



5410 N.W. 33rd Ave., Ste.100
Ft. Lauderdale, Florida 33309
954.777.4790 • 888.771.0591
Fax 954.777.4793
www.SEAlimited.com

Edward R. Brill, P.E., CFEI
ebrill@SEAlimited.com

Education

Florida Atlantic University
Bachelor of Science
Electrical Engineering
1987

Boca Raton, Florida

Bryan College
Bachelor of Science
Business Administration
1983

Dayton, Tennessee

United States Naval Academy
1979 -1981

Annapolis, Maryland

Experience

Senior Electrical Engineer
SEA, Ltd.

2020 to January 2021
Fort Lauderdale, Florida

Senior Project Engineer
SEA, Ltd.

2015 to 2019
Fort Lauderdale, Florida

Project Engineer
SEA, Ltd.

2003 to 2015
Fort Lauderdale, Florida

Investigates electrical accidents and determines causation in liability, property, and personal injury claims. Specialized in the following areas: performs investigations relating to electrical design and construction defects; structural and marine fire analysis; electric shock and electrocution; arc flash and electrical worker accidents, including arc flash assessments and utility line worker accidents; lightning damage analysis and validity; illumination (lighting) studies, including slip/trip-and-fall evaluations; identifies product failures and deficiencies, including household appliances, commercial equipment, and industrial machinery; evaluates product adherence to mandatory standards and industry guidelines; proper handling of evidence and chain-of-custody preservation; field and laboratory testing, including nondestructive techniques and product reliability.

Senior Power Quality Business Manager

1998 to 2003

Florida Power & Light

Juno Beach, Florida

Responsible for developing products and services for commercial and industrial customers that met their needs for improved power quality and reliability to their operations and facilities. Developed a power monitoring service, with a budget of over \$4 million.

Developed power quality related services to help customers solve power quality problems through mitigation equipment, as well as tools and techniques to desensitize electronic equipment from power quality disturbances. Supported six Power Quality Engineers around the state for equipment, job and safety training, Personal Protective Equipment (PPE), and consulting needs with power quality issues affecting customers. Coordinated and taught FPL's Power Quality Seminar to Professional Engineers, Electrical Contractors, and Electricians around the state and obtained Professional Engineering Continuation Education approval through the Florida Board of Professional Engineers.

Power Quality Engineer

1988 to 1998

Florida Power & Light

Juno Beach, Florida

Responsible for developing, planning, and coordinating FPL's Power Quality Program. Performed analysis at over 1,000 residential/commercial/industrial customers' facilities to solve power quality problems affecting customers' equipment and operations by responding to complaints and coordinating remedies. Analysis included site inspection of wiring and grounding installations, monitoring and data analysis, and written reports presenting recommendations to improve performance of systems.

Analyzed, inspected, and monitored high- and low-voltage electrical power equipment (e.g., switchgear, transfer switches, power lines, transformers) to determine the cause of failures or malfunctions in the operation. Analyzed facilities and equipment for damage due to lightning. Determined path of entry and made recommendations for protection to minimize exposure to future events. Investigated grounding and wiring for faults and malfunctions that caused electrical shock or electrocution. Testified as expert witness for Regulatory Affairs before the Florida Public Service Commission. Nationally recognized expert in the power quality field and has published and presented numerous papers. Assisted in the development of the Power Quality Group Safety Program. Qualified as Extendo Stick operator for storm restoration team. Selected to be trained for lineman skills.

Construction Service Engineer

1987 to 1988

Florida Power & Light

Delray Beach, Florida

Responsible for the engineering design and layout and project management of FPL's electrical system for new and existing construction. This included large underground subdivisions, commercial and industrial projects, street lighting, road widening, metering. Coordination with developers, residential, commercial and industrial customers, electrical engineers, electrical contractors, builders, and building officials. Training in areas of project management and design, load and voltage calculation, overhead and underground construction, including cable splicing, transformer installation, pole climbing, pole setting, pole framing, primary and secondary conductor installation, and safety/PPE training. Worked with overhead and underground lineman/cable splicer crews as project manager to deal with field issues and design changes during construction.

Engineering Support

1986

Florida Power & Light

Delray Beach, Florida

Responsible for engineering and design of projects including, roadway lighting, recloser and capacitor bank installations, traffic signalization powering, overhead and underground relocations for road widening projects.

Marketing

1985

Florida Power & Light

West Palm Beach, Florida

Responsible for conducting home and business energy surveys to identify area of energy savings to meet FPL's energy conservation goals. These areas included air-conditioning /heating assessments, window treatments, insulation levels, high efficient appliances, and building envelope analysis.

Engineering Planning-

1985

Florida Power & Light

West Palm Beach, Florida

Responsible for conducting analysis of street lighting and designing roadway lighting projects to meet county and state roadway lighting requirements. Conducted fault current analysis of recloser fault current protection. Designed projects to add/move recloser devices to coordinate fault current levels on FPL's distribution system. Conducted load and growth analysis of FPL's distribution system in the West Palm Beach area for substation and system load planning and growth forecasting.

Storm Patrolman/Area Coordinator

1983 to 2003

Florida Power & Light

Various Locations

Participated in yearly storm patrol duties and training exercises. Coordinated engineers to patrol feeders after storms for storm season assignments. Participated in dry run exercises to simulate storm damage, assessment and restoration. Participated in regular Safety/PPE training, worked directly with FPL lineman crews, contractors and foreign crews on overhead line restoration and repairs. Assigned to storm areas around Florida during storm events.

Customer Service/Meter Reading Group

1983 to 1985

Florida Power & Light

Delray Beach, Florida

Certifications

Certified Fire and Explosion Investigator (CFEI)
American Boat & Yacht Council, Certification No. EC217251205

Professional Registration

State of Florida, License No. 45819
State of North Carolina, License No. 035129
State of South Carolina, License No. 26941
State of Texas, License No. 117717

Publications

"Harmonic Distortion Issues with Energy Conservation Devices," Edward R. Brill, Power Quality Application Conference in Proceedings of the 1992 Power Quality Application Conference, Electric Power Research Institute, Atlanta, Georgia, 1992

“Power Problem Avoidance for Industrial Plants Utilizing a Digital Transfer Switch,”
Edward R. Brill, Richard Lopez, Conference Proceedings of Power Quality '98
Conference, Santa Clara, California, November 1998

“Smart Meters: Reporting What, When, and How Much,” Edward R. Brill, *Power
Quality Magazine*, p. 8-12, a Primedia publication, December 2001

Professional Affiliations

Institute of Electrical and Electronic Engineers (IEEE)
National Fire Protection Association (NFPA)
International Association of Arson Investigators (IAAI)
National Association of Fire Investigators (NAFI)
International Association of Marine Investigators (IAMI)

Seminars and Additional Education

- 1989 – EPRI Power Quality Analysis Course, St. Louis, Missouri
- 1991 – Electric Power Research Institute, Power Quality Applications, International Conference on Power Quality, San Francisco, California
- 1992 – Electric Power Research Institute, Power Quality Applications, International Conference on Power Quality, Atlanta, Georgia
- 1993 – Electric 93 Conference, Atlanta, Georgia
- 1994 – Electric 94 Conference, New York City, New York
- 1995 – National Conference on Harmonics and Power Quality, Philadelphia, Pennsylvania
- 1995 – Electric 95 Conference, Atlanta, Georgia
- 1995 – Certified Energy Manager, Association of Energy Engineers, Juno Beach, Florida
- 1998 – Electric Power Research Institute, Power Quality Applications, International Conference on Power Quality, Charlotte, North Carolina
- 1999 – Certified Power Quality Professional, Association of Energy Engineers, Juno Beach, Florida
- 2000 – AMRA (Automated Meter Reading Association) Conference, Tampa, Florida
- 2001 – Project Success Method Course, Juno Beach, California
- 2001 – Metering Americas Conference, Miami, Florida
- 2001 – Electric Power Research Institute (EPRI) Power Quality Applications International Conference on Power Quality, Pittsburgh, Pennsylvania
- 2002 – Utility Finance & Accounting Seminar, Juno Beach, California
- 2004 – IAAI Investigation of Electrical Appliance-Related Fires, Savannah, Georgia
- 2004 – SEA, Ltd. Live Burn, Seminar Class, Columbus, Ohio
- 2005 – ABYC Electrical Certification Course, Tampa, Florida
- 2005 – National Fire, Arson & Explosion Investigation Training, Sarasota, Florida
- 2010 – Red Vector Course – Sizing Electric Utility Service Entrance Equipment, RV-6028
- 2010 – Red Vector Course – Transformers III – Connections, RV-6034
- 2010 – Red Vector Course – Electrical Conductor Sizing, RV-2639
- 2010 – Red Vector Course – Electrical Equipment: Specifying the 3-Phase Substation Transformer, RV-5746
- 2010 – Red Vector Course – Lighting and the Visual Environment for Senior Living: Recommended Practices – RV-10195

- 2010 – Red Vector Course – Electrical Protection Grounding, RV-947
- 2010 – Red Vector Course – 2008 NEC Code Changes: Part 1, RV-10078
- 2010 – Red Vector Course – OSHA Electrical Regulations, RV-5400
- 2012 – Red Vector Course – 2011 NEC Code Changes – Introduction Chapter 1 and 2, RV-10265
- 2012 – Red Vector Course – Surge Protection (RV-10248AW), RV-10248AW
- 2012 – Red Vector Course – Safety: Electrical Part 2 – Hazardous Location, Clearances & Safety Practice, RV-5876
- 2012 – Red Vector Course – Safety: Electrical Part 1 – Fundamentals, Materials & Equipment Grounding, RV-5875
- 2013 – Red Vector Course – NFPA 70E 2012 – Changes from the 2009 Edition, RV10315AD
- 2013 – Red Vector Course – Florida Engineers’ Laws and Rules (V.11), RV-10264
- 2014 – Red Vector Course – Protecting Your Communications System from Transients and Surges Webcast, RV-10474AW
- 2014 – Red Vector Course – Medium Voltage Underground Cables, RV-5881
- 2014 – Red Vector Course – Renewable Sources of Energy: Wind Power, RV-5709
- 2014 – Red Vector Course – Transformers I – Electrical Characteristics, RV-5983
- 2014 – Red Vector Course – Pole Structural Loading, RV-6020
- 2014 – Red Vector Course – Transformers II – Standards, RV-6031
- 2014 – Red Vector Course – Solar Electric Generation: Technologies, RV-10005a
- 2015 – NFPA Technical Committee on “Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings,” Linthicum, Maryland
- 2015 – National Fire, Arson & Explosion Investigation, Training, Sarasota, Florida
- 2015 – Laws and Regulations Governing Florida Professional Engineers, Jacksonville, Florida
- 2015 – Red Vector Course – Florida Engineers’ Laws and Rules V.13, RV-10412
- 2016 – Red Vector Course – Electric Fire Alarm Systems, RV-10365
- 2016 – Red Vector Course – Arch Flash Hazard Analysis, RV-10747
- 2016 – Red Vector Course – Electric Power Transformers Webcast, RV-10543AW
- 2016 – Red Vector Course – Electric Power Substations Webcast, RV-10470AW
- 2016 – Red Vector Course – Electric Power Substations & Distribution, RV-10326AD
- 2016 – Red Vector Course – Electric Motors & Generators: Generators and Alternators, RV-5668
- 2016 – Red Vector Course – Capacitor Applications, RV-5257
- 2017 – National Academy of Forensic Engineers Special Seminar - Ethics, Forensic Analysis, and Professional Practice, New Orleans, Louisiana
- 2017 – National Academy of Forensic Engineers Special Seminar - Application of Engineering in the Jurisprudence System
- 2018 – Commercial Application Transformers, RedVector
- 2018 – Commercial Application Electric Transformers, RedVector
- 2018 – Power Transmission and Distribution, RedVector
- 2018 – Generating Electricity, RedVector
- 2018 – Power Transmission and Distribution – Basic Equipment and Terminology, RedVector
- 2018 – Fire Alarm Essentials, RedVector
- 2018 – Fire Essentials and Fire Science, RedVector

- 2018 – Emergency Electric Power, RedVector
- 2018 – Uninterruptible Power Supply (UPS) System Efficiency, RedVector
- 2018 – Electric Tools: Digital Multimeters I – Operation, RedVector
- 2018 – Electric Tools: Digital Multimeters II – Applications, RedVector
- 2019 – National Academy of Forensic Engineers – Forensic Engineering Seminar, Orlando, Florida

Courses Taught/Presentations

- 2019 – Presenter at BoatUS – Lightning Damage in the Marine Environment, Jacksonville, Florida
- 2018 – Presenter at BoatUS – Lightning Damage in the Marine Environment, Jacksonville, Florida
- 2018 – Presenter at BoatUS – Lightning Damage in the Marine Environment, Alexandria, Virginia
- 2016 – Presenter at NASP – National Association of Subrogation Professionals Subrogation Litigation: Skills and Management Conference, High-tech tools for scene investigation, preservation, and evidence gathering, Fort Lauderdale, Florida
- 2016 – Presenter at DRI Fire Science and Litigation Conference, The Impact of the Smart Home Revolution on Product Liability and Fire Cause Determinations, Scottsdale, Arizona.
- 2012 – Presenter at Florida Advisory Committee on Arson Prevention (FACAP) – 35th Annual Training Conference, Using X-Ray Technology for Forensic Investigations, Ocala, Florida
- 2012 – Presenter at RIMS Broward County Chapter Meeting – Assembling the Rapid Response Team: Early Investigation Strategies, Fort Lauderdale, Florida
- 2011 – Presenter at Federated National Insurance Company/Superior Adjusting, Origin and Cause, Fort Lauderdale, Florida
- 2011 – Presenter at South Florida Claims Association – The Forensic Investigation on Lightning Damage Claims, Fort Lauderdale, Florida
- 2011 – Presenter at Florida Chapter International Association of Arson Investigators (IAAI) – Basic Electricity and Electrical Fire Causes, Miami Lakes, Florida
- 2007 – Presenter at US Law – Assembling the Rapid Response Team: Early Investigation Strategies for Preparing a Successful Defense, Tucson, Arizona
- 2007 – Presenter at the Southeastern Electrical Exchange – Claims Section Meeting – Investigations of Electrical Fires – Origin and Cause, Charleston, South Carolina
- 2007 – Presenter at York Claims Service, Inc., for Property and Casualty Claims Professionals Seminar – Fire and Electrical Investigation – Subrogation and Evidence Collection, Fort Lauderdale, Florida
- 2007 – Presenter at South Florida Claims Summer Conference for the Association of Property and Casualty Claims Professionals on Origin and Cause Investigations, Fort Lauderdale, Florida
- 2006 – Presenter at Property Casualty Claims Professional Seminar – Forensic Electrical Failure Analysis – The Shocking Truth, Fort Lauderdale, Florida
- 2006 – Presenter at the International Association of Arson Investigators Conference – Investigations of Electrical and Appliance-Related Fires, West Palm Beach, Florida

- 2005 – Presenter at Northeast Florida Property and Casualty Claims Seminar, Fire and Electrical Investigation, Subrogation and Evidence Collection, Jacksonville, Florida
- 2005 – Presenter at Insurance Network Services Seminar on Fire and Electrical Investigation – Subrogation and Evidence Collection
- 2005 – Presenter at Property Casualty Claims Professional Seminar – Forensic Investigation of Lightning Damage Claims, Davie, Florida
- 2004 – Presenter at South Florida Claims Seminar for the Association of Property and Casualty Claim Professionals on Origin and Cause Investigations
- 2002 – 2003 – FPL Power Quality Analysis Course for Florida Professional Engineers Continuing Education Credits, Juno Beach, Florida
- 2000 – AMRA (Automated Meter Reading Association) Conference, presented paper on FPL’s Power Quality Metering Project, Tampa, Florida
- 1998 – Electric Power Research Institute, Power Quality Applications, International Conference on Power Quality, presented paper on Power Quality Business Issues, Charlotte, North Carolina
- 1997– 1999 – Power Quality Analysis Course for Electrical Contractors and Electricians Continuing Education Credits, Sarasota, Ft. Lauderdale, Melbourne, Juno Beach, and Miami, Florida
- 1992– 1997 – Helped develop and teach the following seminars to Engineers, Facility Managers, Electricians, and Building Owners at multiple locations in Florida:
 - FPL Power Quality Seminar
 - FPL Surge and Lightning Protection Seminar
 - FPL Wiring and Grounding Seminar
 - FPL Motor Protection Seminar
 - FPL Harmonic Distortion Seminar
- 1996 – Four-day Power Training Seminar to Philadelphia Electric Company (PECO), Philadelphia, Pennsylvania
- 1995 – National Conference on Harmonics and Power Quality, presented paper on Harmonic Distortion Issues on Electrical Systems, Philadelphia, Pennsylvania
- 1995 – Electric 95 Conference, presented paper on Power Quality Issues for Sensitive Electronics, Atlanta, Georgia
- 1994 – National Conference on Harmonics and Power Quality, presented paper on Harmonic Distortion Issues for Utilities and Customers, Chicago, Illinois
- 1994 – Electric 94 Conference, presented paper on Power Quality Wiring and Grounding Issues, New York City, New York
- 1993 – Electric 93 Conference, presented paper on Lightning and Surge Suppression Protection, Atlanta, Georgia
- 1992 – Electric Power Research Institute, Power Quality Applications, International Conference on Power Quality, presented paper on Energy Conservation Equipment Creating Power Quality Problems, Atlanta, Georgia