

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

**ENERGY DIVISION
TRANSMISSION PROJECT REVIEW PROCESS
DATA REQUEST**

Issued to Southern California Edison on July 16, 2024
Deadline for Response on August 6, 2024
Please confirm receipt of this Data Request.

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The CPUC Energy Division requests full responses to this data request by August 6, 2024, as outlined in the Transmission Project Review (TPR) Schedule for Southern California Edison (SCE).

DATA REQUEST

July 16, 2024

The following Questions address topics related to SCE's June 2024 Transmission Project Review Process Project Spreadsheet.

01-01.

PB- 43.05, PARDEE-PASTORIA (San Joaquin)/PB-43.06 PARDEE-PASTORIA (North Coast)

- a) Please explain the difference in unit costs between the two projects; PB-43.05 is approximately \$2,020¹/mile whereas PB-43.06 is approximately \$1,360/mile.
- b) Please explain the differences in costs between the project spreadsheet forecasts and the PMWIF/Investment Summaries; PB-43.05 is \$25,266 on the spreadsheet vs. \$20,333 on the PMWIF; PB-43.06 is \$35,916 on the TPR Project Spreadsheet vs. \$40,666 on the PMWIF.

01-02.

SP- 170, Lugo-Victor 230 kV Line Reconductor

- a) With an anticipated construction start of September 2027, please explain the need for the projected capital expenditures of \$12,100 and \$22,400 in 2025/2026, respectively.
- b) Please explain the increase from the original projected cost of \$65,100 to \$112,000.
- c) Please describe any project characteristics that lead to the higher-than-average cost per mile cost (~10,400/mile) when compared to the other projects listed.

01-03.

SP- 03, West of Devers Conductor Upgrade

- a) Please explain the ongoing – and increasing – costs associated with this project given its in-service date of 05/14/21. Are the projected costs zero in 2025 and beyond as shown?
- b) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Permitting as the reason. Please discuss the

¹ All costs are in 000's

Permitting issues and identify the number of additional months that Permitting has added to the project's completion.

- d) Please discuss the nature of the post In-Service costs for 2022-2023 totaling \$12,527 and projected expenditures of \$10,152 in 2024.
- e) Please discuss the nature and amount of any 2021 costs occurring after 05/14/21.
- f) Please discuss if there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-04.

SP- 24, Cerritos Channel Tower Relocation

- a) Please provide the current status of Phase 2 of this project. The December 2023 SRP spreadsheet indicated an 08/24/26 in service date, but the current June 2024 TPR Project Spreadsheet has older/past dates.
- b) Based on the answer to (a) above, please provide details on the projected costs for 2024-2028.

01-05.

PB- 25, Seismic Mitigation Program – Substations

- a) Of the 30 programmatic projects under PB-25, it appears only two are still in progress; PB-25.25 and PB-25.30. Are the projected costs shown in PB-25 the sum of remaining work for these two projects?
- b) If (a) is yes, is this amount incremental to the \$2,800 and \$2,500, respectively, already incurred through 2023?

01-06.

PB- 37, Transmission Tower Corrosion Program

- a) Please provide the actual number of structures mitigated in 2023 by category, cost, and type.
- b) Please provide the current forecast of the number of structures to be mitigated in years 2024 through 2028.

01-07.

SP- 124, Laguna Bell-Mesa No. 1 230 kV Line Rating Increase Project

There appears to be a delay in the project completion from the December 2023 SRP Project Spreadsheet of 05/28/24 until 06/02/25 in the June 2024 TRP Project Spreadsheet. Given this, and the corresponding forecast cost increase, please provide details on the increased costs, total forecast cost and whether the zero cost forecast in 2025 is accurate.

01-08.

SP- 88, Pardee-Sylmar No. 1 and No. 2 230 kV Lines Rating Increase | Pardee-Sylmar 230 kV Line Rating Increase Project

- a) Completion of this project (06/01/29) has been pushed by more than four and a half years from the December SRP 2023 spreadsheet, with projected cost at completion increasing by ~19%, now at \$22,700. However, no costs are shown in years beyond 2026. Please discuss why no costs are forecast for 2027-2029 during the construction period.
- b) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- c) The Construction start date was 09/01/22 and the Projected In-Service Date is 06/01/29. Please discuss why the construction period is over 6.75 years?
- d) The Original Planned In-Service Date was 06/01/23. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.
- e) The Original Planned In-Service Date was 06/01/23. For the Reason for Change (2) in In-Service Date (Column BI) identifies Material as the reason. Please discuss the Material shortage and identify the number of additional months that Material shortage added to the project's completion.

01-09.

SP- 19, Lugo-Victorville RAS

- a) The cost started at \$15,455, increased to \$25,779 in 2021 and increased again to \$54,775 in the current TPR Project Spreadsheet. Please provide a summary explanation of the increases in cost and b of the current projected cost.
- b) Are the generation interconnection projects affected by this CRAS responsible for the costs? Is the CRAS included in their interconnection costs?

- c) Please provide a list of the generation projects affected and their share of the cost of the CRAS.
- d) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- e) The Original Planned In-Service Date is N/A. For the Reason for Change in In-Service Date (Column BH) identifies Permitting as the reason. Please discuss the Permitting issues and identify the number of additional months that Permitting added to the project's completion.
- f) The Construction start date was 06/21/17 and the Projected In-Service Date is 03/31/25. Please discuss why construction period took 7.75 years.
- g) Please discuss if there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-10.

SP- 55, Quartzite Solar RNU Q1198

- a) Please provide a copy of the executed LGIA for Q1198
- b) Please explain the difference between the current cost of \$3,800 and the original cost of \$9,600. Did the scope change? Is this due to other projects withdrawing?
- c) The project's current COD in the CAISO queue report is 12/24. When will this RNU be completed?

01-11.

SP- 135 Atlas Solar Q1402

- a) Please provide copy of the Atlas Solar Q1402 executed LGIA.
- b) Please explain the difference between the original projected cost \$1,754 and the current projected cost of \$1,335.
- c) Is the project operational? If not, what is the current estimated ISD?
- d) This is a Cluster 10 project that entered the CAISO queue in 2017. Please explain the delay in this interconnection. What is the current In-Service Date?

01-12.

SP- 115, Arida Solar Farm Q1522

- a) The PMWIF completed October 2020 states total cost as \$45,900. The initial projected cost is \$29,482, while the current projected cost is \$8,348. Please explain the difference between these costs.
- b) It appears the work is being done on a letter agreement. Has the project signed an LGIA? If there is an executed LGIA please furnish a copy.
- c) The current In-Service Date is 05/01/27 while the initial In-Service Date is 08/01/24. What is the current estimated In-Service Date? The project has been in the queue since 2018. What is the reason for the delay?

01-13.

SP- 117, Sanbom Hybrid Q1632

- a) Please provide executed copy of LGIA for Q1632.
- b) Please explain the difference in cost from the Program Summary \$34,900 to the current projected cost \$14,100. Please furnish any additional documentation of other projects or charges that may be affecting the cost difference.
- c) The CAISO queue report shows this project with a COD of 03/15/25. The TPR Project Spreadsheet shows 06/01/2026, it also shows that engineering is less than 50% complete. Are either of these commercial operation dates realistic? If not, please explain the delay. What is the actual achievable COD?

01-14.

SP- 130, Goldback Solar Center Q1619

- a) Please provide a copy of the executed LGIA for Q1619.
- b) Please explain the difference in cost from the Program Summary \$20,900 to the current projected cost \$10,100.
- c) The original COD was listed as 02/16/26 the current projected In-Service Date is 06/01/27. Are either of these commercial operation dates realistic.
- d) The project is listed as on hold. Please discuss the reason(s) for that.

01-15.

SP- 148, Grace Energy – Q1761

- a) Please explain the cost difference between the Original Projected cost and the current projected cost.
- b) Please provide a copy of the executed LGIA.
- c) This project depends on the completion of work at the Colorado River substation. The current In Service date is December of 2026. Is this date achievable? If not, what is a realistic In-service date?

01-16.

SP- 149, Cobalt Q1757 Bolt Substation

- a) Please explain the cost difference between the Original Projected cost and the current projected cost.
- b) Please provide a copy of the executed LGIA.
- c) This project depends on the completion of work at the Colorado River substation. The current In Service date is December of 2026. Is this date achievable? If not, what is a realistic In-service date?

01-17.

SP- 163, Windhub 220kV-Sanborm 5 Hybrid Q1791

- a) Please explain the cost difference between the Original Projected cost and the current projected cost.
- b) Please provide a copy of the executed LGIA.
- c) The current In Service date is January 2027. Is this date achievable? If not, what is a realistic In-service date?

01-18.

SP- 01, Calcite Substation Construction (TOT552_TOT640)

- a) Please provide the current status of the project and identify when construction is expected to begin.
- b) Please identify any additional permits or regulatory approvals that are required to begin construction.

- c) Please provide a detailed description of the work to be completed that is included in the projected capital expenditures in 2024 and 2025.
- d) Please identify the active generation facilities that have an executed interconnection agreement with SCE for interconnection at the Calcite substation.

01-19.

SP- 04, Alberhill Substation Loop-In

- a) Please provide the current status of the project and the third amended CPCN application for the project filed with the CPUC in June 2023.
- b) Column 54 shows an Original Projected cost of \$473,000 and Column 56 shows a Current Projected Total cost of \$241,876. Please explain the cost difference and if there was a change in project scope.
- c) The July 21, 2023, Alberhill System Project Update presented to the Finance and Risk Management Committee provides next steps and key milestone on Page 5. Please provide any more recent management updates to the Alberhill System Project.
- d) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.

01-20.

SP- 06, Mesa Substation

- a) Anticipated spending on the project in the 2024 AU was \$14,857, but the TPR Project Spreadsheet indicates spending of \$19,096 for 2023. Please detail and explain the additional 4,200 in capital expenditures in 2023, and if SCE intends to include this in the RY2025 Annual Update.
- b) The TPR Project Spreadsheet identifies spending of \$8,482 in 2024 and \$2,511 in 2025. Please identify the scope of the project(s) in 2024 and 2025.

01-21.

SP- 10, Riverside Transmission Reliability Project

- a) Please identify any additional permits or regulatory approvals that are required to begin construction.
- b) Please identify the work to be completed that is included in the projected capital expenditures in 2024 and 2025.
- c) The Project Status is "On Hold". Please identify when the project was put on hold.

- d) Is the City of Riverside responsible for any incremental costs as a result of the project being On Hold? If so, please identify these costs.

01-22.

SP- 154, New Serrano 4AA 500/230 kV Bank and 230 kV GIS Rebuild

- a) The Estimated Project cost increased from \$120,000 in the December 2023 SRP spreadsheet to \$212,000 in the current PS. Please detail the increased costs, and any proposed change in project scope.
- b) Please provide the age, manufacturer, configuration, and # of circuit breakers of the existing 230kV GIS at Serrano.
- c) Please provide details on the scope of work for protection and control house upgrades necessary to support the new Serrano 4AA 500/230kV Bank and 230kV GIS Rebuild.

01-23.

PB- 06, Substation Planned Capital Maintenance

- a) Projected Capital Expenditures for 2024-2028 in Column 58 are projected to be approximately \$28,060. Please provide historical expenditure by year for the period 2019-2023.
- b) Please explain SCE's process for establishing annual projected investment levels for this program.
- c) Please provide the list of Substation Planned Capital Replacement projects that were constructed or plan to be constructed during the 2019-2024 period with expenditure by year for each project

01-24.

PB- 16, Substation Miscellaneous Equipment Additions & Betterment

- a) Projected Capital Expenditures for 2024-2028 in Column 58 are projected to be approximately \$27,683. Please explain SCE's process for establishing annual projected investment levels for this program.
- b) Please provide the list of Substation Miscellaneous Equipment Additions & Betterment projects that were constructed or planned to be constructed during the 2019-2023 period with expenditure by year for each project.
- c) Please explain why the June 2024 TPR Project Spreadsheet does not provide projected capital expenditures for 2028.

01-25.

PB- 17, Trans Line Relay Replacements - 220 kV & above

- a) Projected Capital Expenditures for 2024-2028 in Column 58 are projected to be approximately \$21,023. Please explain SCE's process for establishing annual projected investment levels for this program.
- b) Please provide the list of Trans Line Relay Replacements projects that were constructed or plan to be constructed during the 2019-2023 period with expenditure by year for each project.

01-26.

PB- 19, Transformer Bank: On-line Dissolved Gas Analysis (DGA) - 220 kV & above

- a) Please provide the current status of this program including total number of A and AA banks Online Dissolved Gas Analyzers are to be installed as part of this program, how many A and AA banks On-Line Dissolved Gas Analyzers have been installed on and how many A and AA banks still require installation of On-Line Dissolved Gas Analyzers and estimated schedule for installation of On-Line Dissolved Gas Analyzers.
- b) Projected Capital Expenditures for 2024-2028 in Column 58 are 2,110. Please identify the DGA units to be installed and the cost of each.
- c) Please provide historical expenditure by year for the period 2019-2023 for this program and how many DGA units were installed.

01-27.

PB- 20, Phasor Measurement System Install

- a) Please provide the current status of this program including the total number PMUs are to be installed as part of this program, how many PMU's have been installed, and how many PMUs are still required to be installed and estimated schedule for installation of remaining PMUs.
- b) Please provide historical expenditure by year for the period 2019-2023 for this program and how many PMUs were installed.

01-28.

PB- 29, Substation Switchrack Upgrade & Related Line Work

- a) Please provide the list of Substation Switchrack Upgrade & Related Line Work projects that are planned to be constructed during the 2024-2028 period, with expenditure by year for each project.
- b) Please provide historical expenditures by year for the period 2019-2023 for this program.

01-29.

PB- 27, Substation Facility Capital Maintenance

- a) Projected Capital Expenditures for 2024-2028 in Column 58 are projected to be approximately \$24,120. Please provide historical expenditure by year for the period 2019-2023.
- b) Please explain SCE's process for establishing annual projected investment levels for this program.

01-30.

PB- 11, Circuit Breaker Replacements - 220 kV & above

- a) Projected Capital Expenditures for 2024-2028 in Column 58 of the June 2024 TPR Project Spreadsheet are projected to be approximately \$12,214. Please provide historical expenditure by year for the period 2019-2023.
- b) Please provide the list of 220kV and above Circuit Breaker Replacement planned for 2024-2028.
- c) Please explain SCE's process for establishing annual projected investment levels for this program.
- d) Please provide the list of 220kV and above Circuit Breaker Replacement projects that were constructed during the 2019-2023 period, with expenditure by year for each project.

01-31.

SP- 155, Sylmar Sub: Replace 230kV/220kV Transformer with one rated for 1290 MVA normal and 610 MVA Emergency (Procurement Only)

The June TPR Project Spreadsheet and Project Management Information Work Initiation Form 8602 shows an Original Projected cost of \$23,000, Column 56 of the June TPR Project

Spreadsheet shows an Actual Final Cost of \$8,110, and Column 58 shows projected annual investment of \$8,110. Please explain why there is a difference between the projected and actual costs, and if there was a change in scope of the project.

01-32.

SP- 37, Red Bluff Substation Transformer Bank Install

According to the Project File “02_SP-37_2019-03-05 Consent Agenda - Red Bluff 2nd AA Bank Project - FRM WG to FRM”, The Consent Agenda dated March 5, 2019, presented to the Finance and Risk Management Committee states “Of the \$31,000 project cost, SCE will be upfront funding \$4,200. The customer will advance funds to SCE as the project is built up to its \$26,800 cost cap. SCE expects its \$4,200 to be spent in 2021-2022.” Column 56 of the June 2024 TPR Project Spreadsheet shows an Actual cost of \$24,290. Please confirm that Column 56 is correct for this project and explain how the project cost was split since the \$24,290 was less than the customer’s \$26,800 cost cap.

01-33.

SP- 133, Victor 230 kV Switchrack Reconfiguration

- a) Please describe the specific drivers for “converting two positions on the Victor 220kV bus from an existing double breaker double bus (DBDB) scheme to a breaker and one half (BAAH) configuration” as described in the Program/Project Summary.
- b) Please provide one-line operating diagrams of the Victor 220kV bus configuration prior to the upgrade and the one-line operating diagrams of the Victor 220kV bus configuration after the upgrade.
- c) Please describe the upgrades including control house scope of work necessary to the protection scheme for the Victor 220kV bus to support the upgrade of two positions from double breaker double bus (DBDB) scheme to a breaker and one half (BAAH) configuration.

01-34.

SP- 134, Devers 230 kV Reconfiguration Project

- a) Please describe the present Devers 220kV bus configuration and the Devers 220kV bus configuration after the upgrades are completed and provide one-line operating diagrams of both configurations.
- b) Please provide specific drivers that support upgrading the Devers 220kV bus.

- c) Please describe the upgrades including control house scope of work necessary to the protection scheme to support the upgrade of the Devers 220kV bus.
- d) The June 2024 TPR Project Spreadsheet shows a current projected total for this project of 10,770 and the Program/Project Summary shows a total project cost of 14,700. Please explain why there is a difference.

01-35.

SP- 147, Barre 230 kV Switchrack Conversion to Breaker-And-A-Half Project

- a) The June TPR Project Spreadsheet shows an Actual Final Cost of \$42,129 and Project Management Information Work Initiation Form dated 01/31/23 shows a Projected cost of \$24,000. Please explain why there is a difference and if there was a change in project scope.
- b) Project Management Information Work Initiation Form dated 01/31/23 notes “project will need to be coordinated with another existing project to install a new Mechanical and Electrical Equipment Room (MEER) due to automation updates and Substation Infrastructure Replacement (IR). Please provide project details of MEER installation including project name, scope, milestone schedule, and cost.
- c) Please provide an explanation of the allocation of costs between the Barre 230kV Switchrack Conversion and MEER installation.

01-36.

PB- 02.01, Nevada Pacific DC Intertie Insulator Replacement

- a) The Construction start date was 06/01/08 and the Actual In-Service Date was 09/15/17. Please discuss why the construction period was over 9 years. Please discuss why periodic closings (after 8,000 or 12,000 insulators were replaced) couldn't be done.
- b) Please describe the nature and amount of any Prior costs (Column BN) incurred after the Actual In-Service Date of 9/15/17.
- c) Please describe the nature and amount of the \$4,600 in costs incurred from 2019-2023, which is after the 09/15/17 Actual In-Service Date.

01-37.

PB- 05.02, Eagle Mountain; Replace the 5A Bank 220/161/66 kV

- a) The Construction start date was 06/19/19 and the Actual In-Service Date was 12/20/22. Please discuss why the construction period was 3.5 years.

- b) The Original Planned In-Service Date was 08/01/21. For the Reason for Change in In-Service Date (Column BH) identifies Material as the reason. Please identify the number of additional months this material shortage added to the project's completion.

01-38.

PB- 16.23, Serrano 500/220 kV; Install new 2000A ATS and new 66A ATS reconnect

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 02/14/22 and the Projected In-Service Date is 12/31/25. Why is the projected construction period projected to be 3.75 years?
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Material as the reason. Please identify the number of additional months this material shortage added to the project's completion.
- d) The Original Planned In-Service Date was 12/31/19. For the Reason for Change (2) in In-Service Date (Column BI) identifies Workforce as the reason. Please identify the number of additional months this labor shortage added to the project's completion.
- e) Why are no costs projected for 2025, the projected year of In-Service?

01-39.

PB- 17.19, Kramer Bulk Relay Replace

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 09/10/18 and the In-Service Date was 05/26/23. Please discuss why the construction period was 4.67 years.
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Customer Action as the reason. Please discuss the Customer Action and identify the number of additional months the customer action added to the project's completion.

01-40.

PB- 19.13 Windhub Substation Transformer Bank On-Line DGA

- a) Please provide an annual cost breakdown by category (engineering, materials, labor,
- b) AFUDC, overheads, etc.) from inception through 2023.

- c) Please explain why no costs are forecast for 2025, given the In-Service Date of 12/31/2025.

01-41.

PB- 20.18, Center: Install Phasor Measurement Units (PMU)

- a) The Construction start date was 06/15/22 and the Projected In-Service Date is 12/30/25. Please discuss why the projected construction period is 3.5 years.
- b) The Original Planned In-Service Date was 12/31/15. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- c) Please explain why no costs are forecast for 2025, the projected year of In-Service (12/31/25).

01-42.

PB- 22.11, Big Creek 1-Rector TLRR Remediation (1)

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 08/27/19 and the Projected In-Service Date is 12/31/24. Please discuss why the projected construction period is over 5.33 years.
- c) The Original Planned In-Service Date was 12/31/21. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) Please discuss if there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-43.

PB- 22.21, Devers-Red Bluff No.1 TLRR Remediation – 65 Discrepancies

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 12/15/17 and the In-Service Date was 01/04/21. Please discuss why the construction period is over 3 years.
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.

- d) Please discuss if there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-44.

PB- 22.34, Lugo-Mira Loma No.3 TLRR Remediation (1)

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 09/18/18 and the In-Service Date was 01/27/22. Please discuss why the construction period is over 3.33 years?
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) The Original Planned In-Service Date was 12/31/18. For the Reason for Change (2) in In-Service Date (Column BI) identifies Workforce as the reason. Please identify the number of additional months this labor shortage added to the project's completion .
- e) Please discuss if there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-45.

PB- 22.39, Serrano-Valley TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 03/26/18 and the In-Service Date was 03/27/23. Please discuss why the construction period was over 5 years?
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) If there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-46.

PB- 22.40, Big Creek 3-Rector No.1 TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.

- b) The Construction start date was 07/11/22 and the Projected In-Service Date is 04/30/27. Please discuss why the projected construction period is 4.75 years.
- c) The Original Planned In-Service Date was 12/31/21. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) The Original Planned In-Service Date was 12/31/21. For the Reason for Change (2) in In-Service Date (Column BI) identifies Material as the reason. Please identify the number of additional months that material shortage added to the project's completion.
- e) If there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-47.

PB- 22.53, Pardee-Pastoria-Warner TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 08/03/20 and the Projected In-Service Date is 11/17/25. Please discuss why the projected construction period is 5.25 years.
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) The Original Planned In-Service Date was 12/31/18. For the Reason for Change (2) in In-Service Date (Column BI) identifies Outage as the reason. Please identify the number of additional months that Outage added to the project's completion.

01-48.

PB- 22.55, Lugo-Mira Loma No.2 TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 10/11/18 and the In-Service Date was 4/18/22. Please discuss why the construction period was 3.5 years?
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) If there were any demobilization/re-mobilization costs related to this project, please quantify the amount of these costs.

01-49.

PB- 22.62, Big Creek 2-Big Creek 3 TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 01/04/21 and the Projected In-Service Date is 04/30/26. Please discuss why the construction period is 5.33 years?
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-50.

PB- 22.64, Big Creek 2-Big Creek 8 TLRR Remediation

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 02/01/21 and the Projected In-Service Date is 04/30/25. Please discuss why the construction period is over 4 years.
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-51.

PB- 25.13 Barre Substation Seismic Mitigation Project

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change (2) in In-Service Date (Column BI) identifies Outage as the reason. Please discuss the Outage and identify the number of additional months that Outage added to the project's completion.

01-52.

PB- 25.25 Hinson Substation Seismic Mitigation Project

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 11/12/18 and the Projected In-Service Date is 12/31/24. Please discuss why the projected construction period is over 6 years?
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Customer Action as the reason. Please discuss the Customer Action and identify the number of additional months that Customer Action added to the project's completion.
- d) The Original Planned In-Service Date was 12/31/19. For the Reason for Change (2) in In-Service Date (Column BI) identifies Outage as the reason. Please discuss the Outage and identify the number of additional months that Outage added to the project's completion.
- e) Please discuss why no costs are projected for 2024, when the Projected In-Service Date is 12/31/24.

01-53.

PB- 25.30 Center Substation Seismic Mitigation Project

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 10/12/20 and the Projected In-Service Date is 5/23/25. Please discuss why the construction period is over 4.5 years.
- c) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Project Design as the reason. Please discuss the Project Design and identify the number of additional months that it added to the project's completion.
- d) Please discuss why no costs are projected for 2024 and 2025, when the Projected In-Service Date is 05/23/25.

01-54.

PB- 29.01 Lighthipe Substation Switchrack Upgrade

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.

- b) The Construction start date was 09/11/20 and the Projected In-Service Date is 12/31/27. Please discuss why the construction period is over 7.25 years.
- c) The Original Planned In-Service Date was 04/29/22. For the Reason for Change in In-Service Date (Column BH) identifies Material as the reason. Please identify the number of additional months that material shortage added to the project's completion.
- d) Please describe the nature and amount of the \$13,400 in costs projected for 2028, which is after the 12/31/27 Projected In-Service Date.

01-55.

PB- 30.02 CS-(ES-5069) Substation Physical Security Enhancements

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Original Planned In-Service Date was 03/31/20. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-56.

PB- 30.05 CS-(ES-5090) Substation Physical Security Enhancements

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-57.

PB- 30.06 CS-(ES-9078) Physical Security Enhancements

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Original Planned In-Service Date was 12/31/19. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-58.

PB- 32.01 CS-(ES-5080) Substation Security System Install

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Original Planned In-Service Date was 12/23/17. For the Reason for Change in In-Service Date (Column BH) identifies Scope Change as the reason. Please discuss the Scope Change and identify the number of additional months that Scope Change added to the project's completion.

01-59.

SP- 11, Lugo Substation Transformer Bank Conversion

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) Please discuss why the Original Planned In-Service Date of 12/01/11 and Projected In-Service Date of 01/14/27 are over 15 years apart. Please discuss how this delay did not increase costs to ratepayers.
- c) The Original Planned In-Service Date was 12/01/11. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.

01-60.

SP- 12, La Fresa Substation MEER Install

Please discuss the nature of the post In-Service costs for 2020-2023 of \$837, since the project In-Service Date is 12/23/19.

01-61.

SP- 14, Chino Substation Transformer Bank Conversion

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.

- b) The Original Planned In-Service Date was 06/01/18. For the Reason for Change in In-Service Date (Column BH) identifies Permitting as the reason. Please discuss the Permitting issues and identify the number of additional months that Permitting added to the project's completion.
- c) The Construction start date was 11/16/15 and the In-Service Date was 12/31/20. Please discuss why the construction period was over 5 years.

01-62.

SP- 27 Devers Substation Facility Upgrade

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 11/04/19 and the In-Service Date is 06/23/23. Please discuss why the construction period was over 3.5 years?
- c) The Original Planned In-Service Date was 3/3/19. For the Reason for Change in In-Service Date (Column BH) identifies Project Design as the reason. Please discuss the Project Design and identify the number of additional months that it added to the project's completion.

01-63.

SP- 30 Lugo Substation Upgrade

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 10/01/25 and the Projected In-Service Date is 01/30/29. Please discuss why the construction period is over 3.33 years.
- c) The Original Planned In-Service Date was 12/31/18. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) Please discuss why no costs are forecast for 2026-2029 during the construction period.

01-64.

SP- 32 Substation Protection Upgrades - San Joaquin Region

- a) Please provide an annual cost breakdown by category (engineering, materials, labor, AFUDC, overheads, etc.) from inception through 2023.
- b) The Construction start date was 03/02/20 and the Projected In-Service Date is 12/30/27. Please discuss why the construction period is over 7.75 years.

- c) The Original Planned In-Service Date was 06/01/21. For the Reason for Change in In-Service Date (Column BH) identifies Prioritization as the reason. Please identify the number of additional months that Prioritization added to the project's completion.
- d) Please discuss why no costs are forecast for 2026-2027 during the construction period.

01-65.

SP- 72 Lugo Victorville RAS

Please discuss the nature of the post In-Service costs for 2026 and 2027 of \$11,900.

01-66.

SP- 73 N. of Lugo Centralized RAS

Please discuss the nature of the post In-Service costs for 2028 of \$6,800.

01-67.

Grid Enhancing Technologies

In July 2023, the Joint Federal-State Task Force on Electric Transmission (FERC Docket AD21-15) focused on Grid Enhancing Technologies (GETs), which are generally understood to increase the capacity, efficiency, or reliability of transmission facilities. These include power flow control, dynamic line rating, and topology optimization that can boost capacity and reduce congestion.

- a) Please identify all projects listed in the May 2024 TPR Process Project Spreadsheet that incorporate GETs including those listed above and including any other technologies that other California utilities have categorized as GETs. Additionally, identify, by project, the type of technology deployed/to be deployed.
- b) Please describe SCE's plans and policies to incorporate GETs into its transmission project planning and prioritization.

01-68.

SP- 160 Menifee Power Bank (TOT934/Q1645)

The project status is shown as “in construction”, but the expected in-service date is 02/23/24. Please confirm if this project is in service

01-69.

SP- 162 Las Vegas HSR DesertXpress (Virgin Train)

- a) Please confirm that is this the same project also known as Brightline West
- b) What is the current projected demand (MW) of this HSR project and what year is this load expected to interconnect?
- c) What amount and portion of the project costs will be paid by the customer for this project?

01-70.

SP- 165 Kramer-Victor 115 kV to 230 kV Rebuild 7884

Does the cost estimate of \$299,999 come from the CAISO cost estimate or is it an internal SCE estimate? Please provide both cost estimates if available.

01-71.

SP- 165 Kramer-Victor 115 kV to 230 kV Rebuild 7884

- a) Please identify and provide cost details on the specific alternatives SCE looked into for this project.
- b) Given that this is a line rebuild and CPUC approval is not required, what regulatory approvals does SCE anticipate needing for this project?

01-72.

Transmission Planning-Approved Projects Planning and Engineering

For the operative projects approved in the CAISO’s Transmission Planning Process in the following table, please indicate:

- a) In years and months, the duration of time the project was in the planning and engineering status before construction began,
- b) The total amount of capital expenditures for planning and engineering for the project.

Utility Unique ID #1	Utility Unique ID #2	Project Name	Duration of Planning and Engineering	Cost of Planning and Engineering
902165882	CET-ET-GA-EM-644623	Windhub Sub: Install phasor Measurement unit (PMU)		
901896619	CET-ET-GA-EM-644620	Eldorado Sub: Install phasor Measurement unit (PMU)		
903111160	CET-ET-GA-EM-644602	Big Creek 3 Sub: Install phasor Measurement unit (PMU)		
902165883	CET-ET-GA-EM-644624	Colorado River Substation PMU Install		