

# ASHRAE

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS

October 8, 2006

## October Meeting Program Overview

### **Report on the Governor's Executive Order for Energy Efficient Green Building Standards.**

This month's meeting will be held on October 17, 2006. The featured guest speaker will be Harold Trujillo from the New Mexico Energy and Minerals Department. The subject will be The Governor's Executive Order 06-001 requiring all state funded projects to have LEED Silver compliance and a 50% energy reduction. Discussed will be methods of obtaining and demonstrating compliance along with an update on the requirements for public school facilities.

Mr. Trujillo is past president of the New Mexico ASHRAE and AEE Chapters. He has over 32 years of engineering experience with building energy systems and project management. He has administered energy code projects for the state of New Mexico for over twenty seven years, successfully worked with homebuilders, contractors, engineers, architects and the code authority, (the Construction Industries Commission) to promote adoption of the 1983, 1986, 1989 and 1992 Model Energy Codes and the 2003 International Energy Conservation Code. Mr. Trujillo is Bureau Chief of the Energy, Minerals and Natural Resources (EMNRD), Energy Conservation Division, Energy Technology Bureau, which is responsible for implementing the Energy Performance Contracting Act, Public School Energy Design Standard and US

## ***PRESIDENT'S MESSAGE***

It seems like a day doesn't go by without seeing a news article about energy or the environment. Rising energy prices and global warming continue to garner much press and for good reason. This is good if it keeps the importance of these issues in the forefront of everyone's mind.

In our industry, we are probably exposed more to these issues than most and justifiably so. The Department of Energy (DOE) estimates that between 35%-50% of a building's energy usage is used by the HVAC system. They estimate 35% for manufacturing facilities, 50% for residences and somewhere in between for commercial buildings. Additionally, DOE estimates that 73% of the national energy consumption is used in the residential, commercial and industrial sector. Now it's not advanced math but if we multiply the 35% by the 73%, you come up with 25%. That means 25% of the nation's energy is used for HVAC and that is a low-end estimate. That's where we come in.

Many of us in our positions, are responsible for either designing, manufacturing, installing or operating these systems. With a quarter or more of the nation's energy used by our systems we have a responsibility to promote system efficiency and environmental sustainability. Even if you are one of the remaining few that questions if global warming is real, you can't deny that the fossil fuels we rely so heavily on are a limited resource.

### **(President's Message Continued)**

The most immediate action we can take is design high efficiency buildings. Depending on how you want to look at it, this will reduce our dependency on fossil fuels and/or buy us time to develop new emerging technologies. In any case, building efficiency is going to become increasingly important for our future.

In fact, at this month's meeting we will be learning more about an organization that has mandated that all of their new buildings be highly efficient. The State of New Mexico, in accordance with executive order 2006-001, requires that all new state buildings be designed to reduce energy consumption by 50% compared to the regional average. This is a follow-up meeting from last year where we got a brief overview of the State's plan. We hope you will all join us for this month's meeting and look forward to seeing you there.

Warmest Regards,

### **(October Meeting Continued)**

Department Energy grants on energy codes. Mr. Trujillo started his energy work at Lawrence Livermore National Laboratory in 1976 and then returned to NM in November 1979 to work at EMNRD. Mr. Trujillo has conducted energy audits and hundreds of parametric computer simulations to optimize the design of energy efficient buildings. Mr. Trujillo recently was inducted into the NM Association of Energy Hall of Fame for his energy efficiency work throughout his career. Mr. Trujillo also served as ASHRAE Regional (IX) Chairman of the Energy and Technical Affairs Committee and was a member of the ASHRAE National Energy and Technical Affairs Committee prior to 2000. He also received awards for Energy Executive of the Year in 2000 from the New Mexico Association of Energy Engineers, and Energy Professional Development Award from the National Association of Energy Engineers Region IV in 2001.

## **ASHRAE Proposes New Moisture Control Standard**

ATLANTA - In recent years, moisture problems such as mold growth have become big issues for building owners and operators.

Computer simulation tools have been developed to predict thermal and moisture conditions in buildings, but the results can vary greatly with the assumptions for indoor and outdoor conditions

To help combat this issue, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is proposing a standard that formulates design assumptions for moisture design analysis and criteria for acceptable performance. ASHRAE's proposed Standard 160P, Design Criteria for Moisture Control in Buildings, is open for public comment until November 6, 2006. The proposed standard goes beyond prescriptive recommendations for moisture control in buildings that are currently in the ASHRAE Handbook and in building codes.

"Standard 160 gives us a methodology for the first time to make consistent design recommendations, such as the need, type and placement of vapor barriers, in any climate," says Anton Ten-Wolde, chair of the committee that drafted the standard. "The standard requires the designer to think about the interior conditions that will be maintained in the building and the effect that may have on the building envelope."

A draft of the proposed standard is available only during the public review period. To obtain an electronic draft version of Standard 160P during the comment period, log on to ASHRAE.org at [www.ashrae.org/publicreviews](http://www.ashrae.org/publicreviews).

ASHRAE, founded in 1894, is an international organization of 55,000 persons. ASHRAE fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

### **FROM THE HISTORY BOOKS**

September 1978

Chapter Officers were:

President:	J. C. Tankersley
President-Elect:	Larry Hood
Secretary:	Don Knott
Treasurer:	Pete Golwas

The speaker for the evening was David Summers of PNM spoke on "The Realities of Nuclear Fuel Cycle". He presented a down to earth picture of the full cycle from mining of the uranium ore to use in power plants, then to disposal of the spent fuel.

- SEPTEMBER MEETING -

SPEAKER: **Harold Trujillo**

TOPIC: **Report on the Governor's  
Executive Order for Energy Efficient Green  
Building Standards.**

DATE: **Tuesday, October 17th**

TIME: **5:30 pm**

LOCATION: **Albuquerque Petroleum Club  
15th floor, 500 Marquette SW**

TECHNICAL SESSION: none

6:30 pm Dinner and Main Program

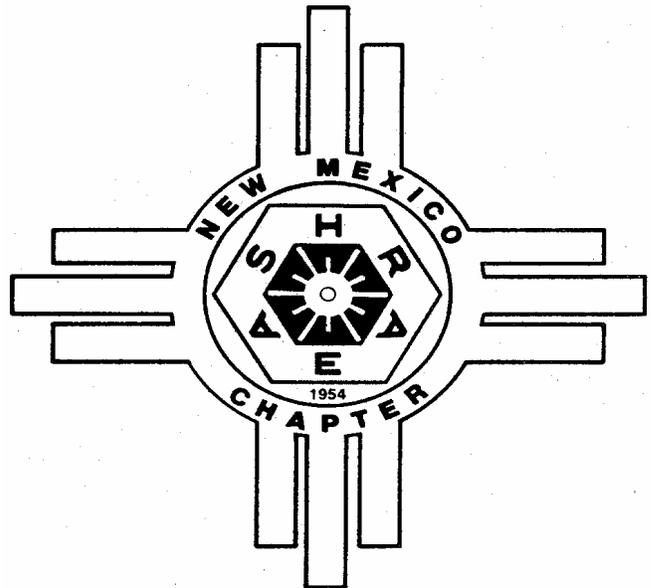
MENU: **TBD**

COST: \$ 25.00

All Costs are inclusive of tax and tip

RSVP: Friday September 15th, RSVP with meal  
selection and number of attendees to:

**Rich Reif (505)-883-4111 Ext. 729 or  
RJR@bpce.com**



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New Mexico Chapter of ASHRAE  
2006 Technical Session

## **GET 7 CEU's and Valuable System Knowledge**

Courses include:

### **Chilled Water System Design and Applications**

W. Ryan Geister, The Trane Company, LA Crosse Wi.

### **Water Source Heatpump Applications**

#### **Including Geothermal Applications**

Thomas Walker, Carrier Corporation

### **Cooling Tower Design Differences and Applications**

#### **Chilled Water vs Water Source Heatpumps**

Dave White, Baltimore Aircoil Company

### **Brief Update of Refrigerants and Standards**

W. Ryan Geister, The Trane Company

When: **Thursday October 19, 2006, 8:15 AM to 4:30 PM**

Where: **Embassy Suites, Lomas & I-25 (Central St Exit)**

Lunch included with half day or all day sessions. Limit seating, please RSVP Rich Reif by fax or email ([rjr@bpce.com](mailto:rjr@bpce.com) or fax 888-1436). Please see the attached schedule and information on our visiting speakers.

Costs:

\$70.00-All 3 Sessions (Includes Lunch)

\$45.00-Morning or Afternoon Sessions (Includes Lunch)

## 2006 New Mexico Chapter of ASHRAE Technical Sessions

8:00 – 8:15	-	Check-In	
8:15 – 9:45	-	Session 1:	Chilled Water System Design and Application
		Presenter:	W. Ryan Geister, The Trane Co.
9:45 – 10:00	-	Break	
10:00 – 11:30	-	Session 1:	Chilled Water System Design and Application
			Update on Refrigerants
		Presenter:	W. Ryan Geister, The Trane Co.
11:30 – 12:15	-	Lunch	
12:15 – 2:15	-	Session 2:	Water Source Heat Pump System Design and
			Application
		Presenter:	Thomas Walker, Carrier Corporation
2:15 – 2:30	-	Break	
2:30 – 4:30	-	Session 3:	Critical Differences of Cooling Tower Design
		Presenter:	Dave White, BAC

### **W. Ryan Geister, Manager, Trane Global Sales Support, Centrifugal and Absorbtion Chillers.**

Ryan is a 1995 graduate of University of Illinois with a MBA from the University of Wisconsin. Ryan has been a featured speaker for International District Energy Association, ASHRAE, and the American Society of Hospital Engineers to name a few.

### **Thomas Walker, Sr. Applications Engineer WSHP, VPAC's, Carrier Corporation.**

Tom is a graduate of the Virginia Military Institute with a MBA from Embry Riddle Aeronautical University. Tom will provide a system overview of WSHP Systems including Geothermal and discuss design parameters

### **Dave White, Western Regional Sales Manager, Baltimore Aircoil Company.**

Dave is a graduate of the University of Virginia with a degree in Mechanical Engineering. Dave recently left a position in Applications Engineering to become Western Regional Sales Manager. Dave brings applications experience in both closed loop and open loop evaporative cooling towers. Dave will discuss the critical design criteria differences between WSHP Systems and Water Cooled Chillers.



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\*Minimum of Honor Roll Recognition by Society

*Individual and corporate contributions advance industry research resulting in better products, installation methods, buildings and profits.*

*Please invest in your future through ASHRAE RESEARCH.*

**chapter's thanks and society gratitude are extended to the following member for this year.**

I would like to take this opportunity to ask you for your continued support for Research and Promotion at the Society level. The mission of Research and Promotion is to improve the quality of life and to answer tomorrow's questions through research today. Our chapter goal for the year is \$10,600. With your continued support I know that this amount can be achieved. Please use the form below and mail either to Jason at Mechanical Representatives or directly to society. If you have any questions, please do not hesitate to contact myself by email [jason@mechrep.com](mailto:jason@mechrep.com) or phone 821-2563. I would also like to thank those individuals and businesses that contributed last year below.

Jason Moorhead  
 Research Promotion Chair

Individuals

Lyle Anderson	Jason Moorhead	<u>Businesses</u>	
Jim Asperger	Richard Reif	Boyd Engineering	Miller Bonded
Daniel Beckley	Charles Scoggin	Bridgers & Paxton	National Heating & Ventilating Co.
Michael Dexter	Michael Slaman	Davis Engineering Equip.	New Mexico S/M Contractors
Edward Fagyal	Charles Steele	Energy Balance	Nick Nellos Memorial
David Graham	DewardStegall	Energy Control	PNM Electric & Gas Services
Gary Grange	J.R. Sunderman	Jim Feeney Consulting	The Response Group
John Grapsas	Maurice Wilden	The Johnston Co.	The Socha Co.
Daniel Harmeyer	Keith Wilson	Mechanical Representatives	Southwest Trane

*Mark your check – ASHRAE Research. Contribute on your membership renewal form.*