DONALD E. HOOPER - RESUME

Graduated from Yale University in 1947 with a Bachelor of Engineering degree; elected to Tau Beta Pi. Also graduated from the Public Service Electric and Gas Company (PSE&G) Power Systems Engineering course in 1958 and the University of Michigan Public Utility Executive Program in 1962.

Accepted employment with PSE&G immediately following graduation. Continued with PSE&G in an advancing series of engineering and management positions for over 40 years until retirement in 1988. Experience included both overhead and underground electric distribution and subtransmission design, construction, operation and maintenance through 69kV; and overhead transmission design, operation and maintenance through 500kV. Experience covered both field and general office work and responsibility. PSE&G is a major company in the utility field, one of the largest investor-owned electric/gas utilities in the United States.

Involved in development of national codes and standards since 1969, representing both the Association of Edison Illuminating Companies (AEIC) and the Edison Electric Institute (EEI) on various National Electrical Safety Code (NESC) and metric committees until retirement from PSE&G. Continues to serve on NESC groups as an individual member.

Started consulting business after retirement from PSE&G; incorporated as ES&C in 1995.

At the present time, active as follows:

- Chairman, NESC Interpretations Subcommittee
- Member, NESC Coordination Subcommittee
- Member, NESC Overhead Lines - Clearances Subcommittee
- Senior Member, Institute of Electrical and Electronic Engineers
- Member, National Fire Protection Association
- Consultant, in areas of electric supply, communications and NESC

Consulting and PSE&G experience is summarized on pages 2 and 3, codes and standards activities on page 4.

116 Stockton Ave. • Ocean Grove, NJ 07756 • (732) 988-2685 • Fax (732) 988-0942

CONSULTING EXPERIENCE

1989 through 1994 Operated as Sole Proprietor

1995 to Present Organized as ES&C, Inc.

1989 to Present Provide consulting services to the electric supply and communication industries, including studies, opinions, seminars and expert witness testimony.

PSE&G EXPERIENCE

Employed by PSE&G (New Jersey) from 1947 to 1988.

Aug 1978 through Jan 1988 Ass't to Vice President-Transmission and Distribution

Executive position: provide direction for both electric and gas transmission and distribution (T&D) activities. Significant accomplishments include:

- Develop and manage Customer Service Improvement Program (Quality Work).
- Edit and publish *Inside T&D*, the T&D Department newsletter serving over 5600 employees (>40% of PSE&G total employment).
- Contribute to national codes and standards activity.
- Develop and manage PSE&G vanpool program, 1980 through 1986, with 50 operating vanpools by 1986.

July 1977 through July 1978 Ass't to Manager-T&D Engineering

Technical executive position: provide technical direction for electric T&D activities. National codes and standards activity continued during this period.

Jan 1964 through June 1977 Distribution Plant Engineer

Engineering position: manage and provide technical direction for general office design group. National codes and standards activity started during this period. Other significant accomplishments include:

- Develop 13kV distribution design standards based on gloving work practice.
- Develop 13kV distribution systems with loop feed, automatic reclosers and automatic throw-over.
- Develop supervisory control and data acquisition systems (SCADA) and apply to 13kV distribution.

Feb 1961 through Dec 1963 Street Lighting Engineer

Engineering position: manage and provide technical direction for general office design group. Significant accomplishments include:

- Develop standards for ornamental wood poles--to become national commercial standard.
- Develop, with suppliers, reliable and inexpensive street light photocontrols. This development led to practical and economical industry conversion of series street lighting to multiple.
- Develop PSE&G private (dusk-to-dawn) lighting program.

July 1949 through Jan 1961 Assistant Engineer, Associate Engineer, Engineer

Field engineering positions: plan distribution system expansion; design both overhead and underground distribution systems; direct construction and installation of distribution facilities; direct distribution system operations. Significant accomplishments include:

- Field application of switchable capacitor voltage control system.
- Develop, design and install underground network service to a major metropolitan shopping center.
- Design and install fixed capacitor VAR supply in underground network system.

June 1947 through June 1949 Cadet Engineer

Participate in company-wide training and development program.

ENGINEERING PAPERS

1987 *EEI's Standards Participation Program*: paper presented to EEI Standards Coordinator's Participation Workshop, October 7, 1987, Washington, DC.

1987 *Representing National Groups, Government and Companies on Committees and IEC Technical Advisory Groups*: paper presented to American National Standards Institute Seminar on Working Toward Consensus in National and International Standardization, March 26, 1987, Arlington VA.

1967 *Bolometer Detects Defective Splices*: published *Electric Light and Power*, November 1967.

1967 *Bolometer Detection of Defective Splices*: paper presented to Pennsylvania Electric Association, January 11, 1967, York, PA.

1964 *Spacer Cable, Reclosers Stormproof 13kV System* published *Electrical World*, November 30, 1964.

NATIONAL CODES AND STANDARDS EXPERIENCE

Contribute to development of the NESC as follows:

1983 to Present Interpretations Subcommittee; member 1983 through 1990, Chairman beginning Jan 1991. This subcommittee reviews public requests for interpretation of specific portions of the NESC and develops official responses. Interpretations are published periodically; last publication covered 1993-1995.

1995 to Present Member, Coordination Subcommittee (SC1).

1978 to Present Member, Overhead Lines-Clearances Subcommittee (SC4). Represented EEI from 1978 to 1988; continued to serve as an independent member after retirement from PSE&G. Chaired EEI activity and proposal to coordinate overhead line clearance values, resulting in significant changes in the 1984 Edition and further refinements in the 1987 Edition of the NESC.

2005 to Present Member, Working Group 4.12, Revise Rules 235 and 238.

1998 to 2000 Member, Working Group 4.8, Aerial Facilities Clearance Review. This group conducted a comprehensive review of overhead clearance requirements between supply and communication facilities and revised the definition of communication lines.

1998 to 2000 Member, Working Group 4.10, New Ice Loads and Clearances. This group reviewed pending changes in the ice-loading map, considered affected clearance rules, and developed appropriate clearance rules.

1991 to 1996 Chairman, Working Group 4.4, Revision of Rule 239. This group reviewed Rule 239 and developed proposals to revise the Rule for consistency and clarity. The proposed revisions were adopted in the 1997 Edition.

1987 to 1990 Member, Working Group 4.2, Uniform Clearances. This group developed a method to state clearance values at minimum rather than normal conditions; the method was adopted in the 1990 Edition. This change also moved the NESC from a design manual approach to a performance standard with simplified code language.

1969 to 1977 Member, Definitions, General and Miscellaneous Subcommittee, representing AEIC. This Subcommittee reviewed and revised subject portions of the NESC, the first major revision since the Sixth Edition (1960).

Other national codes and standards activities include:

1980 to 1988 EEI Metrication Committee; charter member 1980 to 1988, Vice Chairman 1982-83, Chairman 1983-85.

1977 to 1983 Member, American National Metric Council Electrical Goods Sector Committee, representing AEIC.

Donald E. Hooper 5/1/2006