

## R. Neal Elliott, III

### Education

- P Ph.D., Civil and Environmental Engineering, Duke University, Durham, NC, May 1986.
- P MS, Mechanical Engineering, North Carolina State University, Raleigh, NC, December 1981.
- P BS, Mechanical Engineering, North Carolina State University, Raleigh, NC, December 1978.

### Employment

#### Feb. 1993 to Present -

Joined the American Council for an Energy-Efficient Economy as a research associate and director of the industrial energy program. Promoted to senior associate in Dec. 1995. During the last ten years, Elliott has been involved with the preparation of analyses of industrial energy use and efficiency potential, and the proposal of policies to promote greater efficiency. He is the lead author and analyst of the industry chapter of the *Energy Innovations* study on energy efficiency and climate change policy. Elliott has also been involved with the analysis of utility industrial programs, and advises utilities, regulators and advocates on the design of programs. Elliott is co-chair the Consortium for Energy Efficiency, Electric Motor Systems Committee, and is an internationally recognized authority on energy-efficient motor systems and standards, having lectured and published on the topic, and been involved in the implementation of U.S. motor standards. Elliott is co-author of the second edition of the *Energy Efficiency Motor System Handbook*. During the last several years, Elliott, has been a leader in the developing government and private sector initiatives on Combined Heat and Power, and is the past president of the U.S. CHP Association, and is a board and executive committee member, and Chair of the Legislative Policy Committee. Elliott has also published on general industrial energy efficiency and the design of utility industrial energy efficiency programs, and is a frequent speaker at domestic and international conferences.

#### Aug. 1986 to Jan. 1993-

Joined the N. C. Alternative Energy Corp. in Research Triangle Park, NC as Engineering Project Manager working 80 percent time with responsibility in the Agricultural and Industry Program areas including work with the greenhouse and poultry industry. Of particular note is the nationally recognized poultry lighting retrofit activities. Promoted to Senior Engineering Project Manager August 1987 with increased planning responsibilities for the two program areas. During this period was team leader on a \$1 million agricultural thermal storage demonstration project, and developed the concept and over saw the establishment of the Industrial Electrotechnology Laboratory, a demonstration and technical assistance facility located at North Carolina State University.

#### Oct. 1991 to December 1992-

Joined the faculty in the Department of Textile Engineering, Chemistry and Science, North Carolina State University as an adjunct assistant professor. In this capacity, participated in research activities, lectured to textile engineering students, advised textile engineering students on their senior project and served as a resource to graduate students.

#### Sept. 1986 to Aug. 1988 -

Joined the faculty in the Department of Civil Engineering, Duke University, Durham, NC as Adjunct Assistant Professor and Computer Coordinator working 20 percent time teaching a section of introduction to computers and numerical analysis.

#### Sept. 1983 to May 1986 -

Research Assistant, Department of Civil and Environmental Engineering, Duke University, Durham, NC working on modeling of refuse-derived fuel combustion.

#### June 1981 to Aug. 1983 -

Extension Energy Specialist, Industrial Extension Service, North Carolina State University, Raleigh, NC with engineering responsibility for the state's industrial wood energy commercialization program.

#### Employment (continued)

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#### Jan. 1981 to May 1981 -

Instructor, Department of Mechanical and Aerospace Engineering, North Carolina State University, Raleigh, NC teaching one section of introduction to structural analysis.

**July 1979 to June 1980 -**

Research Manager, Department of Mechanical and Aerospace Engineering, North Carolina State University, Raleigh, NC working on the production and analysis of pelletized wood fuel.

**July 1978 to June 1979 -**

Project Leader, Department of Wood and Paper Science, North Carolina State University, Raleigh, NC heading a team to investigate the commercialization of industrial wood fuel.

**Professional Society Memberships and Activities**

- P Former Chair, Subcommittee E 44.12 Biomass Conversion Systems, American Society for Testing and Materials.
- P Member, American Society of Mechanical Engineers.
- P Current Co-Chair, Motor System Committee, Consortium for Energy Efficiency.
- P Advisory Committee, Energy Technology Division, Oak Ridge National Laboratory.
- P President, U.S. Combined Heat and Power Association.
- P Chairman, Industrial P2 External Review Committee for N.Y. State Energy Research and Development Authority

**Professional Registration**

- P Licensed Professional Engineer in North Carolina, Seal No. 14483.

**Honors and Awards**

- P International District Energy Association, 1999 Chairman's Award
- P US-DOE Energy Innovator Award - 1987, 1992
- P National Food and Energy Council Silver Switch Award - 1989, 1991
- P Governor's Energy Achievement Award - 1987, 1992
- P N. C. Alternative Energy Corp. Outstanding Performance Awards - 1987, 1990, 1991, 1992
- P N. C. Alternative Energy Corp. Outstanding Project Management Award - 1989
- P Dean's Fellow, College of Engineering, Duke University - 1983
- P Order of Saint Patrick engineering service fraternity - 1978
- P Faculty Advisor's ASME Student Section Outstanding Service Award - 1978
- P NCSU Engineers' Council Service Award - 1978

**Patents**

- ! "Direct Contact Water-to-Air Heat Exchanger and Method", U.S. Pat. 5,019,300, May 28, 1991.
- ! "Long Term Thermal Energy Production, Storage and Reclaim System", U.S. Pat. 5,046,551, Sept. 10, 1991.
- ! "Multi-Bay System for the Forced Air Post-harvest Conditioning of Agricultural Crops, U.S. Pat. 5,054,291 Oct. 8, 1991.
- ! "Thermal Storage Tank System and Method", U.S. Pat. 5,063,748, Nov. 12, 1991.
- ! "Thermal Storage Tank and Associated Top Structure", U.S. Pat. 5,201,606, Apr. 13, 1993.
- ! "Apparatus and Method for Transporting Buoyant Particulate Matter such as Ice to a Submerged Location in a Fluid", U.S. Pat. 5,195,850, Mar. 23, 1993.

**Publications:**

Co-author of *Energy-Efficient Motor Systems: A Handbook on Technology, Program, and Policy Opportunities (Second Edition)* published by the American Council for an Energy-Efficient Economy, Washington, D.C.  
In addition over 100 reports, articles, and papers.