

Curriculum Vitae

Grant D. Glaus, P.E.

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Grant D. Glaus, P.E. is a registered professional electrical engineer. He has served on National Electrical Safety Code (NESC) Subcommittee 5, Overhead Lines—Strength and Loading, since 2006. Currently, he leads the training and safety business segment at ikeGPS, a technology company focused on the utility poles market, where he is responsible for teaching NESC, OSHA, and line design classes across the United States.

Mr. Glaus has more than 25 years of experience in the utility industry, engineering and managing transmission and distribution line projects, substation projects, electrical system planning studies, joint use (power and communication) projects, and providing training in NESC, OSHA, distribution line design, and other topics. He is a member of IEEE, the IEEE Power Engineering Society, and the National Society of Professional Engineers. He began his career working for engineering consulting firms providing engineering services and training to power and communication utilities, followed by fifteen years supervising and managing the engineering department at Columbia Rural Electric Association, before joining ikeGPS in 2023.

Education

Montana Tech, Butte, Montana

Bachelor of Science in Engineering Science, Electrical Option

Graduation Date: May 1999

Various Continuing Education Courses, 1999-present

Capacitor Design for Distribution Systems, Single-Phase Transformer Testing, Arrester Application, Voltage Regulation, Avian Protection, SEL Real Time Automation Controller, SEL 351 and 651 Recloser Controls, Nuts and Bolts of Work Orders, Designing and Specifying Emergency Power Systems, Digital Protective Relaying Seminar, Comprehensive Substation Training, Overcurrent Protective Devices, Broadband Over Power Lines, AC Interference Effects on Pipeline and Railroad Systems, RUS Revised Distribution Construction Standards Seminar, and various Engineering and Operation Conferences including NorthWest Public Power Engineering & Operations Conference, IEEE Rural Electric Conference, TechAdvantage, Milsoft User Conference, Partner User Conference, and NISC Connect Conference.

Experience

Transmission and Distribution Line Engineering

Responsible for engineering management and/or engineering design for transmission and distribution related projects. Projects have involved a variety of voltage levels, conductor sizes, structure types, terrain types, right-of-way constraints, and environmental issues. Designs for transmission and distribution lines include both overhead and underground circuits (including underwater locations) in both urban and rural settings. Engineering tasks for transmission and distribution engineering projects included planning, cost estimating, design, bidding, construction administration, construction observation, right-of-way, and permitting.

Substation Engineering

Responsible for engineering management for multiple substation related projects. Projects have involved a variety of voltage levels, transformer ratings, bus sizes, structure types, site plans, grounding issues, protection schemes, metering types, communication systems, ownership, and environmental issues.

Electrical System Planning Studies

Responsible for project management and/or engineering design of electrical system planning related studies. Projects have involved a variety of studies including transmission and

distribution long range plans, transmission and distribution construction work plans, sectionalizing and coordination studies, voltage drop studies, motor starting studies, power factor analysis, and environmental studies.

Joint-Use (Power and Communication) Engineering

Responsible for the project management and/or engineering design of joint use (power and communication) related projects. Projects have involved a variety of power line voltage levels and communication line (phone, CATV, fiber optic) cable types. Engineering included calculating and reviewing clearance and strength and loading issues in accordance with the National Electrical Safety Code (NESC) and utility company Joint-Use Agreements, as well as field data gathering, determining make-ready requirements, and field construction observation. Responsible for all third-party joint-use applications and agreements for the electric utility.

Safety Codes and Standards

Knowledgeable in the National Electrical Safety Code (NESC) from directly applying the Code to transmission, substation, and distribution line installations while working as an electric power utility engineer, creating and presenting classes on the application of the Code, through duties as a principal voting member of NESC Subcommittee 5, Overhead Lines—Strength and Loading, and from teaching classes to thousands of power and communication workers from across the United States.

Working knowledge of the National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA) Regulations 1910.269, 1910.268, and 1926.950 through 1926.960, and other codes and standards related to the electrical power and communication utility industries.

Electrical Investigations/Expert Witness

Assisted in electrical investigations and expert witness opinions for cases involving power line contacts, electrocution, lightning, power failure, and electrical service failures resulting in loss of life, injury, and property damage. Performed electrical investigation related to power theft.

Management Experience

Manager of Engineering at Columbia Rural Electric Association. Responsible for all engineering, administration, budgeting, design, and work product for the engineering department. Worked with others on the management team for rates studies, board relations, and power supply for new loads as large as 230 MW.

Work History

ikeGPS

2023 – Present

Training and Education Lead

Lead safety and training business segment. Trained power and communication utility employees in, and provided expert services for, the National Electrical Safety Code (NESC), OSHA, line design, and other utility engineering and safety topics.

Columbia Rural Electric Association

2009 – 2023

Engineering Manager (2017-2023), Engineering Supervisor/System Engineer (2009-2017)

Cooperated as part of the management team on all aspects of the electric cooperative business. Responsible for all engineering functions of the cooperative. Created and ensured completion of capital budgets. Completed system planning and protection, including device settings and programming. Designed and staked transmission and distribution lines. Managed large substation and transmission projects.

Marne and Associates

2005 – 2009

Professional Engineer

Created and taught electric utility safety classes on the National Electrical Safety Code (NESC), OSHA, line design, and other technical and safety topics. Aided in expert witness case preparation and accident investigation. Provided engineering consulting services for electric and communication utilities.

HDR Engineering (formerly SSR Engineers)

1999 – 2005

Project Engineer

Responsible for engineering design and consulting for transmission and distribution line design, system long range planning, construction work plans, device coordination studies, environmental studies, joint use design, and more for electric utilities. Created and taught electric and communication utility safety classes on the National Electrical Safety Code (NESC).

Training Presentations

Applying the National Electrical Safety Code (NESC) to Day-to-Day Utility Work

Presented to utility company employees and others (both one- and two-day versions).

National Electrical Safety Code (NESC) Rules for Joint Use Construction

Presented to utility company employees, public utility commission employees, and others (both one- and two-day versions).

Major Changes and General Overview of the 2023 National Electrical Safety Code (NESC)

Presented to utility company employees and others (both one- and two-day versions).

Major Changes and General Overview of the 2007 National Electrical Safety Code (NESC)

Presented to attendees at multiple locations in the United States (one day).

Distribution Line Design

Presented online to engineers and staking technicians across the United States (eight ninety-minute sessions).

OSHA 1910.269 – Electric Power Generation, Transmission, and Distribution

Presented online to electric utility employees across the United States (one day).

OSHA 1910.268 – Telecommunications

Presented online to communications utility employees across the United States (one day).

Arc Flash Hazards and Arc Rated Clothing

Presented at public seminars, utility conferences, and online to various utility employees (both one-day and ninety-minute versions).

Industry Presentations

“Ask the NESC Expert (Fall 2024)” (Sixty minutes). ikeGPS webinar. November 2024.

“Overview of the National Electrical Safety Code (NESC)” (Thirty minutes). Utilities Technology Council (UTC), Utilisite Division (online meeting). July 2024.

“Ask the NESC Expert (Summer 2024)” (Sixty minutes). ikeGPS webinar. June 2024.

“2023 NESC Changes and Top NESC Violations” (Sixty minutes). Midwest Energy Association conference, Coralville, IA. June 2024.

“2023 NESC Changes and Top NESC Violations” (Sixty minutes). Midwest Electric Distribution Exchange virtual conference. June 2024.

“NESC and Joint Use 201” (Two days). Oregon Joint Use Association Spring Training, Portland, OR. April 2024.

“NESC and Joint Use 101” (One day). Oregon Joint Use Association Spring Training, Portland, OR. April 2024.

“NESC Overview – 2023 Edition (Emphasis on Outside Plant)” (Sixty minutes). Society of Cable Telecommunications Engineers Safety Symposium, Irving, TX. February 2024.

“Fiber in the Supply Space: Which NESC Rules Apply?” (Sixty minutes). ikeGPS webinar. November 2023.

“Communication Antennas on Utility Poles: What are the NESC clearance requirements?” (Sixty minutes). ikeGPS webinar. November 2023.

“Communication Worker Safety Zone: NESC Rule 235C and 238” (Sixty minutes). ikeGPS webinar. October 2023.

Note: Conferences prior to 2023 are not listed.

Professional Affiliations

Institute of Electrical and Electronics Engineers (IEEE)

IEEE National Electrical Safety Code Subcommittee 5, Overhead Lines—Strength and Loading

IEEE Power Engineering Society

National Society of Professional Engineers (NSPE)

Licenses and Certifications

Professional Engineer, State of Washington, License Number 46771

National Rural Electric Cooperative Association, Management Internship Program

Northwest Public Power Association, Senior Leadership Skills

National Rural Electric Cooperative, Supervisory Program