



Vixar Patel

Senior Managing Engineer

Department

Engineering Services

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Locations

New York, NY

Biography

Mr. Vixar Patel received his B.S. degree in Electrical Engineering and an M.S. in Power & Energy Systems from the New Jersey Institute of Technology (NJIT). He is a registered professional engineer with 11 years of experience in electrical design, fire alarm, low-voltage systems, and construction administration of commercial, industrial, transit, and utility projects.

Mr. Patel is also a Certified Fire and Explosion Investigator through the National Association of Fire Investigators and a Certified Marine Electrical Advisor through the American Boat & Yacht Council (ABYC). (Expired 08/24).

Mr. Patel's areas of expertise include electrical power system design and analysis, including protective device coordination studies, arc flash hazard analysis, and short circuit analysis. He has performed over 30 power system analysis studies, including arc flash hazard analysis for commercial, industrial, transit, and utility clients.

Mr. Patel has provided arc flash and shock hazard training for various clients. He is also highly skilled in interpreting and applying the National Electric Code (NFPA 70) and Standard for Electrical Safety in the Workplace (NFPA 70E).

Mr. Patel has participated in more than 750 forensic investigations. He has extensive experience investigating fire and equipment failure matters involving a variety of solar power installations, including residential commercials and industrial installations. He is proficient in inspecting electrical systems, appliances, and consumer products powered with lithium and other batteries to analyze and evaluate potential electrical failure scenarios. He has provided technical assistance and expert opinions on matters involving residential, commercial, and industrial building fires, marine and land vehicle fires, lightning damage, lithium battery fires, electrocutions, and arc flashes.

Credentials

- Professional Engineer
- Certified Fire & Explosion Investigator - National Association of Fire Investigators (NAFI)
- Certified Marine Electrical Advisor - American Boat & Yacht Council (ABYC) (Expired 08/24)

Representative Consulting Assignments

- Building/Structures | Electrical Fire Investigations | Investigated several electrical fire losses involving residential, commercial, and industrial properties. Losses involved failure of cooking appliances, dehumidifiers, computers, lighting fixtures, consumer appliances, battery-operated toys, uninterruptible power supplies (UPS), and improper installations.
- Marine Vessels | Electrical Fire Investigations | Investigated several fire

losses involving marine vessels such as 2015 32-foot Belzona vessel, sailboat J-121, and pontoon boats. Represented the equipment manufacturers (e.g., battery, inverter, battery charger, selector switch, fuse block, and trolling motors) and electricians that installed shore power equipment at marinas.

- Vehicles | Electrical Fire Investigations | Investigated several fire losses involving passenger vehicles and tractor trailer. Represented the insurance carriers for car owners, car dealerships, car mechanics, and battery manufacturers.
- Electric Accidents and Electrocution | Investigated multiple cases involving arc flash injuries and other electrical shocks/injuries.
- Batteries | Investigated several fires and accidents involving both pouch and canister lithium batteries.
- Solar Panels | Conducted several investigations involving solar panels in both large-scale and residential applications.
- Electrical Arc-Flash and Explosion
- Lightning and Surge Damage
- Electrical System Bonding and Grounding
- Code/Standard Compliance
- Equipment Damage Evaluation

Professional Experience

- 2024 - Current | Senior Managing Engineer | YA Engineering Services
- 2019 - 2024 | Mechanical & Electrical Practice Leader | Rimkus
- 2011 - 2018 | Electrical Engineer | Gannett Fleming
- 2011 - 2011 | Student Internship | Princeton Power Systems
- 2010 - 2010 | Student Internship | Bristol Myers Squibb
- 2008 - 2008 | Student Internship | Bristol Myers Squibb

Area of Practice

- Damage Assessment
- Electrical Engineering Design
- Fire Origin & Cause
- Failure Analysis
- Forensic Electrical Engineering
- Lithium Battery Investigations
- Litigation Support
- NEC & NESC Expertise
- Non-Destructive Testing
- Products Liability
- Power Electronics
- Power Generation
- Solar Array Inspection
- Transformer Failure Analysis

Education

- New Jersey Institute of Technology - Master of Science - Power & Energy Systems - Newark - New Jersey
- New Jersey Institute of Technology - Bachelor of Science - Electrical Engineering - Newark - New Jersey

Training Courses

- NFPA 110, Arc Flash, Selective Coordination, NEC changes-Emergency power systems - March - 2018
 - Arc Flash Analysis - June - 2018
 - LED Lighting Tech. Update - September - 2018
 - Arc Mapping Basics - February - 2019
 - The Scientific Method for Fire & Explosion Investigation - March - 2019
 - Fire/Arson Investigation & Arson Case Management - March - 2019
 - Marine Electrical course by American Boat & Yacht Council (ABYC) - August - 2019
 - A Professional Engineer's Standard of Care - January - 2020
 - Hazardous Locations - What You Need to Know - April - 2020
 - Receptacle Fires - April - 2020
 - Generator Applications & Protection - April - 2020
 - Motor Applications & Protection - April - 2020
 - Transformer Applications & Protection - April - 2020
 - Identifying Damage to Electrical Conductors - April - 2020
 - NEC Changes 2020 (4-Day) - April - 2020
 - Arc Flash Calculations - May - 2020
 - 2020 NEC® Changes: Solar PV Systems and Interconnected Power Systems - March - 2021
 - Ethics for the Practicing Engineer - Organizational Issues - March - 2021
 - General Electrical Hazard Awareness for Site Safety - April - 2021
 - 2020 NEC Changes: Overvoltage and Grounding & Bonding - June - 2021
 - 2020 NEC® Changes: Devices, Lighting, and Gear - June - 2021
 - 2020 NEC® Changes: Equipment for General Use - June - 2021
 - 2020 NEC® Changes: Solar PV Systems and Interconnected Power Systems - June - 2021
 - A Professional Engineer's Standard of Care - April - 2022
 - 2020 NEC Changes: Branch Circuit GFCI Protection - June - 2022
 - 2020 NEC Changes: Conductors, Wiring Methods, and Enclosures - June - 2022
 - Changes to NFPA 70E® Standard for Electrical Safety in the Workplace - 2021 Edition - June - 2022
 - 2020 NEC® Changes: Focus on Wiring Methods - January - 2023
 - OSHA Electrical Wiring Methods - May - 2023
 - OSHA Electrical Safety - May - 2023
 - OSHA Electrical General Requirements - May - 2023
 - Electrical Hazards - Construction Worksite Safety - May - 2023
 - Transformers I - Electrical Characteristics - May - 2023
 - Transmission and Distribution: Transmission Line Safety - September - 2023
 - Transmission and Distribution: Service Installation - September - 2023
 - Electric Power Substations - September - 2023
 - Transmission and Distribution: Underground Residential Distribution Systems - September - 2023
 - Transmission and Distribution: Substations and Switchyards - September - 2023
 - Asset Condition Management: Motor Testing - September - 2023
 - Surge Protection - September - 2023
 - Electric Motors - September - 2023
 - Ethical Decision Making for Engineers #1 - September - 2023
 - 2023 NEC® Changes: Overcurrent Protection, Overvoltage Protection, and Grounding and Bonding - May - 2024
 - 2023 NEC Changes: Branch Circuits - May - 2024
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- 2023 NEC® Changes: General Requirements for Wiring Methods, Conductors, and Enclosures - May - 2024
- 2023 NEC® Changes: Feeders, Load Calculations, and Services - May - 2024
- 2023 NEC® Changes: Wiring Methods - May - 2024
- Critical Facilities - Emergency Electric Power - May - 2024
- 2023 NEC Changes: Code-Wide Changes, New and Deleted Articles and Definitions - May - 2024
- Ethics for the Practicing Engineer - Organizational Issues - May - 2024
- Navigating Battery Electric Bus Charging and Facility Retrofits: The SFMTA Experience - December - 2024
- Electric & Hybrid Vehicle Fires - December - 2024
- Road Usage Charging: Charting a New Course for Sustainable Mobility - December - 2024
- The Do's and Don'ts of Elevator and Escalator Safety - December - 2024

Affiliations

- National Fire Protection Association (NFPA)
- Institute of Electrical and Electronic Engineers (IEEE)
- National Association of Fire Investigators (NAFI)

Licenses

- PEN.0033682 - Connecticut - Professional Engineer
 - 23360 - Delaware - Professional Engineer
 - 54856 - Massachusetts - Professional Engineer
 - 53836 - Maryland - Professional Engineer
 - PE18012 - Maine - Professional Engineer
 - 055588 - North Carolina - Professional Engineer
 - 17187 - New Hampshire - Professional Engineer
 - 24GE05292100 - New Jersey - Professional Engineer
 - 101106 - New York - Professional Engineer
 - PE86649 - Ohio - Professional Engineer
 - PE089156 - Pennsylvania - Professional Engineer
 - 12981 - Rhode Island - Professional Engineer
 - 0402062117 - Vermont - Professional Engineer
 - 018.0135551 - Virginia - Professional Engineer
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