

**TOWNSEND ENGINEERING, INC.**  
**5611 RINGGOLD ROAD, SUITE 200**  
**CHATTANOOGA, TN 37412**  
**(423) 855-1184**

**BIOGRAPHICAL PROFILE:**

TERRY E. TOWNSEND, P.E.,  
FELLOW ASHRAE (FASHRAE),  
LEED®AP, NEBB BSC-CP, NEBB RCx-CP

**\*EDUCATION**

1971 - BSME, TENN. TECH. UNIVERSITY  
1973 - MSME, TENN. TECH. UNIVERSITY  
1978 - Ph.D. ME CANDIDATE, TENN. TECH.  
UNIVERSITY

**\*P.E. REGISTRATIONS**

AL, AK, CO, DE, FL, GA, IL, IN, KY, LA, MA,  
MD, MI, MS, NC, NJ, NY, OH, PA, SC, TN, TX  
NCEE CERT. 6439

**\*PROFESSIONAL ASSOCIATIONS**

CHATTANOOGA ENGINEERS CLUB  
AMERICAN SOCIETY OF HEATING,  
REFRIGERATING & AIR  
CONDITIONING ENGINEERS  
(ASHRAE)

- Presidential Member
- College of Fellows
- Past International President
- Past International President Elect.
- Past International Treasurer
- Past International V-President
- Past Director & Regional Chair. VII
- Past Regional Vice Chmn.  
Energy & Tech. Affairs
- Past Society Chmn. Energy &  
Tech. Activities Committee
- Head of Section 4, R & T  
Committee
- Member, Society Technical  
Committees  
TC 2.8, TC 6.6, TC 6.9 TC 7.1, TC 2.7 &

**TC 9.6**

- Honors & Awards Committee Member  
AMERICAN SOCIETY OF MECHANICAL ENG.  
(ASME)  
AMERICAN SOCIETY OF PLUMBING ENGINEERS  
(ASPE)  
CONSULTING ENGINEERS OF TENNESSEE  
AMERICAN CONSULTING ENGINEERING  
COUNCIL  
CLEVELAND STATE (CSCC) &  
CHATTANOOGA STATE (CSTCC)  
TECH. ADVISORY BOARDS  
CHAIRMAN, CHATTANOOGA REGIONAL  
SCIENCE AND ENGINEERING FAIR  
BOARD OF DIRECTORS  
NATIONAL ENVIRONMENTAL BALANCING  
BUREAU (NEBB)  
- Certification Board Exam Committee (Member)  
- Standards Council (Chair)  
STATE OF TENNESSEE ENERGY EFFICIENT  
SCHOOLS INITIATIVE'S (EESI) TECHNICAL  
ADVISORY COMMITTEE (TAC)

**\*CERTIFICATIONS**

NEBB-BSC Certified Professional  
NEBB-RCx Certified Professional  
LEED®AP

The breadth of mechanical engineering experience has been centered in the applications of thermal science and energy transport phenomena. During graduate study, the opportunity to work on projects for industry produced developments and results that were patented by the respective companies funding the research projects. Following graduate school, entry into the Nuclear Power Component allowed a continuation of working the state-of-the-art system designs and advanced project development on an international basis with German and French companies. The "Energy Crisis" and the emerging solar energy application technology caused a change in career direction with 'Energy Conservation' and efficient

components and system designs now being the way of the future. With both State and Federal monies available for clients, the recommended Energy Conservation Measures (ECM) have produced an average 35% measurable reduction in energy consumption while obtaining an average of 30% of available monies for the various clients. The design of systems integrating efficient components in both new and remodeled facilities has been an ongoing and ever-changing challenge that is being adequately met with innovative and cost effective engineering applications. This was so judged by engineering peers who awarded Mr. Townsend with Engineer of the Year honors for his accomplishments.

The extent of commitment to preparing for a more efficient tomorrow has produced college level technology programs developed by Mr. Townsend for Cleveland State, Chattanooga State, Nuclear Regulatory Commission and TVA.

The spectrum of design applications has likewise expanded to Medical Facilities and Industrial complexes and processes. With the increased scope of design and consulting services, Mr. Townsend has been chosen to serve on the TVA Energy Program Advisory Board and other professional committees. The unique design applications and corresponding cost reductions have been documented in articles by TSPE, CET and various institutional and medical facility operational reports.

Mr. Townsend conducts two and three day training seminars both nationally and internationally on "How to Make Existing Buildings More Efficient, Healthy and Comfortable" and "Solutions for Building Performance & IEQ Problems". Due to being considered a Subject Matter Expert (SME) by his peers, Mr. Townsend was chosen to be 1 of the 15 SMEs from throughout the country to serve on the Commercial Workforce Credentialing Council (CWCC) of the National Institute of Building Sciences and the US Department of Energy's National Renewable Energy Lab (NREL). The CWCC task was to develop a national credentialing Job Task Analysis and Dacum for a Building Energy Auditor certification program that would be administered

by the US Department of Energy. Mr. Townsend also serves on the GSA Engineering Judging Panel for new federal facilities.

Mr. Townsend has been involved in Professional Witness activities associated with hotel door closures actions in fire/smoke partitions, mechanical and plumbing contractor installation issues in commercial buildings, and mechanical, plumbing and electrical design and performance issues raised by private Homeowners Associations.

Mr. Townsend participated in the design development of net-zero energy home prototypes for the Tennessee Valley area, net-zero energy commercial facilities for the Eglin Air Force Base Commanding Officer Office facility. Mr. Townsend has been involved in LEED projects for both the public and private sectors by providing mechanical and plumbing systems' designs and computer modeling for LEED certifications of industrial facilities.

To augment his design practice of providing efficient, healthy and comfortable for both new and renovated existing facilities, Mr. Townsend is a certified Technical Commissioning Authority (NEBB BSC-CP) and a certified Technical Retro-Commissioning Authority (NEBB RCx-CP). Both the commissioning and retro-commissioning scopes of activities include mechanical, building automation systems, electrical, plumbing and fire protection systems. The scope of Cx and RCx activities include military, governmental and private commercial facilities.