significantly lower than the 567 "prioritized" projects identified by PG&E for this May 2025 TPR cycle. Compare this to the November 2024 TPR Project Spreadsheet, where 104 POs, with a projected cost of $769.9 million, were "on hold", also significantly lower than the 567 "prioritized" projects for this May 2025 TPR cycle (refer to Table 6 below).

Prioritization Projects

Prioritization refers to PG&E's process of updating its "portfolio forecast within the Electric Transmission (ET) budget targets through a combination of project and program forecast

refinement and continued project and program prioritization, which could include extending project implementation schedules and the pace of program volume execution."[7]

Table 6 shows the number of POs and their associated cost where PG&E's "Reason for Change in Service Date" includes "prioritization." In both actual number and total cost, the magnitude of projects subject to "prioritization" has expanded significantly over the last three years.

Table 6: "Prioritized Projects" by Project Spreadsheet Issuance Date

Data/Project Spreadsheet Date	Total Number of Projects in Project Spreadsheet	Total Cost (billions) of All Projects in Project Spreadsheet	Number of "Prioritization" Projects	Total Cost (billions) of "Prioritization" Projects	Percentage of Number of Prioritization Projects to Total	Percentage of Prioritization Project Cost to Total
June 2022 (STAR)	1,630	$23.56	155	$1.60	9.51%	6.77%
December 2022 (STAR)	1,658	$23.44	245	$2.87	14.78%	12.23%
June 2023 (STAR)	1,526	$25.19	293	$3.72	19.20%	14.77%
December 2023 (STAR)	1,617	$24.51	322	$3.98	19.91%	16.24%
May 2024 (TPR)*	1,724	$20.45	413	$4.79	23.96%	23.40%
November 2024 (TPR)	2,531	$36.96	567	$6.41	22.40%	17.33%
May 2025 (TPR)	2,614	$36.92	567	$6.66	21.69%	18.04%

**Please note that the May 1, 2024 TPR Project Spreadsheet value is shown in this table, rather than subsequent updates during the May 2024 TPR Project Spreadsheet review period.*

CAISO Projects

PG&E indicates that "all projects assigned to PG&E in the 2023-2024 CAISO Transmission Plan are included in the TPR Project Spreadsheet as either active projects with unique POs or as Investment Codes (if greater than $1 million with forecast in the TPR window). Projects with Investment Codes have not been kicked off due to prioritization or being recently approved in the 2023-2024 CAISO Transmission Plan."[8] Table 7 lists the new projects included in the 2023-2024 CAISO TPP by project purpose.

[7] See PG&E's May 1, 2025 TPR Process Transmittal Letter, page 9.
[8] See PG&E's May 1, 2025 TPR Process Transmittal Letter, page 7.

Table 7: PG&E Projects Approved in the CAISO's 2023-24 Transmission Plan[9]

Project Name	Expected In-Service Date	CAISO Project Cost ($millions)
Reliability Projects		**701 – 1,402.2**
Covelo 60 kV Voltage Support	2030	11 – 22
Martin-Millbrae 60 kV Area Reinforcement	2030	20 – 40
Atlantic High Voltage Mitigation	Q2 2029	20 – 40
Crazy Horse Canyon – Salinas – Soledad #1 and #2 115 kV Line Reconductoring	2030	54 – 108
Diablo Canyon Area 230 kV High Voltage Mitigation	2027	35 – 70
Salinas Area Reinforcement	TBD	226.1 – 452.3
Cortina #1 60 kV Line Reconductoring	Q2 2028	47.1 – 94.3
French Camp Reinforcement	Q2 2030	42.1 – 84.2
Rio Oso – W. Sacramento Reconductoring	2030	48.7 – 97.4
Vaca-Plainfield 60 kV Line Reconductoring	Q2 2030	34 – 68
Camden 70 kV Reinforcement	2030	50 – 100
Gates 230/70 kV Transformer Addition	2030	36 – 72
Reedley 70 kV Capacity Increase	TBD	49 – 98
Tejon Area Reinforcement	2029	28 – 56
Policy-Driven		**3,137 – 4,586**
Sobrante 203/115 kV Transformer Bank Addition	2034	20 – 40
New Humboldt 500 kV Substation with 500 kV line to Collinsville [HVDC operated as AC]	2034	1,913 – 2,740
New Humboldt to Fern Road 500 kV Line	2034	980 – 1,400
New Humboldt 115/115 kV Phase Shifter with 115 kV line to Humboldt 115kV Substation	2034	40 – 57
North Dublin – Vineyard 230 kV Reconductoring	2034	116 – 233
Tesla – Newark 230 kV Line No. 2 Reconductoring	2034	29 – 58
Collinsville 230 kV Reactor	2034	39 – 58
Economically Driven		**0**
None		
Grand Total – Reliability, Policy, Economic		**3,838 – 5,988.2**

[9] See 2023-2024 CAISO TPP, pages 160 to 161.

Data Quality

CPUC Staff generally find PG&E's numeric data quality to be acceptable, with limited updates to material provided in each reporting period. However, CPUC Staff remain concerned about gaps in PG&E's TPR reporting, primarily in the development of cost-benefit ratios. These concerns are discussed later in this document.

CPUC Staff also appreciate PG&E's continued inclusion of subject matter experts in the Stakeholder discussions and providing meeting materials that are responsive to parties' requests. The inclusion of maps and other diagrams to help visualize the scope of a project is beneficial.

Finally, CPUC Staff acknowledge that PG&E has increased its efforts to respond to data requests in a timely manner. Given the schedule for these TPR reviews, continued timely responses are necessary to provide Stakeholders with adequate time for review and follow-up.

Data Request Responses

During the May 2025 TPR Process Review, CPUC Staff submitted 88 data requests, including 15 that were confidential, to PG&E. PG&E was timelier in providing data request responses than in the last review period.

CPUC Staff's data requests sought additional information on numerous topics, including significant new projects like the Salinas Area Reinforcement of the new Chualar 115 kV Substation and San Jose A Substation Rebuild. Staff also requested updates on the status of PG&E's four Construction Work in Progress (CWIP)-Incentive projects (i.e., Collinsville, Manning, Newark, and Metcalf Substations) and submitted questions on long-delayed programs for circuit breaker, bank replacement, and animal abatement, including other delayed projects like the Egbert Switching Station.

PG&E's responses were reasonably thorough, although numerous follow-up data requests were needed to delve a bit more deeply into project issues or to seek additional clarity.

Stakeholder Meetings

The CPUC and Stakeholders provided a draft agenda for the July 29, 2025 TPR Stakeholder Meeting to PG&E on July 14, in accordance with the TPR Process Review Period's timelines. At the Stakeholder meeting, PG&E ensured that appropriate personnel were present to respond to questions on a variety of topics, as discussed further below. In response to parties' request, PG&E held a follow-up Stakeholder meeting on August 7, 2025 to provide additional clarity around PG&E's development of cost-benefit ratios.

From a process perspective, PG&E provided the July 29, 2025 presentation (nearly 130 slides) in a timely manner, providing high-level information to support the interactive discussion. PG&E also relied extensively on the "chat" feature of the video meeting platform, with mixed

results. While PG&E worked to provide responses to chat questions during the meeting, it was unable to provide a transcript of the chat until two weeks after the meeting, which hampered the CPUC's and Stakeholders' ability to review the information adequately and submit follow-up data requests. Continued efforts to effectively use this tool and provide timely transcripts will be beneficial to the CPUC and Stakeholders.

On substantive issues, CPUC Staff found PG&E's presentation and discussion on "competitively-bid" projects helpful, especially in separating out PG&E's responsibilities versus developers' responsibilities. Of particular interest was the discussion of PG&E's CWIP Incentive Projects, for which PG&E described the project's scope, provided a map showing the project's endpoints, and illustrated which portions PG&E was responsible for constructing[10]which portions another party (LS Power in this case) was responsible for.[11]

PG&E also shared information on other large projects, identifying the scope, project need, status, risks, and project dependencies. CPUC Staff appreciated the opportunity to learn more directly what is and is not known about each project as it matures through PG&E's planning, engineering, and construction processes.[12]

PG&E also updated Stakeholders on its "Rule 30" Application to the CPUC and shared additional updates of the results of its "Cluster Study" for new large load interconnections in the Bay Area. Updates on advanced procurement of key materials, grid enhancing technologies, and PG&E's Risk-Based Portfolio Planning Framework (RBPPF) and Integrated Grid Planning (IGP) initiatives were also informative. Unfortunately, PG&E did not provide a walk-through of a case example to demonstrate how costs and timelines for energizing data centers are represented in the TPR Project Spreadsheet. As discussed in section below, CPUC Staff consider clear and timely representation in the TPR Project Spreadsheet of these increasingly common and impactful projects to be a priority. CPUC Staff request that future Stakeholder meetings provide an opportunity for more robust exchanges, with relevant examples.

For the follow-up Stakeholder meeting on cost-benefit ratios, PG&E expeditiously scheduled the requested meeting and ensured appropriate personnel were involved who could explain PG&E's timelines and scope of work to be performed so that these ratios can be included in the TPR Project Spreadsheet in future cycles.

Issues of Note

During the May 2025 TPR cycle, CPUC Staff focused of a number of areas that continue to merit close scrutiny:

---

[11] See, for example, pages 56 to 72 of the July 29, 2025 TPR Stakeholder Meeting presentation.
[12] See, for examples, pages 11 to 29 of the July 29, 2025 TPR Stakeholder Meeting presentation discussing numerous large projects including Wheeler Ridge, Estrella, Ignacio-Mare Island, and Morgan Hill-Watsonville.

1. Continued project delays and their impact on system reliability, generator interconnection, and cost to electric transmission customers;
2. PG&E's Transmission Substation Emergency Preparedness Long-Lead Time Materials Procurement Program;
3. How PG&E addresses faulty workmanship issues;
4. PG&E's development of cost-benefit ratios;
5. PG&E's data center initiatives; and
6. Depreciation rates applied to PG&E's "life extension programs."

Each of these areas is discussed below.

A. Prioritization and its Impacts on Reliability, Interconnection Times, and Ratepayers

Continued project delays because of "prioritization" remain a key concern of CPUC Staff. The impacts of these delays on system reliability and generator interconnection are unclear, and the need for tools that mitigate these delays appears to be growing. Additionally, financial impacts on electric transmission ratepayers are of increasing concern when PG&E is neither actively advancing projects to completion, nor placing the projects "on hold" and in "deferred" status in its accounting system.

To illustrate CPUC Staff's concerns on financial impacts, while PG&E has placed a planning order associated with Egbert Switching Station "in deferred status," other planning orders associated with Egbert "have open commitments for material storage and engineering support" and cannot be placed on hold.[13] PG&E's continued delay of the Egbert Project until at least late in 2029 is increasing costs to ratepayers while there is no advancement of the project. It is neither just nor reasonable that ratepayers are being asked to pay for storage costs and continued AFUDC accruals that would not otherwise be incurred if PG&E was completing the project in a timely manner.

Similar challenges are seen in other long-delayed projects. T.0000590 – Hunters Point Substation, "has been halted since August 2022 due to cost increase & other emergency priority work. However, the orders under T.0000590 were unable to be placed in deferred status due to open purchase orders for long lead materials not yet received."[14] For one planning order associated with this project, PO 5752496 – HUNTERS POINT: Repl 115 KV GIS BAAH, PG&E has incurred $43.5 million in costs through 2025, and $10.5 million of that – 24% – is attributable solely to AFUDC accruals. In both 2023 and 2024, PG&E accrued $2.8 million in AFUDC each year, for a project it indicates was halted more than three years ago, with no progress being made toward the project's completion.[15]

[13] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q016, July 9, 2025.
[14] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q027, July 9, 2025. At this time, it is unclear what long lead time material is taking more than three years to be delivered.
[15] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q010, Attachment 1, Lines 111 to 124, July 9, 2025.

Another long-delayed project is PO 5766750 – Coleman-Red Bluff Reconductor-Phase 1. This project was originally approved by the CAISO in 2011, and the scope was later revised in 2017-2018 by the CAISO.[16] PG&E indicates that the project was internally On Hold from 2022 to 2024 due to project prioritization efforts but never placed in SAP deferred status due to ongoing engineering activities needed to address CAISO's revised scope.[17] However, in the same data request response, PG&E indicated that a new scope was approved in 2021, the project was deferred from 2022 to 2024, and was issued for construction in 2025. To date, PG&E has incurred $5.031 million on this project, $1.851 million of which are AFUDC charges [18]

Other projects have been halted during construction but not placed on hold, sometimes incurring costs to demobilize crews, requiring security services to avoid theft of materials being stored on site, and incurring additional AFUDC costs while still not advancing a project to completion.[19]

PG&E has put in place a process to automatically suspend AFUDC accruals for projects with less than $15 million in charges to date. As of June 2025, PG&E had automatically placed 400 electric transmission preventative orders on hold.[20] This was an increase in the number of orders in December 2024, where PG&E indicated 362 work order numbers totaling $65,529,472 as the "AFUDC Base Used in Calc." While PG&E objected to the calculation of the amount of AFUDC PG&E would have accrued if these work orders had not been placed "on hold,"[21] if one assumes a 7% AFUDC rate and applies it to the $65.5 million in AFUDC Base, the amount is an estimated $4.6 million in annual costs that would have been charged to projects despite there being no activity. CPUC Staff recommend that PG&E expands the automatic hold process to all projects and that PG&E carefully evaluates the continued need for many long-delayed projects and assesses whether continuing to accrue AFUDC on projects delayed by PG&E's own actions best serves ratepayers.

B. Advanced Procurement of Transformers and Circuit Breakers Must be Assessed Continuously to Incorporate Changing System Conditions

CPUC Staff continue to monitor the results of PG&E's program authorization for a "Transmission Substation Emergency Preparedness Long-Lead Time Materials Procurement Program."[22] The focus of this program is on emergency readiness and replacement of existing

[16] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q037, subpart c, July 9, 2025.
[17] See PG&E's response to Data Request TPR-Process_DR_ED_011-Q037, July 9, 2025.
[18] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q010, Attachment 1, Lines 268 to 281, July 9, 2025.
[19] See PG&E's Responses to Data Requests TPR-Process_DR_ED_011-Q032, July 9, 2025, and TPR-Process_DR_ED013-Q010, July 9, 2025, on PO 5777642 – CASCADE: Install BK 2, Phase 2,. See also PG&E's response to TPR-Process_DR_ED-011-Q029, July 9, 2025, indicating a 3.5 year construction period for PO 5777058 – Rio Oso Sub: T-Line Re-String Conduc.
[20] See PG&E's July 29, 2025 TPR Stakeholder Meeting Presentation, page 105. See also PG&E's response to ED_011-Q018.
[21] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q018, July 9, 2025.
[22] See PG&E's Response to Data Request TPR-Process_DR_ED_008-Q005, Attachment 1, March 13, 2025.

equipment that is expected to fail annually. PG&E has indicated that "additional material purchases are needed to maintain an adequate emergency inventory level in response to a significant market increase in lead time and our increasing trend in substation equipment failure rates."[23] As PG&E delays more projects and replaces equipment only as it fails, rather than proactively, it is increasingly important for PG&E to have adequate supplies on hand to address any unanticipated failures in existing equipment. Given the long lead time for delivery of this equipment, along with anticipated supply chain shortages, CPUC Staff are concerned that an increase in unanticipated equipment failure will impair system reliability. Adequate safeguards are warranted to protect against such an event.

C. Pursuit ofConstruction Claims for Faulty Workmanship

In the May 2024 TPR Review and the Stakeholder Transmission Asset Review (STAR) Process, which pre-dated the TPR Process, CPUC Staff identified the Gates Trench Failure project,[24] wherein PG&E sought to capitalize the cost associated with a trench failure that was caused by a sub-contractor's possible negligence. In response to a July 2023 data request on the status of the claim against the sub-contractor,[25] PG&E stated, "PG&E and the contractor/subcontractor discussed a potential for a claim, but it appears a notification was not formally provided to the contractor/subcontractor related to the claim. Bringing a claim at this time will be difficult. The matter against the contractor/subcontractor should be considered closed." PG&E subsequently wrote-off the cost of this repair, charging the $9.994 million to its shareholders.[26]

Accordingly, during the July 29, 2025 TPR Stakeholder Meeting, when PG&E provided updates on "Competitively-Bid Projects Interconnected by PG&E,"[27] indicating that "contractor performance challenges with Fixed Series Capacitor (SC) commissioning" were an issue in interconnecting LS Power Grid California's Fern Road Substation STATCOM Facility to the Round Mountain 500kV line,[28] CPUC Staff requested information on how PG&E would address those performance challenges and was encouraged when PG&E indicated that it has "formally notified the contractor of its claim for Liquidated Damages to recover financial damages."[29] CPUC Staff will monitor PG&E's resolution of this claim in the next TPR cycle to ensure that responsible parties bear appropriate costs.

D. Cost-Benefit Ratios are an Important Tool for Project Evaluation

During the July 29, 2025 TPR Stakeholder Meeting, and the subsequent August 8, 2025 discussion, it became clear that PG&E has more work to do to develop the cost-benefit ratios that

[23] See PG&E's Response to Data Request TPR-Process_DR_ED_011-Q008, July 21, 2025.
[24] These costs were recorded to PO 5787766 - Gates Trench Failure - Gates Bk 12 Conduit/Trench Failure Repl.
[25] See PG&E's Response to Data Request STAR Process Data Request GridSME 29-46, July 26, 2023.
[26] See PG&E's Response to Data Request TPR-Process_DR_ED001_Q024Supp.pdf, dated August 21, 2024.
[27] See July 29, 2025 TPR Stakeholder meeting presentation, pages 73 to 76.
[28] Ibid, page 74.
[29] See PG&E's Response to Data Request TPR-Process_DR_ED_013-Q001, subpart c, September 4, 2025.

are included in Field 66 "Cost Benefit Analysis" of the TPR Project Spreadsheet. PG&E indicated that its "contracting support is currently being negotiated" and "work on the transmission consequence profile is anticipated to commence in Q4 of 2025" but that "there currently is no road map or planned work to develop an asset level substation model."[30] CPUC Staff are concerned with the time it is taking to develop these measures, given that Cost Benefit Ratio reporting is a required element of the TPR Process. As the CPUC and Stakeholders have indicated, this is an important tool for project evaluation and ranking. CPUC Staff expect a full report on the scope of work to be performed by the contractor PG&E is hiring as well as the timelines to provide this required information to the CPUC and Stakeholders.

E. Data Centers and Other Large Load Energization

CPUC Staff data requests for the May 2025 TPR cycle included both public and confidential questions regarding POs identified by CPUC Staff as potentially being part of large load (i.e., data center) energization projects. PG&E currently processes applications for such projects via Rules 15 and 16 exceptional case filings but has an active application at the CPUC for a proposed Electric Rule 30, to apply to retail customers taking 50-230kV (transmission-level) service for loads 2MW and above. CPUC Staff's data request questions sought to build an understanding of the extent of such work in FERC's jurisdiction, to understand PG&E's terminology for large load customers to TPR projects, and to identify potential areas for improvement for the TPR with regard to an increasing category of work, so that future discussions proceed with a common understanding of terms and cost representations.

PG&E's response regarding the one identified public project - "T.0001316 SANTA TERESA SUB" - indicates that it was in fact a "Distribution Capacity project [...] not a Load Transmission project." That CPUC Staff had identified this as a potential large load energization project suggests that there is work to be done to resolve ambiguities in project representation. Considering that the TPR Process is supposed to be limited to FERC jurisdictional transmission projects and costs, ongoing collaboration between PG&E and CPUC Staff will be beneficial to reach a common understanding of how to handle such projects in future TPR cycles.

F. Depreciation Rates for Shunt Splice and Other Life Extension Programs

CPUC Staff have previously raised concerns about the inclusion of costs incurred for life extension programs, such as tower coating, cathodic protection, and shunt splice programs in asset classes with depreciable lives that far exceed the useful lives of these treatments. Inflated years of service would result in an unreasonable amount of long-term cost recovery.[31] While this issue has now been largely resolved for future tower coating and cathodic protection costs, CPUC Staff recommend that, for the shunt splice and any newly created life extension programs,

[30] See PG&E's Response to Data Request TPR-Process_DR_ED_013-Q011, September 4, 2025.
[31] For example, shunt splices are recorded to an account with a 65-year life, even though the shunt splices only extend the life of an asset by 15 to 25 years. See PG&E's Response to Data Request TPR-Process_DR_ED_008-Q011, March 13, 2025.

PG&E separately track these costs so that they can be recorded to an account with a depreciable life that more appropriately reflects the time the assets will be in service.

Conclusion

CPUC Staff appreciate PG&E's continued engagement in the TPR Process and will continue to evaluate PG&E's plans to ensure safe, reliable, and affordable electric transmission solutions for its customers. This will include the evaluation of long-delayed projects to assess which costs are appropriately borne by electric transmission customers and how continued project delays affect system reliability and generator interconnections.

PG&E should direct any questions or comments on the TPR Process to tprprocess@cpuc.ca.gov.