

EXPERTISE IN THE PJM REGION

RMS Energy has decades of proven experience supporting generation, storage, and large load developers in PJM.

- ▶ Vast expertise working with **developers and Transmission Owners** across the PJM footprint.
- ▶ Support covering **generation, load, and transmission interconnections**.
- ▶ Deep knowledge of **model development, tuning, testing, commissioning, and compliance**.
- ▶ Specialized experience with **renewables, BESS, synchronous generation, and large hyperscale loads**.
- ▶ Proven ability to guide clients through **PJM's evolving queue reform and FERC Order 2023 compliance**.
- ▶ **Competitive Transmission:** Expertise supporting PJM's competitive transmission planning processes, including project qualification and stakeholder coordination.



PJM INTERCONNECTION CYCLE SUPPORT

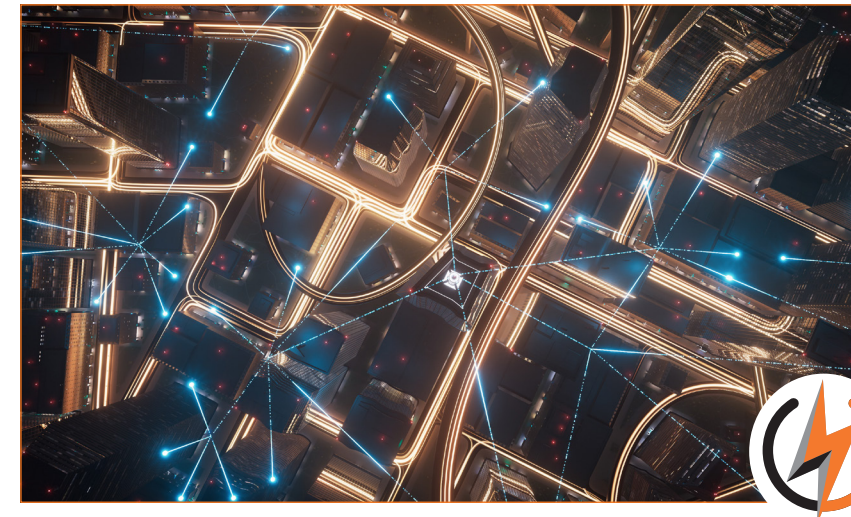
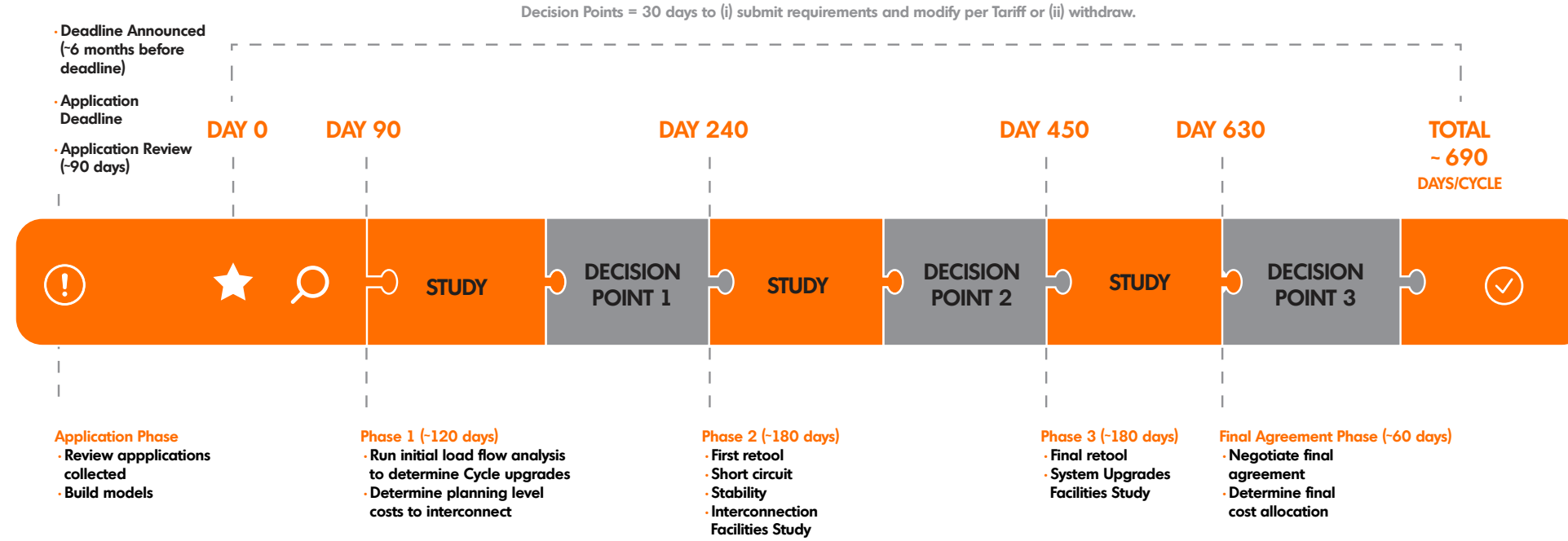
PJM's process is structured under **Manual 14H – New Service Requests Cycle**. RMS Energy provides full support across all stages:

- ▶ **Pre-Application:** Shadow studies to identify viable POIs.
- ▶ **Application:** ASA preparation, site control, deposits.
- ▶ **Study Phases (I, II, III):** System impact, short circuit, voltage, and stability studies.
- ▶ **Decision Points (DP1, DP2, DP3):** Guidance through milestone reviews.
- ▶ **Agreements:** ISA, GIA, WMPA support and negotiations.
- ▶ **Facilities Study & Post-COD:** As-built modeling, compliance, and operational readiness.

Major PJM Support Experience:

- ▶ Interconnection studies for solar, wind, BESS, synchronous, and thermal resources.
- ▶ Advanced support for large load interconnections such as hyperscale data centers and green hydrogen.
- ▶ Extensive collaboration with PJM, Transmission Owners, and developers to resolve Affected System issues.
- ▶ Guidance on transition cycles and evolving queue reform requirements under FERC Order 2023.
- ▶ **Competitive Transmission advisory services:** Assistance in responding to PJM's competitive transmission planning windows and stakeholder processes.

PJM INTERCONNECTION PROCESS



TECHNOLOGICAL VARIETY IN RMS ENERGY'S EXPERIENCE

- ▶ **Generation:** Solar, Onshore & Offshore Wind, BESS, Thermal, Synchronous, Nuclear.
- ▶ **Large Load:** AI Data Centers, Cryptocurrency, Green Hydrogen.
- ▶ **Transmission & FACTS:** AC, HVDC, STATCOM, SVC, GETs, reconductoring.
- ▶ **OEMs:** GE, Siemens, Vestas, SMA, Sungrow, Tesla, Power Electronics, Ingeteam, ABB, Mitsubishi, TMEIC.

Why RMS Energy?

- ▶ 400+ years of combined expertise in ISO/RTO interconnections.
- ▶ Trusted partner across PJM, ERCOT, MISO, SPP, NYISO, ISONE, CAISO.
- ▶ Deep knowledge of PJM queue reform, FERC Order 2023, and evolving compliance requirements.
- ▶ Proven results integrating renewables, BESS, and hyperscale load interconnections.
- ▶ **Competitive Transmission experience:** Helping clients succeed in PJM's transmission planning & competitive solicitation frameworks.

RMS Energy stands ready to guide developers through every stage of the PJM interconnection process — from concept to commissioning and beyond.

DYNAMIC MODEL DEVELOPMENT & TESTING



RMS Energy supports PJM developers in preparing and validating models:

- ▶ **Model Development:** PSS®E (.dyr, .idv), inverter-based (REGC, REEC, REPC or approved UDMs).
- ▶ **Model Quality Tests (MQT):** LVRT, HVRT, frequency response, inertia.
- ▶ **PSCAD Models:** Developed when required for IBRs.
- ▶ **Reports & QA:** Dynamic model reports, checklists, and as-built FAT validation.

Result: Accurate and reliable models that meet PJM requirements for interconnection studies.

NERC MOD-026 & MOD-027 Compliance (PJM-Specific)

RMS Energy ensures full compliance with PJM's enhanced MOD-026/027 requirements.

Key Requirements

- ▶ Acceptable Models only (per PJM list).
- ▶ EMT models **mandatory** for inverter-based resources.
- ▶ Submittals include .raw, .dyr, lab test reports, OEM data, SLDs.
- ▶ PJM review: Usable or Not usable per PJM-specified timelines.

RMS Services

- ▶ End-to-end compliance package preparation.
- ▶ On-site testing: AVR, PSS, governor, PFR, ride-through.
- ▶ Benchmarking EMT vs phasor models.
- ▶ Resubmittal support if PJM flags models "Not usable."

Result: No delays, no rework — fully compliant submissions on the first try.



PJM MOD-026-027 REQUIREMENTS

TEST #	TEST NAME
1	No-fault/Flat run
2	Disturbance - 3 ϕ fault @ POI (5 cycles) » clear » 20 sec run
3	Voltage Up 3%
4	Voltage Down 3%
5	Voltage Ride Through (VRT) - 3 ϕ fault @ POI (9 cycles) » clear » 60 sec run
6	Frequency Up 0.3 Hz
7	Frequency Down 0.3 Hz
8	LVRT protection check

