

Laurence C. Lehman, P.E.
Lehman Engineering Company
P. O. Box 29160 Richmond, Virginia 23242-0160
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I. Background

- Engineering Expert in Electric Power Systems & Energy for Utility, Industrial, & Facilities
- Licensed Professional Engineer (Virginia & Florida) / Electrical Engineer
- United States Citizen (Born in USA)
- 27 Years Experience / Seasoned Professional / Qualified Mentoring

II. Education

- Georgia Institute of Technology 1974 - 1978 Bachelor of Electrical Engineering

III. Areas of Engineering Expertise

Electric Power Distribution Systems:

- Electric Utility (T&D), Industrial, Manufacturing
- Facilities, Hospital, Commercial, Residence
- High Voltage, Medium Voltage & Low Voltage / AC & DC
- Design, Construction, Operation, & Maintenance of Electric Power Systems
- Overhead Power Lines / Underground Distribution / URD / Substation / Transmission
- National Electric Safety Code (NESC) Practices
- National Electric Code (NEC) Practices

Power System Studies:

- Short Circuit / Fault Calculations / Coordination
- Protective Relaying, Motor Starting, Voltage Drop, Flicker
- Harmonics, Load Flow, Power Factor, Arc Flash Hazard
- Network Grid System Modeling & Analysis
- Engineering Economics / Cost Analysis

Grounding & Overvoltage Protection:

- Lightning Protection / Surge Suppression / TVSS
- Grounding & Bonding - Systems & Equipment
- Substation Grids / Signal Reference Grids (SRG)

III. Areas of Engineering Expertise - *continued*

Code Application & Compliance:

- National Electric Safety Code (NESC) Practices
- National Electric Code (NEC) Practices
- NFPA 70B - Electrical Maintenance
- IEEE Standards / OSHA /ANSI / ASTM (As Applicable)

Power Quality / Energy Management:

- Computer Grade Clean Power
- Mission-Critical Facilities
- Energy Conservation and Efficiency
- Demand Side Management
- Audits, Analysis, Troubleshooting, Problem-Solving

Reliability / Maintenance Technology:

- PM, PdM, RCM, CBM, TPM
- Electrical Testing for Equipment & Systems
- Data Centers & Server Farms / ADP Rooms
- Emergency & Standby Generation Systems

Equipment Design:

- Generators, Transformers, Motors, UPS's, Cable
- Reclosers, Breakers, Sectionalizers, Relays, Fusing
- Switchgear, Panelboards, Capacitors, Filters, Arresters
- Wiring, Splices, Connectors, Pole-Line Hardware

Quality Assurance & Control:

- Plant Inspections, Surveillance & Audits
- Material Receipt Inspections & Testing Procedures
- QA/QC Programs Designed and Implemented

Expert Witness, Forensics, and Litigation Services:

- Electrocution / Electrical Contact / Shock / Arc Flash Hazards
- Accident Reconstruction / Fire Investigations
- Consulting & Research (Electric Power Systems)
- Articulate, Accurate, and Believable Testimony

Power System Training & Seminars:

- Fundamentals Of Electrical Power Distribution Systems
- Modular, Half-Day Lectures on 6 Important Power Topics
- Over 1000 People Have Attended From Major Corporations
- Off or On Site Training / Continuing Education Credit (CEU's)

Technical Marketing & Writing:

- Specifications For Equipment Purchase / Standards and Procedures Written
- Marketing Brochures and Catalogs
- Presentations (e.g. for Engineering Sales & Meetings)

IV. Professional Work Experience

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|---------------------------------|----------------|--------------------------------------|
| • Lehman Engineering Company | 1993 - Present | President / Chief Engineer |
| • First Energy / JCP&L | 2001 - 2003 | Reliability Engineer |
| • Virginia Power | 1987 - 1993 | Senior Standards Engineer |
| • Florida Power & Light Company | 1980 - 1987 | Senior Engineer - Design / Standards |
| • Cooper Power Systems | 1979 - 1980 | Sales Engineer |

V. Professional Activities

- Registered Professional Engineer VA #24170, FL #36826
- Senior Member of Institute of Electrical & Electronic Engineers (IEEE)
- Charter Member of Mid-Atlantic Power Quality Society
- National Society of Professional Engineers (NSPE)
- Senior Member of Association of Energy Engineers (AEE)
- Member of the Electrical League of Richmond
- Past Member of American Society of Testing & Materials (ASTM)
- Past Member of American National Standards Institute (ANSI)
- Past Member of Florida Engineering Society (FES)

VI. Contact Information

- Address: P. O. Box 29160
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