

FRED RADDATZ, PE

GRID STRATEGY & INTERCONNECTION LEADER

Clean Energy & Grid Infrastructure Strategy | Utility & ISO/RTO Engagement | Executive Decision Support
San Diego, CA | 619-880-9761 | fred@fredraddatz.com

linkedin.com/in/fredmr | fredraddatz.com

PROFESSIONAL PROFILE

Licensed Professional Engineer with 17+ years in the electric power industry and 14+ years in transmission planning and interconnection, with experience spanning distribution systems and transmission networks through 765 kV. Brings utility, transmission-owner, and clean energy developer perspectives across ComEd, SDG&E, and Hanwha Renewables/Qcells. Leads grid strategy for utility-scale solar, standalone battery energy storage systems (BESS), and hybrid resources, including generation opportunities associated with major load growth such as prospective data center demand. Translates power-system reliability analysis, grid constraints, utility and ISO/RTO processes, interconnection agreements, network-upgrade cost, schedule, and regulatory requirements into site selection, infrastructure, portfolio, and executive decisions across regulated utility systems and organized electricity markets, including CAISO/WECC, MISO, PJM, and ERCOT.

CORE EXPERTISE

Clean Energy & Grid Infrastructure Strategy | Site Selection, POI & Grid Capacity Planning | Generation, Storage & Large-Load Planning
Network Upgrades, Cost Allocation & Infrastructure Risk | Interconnection Agreements & Project Lifecycle | M&A & Energy Infrastructure Due Diligence
Utility, ISO/RTO & Cross-Functional Engagement | Scenario Analysis & Executive Decision Support | AI-Assisted Engineering & Process Improvement

PROFESSIONAL EXPERIENCE

HANWHA RENEWABLES / QCELLS USA CORP. | HANWHA GROUP

Remote, CA

Principal Planning Engineer, Development

2024 - Present

Senior Interconnection Planning Engineer

Apr 2022 - 2024

- Lead transmission planning, grid-capacity, interconnection, and renewable-integration strategy for utility-scale clean energy projects, including solar, standalone BESS, and hybrid resources across CAISO/WECC, MISO, ERCOT, and diverse utility and transmission-provider systems; guide site and point-of-interconnection (POI) selection, project sizing, study scope, and proceed, modify, or withdraw recommendations.
- Develop repeatable, scenario-based evaluations of site and POI alternatives, available grid capacity, grid constraints, queue and dispatch assumptions, project sizing, BESS grid charging, network reinforcements, and long-range transmission plans; translate technical options into reliability, cost, schedule, regulatory, and commercial implications for project prioritization, capital allocation, infrastructure decisions, and project optionality.
- Lead technical execution and cross-functional coordination from applications through Material Modification Assessments, LGIA/GIA and multiparty agreements, financial security postings, restudies, and amendments. Translate study results, network-upgrade exposure, cost allocation, schedules, and security obligations into clear risks and recommended actions for development, legal, finance, commercial, and executive stakeholders.
- Perform and technically lead TARA-based steady-state power-system simulations and analysis covering power flow, contingency, and thermal/voltage screening, generation deliverability, FCITC analysis, TSR studies, flowgate, and transfer limits, BESS grid charging, and queue and dispatch sensitivities; review material assumptions and external results to identify risks and inform project decisions.
- Lead technical due diligence on energy infrastructure and interconnection matters for acquisitions, asset sales, and RFP opportunities through study, agreement, amendment, and counterparty review; present grid and interconnection risks to executives, provide technical input to transaction and investment decisions, and support review of PPA, resource-adequacy, and other offtake provisions where they intersect with deliverability, grid charging, schedule, COD, or interconnection obligations.
- Built and continue to develop a TARA-based, AI-assisted workflow that accelerates case preparation, native-result ingestion, source validation, scenario comparison, and decision-ready reporting. Use structured requirements, source traceability, execution controls, and engineering review to improve consistency, quality, and repeatability.
- Mentor and onboard engineers and direct and review consultants; helped establish in-house TARA methods, QA controls, and documentation standards that expanded internal capability, improved repeatability, and reduced consultant reliance.

SAN DIEGO GAS & ELECTRIC

San Diego, CA

Jan 2017 - Apr 2022

Senior Engineer, Transmission Planning - Generation Interconnection

- Analyzed generation interconnection requests and produced reliability-study reports under CAISO, FERC, NERC, and SDG&E requirements, supporting interconnection customers and internal Grid Assessment stakeholders from the utility side of the process.
- Coordinated directly with CAISO, interconnection customers, consultants, and internal technical teams on new requests, material modification assessments, Rule 21, and Wholesale Distribution Access Tariff studies, translating tariff and study requirements into clear expectations and actionable results for technical and nontechnical stakeholders.
- Applied PSLF, PSS/E, TARA, ASPEN, and PSAT/VSAT in power-flow, contingency, short-circuit, voltage, and stability studies; reviewed customer- and consultant-submitted models, assumptions, and results against utility requirements.
- Created code, macros, and automated methods that reused contingency data across applications and improved case preparation, analysis, and reporting efficiency.

COMED | AN EXELON COMPANY

Oakbrook Terrace, IL

Jan 2012 - Jan 2017

Senior Engineer, Transmission Planning - Reinforcement Planning

- Planned and supported more than 40 transmission reinforcement projects using PSS/E under FERC, NERC, PJM, and ComEd requirements, addressing system capacity, reliability, generation changes, and large-customer load additions.
- Evaluated steady-state loading, generation retirement, generator deliverability, N-1-1 contingencies, 300 MW right-of-way loss, and light-load conditions to identify reinforcement needs and compare infrastructure alternatives.
- Submitted projects through PJM RTEP open proposal windows under FERC Order No. 1000, including market-efficiency opportunities, and coordinated technical support for reliability and customer-driven system needs.
- Developed reinforcement alternatives, technical justifications, and decision materials for vice president-level committees, supporting authorization decisions with clear statements of need, options, and recommended action.

Distribution Design Engineer | Libertyville, IL

Jan 2009 - Jan 2012

- Designed electric-distribution capacity expansion, system-performance, corrective-maintenance, and relocation projects using AutoCAD and TED-CEGIS; developed cost estimates within 10% of actuals, reduced external expense through contractor alternatives and in-house permit preparation, and coordinated safe field execution with union, contractor, and management teams.

TECHNICAL FOUNDATION

Power-system software: PowerGEM TARA, PSS/E, PSLF, ASPEN, PSAT/VSAT

Markets & systems: CAISO/WECC, MISO, PJM, and ERCOT; study, review, and project experience across systems including PNM, PacifiCorp, Idaho Power, Avista, Arizona Public Service, WAPA, Bonneville Power Administration, Puget Sound Energy, SMUD, Grant PUD, Portland General Electric, Black Hills Energy, and Southern Company Services

Study & analysis: Power flow, contingency, and thermal/voltage screening, generator deliverability, site and POI capacity screening, short-circuit and stability, FCITC analysis, TSR studies, flowgate, and transfer limits, BESS grid charging, queue and dispatch sensitivities

Engineering automation & controlled AI: Workflow design, prompt and context engineering, Git-based version control, source traceability, execution controls, and engineering review

EDUCATION & LICENSURE

Licensure: Professional Engineer (PE), Illinois

Education: B.S., Electrical Engineering, power systems focus, University of Illinois Urbana-Champaign, 2008

INDUSTRY LEADERSHIP & ENGAGEMENT

- Speaker, EUCI Optimizing Transmission-Level Renewable Energy Interconnection conference, 2024; presented on navigating renewable-energy interconnection queue challenges.
- Vice Chairperson (2019-2022) and Chairperson (2022-2023), IEEE Power & Energy Society San Diego Chapter.