

RLC has been performing an increasing number of distribution related analyses for a growing list of clients based on evolving needs of the grid – primarily due to distributed energy resource (DER) penetration and load electrification. Through extensive experience, RLC is an industry leader in this space and has developed thorough study processes, templates, procedures, QA/QC, and automation to ensure high study quality. RLC is heavily involved with the **full lifecycle of DER project applications** including, but not limited to, initial screening, study material preparation via Owner's Engineer support, studies (SIS and detailed design), and witness testing.

SYSTEM IMPACT STUDIES (SIS)

Standard Studies:

- Project Design Review
- Short Circuit
- Steady State
- Load Flow
- Output Drop
- EMT Screening
- Protection

Time Domain Studies:

- Model Validation Checks
- Transient Overvoltage (TroV)
- Risk of Islanding (ROI)
- Underfrequency Load Shed (UFLS)
- Volt/Var Interaction

DETAIL DESIGN STUDIES

Protection Coordination:

- Fuse Saving Schemes
- Device Ratings
- Minimum Pickup
- Protective Reach
- Magnetizing Inrush
- Margin and
- Coordination

Volt/Var Operational:

- Voltage Levels
- Voltage Fluctuation
- Reactive Power
- Device Tapping
- Reactive Compensation

WITNESS TESTING

- Installation Evaluation
- De-Energized Relay Testing
- In Service Checks
- Troubleshooting and Recommendations

OTHER SPECIALIZED STUDIES

- Hosting Capacity
- Integrated Resource Plan
- 8760 Curtailment Analyses
- Load Studies



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