April 2025 Transmission Development Forum SCE's Generation Interconnection Process Improvements



Energy for What's Ahead[®]

SCE's Generation Interconnection Process Improvements

SCE is advancing a suite of initiatives aimed at enhancing project execution, improve planning agility, and strengthen operation resilience across the grid. This presentation highlights recent progress in the following key areas:

- Work Order Process Improvements A pilot program successfully streamlined the work order process by removing redundant evaluations, standardizing documentation, and aligning internal assessments with project delivery timelines.
- Advance Procurement Strategy To mitigate extended lead times for major equipment, SCE implemented a long-range sourcing strategy, secured manufacturing slots, and aligned procurement planning with project priorities to reduce risk of delay.
- **Centralized RAS Enhancements** By streamlining integration timelines and establishing a second test environment, SCE is reducing delivery timeframes for generator interconnection projects.

Work Order Process Improvements

- A work order is a system generated authorization that allows of project work to begin. Shorter work order turnaround times enable project teams to begin charging labor and materials more quickly after GIA execution.
- SCE launched a pilot program to assess the feasibility of eliminating the Emergent Project Evaluation Form (EPEF) from the initial workflow. The program also aimed to standardize project summaries and enable the Major Projects group to conduct assessments akin to the EPEF at the final stage of the work order process.



Work Order Process Improvement Pilot

Work Order Pilot Results

Work Order Sub-Process	Turnaround Time Pre-pilot (BD)	Turnaround Time Post-Pilot (BD)	Results (Difference in BD)
Work Order Request	14	14	0
Work Order Creation	116	36	-80
Authorization to Proceed	16	45	29
Total Reduction in Time			-51

Operationalizing Process changes:

§ Shared results with internal stakeholders.

- § Gained stakeholder approval.
- § Standardized project summaries.
- § New Process/procedures documented and shared with all impacted stakeholders.
- Go-Live Date:
 - April 14, 2024.

Advance Procurement of Major Equipment

- SCE developed a sourcing plan using a 5-year forecast for power transformers and circuit breakers to address increased manufacturing lead times.
 - Lead times for High Voltage Power Transformers have generally increased from 18-24 months to over 48 months, and from 18 months to over 36 months for circuit breakers.
- SCE has extended its planning cycle to adapt to market changes in lead times, aiming to mitigate the risk of material shortages.
- SCE negotiated and executed contracts with manufacturers to reserve production slots for power transformers and circuit breakers, ensuring supply availability.
 - These production slot reservations allow SCE to better align with project priorities and adjust designs before production, enhancing flexibility and reducing the risk of project delays.
 - SCE is currently updating its material forecast to evaluate current production slots against priorities and assess the need for future reservations.

Centralized Remedial Action Scheme Improvements

- SCE has reduced the time required to include a generator project on a CRAS from 36 months to 27-33 months, achieving a 10-25% time savings through process improvements.
- A second laboratory environment for the Centralized Remedial Action Scheme (CRAS) will enable parallel testing of different generation interconnection projects, rather than sequential testing.
 - Due to hardware unavailability from its vendor, SCE's second environment will be operational in Q2 2025, instead of the initially targeted Q4 2024. This delay will not adversely impact any generator projects, as they are scheduled to come online after this period.
- CAISO's updated planning standards and guidelines for RAS have limited the amount of generation that can be added to a RAS. Consequently, many projects have had CRAS removed for their required upgrades, reducing the backlog of projects needing addition.