

DOCKETED	
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Bulk Grid Interconnection Improvements

Accelerating Safe, Reliable Interconnections at SCE

SCE's Grid Interconnection Improvements

SCE is advancing a suite of initiatives aimed at enhancing project execution, improve planning agility, and strengthen operation resilience across the grid.

- **Commissioning Procedure for Inverter-Based Resources (IBRs)** – Ensures consistent testing for IBRs to verify compliance with SCE requirements, validate model accuracy, and address discrepancies before interconnection.
- **Intra-Cluster Reliability Network Upgrade Prioritization** – Enables select interconnection projects to proceed using available grid capacity – without waiting for long-lead time reliability network upgrades – by ranking those most development-ready, based on CAISO's scoring process and SCE's studies.
- **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.

SCE's Commissioning Procedure

- **Purpose:** Provide instructions and guidance to customers for consistent performance testing procedures for inverter-based resource (IBR) projects seeking interconnection to SCE's transmission and subtransmission system.
- **Objective:** Ensure that IBR plant settings meet SCE's performance requirements and verify the models provided by customers represent equipment installed in the field.
- **Applicability:** IBRs that are ≥ 20 MW and seeking interconnection at voltages > 50 kV.

Types of Tests

Voltage Reference Step

Assess the ability of the Automatic Voltage Regulator (AVR) to respond to a change in voltage regulation setpoints.

System Voltage Step

Assess the ability of the AVR to respond appropriately to a change in system voltage and ensure the IBR plant meets SCE's voltage and VAR requirements.

Ramp Rate

Verify the IBR plant's operational ramp rate response and its ability to adjust its active power output within the required timeframe.

Reactive Power Capability

Assess the IBR plant's ability to provide reactive power within the required power factor range while maintaining its active power output at the continuous rated level.

Primary Frequency Response

Assess the IBR plant's capability to sense changes in frequency and adjust its active power output accordingly.

Restricted Charging/Discharging

Assess a Battery Energy Storage System (BESS) plant's ability to maintain charging capacity within the limits identified by SCE in the interconnection studies.

Accessibility

URL:

[Grid Interconnections |
Generating Your Own Power |
Your Business | Home – SCE](https://on.sce.com/CommissioningProcedure)

Vanity URL:

<https://on.sce.com/CommissioningProcedure>



Generation Project Types

- [Generating Power for Sales](#)
- [Programs for Self-Generation at Home or Business](#)
- [Backup Systems](#)
- [Qualifying Facility Conversions](#)



Rules and Regulations

- [Rule 21](#)
- [Wholesale Distribution Access Tariff \(WDAT\)](#)
- [Transmission Owner Tariff](#)
- [Interconnections to California Independent System Operator \(CAISO\)](#)



Additional Information

- [CAD File Requirements](#) 
- [Commissioning Procedure](#) >
- [Distribution Resources Plan External Portal \(DRPEP\)](#) >
- [Electrical Service Requirements \(ESR\)](#) >
- [Interconnection Handbook](#) >
- [Interconnection Queue](#) 
- [Inverter Manufacturer Attestation Form Phase 3 Functions 1 and 8](#) 
- [Redacted Interconnection Study Reports](#)
- [Request Base Case Data](#) 
- [Rule 21 Unit Cost Guide](#) 

2025 Intra-Cluster Reliability Network Upgrade Prioritization

- Interconnection Customer projects with eligible Reliability Network Upgrades that may use available capacity for earlier interconnection.

Eligible Reliability Network Upgrade	Number of Eligible QC14 Projects in SCE Area
Devers 220 kV SCD Mitigation: 80 kA Upgrade	5
Serrano 220 kV SCD Mitigation: 80 kA Rebuild	6
Serrano 500kV SCD Mitigation: 63kA Rebuild	2
Pardee 220kV SCD Mitigation: 80kA Rebuild	11