

Ph.D.-Level Electrical Power Engineering

PEFG is a principal-led electrical power engineering practice providing **forensic investigation, expert witness testimony, and power system engineering** for high-consequence equipment failures and disputes. Every engagement is led personally by **Jay R. Prigmore II, Ph.D., P.E.** — the same engineer inspects the evidence, does the analysis, signs the report, and gives the testimony.



JAY R. PRIGMORE II
PH.D., P.E.

400+ INVESTIGATIONS LED/DIRECTED	15+ TESTIFYING ENGAGEMENTS	\$1B+ POTENTIAL DISPUTE VALUE	18 STATES, P.E. LICENSURE	IEEE 1584 WORKING GROUP VOTING MEMBER
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01 INVESTIGATION & LITIGATION

- **Expert witness** — consulting and testifying expert; Rule 26 reports, deposition, trial, and arbitration. Plaintiff or defense.
- **Forensic investigation** — origin and cause of electrical fires and equipment failures, to NFPA 921.
- **Evidence preservation** — preservation protocols, joint inspections, chain of custody, and laboratory examination.
- **Arc flash incidents** — incident energy reconstruction, PPE and labeling adequacy, NFPA 70E compliance.
- **Standard-of-care disputes** — design, installation, maintenance, and testing against NEC, NFPA 70B/70E, NESC, and IEEE.

02 ENGINEERING & DESIGN

- **Arc flash studies** to IEEE 1584-2018, labeling, and independent review of existing studies.
- **Power system studies** — short-circuit, load flow, motor starting, and protective device coordination.
- **Diagnostics** — partial discharge, transformer DGA interpretation to IEEE C57.104, and power quality.
- **Generators & transformers** — specification, protection, and retrofit, upgrade, and replacement design.
- **Power system & facility design** — medium-voltage distribution, protection, and DC systems, sealed where licensed.
- **Reliability investigation** for owners and operators of mission-critical facilities.
- **Modeling:** EasyPower, ETAP, SKM, ARCAD, PSCAD, PowerWorld, MATLAB/Simulink. **Design & relay software:** AutoCAD, Revit, AcSElerator, Easergy.

03 EQUIPMENT & MATTER TYPES

MV/LV switchgear & bus	Circuit breakers & relays	Protection misoperation	Power & substation transformers	Generators & rotating machinery
UPS, battery & DC systems	Data center power	Wind turbines & collector systems	Power quality damage claims	Electrical fires
Offshore & industrial power				Arc flash injury

04 CREDENTIALS

- **Ph.D., Electrical Engineering (Power)**, Arizona State Univ.
- **Licensed Professional Engineer**, 18 states; additional states via NCEES record
- **IEEE 1584 Working Group** — voting member since 2016
- **NFPA TC on Electrical Inspection Practices** — founding member; **IEEE Senior Member**
- Author, CIGRE Green Book chapter on fault current limiters; author, HVDC chapter, *The Power Grid*
- Tutorial co-presenter, IEEE IAS Electrical Safety Workshop 2024
- Plant Engineering Product of the Year (2015) — arc flash mitigation device

05 EXPERIENCE

- **SiTESPAN, LLC** (2025–present) — Director of Engineering: power system design, investigations, and arc flash studies.
- **Google** (2020–2025) — led electrical quality and field reliability engineering for the global hyperscale data center fleet, including incident response and forensic analysis.
- **Exponent** (2016–2020) — led and directed forensic investigations; testifying expert in 15+ matters, some over \$1B in potential dispute value.
- **G&W Electric** (2013–2016) — product development, electrical safety apparatus.

06 HOW ENGAGEMENTS WORK

01 Conflict check Retention letter typically in 1–2 business days.	02 Written scope & budget Rate schedule and estimate before work starts.	03 Checkable work Reproducible methods; reports that state the basis for each opinion.
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Nationwide. Engineering opinions and sealed deliverables are rendered in jurisdictions where the P.E. license is active at the time of the work. Representative matter types, CV, testimony list, and rate schedule furnished with the conflict check.

CONTACT THE PRINCIPAL

Jay R. Prigmore II, Ph.D., P.E. • Managing Member & Principal Engineer
PEFG, PLLC • Prigmore Engineering and Forensics Group

START A CONFLICT CHECK

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