

SCE Transmission Project Review (TPR) Process

Cycle 3 - Stakeholder Meeting

August 28, 2025

Agenda

Start Time	End Time	Duration	Topic	Presenter
9:00 AM	9:05 AM	5 min	Roll Call	J. Huerta
9:05 AM	9:15 AM	10 min	TPR Meeting Overview, Agenda, Safety, and Meeting Logistics	M. Khouzam
9:15 AM	9:25 AM	10 min	1. SCE TPR Project Spreadsheet	J. McConnell
9:25 AM	9:35 AM	10 min	2. Generator Interconnection Network Upgrades and CAISO TPP Reliability and Policy-Driven Projects Through CAISO 2023-2024 TPP	M. Avendaño
9:35 AM	9:45 AM	10 min	14. Grid Enhancing Technologies	M. Avendaño
9:45 AM	10:00 AM	15 min	13. Competitively-Bid Projects	F. Benavides
10:00 AM	10:10 AM	10 min	16. California High Speed Rail Authority (CHSRA) Projects	F. Benavides
10:10 AM	10:15 AM	5 min	5. Wildfire Impacts	A. Ocegueda
10:15 AM	10:25 AM	10 min	9. Project Updates	A. Ocegueda
10:25 AM	10:40 AM	15 min	Break	
10:40 AM	11:00 AM	20 min	9m) Project Update - SP-157 Mesa - Del Amo - Serrano 500 kV Upgrade	M. Esguerra
11:00 AM	11:15 AM	15 min	8. SP-30 Lugo-Victorville 500 kV Transmission Line Upgrade	E. Webb
11:15 AM	11:30 AM	15 min	3. Transmission Line Rating Remediation (TLRR)	N. Harris
11:30 AM	11:40 AM	10 min	4. Supply Chain / Advance Procurement	M. Vallecorsa
11:40 AM	11:50 AM	10 min	6. PB-05 Substation Unplanned Capital Maintenance and PB-06 Substation Maintenance Program	B. Almendarez
11:50 AM	12:00 PM	10 min	7. PB-25 Seismic Mitigation Program – Substations	A. Flores
12:00 PM	1:00 PM	60 min	Lunch	
1:00 PM	1:15 PM	15 min	10. Data Field 25, Prioritization Procedure	S. Mascarenhas
1:15 PM	1:30 PM	15 min	11. Data Field 66, Cost Benefit Analysis	M. Avendaño
1:30 PM	1:40 PM	10 min	12. Data Field 48, AACE Class	P. Tran
1:40 PM	1:50 PM	10 min	15. Data Centers	O.Marroquin
1:50 PM	2:00 PM	10 min	Close Out & Next Steps	A. Ocegueda

Please note that Topics are numbered as received from the CPUC in TPR Proposed Topics List, but the order here has been reorganized in order to accommodate speakers.

TPR Meeting Overview, Agenda, Safety, and Meeting Logistics

Mark Khouzam, Senior Advisor
FERC Rates and Tariffs – TPR Team

Roll Call

Jerry Huerta, Senior Attorney

Virtual Meeting Emergency Protocol

VIRTUAL MEETING EMERGENCY PROTOCOL

Follow these steps when a virtual or hybrid meeting attendee is incapacitated.

BEFORE THE MEETING STARTS - ASSIGN ROLES

- Who will call ESOC? **(626-815-5611)**
- Who will contact the leader?
- Who will stay on the call with the employee?
- Identify the location of employees who may be in transit or out in the field.

1



A medical emergency occurs, or seems to be occurring.

2



If you know the employee's location, call 911.

Jenny McConnell Antonio Ocegueda

3



Call Edison Security Operations Center (ESOC) at **626-815-5611**.

4



If 911 has not been called, ESOC will contact 911 to dispatch emergency services to employee's home address.

5



Contact the employee's leader.

Rob Mindess

6



Remain on the line with the employee until emergency services arrives.

Mark Khouzam



Edison Safety

If employee is a supplemental worker, ESOC will contact the vendor to provide known information; if unavailable, 911 will be contacted.

Safety Moment – Back to School Safety for Drivers

Back to School Safety Reminders for Drivers.

Here are 4 easy ways to stay alert:

- Obey school zone speed limits and follow your school's drop off procedure.
- Make eye contact with children crossing the street.
- Never pass a bus loading or unloading children.
- The area 10 feet around a school bus is the most dangerous for children; stop far enough back to allow them to safely enter and exit the bus.

Source: National Safety Council



Meeting Logistics

-  No NERC CIP confidential information will be discussed
-  Please mute your line if you are not speaking
-  Presenters will take questions at the end of their section
-  Please use raise your hand (icon) and we will call on you in the order it was raised; Reminder to put hand down after question
-  When asking questions, please state your name and organization first
-  Presenters will be joining throughout the day at a specific times, so we will work to stay on schedule
-  SCE welcomes your feedback on how to improve the stakeholder calls during next steps and in written comments

TPR Overview and Meeting Objectives

- The Transmission Project Review Process provides the Commission and all Stakeholders semi-annually with current, specific, comprehensive, and system-wide transmission data for projects with capital additions to rate base in the last five years and forecasted or actual capital expenditures in the current year and future four years
- SCE hosts a semi-annual Stakeholder Meeting on February 28 and August 28, to engage and address Stakeholder's questions and discussion topics
 - SCE has made a good faith effort to identify the appropriate subject matter experts to speak on each topic and to provide accurate information throughout this presentation but reserves the right to correct or supplement the information provided if it becomes aware of needed modifications or additions

TPR Process Milestones

Date	Milestone
June 2	SCE provides semi-annual Project Data Spreadsheet and project authorization documents to Stakeholders
July 16	Deadline for Stakeholders to provide questions/ comments
August 6	SCE publishes written responses to questions / comments
August 13	CPUC and Stakeholders provide agenda items for Stakeholder meeting
August 28	SCE hosts Stakeholder meeting
September 12	Stakeholders provide questions/ comments within 15 calendar days following Stakeholder meeting
October 3	SCE publishes written responses to questions/ comments
October 13	Deadline for Stakeholders to provide project-specific follow-up questions/ comments
October 27	SCE publishes written responses to project-specific follow-up questions/ comments
October 31	Stakeholders may provide comments to SCE by this date
December 1	Repeat

SCE's June 2025 TPR Materials & Questions Received

- SCE's June 2025 TPR Project Spreadsheet included all FERC-jurisdictional electric transmission projects with actual or forecasted capital costs of one million dollars or more in the prior five calendar years, the current year, or the next four years (2020 – 2029)
- SCE's June 2025 TPR Submission included:
 - Project Data Spreadsheet included a total of 484 rows comprised of: 48 Program Blankets, 307 programmatic projects, and 129 Specific Projects.
 - 172 Authorization Documents that correspond to Projects in the Spreadsheet.
 - 2 Procedures
 - SCE addendum for AB970 eligible projects that would otherwise be subject to the TPR >\$1M threshold in accordance with the CPUC Decision 25-01-040
- SCE received one data request set from Energy Division
 - 43 questions with subparts
- 16 topics with subparts for today's discussion were received from the CPUC (in coordination with other stakeholders)

1. SCE TPR Project Spreadsheet

Jenny McConnell, Advisor – Technical Compliance

SCE TPR Project Spreadsheet

Please describe SCE's process for pulling data. Identify source systems, records, accounting data, etc., particularly noting any changes since last cycle. Discuss issues encountered in preparing the current TPR Project Spreadsheet and planned improvements for the next cycle.

- Our process for pulling data remained consistent with Cycle 1 and Cycle 2
- As it pertains to financial data, forecast information is sourced from the annual capital operating plan. Recorded costs are obtained from PowerPlan. New projects that meet the threshold criteria for inclusion in the TPR are identified through the analysis of recorded and forecasted data and subsequently incorporated into the TPR spreadsheet.
- Subject Matter Experts (SMEs) update required fields for new and existing projects using the various data sources. For example:

P6 Production Database	PowerPlan	CAPMAR
PMWIF SharePoint Site	GICD's iREQ Access Data Base	COBRA
Trend SharePoint Site	Copperleaf C55	SAP
CMT SharePoint Site	MDI/IWP (Integrated Work Plan)	EHSync system
ATP SharePoint Site (Programs)	Wildfire Mitigation Plan	Google Earth
CAISO Annual Transmission Plans	Project Cost Element Details (PCED)	ArcGIS
- The absence of a unified data source encompassing all required TPR fields has historically made each filing a resource-intensive effort. To address this challenge, SCE is actively working to improve our process, utilizing greater automation.

2. Generator Interconnection Network Upgrades and CAISO TPP Reliability and Policy-Driven Projects Through CAISO 2023-2024 TPP

Manuel Avendaño, Engineering Senior Manager, Central System Planning

Generator Interconnection Network Upgrades and CAISO TPP Reliability and Policy-Driven Projects Through CAISO 2023-2024 TPP

- a) **Please provide an update on projects at or greater than 1MW that are interconnecting to SCE's electric transmission system. Please identify the updates to those included in the January 2025 CAISO Transmission Development Forum (TDF).**
- The TDF does not address individual interconnection concerns. The scope of the projects for the forum are previously approved projects through the CAISO Transmission Planning Process (TPP) and Network Upgrades identified in the generator interconnection process. The TDF does not provide updates on individual generation projects at or greater than 1 MW that are interconnecting to SCE's electric transmission system.
- b) **Please identify the type and amounts (MW and MWh) of generation that will interconnect to the electric grid.**
- The TDF does not identify the type and amounts (MW and MWh) of generation that will interconnect to the electric grid
- c) **Please include in the discussion cost estimates and in-service dates as provided in the CAISO Transmission Plan approving each project, the previous TPR Project Spreadsheets, and the current estimates. Please provide the reasons for changes in costs or in-service dates.**
- The CAISO Transmission Plan does not provide cost estimates and in-service dates of generation projects. CAISO 2023-2024 TPP Projects are listed on the next slide

Generator Interconnection Network Upgrades and CAISO TPP Reliability and Policy-Driven Projects Through CAISO 2023-2024 TPP

c) CAISO 2023-2024 TPP Projects in July 2025 TPR

Project Name	2023-2024 TPP		2025 TDF/TPR	
	Initial Estimated Cost	Initial Expected In-Service Date	Current Projected Total or Actual Final Cost	Current Expected In-Service Date
Inyo 230 kV Shunt Reactor	\$20 M	12/31/2027	\$21.58 M	9/25/2026
Etiwanda 230 kV Bus SCD Mitigation	\$15 M	12/31/2027	\$15.01 M	8/20/2029
Eldorado 230 kV Short Circuit Duty Mitigation	\$48.8 M	12/31/2029	\$38.29 M	12/31/2029

14. Grid Enhancing Technologies

Manuel Avendaño, Engineering Senior
Manager, Central System Planning

Grid Enhancing Technologies

Please provide any updates on Grid Enhancing Technologies (GETs) SCE is evaluating (e.g., Ambient Adjusted Ratings (AAR) and Dynamic Line Rating (DLR)), if any GETs projects have been in coordination with the CAISO, and how deployment of these technologies has enhanced grid operation and congestion/constraint mitigation timelines. Additionally, please describe any GETs implemented in projects without CAISO direction (i.e. at the volition of SCE alone).

- **GETs Under Evaluation**
 - SCE continues to evaluate and advance the deployment of GETs, including AAR and DLR, in alignment with regulatory directives such as SB 1006 and internal planning strategies
 - SCE is actively implementing an AAR system across its Bulk Electric System in compliance with FERC Order 881
 - SCE is conducting a data-driven analysis per SB 1006 to identify transmission corridors where DLR could reduce congestion and curtailment of renewable resources
- **Coordination with CAISO**
 - SCE coordinated with CAISO in evaluating GETs as part of the annual Transmission Planning Process (TPP). No DLR projects have yet been formally recommended for implementation through the TPP.
- **GETs Implemented Without CAISO Direction**
 - SCE has not yet implemented GETs projects in the CAISO controlled grid independently of CAISO direction. However, internal studies and pilot assessments are laying the groundwork for future deployments. These efforts include evaluating sensor technologies and refining cost and feasibility models.
 - SCE faces regulatory and cost recovery challenges in testing and validating DLR solutions in the field and is actively pursuing ongoing (e.g., CHARGE 2T under DOE IIJA GRIP) and new grant opportunities to support deployment and demonstration efforts

13. Competitively-Bid Projects

Fernando Benavides, Senior Advisor –
Integrated Major Project Development

Competitively-Bid Projects

Please provide a list of competitively-bid projects (both TPP and non-TPP, if any) that SCE has interconnected at the transmission level. Include historical, in-process, and future-planned projects. For each project, please provide the following:

- a) Project Description:** The North of SONGS – Serrano 500 kV Line Project (“Project”) was submitted for competitive solicitation by the CAISO as part of the 2022-2023 Transmission Plan and is meant to relieve what the CAISO refers to as the Southern Area Constraint. The Project consists of an approximate new 30-mile 500 kV line between the planned North of SONGS substation and the existing Serrano substation. The transmission line is competitive work terminating 100 feet outside of the substation fence. The incumbent work required at the Serrano substation is to be completed by SCE and the incumbent work at the North of SONGS substation is to be completed by Horizon West Transmission, LLC.
- b) Primary purpose:** The primary purpose of the Project, along with the other Southern Area Reinforcement projects, is to increase transmission capacity in the Los Angeles Basin by establishing a new 500 kV source from San Diego. The Project was identified and approved as a policy-driven project with the purpose of allowing for increased transmission capacity into local capacity areas to deliver renewable energy resources or zero-carbon resources that are expected to be developed by 2035.

Competitively-Bid Projects

Please provide a list of competitively-bid projects (both TPP and non-TPP, if any) that SCE has interconnected at the transmission level. Include historical, in-process, and future-planned projects. For each project, please provide the following:

- c) SCE-specific cost information (whether SCE is the incumbent utility, project sponsor, or both):** Per the CAISO 2022-2023 Transmission Plan, the estimated cost for the Project is \$503M
- d) Challenges encountered:** No challenges have been encountered at this stage of the Project
- e) Most up-to-date in-service dates (where applicable):** Per the California ISO, the Project must be in service no later than June 1, 2034
- a) Project dependencies on other non-competitively bid projects:** The scope of work to terminate the approved North of SONGS – Serrano 500 kV Line within the SCE-owned Serrano substation is a project dependency that is not competitively bid

16. California High Speed Rail Authority (CHSRA) Projects

Fernando Benavides, Senior Advisor,
Integrated Major Project Development

California High Speed Rail Authority (CHSRA) Projects

The planned path of the CHSRA High Speed Rail line goes through SCE territory. Please describe any expected impacts on SCE's Transmission System, including facility relocations and network upgrades. Please include timelines, expected cost, and cost allocation agreements.

- SCE completed a preliminary study in September of 2013 which evaluated the high-speed rail line. The study evaluated different locations where SCE could have provided service from though none were selected as the CHSRA did not request for SCE to move forward. Due to the amount of time that has since past from the original study, a full re-study would be required to evaluate the impact of the high-speed rail line. For that reason, there are no timelines, costs or information on agreements that are available.

5. Wildfire Impacts

Antonio Ocegueda, Principal
Manager, FERC Rates & Tariffs

Wildfire Impacts

Please provide an update on whether any SCE transmission facilities were affected by the January 2025 wildfires in SCE territory and, if so, provide a list of impacted transmission lines, towers, poles, and substations, along with estimated cost to repair damages.

- As discussed in SCE's response to DR Question 01-40:
 - While investigations are ongoing, SCE is currently not aware of any damage to SCE transmission facilities or lines related to the January 2025 wildfires in SCE's service territory

9. Project Updates

Antonio Ocegueda, Principal Manager,
FERC Rates & Tariffs

Project Updates

Please provide an updated overview of each of the following projects/programs, including any project drivers, timelines to completion, milestone schedule, current status, project risks, project dependencies, FERC/CPUC allocation, cost changes since project inception, and changes to the project in the past 12 months.

- a) SP-01 Calcite Substation**
- b) SP-04 Alberhill Substation Loop In**
- c) SP-10 Riverside Transmission Reliability Project**
- d) SP-152 New Coolwater A 115/230 kV Bank**
- e) SP-162 Las Vegas HSR DesertXpress (Virgin/Brightline West Train)**
- f) SP-154 Serrano 4th Bank & GIS Rebuild**
- g) PB - 05.02 Eagle Mountain–Blythe 161 kV**
- h) PB-54 Transmission Planned Maintenance - Switch Replacement**
- i) PB-18, Substation Transformer Bank Replacement Program (include a list of completed and upcoming projects in this program)**
- j) PB-02.04, CA Pacific DC Intertie: Polymer Insulator Replacement (include discussion of the execution approach for this program)**
- k) PB-52 Advanced Technology Capital IIJA DOE (include examples of pilot sites and include itemized forecast by year/component)**
- l) XX Spare Transformer Equipment Program**

Project Updates (Part 1)

#	Project/Program Name	Project Driver	Timeline to Completion	Milestone Schedule	Current Status	Project Risks
a)	SP-01 Calcite Substation	See TPR Cols 5, 9, 10	See TPR Col 51	Schedule in Development	See TPR Col 47	Generator Interconnection project completion
b)	SP-04 Alberhill Substation Loop In	See TPR Cols 5, 9, 10	See TPR Col 51	Schedule in Development	See TPR Col 47	Licensing delays
c)	SP-10 Riverside Transmission Reliability Project	See TPR Cols 5, 9, 10	See TPR Col 51	See DR 1.031, subpart a	See TPR Col 47	Material procurement risks and unknown unground conflicts
d)	SP-152 New Coolwater A 115/230 kV Bank	See TPR Cols 5, 9, 10	See TPR Col 51	Schedule in Development	See TPR Col 47	Outages and material lead times
e)	SP-162 Las Vegas HSR DesertXpress (Virgin/Brightline West Train)	See TPR Cols 5, 9, 10	See TPR Col 51	See DR 1.041	See TPR Col 47	See DR 1.041
f)	SP-154 Serrano 4th Bank & GIS Rebuild	See TPR Cols 5, 9, 10	See TPR Col 51	See DR 1.014	See TPR Col 47	Outages and material lead times
g)	PB - 05.02 Eagle Mountain - Blythe 161 kV *	See TPR Cols 5, 9, 10	See TPR Col 51	In Service	See TPR Col 47	In Service
h)	PB-54 Transmission Planned Maintenance - Switch Replacement	See TPR Cols 5, 9, 10	See TPR Col 51	N/A - This is a program	See TPR Col 47	N/A - This is a program
i)	PB-18 Substation Transformer Bank Replacement Program	See TPR Cols 5, 9, 10	See TPR Col 51	N/A - This is a program	See TPR Col 47	N/A - This is a program
j)	PB-02.04 CA Pacific DC Intertie: Polymer Insulator Replacement	See TPR Cols 5, 9, 10	See TPR Col 51	See DR 1.023, Subpart c	See TPR Col 47	See DR 1.023, Subpart c
k)	PB-52 Advanced Technology Capital IIJA DOE	See TPR Cols 5, 9, 10	See TPR Col 51	See DR 1.022, Project under DOE Review	See TPR Col 47	See DR 1.022, Project under DOE Review
l)	XX Spare Transformer Equipment Program**	See TPR Cols 5, 9, 10	See TPR Col 51	N/A - This is a program	See TPR Col 47	N/A - This is a program

*Noted as PB - 05.02 Eagle Mountain: Replace the 5A Bank 220/161/66kV in TPR

**Noted as PB-04.01 - SC&M FERC STEP in TPR

Project Updates (Part 2)

#	Project/Program Name	Project Dependencies	FERC %	Cost Changes Since Inception	Changes in Past 12 Months	Completed Projects (if program)	Upcoming Projects (if program)	DR Reference
a)	SP-01 Calcite Substation	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.043
b)	SP-04 Alberhill Substation Loop In	See TPR Col 8	52%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR1.042
c)	SP-10 Riverside Transmission Reliability Project	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.031
d)	SP-152 New Coolwater A 115/230 kV Bank	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	N/A
e)	SP-162 Las Vegas HSR DesertXpress (Virgin/Brightline West Train)	See TPR Col 8	76%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.041
f)	SP-154 Serrano 4th Bank & GIS Rebuild	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.014
g)	PB - 05.02 Eagle Mountain - Blythe 161 kV *	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.029
h)	PB-54 Transmission Planned Maintenance - Switch Replacement	See TPR Col 8	10%	See TPR Col 54, 56, 70	See TPR Col 52	See PB Children	See PB Children	DR1.030
i)	PB-18 Substation Transformer Bank Replacement Program	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	See PB Children	See PB Children	DR 1.026
j)	PB-02.04 CA Pacific DC Intertie: Polymer Insulator Replacement	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.023
k)	PB-52 Advanced Technology Capital IJIA DOE	See TPR Col 8	60%	See TPR Col 54, 56, 70	See TPR Col 52	See PB Children	See PB Children	DR 1.022
l)	XX Spare Transformer Equipment Program**	See TPR Col 8	100%	See TPR Col 54, 56, 70	See TPR Col 52	N/A	N/A	DR 1.024

*Noted as PB - 05.02 Eagle Mountain: Replace the 5A Bank 220/161/66kV in TPR

**Noted as PB-04.01 - SC&M FERC STEP in TPR

Break (15 minutes)

9m) Project Update - SP-157 Mesa - Del Amo - Serrano 500 kV Upgrade

Mark Esguerra, Director, Transmission
& Substation Engineering

SP-157 Mesa - Del Amo - Serrano 500 kV Upgrade

Project Background

- Approved and awarded to SCE as a “Policy-Driven Project” by the CAISO Board of Governors on May 18, 2023, in the 2022-2023 TPP, as part of a suite of projects proposed to address multiple deliverability constraints across multiple service areas

Significant increase to Original Project Cost

- Original \$1.125 billion reported in June 2025 TPR
- Extensive review of project scope (post Op Plan) by SCE Project Management team refined constraints and addressed missing elements. Updated project cost estimate determined to be multiple times greater than the original.

Key Drivers to Cost Increases

- Transmission corridor congestion would require approx. 14 miles of existing 220 kV and 8 miles of 66 kV existing lines to be relocated and/or undergrounded
- Physical space limitations at existing substation property requires full rebuild of Del Amo Substation 220/66/12kV equipment to create space for new 500 kV switchyard and AA-banks
- Increase in Project Contingency per standard project estimating principles

Status

- SCE providing any requested support to CAISO technical team as they re-evaluate reliability and/or deliverability analyses. Anticipate resolution as part of the 2025-2026 TPP.
- Ultimate project scope and impact to timeline unknown at this time

8. SP-30 Lugo-Victorville 500 kV Transmission Line Upgrade

Elizabeth Webb, Major Construction Project Manager, TSPM (Transmission, Substation, Project Management)

SP-30 Lugo-Victorville 500 kV Transmission Line Upgrade

SCE updated the in-service date for the Lugo-Victorville 500 kV Transmission Line Upgrade Project to 2027-03-31 in the June 2025 SCE TPR PS. During the July 30, 2025 TDF, SCE also stated that a portion of SCE's scope cannot be completed without coordinating outage dates with LADWP (causing sequencing delays as LADWP work continues to also be delayed), that generators are reaching out to LADWP for assistance, and that meetings between SCE and LADWP leadership are ongoing.

a) Please provide a breakdown of SCE/LADWP/other TO project scope, work schedule, and dependencies.

To date SCE has completed the following work:

- Completion of line infraction work to address line to ground clearance issues (SCE side)

SCE has the remaining work to complete at Lugo:

- Replacement of three 500kV CB's, terminal equipment and associated disconnects
- Replacement of bus supports, lightening arrestors, CCVTS, and line protection relays
- Removal of wave trap and upgrade of line position to support increased rating of the 500kV T/L

The replacement of each CB and associated equipment described above will take several weeks and will require coordination with LADWP. At this time there is no finalized work schedule since it would be dependent on when LADWP would allow for SCE to commence and complete its work based on available outage windows.

The overarching dependency for SCE and LADWP to complete this work is dependent on the availability to receive approval to take an outage of the Lugo-Victorville 500kV T/L. However, until there is resolution related to the replacement of the Sylmar Banks, specifically Bank E, an outage of the Lugo-Victorville 500kV T/L is not possible due to reliability concerns that would result from loss of any of the remaining two Sylmar Banks.

SP-30 Lugo-Victorville 500 kV Transmission Line Upgrade

SCE updated the in-service date for the Lugo-Victorville 500 kV Transmission Line Upgrade Project to 2027-03-31 in the June 2025 SCE TPR PS. During the July 30, 2025 TDF, SCE also stated that a portion of SCE's scope cannot be completed without coordinating outage dates with LADWP (causing sequencing delays as LADWP work continues to also be delayed), that generators are reaching out to LADWP for assistance, and that meetings between SCE and LADWP leadership are ongoing.

b) Please provide any mitigation plans coming out of meetings between SCE and LADWP.

- Per LADWP, Sylmar Bank E needs to be replaced first before the required outages needed to complete the Lugo-Victorville 500kV T/L Upgrade can be approved. There are also no available spare banks that can be used. As it relates to the Lugo-Victorville 500kV T/L, the only mitigation to prevent possible overloads would be for curtailments and/or reductions in imports. Any other possible mitigations related to the ability to commence work, which would include the outage of the Lugo-Victorville 500kV T/L, has been discussed between SCE and LADWP with scheduled meetings to take place by the end of August.

SP-30 Lugo-Victorville 500 kV Transmission Line Upgrade

SCE updated the in-service date for the Lugo-Victorville 500 kV Transmission Line Upgrade Project to 2027-03-31 in the June 2025 SCE TPR PS. During the July 30, 2025 TDF, SCE also stated that a portion of SCE's scope cannot be completed without coordinating outage dates with LADWP (causing sequencing delays as LADWP work continues to also be delayed), that generators are reaching out to LADWP for assistance, and that meetings between SCE and LADWP leadership are ongoing.

c) Please describe any opportunities for the CPUC to help speed up this project.

- SCE and LADWP leadership have been in recent contact regarding this matter to determine how best to resolve. Meetings are currently scheduled to occur by the end of August to determine if there are any opportunities that would allow for SCE to complete additional portions of its work in advance or the Sylmar Bank E replacement work. Depending on the outcome of these discussions, SCE would welcome any assistance that the CPUC can provide though it is unclear what the capacity of that could be at this time.

3. Transmission Line Rating Remediation (TLRR)

Nora Harris, Sr. Project Manager,
Major Construction

Transmission Line Rating Remediation (TLRR)

- a) Please provide an explanation on why approximately 60% of the remaining TLRR discrepancy remediation work is skewed heavily for the last forecasted year (i.e. 3,534 of the remaining 5,964 spans for the year 2030). Refer to the table SCE provided in the 08/06/2025 TPR response:

<u>Year Forecasted</u> <u>(June 2025 TPR)</u>	<u>Remediation Spans</u>
2025	567
2026	346
2027	753
2028	626
2029	304
2030	3,534

- b) Please explain if SCE expects the remaining discrepancy work will follow the pattern of the previous 5,782 spans remediated reported in the July 8, 2025 Quarterly Report to the CPUC (e.g. approximately 20% cleared with no violation and 80% cleared by remediation work).
- c) Please provide any cost comparison or cost impact analysis for the change from the December 2024 TPR TLRR Forecast versus the May 2025 TPR TLRR Forecast. Refer to the table SCE provided in the 02/06/2025 TPR response:

<u>Year Forecasted</u> <u>(Dec 2024 TPR)</u>	<u>Remediation Spans</u>
2025	602
2026	472
2027	537
2028	1,720
2029	2,233
2030	0

- d) Please provide justification for the updated forecast schedule. Please describe any safety or reliability concerns identified with pushing out the completion of TLRR remediation work into 2030.

Transmission Line Rating Remediation (TLRR)

- Remediation Schedule: discrepancy remediations are only taken once all work is complete on a particular circuit
- The majority of remaining discrepancies should be cleared by construction work
 - Most discrepancies remaining to be remediated fall in one of five (5) major projects that require CPUC licensing
 - Project scope identification for the rest of the Program is nearly complete
 - Remaining scope may have been remediated by another SCE Project or Program
- Updated forecast deferrals are primarily related to two previously identified challenges: project licensing requirements and material resourcing
- SCE believes the circuits can continue to be operated safely
 - High priority spans were corrected prior to 2014
 - SCE conducts regular patrol and vegetation management inspections to ensure safe operation of these facilities
 - SCE has flagged circuits with TLRR remediations with Transmission Planning so that additional load is not planned for those circuits until remediations are complete

Transmission Line Rating Remediation (TLRR)

Cost Comparison – December 2024 to June 2025

Project ID	Project Name	December 2024 TPR	June 2025 TPR	Change (\$K)
PB-22.56	Big Creek 3-Rector No.2 TLRR Remediation	\$ 13,939.23	\$ 15,146.57	\$ 1,207.34
PB-22.45	Eagle Mountain-Blythe TLRR Remediation	\$ 83,533.33	\$ 85,017.81	\$ 1,484.49
SP-26	Control-Silver Peak TLRR Remediation	\$ 254,167.47	\$ 255,830.62	\$ 1,663.16
PB-22.40	Big Creek 3-Rector No.1 TLRR Remediation	\$ 86,866.88	\$ 89,624.23	\$ 2,757.35
SP-23	Eldorado-Pisgah-Lugo TLRR Remediation	\$ 235,281.71	\$ 238,235.14	\$ 2,953.43
PB-22.23	Bailey-Pardee TLRR Remediation	\$ 18,460.80	\$ 23,779.55	\$ 5,318.75
SP-25	Ivanpah-Control TLRR Remediation	\$ 1,165,731.36	\$ 1,040,679.08	\$ (125,052.29)
Sum of Total Change >\$1M				\$ (109,667.77)

Data Source: TPR Data Column 56, December 2024 and June 2025

4. Supply Chain / Advance Procurement

Michael Vallecorsa, Principal
Manager, Procurement

Supply Chain / Advance Procurement

- a) Please explain whether SCE is encountering any supply chain issues for transformers, circuit breakers, and other critical transmission-related infrastructure. If it is, please explain them and describe SCE's plans to address.
 - Lead-times for power transformers and circuit breakers continue to be well above historical averages which is why SCE negotiated slot reservations to cover anticipated demand for the next few years. SPE is also working on ordering major equipment earlier in the process to mitigate the potential for delays.
- b) Please provide an update on SCE's advance procurement of transformers and circuit breakers, both for emergency inventory and known projects. Please include updates on the preferred manufacturers/production slot reservation strategy and the work order process improvement pilot that were discussed during SCE's February 28, 2025 TPR Stakeholder Meeting.
 - In 2024, Edison reserved production slots for multiple years for critical, long-lead time power transformers, and circuit breakers based on SPE's projected demand. SPE is continuing to update their demand plan and place orders proactively to mitigate the potential for project delays due to current market lead-times.
- b) Please describe how tariffs are affecting the cost and availability of transformers, circuit breakers, and other critical transmission-related infrastructure
 - We have not experienced challenges with availability due to tariffs but costs of finished goods, raw materials, and components are impacted by these current tariffs. Edison continues to use competitive pressures, evaluating manufacturing capacity, and negotiating with suppliers to minimize the impact of tariffs.

6. PB-05 Substation Unplanned Capital Maintenance and PB-06 Substation Maintenance Program

Ben Almendarez, Manager,
Maintenance Programs

PB-05 Substation Unplanned Capital Maintenance and PB-06 Substation Maintenance Program

Please describe these programs and provide an update on major projects under each. Please include in the discussion any notable risks or challenges to the programs, specifically any cost or reliability implications.

Program Description: **Substation Capital Maintenance** activities are predominantly like-for-like replacements requiring minimal engineering. Substation Capital Maintenance captures the labor, equipment, and other material costs to remove and replace assets not identified in other replacement programs, either on a programmatic or reactive basis. It contains two categories:

1. **Preventative Maintenance (PB-06)** - Programmatic approach that allows SCE to proactively plan work over a controlled schedule, perform any necessary engineering design activity, and allocate and manage resources effectively

Example: Rancho Vista Substation – SF6 Gas Monitoring System

- Installation of an Online Gas Monitoring System for 220 kV and 500 kV GIS equipment
- Replacement of existing gas density monitors with advanced units featuring alarm contacts and visual indicators

Benefits:

- Support CARB(California Air Resource Board) Compliance by Lowering SF6 Emissions
- Enhances Operational Reliability and Safety

Program Risk/Challenges Impact: Low

- Work identification and prioritization is determined utilizing engineering and technical subject matter expert input to assess the condition of existing equipment, current operational requirements, and criticality of that equipment

PB-05 Substation Unplanned Capital Maintenance and PB-06 Substation Maintenance Program

2. Substation Breakdown Maintenance (PB-05) - Supports reactive equipment replacements, which must be completed in a timely manner because substation equipment failures may lead to prolonged outages, unsafe operating conditions, or more costly reactive solutions. Drivers for these emergent projects can include deteriorating equipment conditions, weather events, such as lightning strikes, or faults as a result of animal intrusion, resulting in equipment damage or internal component failure.

Example: In 2022, the Santa Monica Substation 16 kV load was interrupted when a rodent contacted the Beachcomber 16 kV Circuit Breaker. The fault resulted in the circuit breaker failing catastrophically, necessitating a reactive replacement.

Program Risk/Challenges Impact: High

- Unpredictable nature of equipment failures may arise from external factors such as severe weather events including lightning strikes or from operational disruptions caused by animal intrusion, potentially resulting in damage to substation assets or internal component malfunction
- Safety concerns for failures can pose serious hazards to workers and the public, demanding immediate and well-coordinated responses

7. PB-25 Seismic Mitigation Program – Substations

Adrian Flores, Sr. Project Manager –
Major Construction

PB-25 Seismic Mitigation Program – Substations

Please describe the history and current status of this program, including the reason that 23 new projects under the program (with total cost estimated at \$57 million) have been included in the current TPR PS. Please include in the discussion any notable risks or challenges to this program.

- SCE clarifies that 17 new projects have been added in the July 2025 TPR, with a total projected cost of \$41.4M
- New projects have been added because they exceeded the \$1M threshold for reporting but were originally in the PB-25 Seismic Mitigation Program header
- Established in 2016, the Seismic Resiliency Program, formally the Seismic Assessment and Mitigation Program, was created to centralize all seismic mitigation efforts across SCE. The program ensures consistency to evaluation, prioritization and reporting of seismic-related work. (Please see Section II.C.1.a "Seismic Resiliency Program" on pages 21-23, Exhibit SCE-04, Vol. 1 of SCE's 2025 GRC for more detail).
- SCE has identified notable risks impacting seismic mitigation substation projects, including:
 - Limited outage availability
 - Complex permit requirements
 - Delays in vendor deliverables
- To mitigate these challenges, SCE has implemented early outage coordination of schedules with affected customers, streamlined permitting and environmental reviews and strengthened vendor engagement to ensure timely engineering documentation

Lunch (1 hour)

10. Data Field 25, Prioritization Procedure

Sheridan Mascarenhas, Strategic Planning
Senior Advisor, Transmission Project
Development

Data Field 25, Prioritization Procedure

SCE has stated that it does not have an enterprise-wide mechanism that scores and prioritizes all projects implement across the company, and therefore, has provided the input “NA” for this data field. The Utility Prioritization Tab references prioritization process for certain programs/projects but does not provide prioritization of the various “Assets and Items”, identified as Circuit Breakers: Transformers: Relays, Protection, Control: Substation Switchracks: Substation Switchrack Rebuild: Transmission Lines.

- a) Please describe how SCE prioritizes work by the “Assets and Items” categories.**
- b) For future cycles, would SCE consider populating Field 25 with the ranking by “Assets and Items” categories?**

Data Field 25, Prioritization Procedure

- While SCE does not have a utility-wide prioritization ranking system, need and timing is primarily determined by compliance with applicable transmission planning standards, CAISO TPP approval, third party executed agreements or other contractual/regulatory requirements
- As further explained in SCE's TPR submittals (tab "Utility Prioritization"), SCE does have some program-specific prioritization methods that are only applicable to programs such as circuit breakers and transformers
- Generally, replacement of assets above are identified using a risk informed prioritization. Reprioritization occurs as field conditions change and/or as new projects are identified to address other issues at the same substation or circuit, which can allow projects to be performed together for operational and/or cost efficiency purposes.

Data Field 25, Prioritization Procedure

SCE prioritizes work under separate single infrastructure replacement programs

- For specific programs such as Circuit Breaker Replacements or Substation Transformer Bank Replacements SCE utilizes the following;
 - **Health Index:** An index that scores equipment based on several factors such as age, inspection findings, performance history, test results etc.,
 - **Additional Factors:** Additional factors such as regulatory compliance requirements, technology obsolescence, unavailability of replacement parts, operational or design efficiency etc.
- Plan / Prioritization Development
 - Based on these factors, a draft replacement schedule is developed
 - Two adjustments are then made. First, the draft schedule is adjusted by SMEs
 - Second, the schedule is adjusted to optimize for construction efficiencies
- SCE continues to have concerns with providing limited set of prioritization data under Column 25 that is specific to a limited set of programs and not cross-comparable
 - SCE will continue to explore ways this limited set of data could be provided without causing confusion/misinterpretation

11. Data Field 66, Cost Benefit Analysis

Manuel Avendaño, Engineering Senior
Manager, Central System Planning

Data Field 66, Cost Benefit Analysis

Please provide an update on SCE's incorporation of cost/benefit analyses in its project planning strategy. What efforts is SCE taking to implement a Cost-Benefit Analysis or Cost-Benefit Ratio for the projects in the Project Spreadsheet?

Currently, SCE does not have an enterprise-wide standardized cost/benefit analysis program to compare projects across its portfolio. Numerous projects in TPR are driven by external factors and requirements where a cost/benefit analysis is not utilized, but cost is an important factor in determining the preferred alternative.

Typical Origin of Projects:

- Grid expansion projects approved by the CAISO as part of the Transmission Planning Process (TPP)
- NERC Compliance projects
- Customer-requested system modification projects, such as generator interconnections, upgrades to serve new customer load, or new transmission interconnection
- Infrastructure replacement projects

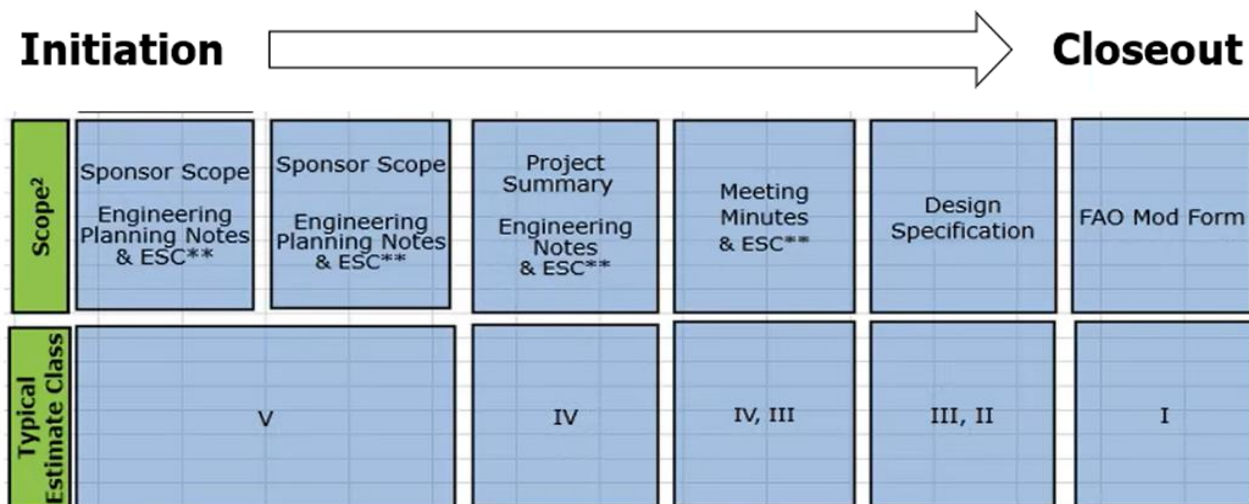
12. Data Field 48, AACE Class

Peter Tran, Project Controls & Central
Coordination,
Manager, Cost Estimating

Data Field 48, AACE Class

SCE stated that it has recently implemented a new data tool that facilitates the warehousing of Association for the Advancement of Cost Engineering (AACE) class information for substation and bulk transmission project work. Accordingly, starting with the June 2025 TPR submittal, SCE is now reporting the current AACE class as applicable and where available via the new tool. Please use 2-3 projects at AACE class 3 or 4 as examples to “walk through” the process of assessing projects with the new data tool and provide an overview of the “specific points in the project lifecycle” for which the AACE Estimated Class is determined” (as discussed in the TPR Notes Tab)

- SCE references AACE Class guideline and applies its framework on the determination of estimating class for substation and bulk transmission projects
- Example for Class IV estimate: SP-175 Neenach Sub 904042381
- Example for Class III estimate: PB-16.18 Vincent Sub 902820062



15. Data Centers

Oscar Marroquin, Senior Advisor,
CIMOS/ Rule 2

Data Centers

Has SCE received any applications for transmission-level load interconnections for data center projects? If so, please describe the details of the planned project(s), including but not limited to anticipated load, cost, timeline, and rate schedule. If not, please describe how SCE plans to treat such an interconnection application in the future.

- No SCE has not received any Transmission level requests
- Requests which require a transmission voltage are provided in accordance with SCE's Rule 2. B and 2. H.
 - The process is captured through the Method of Service (MOS) Study analyzing transmission system impacts, technical requirements, estimated costs, and schedule for the installation of any equipment required to serve the new load

Close Out & Next Steps

Antonio Ocegueda, Principal Manager
FERC Rates and Tariffs

Close Out & Next Steps

- Stakeholders to submit comments to ferccaseadmin@sce.com
[Please cc: Jerry Huerta (jerry.huerta@sce.com) and Mark Khouzam (mark.Khouzam@sce.com)]
- Stakeholder questions and/or comments are to be submitted by **September 12**
 - SCE will respond to questions within 15 business days of receipt
- Project-specific follow-up questions and/or comments are to be submitted by **October 13**
 - SCE will respond to questions within 10 business days of receipt
- Stakeholders may provide comments to SCE by **October 31**
- Next TPR submission to occur on **December 1, 2025**