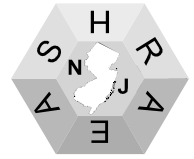




# THERMOGRAM



The New Jersey Chapter of ASHRAE Newsletter

WWW. NJASHRAE.COM

DECEMBER 2006

REPLY@NJASHRAE.COM

## CHAPTER OFFICERS

### PRESIDENT

JORI FAHRENFELD  
609-520-1600

### PRESIDENT - ELECT

PETER FRANGISKOU P.E.  
201-945-9999

### VICE-PRESIDENT

MARK RICHTER P.E.  
212-354-5656

### TREASURER

MARK MCLEOD  
973-633-7730

### SECRETARY

JANET SHIPTON  
732-380-1100

### BD. OF GOVERNORS

LINDA CAROLAN  
908-663-2180

RUTH GIACOBBE  
732-968-4850

YOGESH SHAH P.E.  
201-447-6400

CHRIS PHELAN  
973-777-6700

RUSS GRAHAM  
908-663-2180

### COMMITTEES

#### MEMBERSHIP

CHRIS PHELAN  
973-777-6700

#### RESEARCH PROMOTION

YOGESH SHAH P.E.  
201-447-6400

#### STUDENT ACTIVITIES

PETER FRANGISKOU P.E.  
201-945-9999

#### REFRIGERATION

JIM CASEY

#### ROSTER/DIRECTORY

OPEN

## JANUARY 10, 2007

### HILTON WOODBRIDGE

120 WOOD AVENUE, ISELIN, NJ

TEL: 732-494-6200

GARDEN STATE PARKWAY EXIT 131A

**JOINT MEETING WITH  
N.J. MECHANICAL CONTRACTORS ASSOCIATION  
AND AMERICAN SOCIETY OF PLUMBING ENGINEERS**

**COST \$60.00 FLAT RATE (INCLUDES OPEN BAR)**

RSVP TO:

**REPLY@NJASHRAE.COM**

**NO LATER THAN FRIDAY JAN 5TH, 2007**

**5:30 GUEST REGISTRATION / COCKTAIL HOUR**

**6:30 DINNER AND PRESENTATION**

**DINNER TOPIC:**

**“A SUSTAINABLE FUTURE”**

*SPECIAL GUEST*

**MR. TERRY TOWNSEND P.E.  
FELLOW ASHRAE**

**2006-07, PRESIDENT  
AMERICAN SOCIETY OF HEATING, RE-  
FRIGERATING  
AND AIR-CONDITIONING ENGINEERS**

*Mr Townsend will present on Society's impact on the earth's environment resulting in Global Warming and how the Engineering and Building Industry holds the leadership role in incorporating Sustainability into their daily practices.*



**COMMITTEES**  
 (CONTINUED)
**CTTC – TEGA**
 MARK RICHTER P.E.  
 212-354-5656
**NEWSLETTER ADS**

OPEN

**NEWSLETTER EDITOR**
 MARK RICHTER P.E.  
 212-354-5656
**NOMINATING**
 RUSS GRAHAM  
 908-663-2189
**PROGRAM**
 PETER FRANGISKOU P.E.  
 201-945-9999
**SEMINARS**
 MARK RICHTER P.E.  
 212-354-5656
**TECHNICAL SESSIONS**
 PETER FRANGISKOU P.E.  
 201-945-9999
**SCHOLARSHIP**
 RUSS GRAHAM  
 908-663-2189
**SPECIAL EVENTS/GOLF OUTING**
 CHRIS PHELAN  
 973-777-6700
**AUDIT**
 LINDA CAROLAN  
 908-663-2189
**BUDGET**
 MARK RICHTER  
 212-354-5656
**HISTORIAN**

BOB DALY

**ATTENDANCE/RECEPTION**
 MARK MCLEOD  
 973-633-7730
**HONORS & AWARDS**
 JEFFREY GRANT  
 908-272-6755
**WEB PAGE DESIGN**
 LINDA CAROLAN  
 908-663-2189
**CHAPTER BYLAWS**
 LINDA CAROLAN  
 908-663-2180

 WWW.NJASHRAE.COM  
 WWW.REPLY@NJASHRAE.COM

**ASHRAE ATLANTA**  
 TOLL FREE NUMBER  
 1-(800)-527-4723

## JANUARY SPEAKERS BIOGRAPHY

### Terry Townsend, P.E., Fellow ASHRAE


**2006-07, President**
**American Society of Heating, Refrigerating  
 and Air-Conditioning Engineers**

Terry E. Townsend, P.E., Fellow ASHRAE, is president, Townsend Engineering Inc., Chattanooga, Tennessee, and Panama City, Florida.

As ASHRAE's president, Mr. Townsend directs the Society's Board of Directors and oversees the Executive Committee. During his term, Townsend is focusing on *The ASHRAE Promise: A Sustainable Future*, highlighting ASHRAE's efforts in sustainability in the building environment.

Mr. Townsend has served as president-elect, treasurer, vice president and Region VII director and regional chair.

He serves on technical committee (TC) 2.7, Seismic and Wind Restraint Design, TC 2.8, Buildings Environmental Impacts and Sustainable, TC 7.1, Integrated Building Design, TC 6.6, Service Water Heating, TC 6.9, Thermal Storage, and TC 9.6, Health Care Facilities.

His past service also includes chair of Publishing Council, Technology Council, President-Elect Advisory Committee (PEAC), Members Council and the Advocacy Committee.

He was the ASHRAE representative to the ASHRAE/U.S. Green Building Council Steering Committee and ASHRAE liaison to both

the American Society for Healthcare Engineering and the National Environmental Balancing Bureau. He held all offices in the Tennessee Valley Chapter.

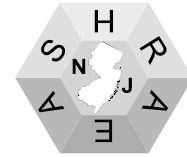
He is the recipient of the Exceptional Service Award, the Distinguished Service Award, a Region VII Technology Award, a Regional Award of Merit and a Chapter Report Award.

He was awarded a bachelor of science in 1971 and a master of science in mechanical engineering in 1973 from Tennessee Technological University.

He has two daughters, Tiffany Elaine Townsend and Tara Elizabeth Townsend Paras, and wife, Leatha Davis Townsend.



**NJ ASHRAE 2006 – 2007**  
**DINNER MEETING SCHEDULE**



**FEBRUARY 1, 2007**  
*MEMBERSHIP AND HISTORY NIGHT*

*COMPARISON OF ASHRAE NOISE CRITERION*  
 MR. MATTHEW MURELLO, P.E.  
 LEWIS S. GOODFRIEND & ASSOCIATES

**MARCH 1, 2007**  
*AIR OUTLET DESIGN AND DISTRIBUTION*  
 MR. PETER PETRACA  
 N.J. AIR PRODUCTS

**APRIL 5, 2007**  
*STUDENT NIGHT*  
 CHILLED CEILING IN PARALLEL WITH DEDICATED OUTDOOR AIR SYSTEMS  
 (DOAS)  
 ASHRAE DISTINGUISHED LECTURER  
 MR. STANLEY MUMMA, PHD

**MAY 3, 2007**  
*SCHOLARSHIP AWARD NIGHT*  
*INSTALLATION OF OFFICERS*  
 JOINT MEETING WITH N.J. USGBC  
 TBD

**JUNE 7, 2007**  
*SPOUSES NIGHT*

**2006-2007 PRESIDENTIAL AWARD OF EXCELLENCE (PAOE) SUMMARY**

Chapter #	Chapter Name	Chapter Members/ students	Member Promotion	Student Activities	Research Promotion	CTTC	History	Chapter Operations	Chapter PAOE Totals
007	N.J.	831	0	0	0	0	25	280	305

## HELP WANTED

<b>Company:</b>	Clive Samuels and Associates	<b>Location:</b>	Princeton New Jersey
<b>Company Profile:</b>		<b>Other Categories:</b>	
<b>Specialty Field:</b>	Commercial	<b>Training/Education:</b>	BSME; PE License Required
<b>Experience:</b>	10+	<b>Salary Range:</b>	TBD

### Specific job responsibilities / qualifications required including certifications:

Would you like to be part of the MEP Design Engineer industry? Do you want to be challenged by opportunities that expose you to many facets of building design development?

As a Mechanical Lead Engineer for our Princeton NJ based MEP Consulting Engineering Firm (Division of Emerson Electric a Fortune 200 Corp), you will play a key role in performing complex engineering, design, analysis and other technical tasks utilizing current technology and available standards.

Perform a technical leadership role supervising, coordinating and directing others in the production of customer-focused design services that meet established project requirements.

Participate in business development activities including sales, proposal preparation and client presentations.

#### Requirements:

- + Senior-level engineering assignment to a project or organizational team, or as a Lead Engineer for a specific discipline or larger projects
- + Independently develops and/or supervises the creation of engineering documents that meet customer quality requirements; typical responsibilities may include detailed calculations and analyses, drawing review, technical reports, proposal evaluations, design and installation packages and development of specifications
- +May supervise or mentor one or more subordinates and provide input regarding performance.
- + Responsible for selection, layout and sizing of applicable systems and equipment
- +Identifies problems, establishes work scope, prepares budge and schedule, plans work, provides technical direction, and reports work status
- + Performs internal and external project management responsibilities as required
- +Represents design team at project and client meetings
- +Reviews, signs and seals drawings, specifications, calculations, reports and other documents.

CSA offers a competitive salary and excellent benefits, including medical, dental, life insurance, 401K with company match. We are an Equal Opportunity Employer and hire regardless of race, color, religion, general, natural origin, disability or veteran status.

### Clive Samuels and Associates

105 College Road East 105 College Road East 105 College Road E  
Princeton, NJ

## HELP WANTED

### **Drafter/Estimator/Designer**

A well established New Jersey family-owned Design-Build Mechanical Contracting & Service company is seeking a highly qualified Drafter / Designer / Estimator to join their expanding commercial and institutional contracting business.

### **Job Purpose:**

Candidate will work closely with owners in preparing mechanical drawings, estimating material/equipment/sub-contracting costs, and designing new construction projects.

### **Minimal Requirements:**

10-15 years in commercial/industrial HVAC industry, non-smoker, college degree, experience with CADD, project design, estimating & organizational skills for multiple projects, ability to work independently meeting specific time deadlines.

### **Duties:**

- Prepares rough sketches and final as-built drawings.
- Onsite observations to validate mechanical layout.
- Organize and prioritize multiple projects.
- Solicit vendors and accurately make comparisons for material cost take-offs.
- Design drawings for new design/build projects.
- Maintains reliable data base on current and future work.

### **Skills/Qualifications:**

CADD, Microsoft office suite, scheduling, self-motivated, vendor relationships, deadline-oriented, U.S. citizen, excellent teamwork, focused concentration, emotionally resilient, pleasant attitude.

**Salary/Benefits:** Competitive salary, comprehensive medical/dental/401k plan

Ken Celiano, Psy.D.

Dir. Personnel & Organizational Development

AJ Celiano, Inc. 460 Ludlow Ave

Cranford, NJ 07016 847-338-2199 (mobile)

[www.ajceliano.com](http://www.ajceliano.com) - [kceliano@ajceliano.com](mailto:kceliano@ajceliano.com)



**SCHOOR DEPALMA**  
Engineers and Consultants

### **Sr. HVAC Engineer for our Manalapan, New Jersey office**

Schoor DePalma, one of the region's leading engineering and consulting firms, employs more than 1100 professionals from 22 office locations throughout New Jersey, Pennsylvania, New York, Florida, Arizona and Maryland.

Schoor DePalma is looking for a senior HVAC engineer to manage an HVAC group as part of an MEP Department in the Manalapan, NJ office. 10+ years of HVAC building design experience required and a NJ PE license. LEED accredited a plus. Excellent growth opportunity in a growing department.

## HELP WANTED

### WANTED – TOP NOTCH ENGINEERS / TECHNICIANS!!

Specializing in hands-on field testing and evaluation of HVAC systems and site utilities, the Dome-Tech Group provides engineering services, energy consulting and project development and implementation to optimize building performance, reduce energy expenses and improve indoor environmental quality. Dome-Tech is actively hiring for the following challenging career positions:

#### **Commissioning Field Technician / Engineer**

The ideal candidate must have 5+ years of field related experience with HVAC systems such as air/water balancing, system start-up and commissioning, service/maintenance, operations and troubleshooting. Experience conducting functional tests of chillers, boilers, AHUs, VAVs and other HVAC equipment required. An engineering or technology degree is desired.

#### **Energy Engineer**

Dome-Tech Energy Advisors is seeking qualified energy engineers to support demand for its energy consulting services. The ideal candidate will possess either a BSME or BSEE (PE, CEM desired) with experience in energy auditing, project screening and energy engineering.

#### **Project Engineer**

Dome-Tech Energy Solutions (DES) is seeking qualified project engineers to support the growing demand for our turnkey design/build services. The ideal candidate will possess a BSME (PE, CEM desired) and mechanical design experience with central plant utility systems (chilled water & steam). Candidate must have design experience in heating / cooling load calculations, pipe sizing and pressure drop calculations, combined heat and power analysis, and energy conservation measures, including life cycle cost analysis.

#### **Sr. Project Engineer – Pump Systems**

Dome-Tech Energy Solutions (DES) is seeking a qualified project engineer to support the growing demand for pump system projects for our municipal and utility customers. The ideal candidate will possess a BSME and have experience identifying and analyzing root causes of pump system degradation or failure. Candidate must be able to identify opportunities to improve pump system performance (repair, upgrade, replace) as part of energy conservation management program. Experience with numerous pumps / pumping system designs is essential – utility, HVAC and process pumps.

\*\*\*\*\*

**Salary / Benefits:** Competitive salary commensurate with experience, medical/dental benefits, 401K, flexible spending account, paid vacation and holidays.

Please email resumes to [recruiting@dome-tech.com](mailto:recruiting@dome-tech.com) or fax to 732-590-0129.

**Joe Martino, Technical Staffing**  
**Phone: (732) 590-0122, ext. 133**  
**Fax: (732) 590-0129**

**E-mail: [recruiting@dome-tech.com](mailto:recruiting@dome-tech.com)**

**Website: [www.dome-tech.com](http://www.dome-tech.com)**

**Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without permission of the chapter.**

## SOCIETY NEWS.....

### ASHRAE Receives Recognition for Sustainability Efforts

ATLANTA – ASHRAE has been recognized by the Sustainable Buildings Industry Council for the Society's educational efforts related to sustainability.

Last week, ASHRAE received a Best Sustainable Practice Award in the Educational Initiatives category, which recognizes the best products, processes, educational tools and outreach initiatives.

The award centered on the presidential challenge made by Terry Townsend of ASHRAE's promise for a sustainable future. To fulfill that challenge, ASHRAE is using its expertise and tools to provide cost-effective solutions in designing, operating and maintaining energy efficiency and sustainable buildings.

"The sustainability initiative is stimulating conversation inside ASHRAE about what it means to be sustainable and the importance of protecting today's natural resources for future generations," Townsend said. "We are pleased to be recognized by the Sustainable Buildings Industry Council (SBIC) for our efforts."

The Awards program was established in 2001. "The Best Sustainable Practice category recognizes the excellent innovations and unique contributions SBIC members are making toward building a sustainable future in America," Douglas K. Schroeder, associate director of SBIC, said. "This year's competition was exceptionally competitive, but for the second consecutive year, the SBIC jury recognized the valuable contributions ASHRAE is making to the buildings industry." Realizing that sustainability cannot be accomplished without measurable goals, ASHRAE has put in place some 35 specific challenges, ranging from a proposed water conservation standard, development of building performance metrics, research and design guidance resulting in net zero energy use buildings and greening of ASHRAE meetings. To generate excitement and increase member awareness, ASHRAE created a three-part DVD, featuring a video of Townsend fishing with his grandchildren illustrating the importance of sustainability, Townsend's recorded presidential speech, and a short video highlighting why ASHRAE is taking on this challenge.

The DVD is part of a total communications package from ASHRAE to inspire members and the industry about the challenges and opportunities related to sustainability.

Other aspects include a promotional slide chart explaining the benefits of sustainable design measures, a Website, [www.engineeringforsustainability.org](http://www.engineeringforsustainability.org), featuring sustainability guidance from ASHRAE; creation of a page on [ASHRAE.org](http://ASHRAE.org), [www.ashrae.org/building](http://www.ashrae.org/building), focusing on ASHRAE's planned renovation of its Headquarters building as sustainable; and use of ASHRAE publications and other outreach vehicles to spread the word about the Society's work.

The award is the second for ASHRAE from SBIC. Last year, the Advanced Energy Design Guide for Small Office Buildings published by ASHRAE and the ASHRAE Journal supplement, "Building for the Future," were recognized with honorable mention in the educational initiatives category.

### Liquid Cooling Guidelines Available

### IT Heat Load Solution Discussed in New ASHRAE Publication

ATLANTA – Heat loads generated by IT equipment can present significant problems for data centers by introducing effects such as decreased equipment availability, wasted floor space and inefficient cooling system operation. One solution, liquid cooling, is described in detail in ASHRAE's new publication, Liquid Cooling Guidelines for Datacom Equipment Centers.

Liquid Cooling Guidelines for Datacom Equipment Centers covers a broad range of liquid cooling topics such as facility cooling systems, facility piping design, liquid cooling implementation for datacom equipment, liquid cooling infrastructure requirements for chilled water systems, and liquid cooling infrastructure requirements for technology cooling systems.

The book is the fourth in a series written by ASHRAE Technical Committee 9.9, Mission Control Facilities, Technology Spaces and Electronic Equipment.

"The book incorporates the experience of liquid cooling from the mainframe days," says Roger Schmidt of IBM and chair of TC 9.9. "Liquid cooling is a proven technology, and the book provides a good central source of liquid cooling information from the datacom equipment to the facility level."

The cost of Liquid Cooling Guidelines for Datacom Equipment Centers is \$49 (ASHRAE members, \$39) and is available in print and download versions. To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide); fax 404-321-5478; by mail at 1791 Tullie Circle NE, Atlanta, GA 30329; or visit the Bookstore at [www.ashrae.org](http://www.ashrae.org).

## SOCIETY NEWS.....

### **Become Part of the Green Team: New Guidance from ASHRAE**

ATLANTA – Looking to become a more effective player on the green team?

ASHRAE GreenGuide: The Design, Construction and Operation of Sustainable Buildings will help teach designers how to participate effectively on design teams charged with producing green buildings.

“This is a design guide for mechanical engineers who are interested in advancing integrated, high performance/green concepts and applications on building design projects,” said Malcolm Lewis, Ph.D., a member of ASHRAE’s technical committee on building environmental impacts and sustainability, which wrote the book. “The guidance will help building professionals analyze system design options and point them in the right direction for deeper analysis.”

The book, an update to the 2003 version of ASHRAE GreenGuide, contains a new chapter outlining guidance on the Leadership in Energy and Environmental Design (LEED™) Rating System developed by the U.S. Green Building Council. The chapter discusses ways in which LEED credits affect engineers and how they can best respond to the opportunities presented by the use of LEED on projects.

“The GreenGuide will assist the design and development team in striving for a level of accountability as to the effectiveness of their efforts to produce a building that is truly green,” Lewis said.

The book also contains a new chapter on how HVAC&R systems interact with the local environment and methods for mitigating or reducing that impact.

“There are some areas that are either not intuitively obvious as being potential impacts of HVAC systems or are items that some may not consider to be truly sustainable issues,” Lewis notes.

The ASHRAE GreenGuide also contains more than 40 GreenTips, which are sidebars containing information on techniques, processes, measures or systems. The tips contain a list of other sources for reference. To read the GreenTips, visit [www.engineeringforsustainability.org](http://www.engineeringforsustainability.org).

This is the first in a new series of books, known as The ASHRAE Professional Series, published in cooperation with Butterworth-Heinemann/Elsevier. The series is intended to provide high-quality professional information for a global audience of HVAC&R engineers as well as professionals in related fields.

The cost of the ASHRAE GreenGuide is \$79.95 (\$62.95, ASHRAE members).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the [ASHRAE.org](http://ASHRAE.org) Bookstore at [www.ashrae.org](http://www.ashrae.org).

### **ASHRAE Publishes User’s Manual for Standard 62.2**

ATLANTA – A new book from ASHRAE will aid users in designing and constructing homes and apartments that comply with its residential ventilation and indoor air quality standard.

The User’s Manual is the first for ASHRAE Standard 62.2-2004, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, which provides the minimum requirements necessary to achieve acceptable indoor air quality for dwellings.

The manual was co-developed by the Indoor Air Quality Association.

“The 62.2 User’s Manual will provide HVAC engineers and IAQ consultants with practical information to ensure that ventilation positively affects the indoor environment,” Robert G. Baker, IAQA president and ASHRAE Member, said. “IAQA was pleased to be a co-sponsor of this dynamic publication.”

The manual explains how to comply with all the requirements of the standard, provides examples illustrating specific methods of complying with sections of the standard, and includes background material explaining why many of the requirements of the standard exist, according to Roger Hedrick, who co-authored the book.

The manual is targeted toward builders and subcontractors, but will also be useful for code officials, researchers, and interested homeowners.

“The manual has been developed as a document that will accompany Standard 62.2 and provide guidance for applying its requirements to the design and construction of residential buildings,” David Grimsrud, chair of the Standard 62.2 committee, said. “It serves as a guide to clarifying issues for users.”

The cost of the 62.2 User’s Manual is \$45 (\$36, ASHRAE members).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the [ASHRAE.org](http://ASHRAE.org) Bookstore at [www.ashrae.org](http://www.ashrae.org).

IAQA, founded in 1998, is an international organization of 5,200 members. IAQA is a non-profit, multi-disciplinary organization, dedicated to promoting the exchange of indoor environmental information, through education and research, for the safety and well being of the general public. For more information, visit [www.iaqa.org](http://www.iaqa.org).

## SOCIETY NEWS.....

### 07' ASHRAE

#### Measures to Attain Major Energy Savings Shared at ASHRAE Seminar

ATLANTA – Guidance for building design engineers and owners that will result in buildings cutting their energy usage in half by 2010 currently is being developed by leading organizations in the building environment industry.

Achieving that goal will require more than simply substituting or adopting new technologies and systems. It will acquire changes in design practice in which the design team converts energy strategies into building plans, sections, details and construction.

An update on some of the measures that have been demonstrated to yield significant energy reductions will be presented at ASHRAE's 2007 Winter Meeting in a seminar, Achieving 50% and Beyond Approach to Net Zero Energy Use in Buildings Part 1. It takes place from 7:45-9:15 a.m. Monday, Jan. 29, and is followed by Part 2 from 10:45 a.m.-12:15 p.m. The guidance is being developed by ASHRAE in cooperation with the American Institute of Architects, the Illuminating Engineering Society of North America and the U.S. Green Building Council, through a series of Advanced Energy Design Guides for the commercial building sector.

John Mitchell, P.E., is chairing a scoping committee studying ways to achieve building designs as close as is feasible to net zero energy use, defined as "a building which, on an annual basis, uses no more energy than is provided by the building's on-site renewable energy sources." This study will provide the basis for the development of Advanced Energy Design Guides to go 50 percent and beyond minimum standards for energy use. "The goal of a 50 percent approach to net zero energy use, on either a site or source basis, is feasible," he said. "There are no apparent technological barriers to achieve the desired energy reductions but aggressive energy conservation strategies and energy generation are needed."

The scoping study recently was completed and identified measures that achieve significant energy savings. Some of the measures identified are:

- Improved daylighting and electrical illumination systems
- Reduction of parasitic power requirements in air and water distribution systems
- Separate treatment of ventilation and internal thermal loads
- Improved delivery of conditioning to where it is needed
- Improved part load performance of HVAC components
- Water loop heat pump systems.

Information related to the Advanced Energy Design Guide series can be found at [www.ashrae.org/aedg](http://www.ashrae.org/aedg).

Speakers in the seminars are:

Net Zero Energy Building Ideas – The Path Toward Net Zero Energy Use, John W. Mitchell, Ph.D., P.E., University of Wisconsin, Madison  
 Architectural Perspective as a Bridge to Engineering, Jeff Levine, American Institute of Architects, New York, N.Y.

What Has Been Done? Case Study Review, David Hewitt, New Buildings Institute, White Salmon, Wash.

Integrated Design Process – Making it Possible, Jeff Levine, American Institute of Architects, New York, N.Y.

Daylighting – Advanced Lighting, Daylighting and Controls, Stephen Selkowitz, Lawrence Berkeley National Laboratory, Berkeley, Calif.

Distribution Systems – Air, Wayne Reedy, Carrier Corp., Indianapolis, Ind.

Distribution Systems – Water, Stephen Kavanaugh, Ph.D., University of Alabama, Tuscaloosa, and Harvey Sachs, Ph.D., American Council for an Energy-Efficient Economy, Washington, D.C.

HVAC/Ventilation, Michael Brandemuehl, Ph.D., University of Colorado, Boulder, Colo.

Held with the ASHRAE Winter Meeting is the ASHRAE co-sponsored International Air-Conditioning, Heating, Refrigerating Exposition, Jan. 29-31, at McCormick Place. For more information, visit [www.ahrexpo.com](http://www.ahrexpo.com).

For more information about the ASHRAE meeting, visit [www.ashrae.org/dallas](http://www.ashrae.org/dallas).

###



1791 Tullie Circle, NE • Atlanta, Georgia 30329-2305 ☎ 404-636-8400 • Fax 404-321-5478 • <http://www.ashrae.org>

Ronald W. Swarthout, P. E.  
Vice Chair, Region I  
Research Promotion

Reply to: 921 Forest Road  
Endwell, NY 13760  
607-754-1590  
[rswarthou@cs.com](mailto:rswarthou@cs.com)

### Region 1 Dinner

Dallas Winter Meeting

**Date:** Monday, January 29, 2007

**Location:** YO Ranch Steakhouse Restaurant, 702 Ross Avenue at Market Street, Dallas, Texas 75201  
“One of Dallas’s premier dining establishments and most extensive selection of wild game”

**Time:** 6:00 PM Meet at the Adam’s Mark Hotel Lobby  
(5 minute train ride from Adam’s Mark Hotel)  
6:30 PM Arrive at Steakhouse for cocktails – cash bar  
7:00 PM Dinner

**Menu:** Starters  
House Salad with garlic cilantro vinaigrette or Seafood Bisque Soup

Choice of Entrees:  
Prime Aged Beef Filet Mignon  
Grilled Salmon Filet with a bruschetta butter  
Sautéed Chicken Breast with a wild mushroom brandy sauce

Desserts  
Jack Daniels Pecan Pie or White Chocolate Macadamia Nut Bundt Cake w/ raspberry sauce

**Cost:** \$40.00 per person received before January 22, 2007 -- \$45.00 per person after January 22

**Reservations with payment:** must be received by Monday, January 22, 2007  
Make checks out to ASHRAE – Region 1 Fund & mail to Ronald Swarthout at the above address

Name \_\_\_\_\_ Menu Choice \_\_\_\_\_

Name \_\_\_\_\_ Menu Choice \_\_\_\_\_

Name \_\_\_\_\_ Menu Choice \_\_\_\_\_

Name \_\_\_\_\_ Menu Choice \_\_\_\_\_

*American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.*

ADVERTISEMENTS.....



EFI COMMISSIONING SERVICES, LLC

MR. EDWARD ICZKOWSKI

HVAC COMMISSIONING SPECIALISTS  
PO Box 386 • DENVILLE, NJ 07834  
(973) 537-5482 • FAX (973) 537-8792 • WWW.EFICX.COM

**If you would like to place an advertisement in the Thermogram, please contact Mr. Mark Richter @ 212-354-5656 or via email [mrichter@AKF-eng.com](mailto:mrichter@AKF-eng.com) for further details.**