

GENERATION MODELING

Increased inverter-based interconnections, IEEE 1547-2018 requirements, ride through requirements, and increased system stability demands have led to more utilities and system operators requiring the generation owner to provide highly detailed project generation modeling for both the distribution and transmission systems. RLC Engineering is an industry leader in:

Time Domain (PSCAD) Model Functional Verification

- Initialization
- Risk of Islanding functionality
- Transient overvoltage mitigation functionality

Cluster Study Dynamic Model Development

- Siemens PSS dynamic models
- Project aggregation
- Inverter-based generation models (solar PV, BESS, Type 4 Wind Machine)
- Wind machine models (Types 1-5)
- Synchronous generator models (hydro, gas, Type 5 Wind Machine)

PSS/PSCAD Model Benchmarking for ISO-NE & NYISO

- Benchmarking all generation types per system operator requirements
- Initializing and unit testing
- System response tests including:
 - Ringdown Test
 - Over/Under Frequency Response Test
 - High/Low Voltage Ride Through Test
 - Normal Contingency Testing
 - AVR/Voltage Reference Step Test
 - Specialized Testing

