

Ward Arms | Forensic Electrical Engineer, PE, CFI

Field Office: Eden Prairie, MN 55346

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Professional Summary:

Forensic Electrical Engineer, with extensive experience in root-cause failure analysis, electrical engineering, electrical design & construction, and materials science. Bachelor of Science degrees in Electrical Engineering and Materials Science from the University of Minnesota College of Science and Engineering (Minneapolis). Licensed Professional Electrical and Computer Engineer. Licensed Class A Journeyman and Master Electrician. International Association of Arson Investigators - Certified Fire Investigator. National Association of Fire Investigators – Certified Fire and Explosion Investigator.

Licenses and Certifications:

Professional Engineer:

Alabama #31555, Arizona #50855, Arkansas #14309, California #19254, #Colorado #PE.0044155, Connecticut #PEN.0027719, Delaware #17033, Florida #70909, Georgia #PE034513, Hawaii #PE-14168, Idaho #P-14294, Illinois #062062426, Indiana #PE11011531, Iowa #P20015, Kansas #PE21321, Kentucky #27242, Louisiana #PE0035204, Maine #PE12304, Maryland #38671, Michigan #6201056929, Minnesota #23384, Mississippi #19755, Missouri #2010001769, Nebraska #E-13425, Nevada# 020775, New Hampshire #13164, North Carolina #036585, North Dakota #PE-6654, Ohio #PE.74416, Oklahoma #24547, Oregon #84319PE, Pennsylvania #PE077321, Rhode Island #PE.0009536, South Carolina #28278, South Dakota #10188, Texas #105591, Utah #7643679-2202, Vermont #018.0070721, Virginia #0402047599, Washington #46749, Wisconsin #40906-6

Licensed Class A Journeyman & Master Electrician, (MN - #AM007921, IA - #EL208109JA)

National Council of Examiners for Engineering and Surveying Record (NCEES) ID:17-624-74

International Association of Arson Investigators (IAAI), Certified Fire Investigator #16-071052

National Association of Fire Investigators (NAFI), Certified Fire and Explosion Investigator #24214-13991

Professional Experience:

EFI Global, Forensic Electrical Engineer/Fire Investigator, 2019 - Present

Energy Systems Group, Electrical Engineer, 2014 - 2019

NV5, Electrical Engineer, 2013 - 2014

Hallberg Engineering, Electrical Engineer, 2009 - 2013

The Egan Companies, Electrical Engineer, 2007 - 2009

Target Corp, Electrical Engineer / PM, 2002 - 2007

Parsons Electric Corp, Electrical Engineer, 1991 – 2001

Honeywell – Undersea Systems, Electrical & Materials Engineering Aide, 1987 - 1989

Specialized Education:

University of Wisconsin (Madison), Fundamentals of Distributed Energy Resources – EV, Solar Farms, Wind Turbine Generators, Microgrids, (20 hours, tested), 2022
Western Michigan University, Investigation of Gas & Electric Appliance Fires (30 hours, tested), 2019
University of Wisconsin (Madison), National Electrical Safety Code (17 hours, tested), 2021
North Star Imaging Inc, Digital Radiography and Computed Tomography (40 hours, tested), 2021
Boston Safety Training Inc, Arc Flash Safety Training (8 hours, tested), 2021
Rochester Institute of Technology, Computer Forensics (40 hours, tested), 2020
Power Line System (Madison), Power Line System Design – PLS-CADD (30 hours), 2019
Caterpillar (San Diego), Gas Turbine Operation & Maintenance Principles (30 hours, tested), 2018
Caterpillar (San Diego), Power Generation Principles and Applications (30 hours, tested), 2018
Microsoft Technology Associate, Software Development Fundamentals #G6084420 (tested), 2018
Microsoft Technology Associate, Network Security Fundamentals #G6401061 (tested), 2018
Microsoft Technology Associate, Networking Fundamentals #G4085302 (tested), 2017
Rockwell Automation, Controllogix PLC Fundamentals (40 hours, tested), 2016
University of Wisconsin (Madison), Modern Power System Protection: Applications and Performance Analysis, 2013
University of Wisconsin (Madison), Fundamentals of Substation Equipment and Control Systems, 2011
Georgia Tech (Atlanta), Power Systems Relaying: Theory and Application, 2010
University of Wisconsin (Madison), Principles of Substation Design and Construction, 2010
University of Wisconsin (Madison), Coordination of Industrial & Commercial Electrical Power Systems, 1993
University of Wisconsin (Madison), Protection of Industrial & Commercial Electrical Power Distribution Systems, 1993

Education:

B.S. Electrical Engineering, University of Minnesota (Minneapolis), 1991, College of Science & Engineering
B.S. Materials Science & Engineering, University of Minnesota (Minneapolis), 1989, College of Science & Engineering
MBA, University of Minnesota (Minneapolis), 1998, Carlson School of Management

Affiliations:

Institute of Electrical and Electronics Engineers (IEEE)
National Academy of Forensic Engineers (NAFE)
National Society of Professional Engineers (NSPE)
National Fire Protection Association (NFPA)
International Association of Arson Investigators (IAAI)
National Association of Fire Investigators (NAFI)