PSCAD MODEL DEVELOPMENT

CLIENT: Confidential

LOCATION: Multiple Locations

PROJECT DETAILS

RLC Engineering has extensive experience in Inverter-Based Resource (IBR) PSCAD modeling, ensuring compliance with the stringent standards of CAISO, ERCOT, and MISO. Our capabilities also include post-commissioning verifications for legacy solar facilities, ensuring accuracy, reliability, and seamless grid integration.

With in-depth knowledge of IEEE Standard 2800 and NERC EMT guidelines, RLC applies rigorous validation processes to maintain precision and reliability in power system simulations. Our IBR models undergo thorough testing in PSCAD and are benchmarked against PSSE and PSLF, ensuring consistency across platforms.

By leveraging advanced simulation techniques, RLC assesses critical performance factors, such as Low Voltage Ride-Through (LVRT) capabilities, where models demonstrate effective reactive power support to stabilize voltage during transient conditions. These insights help developers optimize plant performance and maintain grid stability, regulatory compliance, and system reliability.

SCOPE OF SERVICES

- Understand IBR PSCAD modeling requirements in a particular utility and ISO.
- Understand IEEE standard 2800 and NERC EMT guidelines, and follow the most recent development.
- Develop or update the IBR facility PSCAD model by using the verification and validation processes.
- Collaborative efforts with the OEMs.
- Cooperate with NERC MOD 026 and 027 performance through PSCAD modeling.
- Ensure that the installed systems accurately reflected the PSCAD models, validating performance and compliance with design specifications.

PROJECT EXPERIENCE

- CAISO EMT modeling and compliance.
- ERCOT EMT modeling and verification.
- MISO and Ameren EMT modeling.
- Post-commissioning EMT model verification and validation.
- Legacy solar facility EMT modeling.
- Specialized EMT modeling: GFM, TOV, and TRV.

Empowering Energy Solutions
for the future...today

RLC ENGINEERING