
Michael Lilien, P.E., C.F.E.I. | Senior Principal Forensic Electrical Engineer

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Professional Summary:

Mr. Lilien's range of engineering experience is wide and deep. He has worked as a forensic engineer, managing projects as varied as manufacturing plant fires, commercial electrical system issues, to utility renewable energy investigations. Starting in 2022 he became certified to investigate wind turbine farms from the Global Wind Organization (GWO), including climbing nacelles. He has trained engineers and fire investigators from EFI, Hawaii, Missouri, Florida, and the Pacific Northwest, along with EFI's various insurance partners, in transformer use and design, overhead utility equipment, lithium-ion batteries, electric vehicles, and electrical forensic investigation along testing equipment. Mr. Lilien has spent considerable time at San Diego Gas & Electric working field operations, including assessing damaged overhead utility equipment after wildfires in San Diego County in 2003 (Cedar Fire) and 2007 (Witch and Harris Fires). He also headed construction projects that help to harden SDG&E back-country system, supervised distribution operations as lead engineer during normal and storm-related times and wrote equipment and safety standards for new pieces used in the system hardening effort. While with Ameren Missouri, Mr. Lilien was responsible multi-million-dollar capital project work outside of the St. Louis-metro area, including distribution/transmission substation work and line hardening. While in transformer manufacturing at ABB (now Hitachi Energy) Mr. Lilien led electrical engineering teams, did considerable troubleshooting and forensic work of product and testing issues, and led teams in product research, development, and design. Most recently prior to EFI Global Mr. Lilien functioned as an electrical engineering consultant for DEMSI, Inc. in a mediation case for the Federal Emergency Management Agency (FEMA) in New Orleans, LA.

His areas of expertise include, but are not limited to:

- **Utility Damage Assessment**
- **Electrical Contact/Failure Analysis**
- **Forensic Project Management**
- **Forensic Accounting and Invoice Examination**
- **Vehicle Fire Investigation**
- **Design/Drawing Production and Review**
- **Technical Writing**
- **Project Work Efficiency Methods**

Licenses and Certifications:

Professional Engineering, Arizona, **License #80299**

Professional Engineering, Arkansas, **License #18549**

Professional Engineering, California, **License #19847**

Professional Engineering, Florida, **License #95280**

Professional Engineering, Georgia, **License #PE052393**

Professional Engineering, Idaho, **License # P-22886**

Professional Engineering, Illinois, **License #062-072249**

Professional Engineering, Indiana, **License #12500304**

Professional Engineering, Iowa, **License #P25978**

Professional Engineering, Idaho, **License # PE22886**

Professional Engineering, Indiana, **License # PE12500304**

Professional Engineering, Kansas, **License #27650**

Professional Engineering, Kentucky, **License #39986**

Professional Engineering, Louisiana, **License # 0045971**

Professional Engineering, Michigan, **License # 6201341821**

Professional Engineering, Missouri, **License # 2018037496**

Professional Engineering, Montana, **License # PEL-PE-LIC-76252**

Professional Engineering, Nebraska, **License # 19494**

Professional Engineering, Oklahoma, **License # 33463**

Professional Engineering, Oregon, **License # 098949PE**

Professional Engineering, South Carolina, **License # 43327**

Professional Engineering, Tennessee, **License #130653**

Professional Engineering, Texas, **License # 151053**

Professional Engineering, Utah, **License # 13757080-2202**

Professional Engineering, Washington, **License # 21035607**

National Council of Examiners for Engineers and Surveyors, **License #12-516-37**

Certified Fire and Explosion Investigator (NAFI): **License #23657-14780**

Project Experience at EFI Global:

The projects here outline a small sampling of the types of projects and losses Mr. Lilien regularly investigates. For further information or additional examples, please contact EFI Global.

Pine Mountain Transformer Damage, Pine Mountain, GA

Handled both the forensic investigation and auditing of a damaged 2,500 kVA transformer at the Pine Mountain, GA solar array.

Midway Wind Farm, LLC, Taft, TX

Handled the forensic investigation of a failure of a power transformer at the Midway Wind Farm, LLC in Taft, TX, inside a nacelle.

Martin Lake Coal Power Plant, Tatum, TX

Handled both the forensic investigation and equipment restoration consulting for the fire that occurred at the Martin Lake Power Plant, a 2.25GW coal-fire power plant in Tatum, TX, the second largest power plant in Texas.

Cattleman II Solar Park, Milam County, TX

Investigated the damage to a power transformer in the Cattleman II Solar Park, a 150 MW solar array currently under construction.

Silfab Solar, Inc., Burlington, WA

Investigated an equipment fire to an automated panel welder and consulted with an insurance adjuster on the proper replacement of the equipment.

Al Habtoor Motors, Dubai, United Arab Emirates

Worked as an equipment consultant to the largest car dealership in the Middle East following the Spring floods in 2024, along with establishing workflow schedules for Al Habtoor's main distribution and repair facilities that handle Subaru, Bentley, Bugatti, and Pagani cars, the largest Bentley showroom in the world, and a Bugatti dealership, both located in downtown Dubai.

Al Sabah Maternity Hospital, Kuwait City, Kuwait

Lead a forensic and equipment consulting investigation at a maternity hospital in downtown Kuwait City. The hospital, with its 789 beds, makes it the largest one of its kind in the Middle East.

National Grid Electricity Transmission, London, England

Investigated transmission termination failures at site outside of Hinkley Point Nuclear Power Station, along with damage claims to underground cable that was under construction.

Project Experience Prior to EFI Global:

The projects found here speak to the experience Mr. Lilien regularly has obtained prior to beginning to work for EFI Global. For further information or additional examples, please contact EFI Global.

**San Diego Gas & Electric Company, San Diego, CA
Field Engineer and Distribution Operations Supervisor**

Functioned as storm damage assessment coordinator for the largest district by land area in SDG&E's territory for three years, including during major firestorms. Supervised Distribution System Operators for both normal and storm-related switching situations.

Ameren Missouri, Jefferson City, MO**Smart Energy Capital Project Design and Management**

Managed all multi-million-dollar capital project work outside of the St. Louis/Metro area for Ameren. This included all distribution, substation, and transmission system hardening projects for the regional territories of Ameren Missouri.

DEMSI Incorporated, Austin, TX**Electrical Engineering and Mediation**

Functioned as a mediator in a dispute between FEMA and Holy Cross School, New Orleans, LA. The dispute stems from the re-building of the school after Hurricane Katrina destroyed it in 2005.

Schaefer Engineering, Wentzville, MO**Industrial Mining Fire**

Investigated a mining fire at a quarry in southeast Missouri, involving a rock crushing machine and its maintenance.

ABB (now Hitachi) Transformers, Jefferson City, MO**Electrical Transformer Design and Management**

Worked on developing design programs for renewable transformers and collaborated with mechanical and test engineers the repair of damaged units, along with transformer testing and troubleshooting procedures and techniques.

Expert Witness Testimony: Court Qualifications/Depositions/Testimony:

Mr. Lilien has extensive experience testifying as an expert witness in mediation, arbitration, depositions, and trials and has been accepted as an expert witness in numerous jurisdictions.

**List of Expert Witness Testimony Experience is Available Upon Request*

Professional Experience:

EFI Global, Incorporated, Senior Principal Forensic Electrical Engineer, 2020 – Present

DEMSI, Incorporated, Electrical Engineering Consultant, 2019 – 2020

Ameren Missouri, Senior Electrical Engineer, 2019

Schaefer Engineering, Project Manager, 2018-2019

ABB, Incorporated, Electrical Engineering Manager, 2012-2018

San Diego Gas & Electric Company, Senior Electrical Engineer, 2003-2012

Specialized Education:

Wind Turbine Technical Training Global Wind Organization, 2022-Present

Wind Turbine Climbing & Manual Handling Global Wind Organization, 2022-Present

Wind Turbine First Aid and CPR Training Global Wind Organization, 2022-Present

Wind Turbine Fire Awareness Training Global Wind Organization, 2022-Present

Fire Investigation for Fire Officers, CFITrainer.net, 2020

Principles of Fire Investigation, CFITrainer.net, 2020

Various Fire Investigation Modules, CFITrainer.net, 2020

Six Sigma Yellow Belt, ABB, Incorporated, 2018

4Q and Kaizen Improvement Methodology, ABB Incorporated, 2017

Doble Engineering Devices, Doble Engineering, 2012

SEL Relay University, Schweitzer Engineering Laboratories, 2011

Education:

Master of Art, **Business Administration**, University of Missouri, Columbia, MO, 2015

Bachelor of Science, **Electrical Engineering**, University of Illinois, Champaign-Urbana, IL, 2003

Affiliations:

International Association of Arson Investigators (**IAAI**)

Institute of Electrical and Electronic Engineers (**IEEE**)

National Association Fire Investigators (**NAFI**)

National Society of Professional Engineers (**NSPE**)

Missouri Society of Professional Engineers (**MSPE**)

Courses Created and Taught:

Date	Organization	Presentation Title	Length (Hours)	Type	Audience
5/9/2018	Hawaiin Island Utility Group	Transformer Training Course	8	Live	Hawaiin Island Utility Group Engineers
9/17/2021	Ameren Missouri	Utility Engineering	4	Live	Ameren Missouri Field Enginners
7/12/2021	EFI Global	Utility Equipment and Wildfires- Part 1	0.25	On-line	EFI Wildfire Team
8/9/2021	EFI Global	Utility Equipment and Wildfires- Part 2	0.25	On-line	EFI Wildfire Team
9/13/2021	EFI Global	Utility Equipment and Wildfires- Part 3	0.25	On-line	EFI Wildfire Team
10/11/2021	EFI Global	Utility Equipment and Wildfires- Part 4	0.25	On-line	EFI Wildfire Team
11/8/2021	EFI Global	Utility Equipment and Wildfires- Part 5	0.25	On-line	EFI Wildfire Team
1/20/2022	CFITrainer.net	Wildfire Utility Equipment	1	On-line	IAAI Members
3/2/2023	Florida Advisory Commission on Arson Prvention (FACAP)	ABCs of Electrical Investigation	2	Live	Florida IAAI Members
3/2/2023	Florida Advisory Commission on Arson Prvention (FACAP)	Utility Equipment Education for Fire Investigators	2	Live	Florida IAAI Members
4/5/2023	EFI Global	The History, Engineering, and Fire Investigation of Electric Vehicles	1	On-line	EFI Fire Investigators and Engineers
5/2/2023	Pacific Northwest Fire Investigation Symposium	Utility Equipment Education for Fire Investigators	4	Live	Northwest IAAI Members
5/2/2023	Pacific Northwest Fire Investigation Symposium	ABCs of Electrical Investigation	4	Live	Northwest IAAI Members
5/10/2023	EFI Global	Megohmmeters: The What, When and Why	1	On-line	EFI Fire Investigators and Engineers
6/21/2023	EFI Global	When Energy Goes Bad: An Investigation into Lithium-Ion Batteries and Their Failures	1	On-line	EFI Fire Investigators and Engineers
7/27/2023	Sedgwick and Insurance Partners	Utility Equipment 101 for Insurance Professionals	1	On-line	Insurance Adjustors
4/16/2024	Sedgwick and Insurance Partners	Utility Equipment 101 for Insurance Professionals	1	On-line	Insurance Adjustors
5/22/2024	EFI Global	More Intelligent About Smart Homes	1	On-line	EFI Fire Investigators and Engineers
10/24/2024	Sedgwick and Insurance Partners	More Intelligent About Smart Homes	1	On-line	Insurance Adjustors
1/23/2025	Sedgwick and Insurance Partners	The History, Engineering, and Fire Investigation of Electric Vehicles	1	On-line	Insurance Adjustors
05/06/2025 - 05/08/2025	Pacific Northwest Fire Investigation Symposium	Electricity and Fire Investigation	24	Live	Northwest IAAI Members
7/24/2025	Sedgwick and Insurance Partners	More Intelligent about Smart Homes Equipment for Fire & Insurance Professionals	1	On-line	Insurance Adjustors

Honors and Awards:

Christ-like Service and Devotion Award, Upwards Basketball League, Columbia, MO, 2019

Grainger Power Engineering Award, Department of Electrical Engineering, University of Illinois, 2003