President’s Message
By: Rob Teis

BIM, or Building Information Modeling, is an integrated approach to building design and construction where the design team uses software tools to create a multi-dimensional building model which can be used for technical analysis, life cycle costing, time management, cost tracking and other uses. It is also the subject of this month’s panel discussion. We have assembled a panel of experts and will be testing their wits with engaging questions.

PLEASE NOTE: THIS MONTH’S MEETING IS A LUNCH MEETING AT THE TULSA SOUTHERN HILLS MARRIOTT. It will be a joint meeting with AIA and BOMA. Please make plans to join us to learn more about this subject and contribute to the lively discussion. We will be returning to the Bass Pro venue next month for the January meeting.

I would like to thank Ken Fulk for attending last month’s meeting and for his suggestions for making our chapter operate more smoothly this year. Ken is a great resource for our regional and society activity. Please contact me or Ken if you are interested in becoming more involved at the regional or society level. Thank you to our speakers from last month’s meeting, Dave Knebel and Brandon Wallace.

(Continued on page 2)
Please don’t forget to turn in your Research donations before the end of the year. They are tax deductible and benefit us all in many ways. Contact Dave Myers if you need a receipt or invoice.

Rob Teis can be reached at
918-382-6134 or robt@aaon.com

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**Research Promotion**

*By: David Myers*

Thanks to all of you who attended our November Research Promotion night last month. We recognized Honor Roll donors from the 2009-2010 ASHRAE year. Both personal and corporate donors were recognized. I still have several recognition certificates and coins to give away. I’ll have the awards with me at each meeting. If I can’t find you, hit me up. On behalf of the NEOK Chapter and Society, thank you for your support to ASHRAE Research.

To those not at November’s meeting, I had in my possession a new document provided by Society showing what Chapter 18 of the 2009 ASHRAE Handbook - Fundamentals “Nonresidential Cooling and Heating Load Calculations” would look like WITHOUT your support, i.e., your donations to ASHRAE Research. All data obtained using Research dollars was blacked out. Take a look at it at the next meeting. I’ll have it with me.

We’re at 20% of our 2010-2011 research campaign goal of $45,000. **Reminder: Donations to ASHRAE Research are still tax deductible.** Make a big impact on our campaign year by making your contributions before 2010 ends. 100% of the money given to Research goes directly to Research. Administrative costs are covered by other funds at Society.

Make all checks payable to ASHRAE RESEARCH. Let me know if I need to send you an Invoice to present to your company. Contact me at 918-382-6191 or at davidm@aaon.com. Thanks again and I hope to see all of you at the December meeting. “Remember the reason for the season.”

David Myers can be reached at
918-382-6191 or davidm@aaon.com

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**Pictures From Last Chapter Meeting**

Main Speaker: Dave Knebel

Tech Session Speaker: Brandon Wallace
Last month we left off talking about another John Zink Company (JZC) manager who moved to AAON. Robert Ferguson PE, who worked for JZC from 1980 to 1988, joined AAON as vice-president when it was first organized.

A third key person was William A Bowen, who had worked for a North Carolina bank from 1955 to 1979. He then became president, CEO and board chairman of Tulsa’s First National Bank and Trust Company. While serving as the president of the Tulsa Economic Development Foundation in 1987 and 1988, Bowen was instrumental in organizing investors to start Aaon. He became the new firm’s vice-president of finance and a director.

Aaon’s other founders included Secretary/Director John B. Johnson, Fr., a Tulsa attorney since 1961; Director Richard E. Minshall, president of Tulsa’s Capital Advisors, Inc. since 1978; and Anthony Pantaleoni, a partner in the law firm of Fulbright Jaworski & Reavis McGrath in New York City.

Aaon bought its Tulsa manufacturing plant and offices in late 1988. After extensive changes costing almost $1 million, the company began using the refurbished facilities in early 1989. The heavy industrial manufacturing and warehouse spaces totaled 172,000 square feet, and the offices were situated in an additional 12,000 square feet. The facility is located at 2425 S. Yukon.

The firm made two main lines of products until late 1988, when Aaon began manufacturing its RE series of air conditioners. This new line allowed for 19 different cooling sizes up to 63 tons. In late 1989 they introduced the RF series with six different cooling sizes up to 140 tons.

In its first year of operation, Aaon faced a major challenge when a vendor who supplied their coils failed leaving many machines unfinished in the Tulsa plant. With the help of the Bank of Oklahoma, the firm was able to survive and move ahead.

As Aaon moved into the 90’s many changes took place, such as losing McDonald’s who was one of their main customers. The company continued to move ahead in the industry and formed a new subsidiary called CP/AAON, a Texas corporation, to acquire most of the assets of Coils Plus, Inc. of Longview, TX. Coils Plus was founded in 1984 to design and make new and replacement coils for the HVAC industry.

In March 1992, Aaon made opportunities available to 29 individuals, 8 officers and 21 employees to purchase stock in the company.

In 1993, Aaon’s customers included such names as Wal-Mart, QuikTrip, Mazzio’s, Braum’s, Target, Kmart, plus many others. The company also moved into the overseas market.

Aaon has continued to stay up with all of the changes in our industry and continues to make profits along the way. Remember Aaon has been a Golden Circle contributor to ASHRAE research since 2001. To attain this status you have to donate $10,000.00.

Thank you Aaon for all of your support to ASHRAE.
Treasurer Report
By: Chad Smith

November 2010 Net Worth - As of 11/11/2010
(Includes unrealized gains)
As of 11/11/2010

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<th>Account</th>
<th>Balance</th>
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<td>TOTAL Cash and Bank Accounts</td>
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<td>OTHER ASSETS</td>
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<td>TOTAL Other Assets</td>
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<td>NEOK ASHRAE</td>
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<td>TOTAL Investments</td>
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<td>TOTAL ASSETS</td>
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LIABILITIES
Other Liabilities
Sales Tax* 0.00
TOTAL OTHER LIABILITIES 0.00
TOTAL LIABILITIES 0.00

OVERALL TOTAL 56,231.05

Chad Smith can be reached at 918-665-6600 or Chad@airetechcorp.com

Events
By: Justin Roush

Thanks to everyone who came out to support ASHRAE research at the NEOK chapter’s annual poker night. We raised $310 for research and hope this continues to be an annual YEA event. Congratulations to Tim Wilcox, our big winner for the night. Also, a special thanks to EEI and ABS for donating their office space as well as supplying food and beverage for the evening.

Justin Roush can be reached at 918-258-6890 or jroush@fkengineers.com

Pictures From Poker Night

Tim Wilcox (right) was our big winner at the NEOK chapter’s annual poker night

Participants at the NEOK chapter’s annual poker night
E-Vite Notifications
By: Robert Schatz

If you have stopped receiving meeting notifications from the E-Vite system and chapter newsletter notification, please contact me.

Robert Schatz can be reached at 918-836-0271 or robert.schatz@leeandbrowne.com

Chapter Technology Transfer
By: Duane Harmon

Thanks to Brandon Lee Wallace, Southwest Regional Sales Manager of BRD Noise and Vibration Control, for the tech session on Best Practices for HVAC Noise and Vibration Control. Also, thanks to David Knebel, Vice President Sales for Aaon, for the main program presentation on Industry Trends and Single Zone VAV.

The December meeting will be a joint meeting with the local AIA chapter. A joint meeting with the local architectural association seemed like a given with the rising interest in designing buildings utilizing 3D software. The panel discussion will cover the topic of Building Information Modeling (BIM). The panel members will consist of local architects, engineers, and contractors. The panel members will discuss the entire design and construction process utilizing BIM. The panel members will formulate lessons learned and best practices in working with BIM. This is a must attend event as the architectural discipline appears to be moving quickly toward designing and building in the 3D world.

Duane Harmon can be reached at 918-877-6000 or dharman@cyntergyaec.com

Half Pot Update
By: Bill Hanlon

Thanks to all who helped in this fund-raising effort. The ace of spades was not drawn, so the pot will continue to grow next month and the number of cards will get smaller. Best of luck at the December meeting.

Bill Hanlon can be reached at 918-835-8333 or bill.hanlon@icstulsa.com

More Pictures From Last Chapter Meeting
# 2010/2011 Programs

<table>
<thead>
<tr>
<th>Date</th>
<th>Technical Session</th>
<th>Speaker</th>
<th>Main Program</th>
<th>Speaker</th>
<th>Theme and Special Guests</th>
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<tbody>
<tr>
<td>09/09/2010</td>
<td>Golf Tournament at Clary Fields Golf Course</td>
<td>Golf Tournament at Clary Fields Golf Course</td>
<td>Golf Tournament at Clary Fields Golf Course</td>
<td>Golf Tournament at Clary Fields Golf Course</td>
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<td>10/14/2010</td>
<td>NONE - Lunch Meeting</td>
<td>NONE - Lunch Meeting</td>
<td>AEP - Commercial and Industrial Efficiency Offerings</td>
<td>Micah Burdge</td>
<td>Membership; Refrigeration</td>
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<td>12/09/2010</td>
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<td>NONE - Lunch Meeting</td>
<td>BIM - Joint meeting with AIA</td>
<td>Panel of 5</td>
<td>Panel Discussion</td>
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<td>01/13/2011</td>
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<td>NONE - Lunch Meeting</td>
<td>Document Management &amp; Discovery - How Documents &amp; E-mails are Used in Litigation</td>
<td>Chris McDonald, HSB, ASHRAE DL</td>
<td>Membership Promotion &amp; YEA</td>
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<td>02/10/2011</td>
<td>NONE—Spouses Night</td>
<td>NONE—Spouses Night</td>
<td>NONE—Spouses Night</td>
<td>NONE—Spouses Night</td>
<td>Research Auction; Spouses Night</td>
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<td>03/10/2011</td>
<td>Modular Chiller Systems</td>
<td>Tiffany Bates - ClimaCool</td>
<td>Natural Gas Industry</td>
<td>TBA</td>
<td>Student Activities, Past Presidents, &amp; Golden Circle Night</td>
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<td>04/14/2011</td>
<td>Basic Refrigeration</td>
<td>TBA</td>
<td>School Systems</td>
<td>TBA</td>
<td>Plant Tour</td>
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<td>05/12/2011</td>
<td>Boiler 101</td>
<td>TBA</td>
<td>Engineering Ethics</td>
<td>Bruce Pitts, Oklahoma State Board of Licensure</td>
<td>Awards Night; Installation of Officers</td>
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## PAOE Points

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</table>
The Oil Capital Air
Northwestern Oklahoma Chapter
American Society of Heating Refrigerating and Air-Conditioning Engineers, Inc.
P.O. Box 54069
Tulsa, OK 74155-0069

Chapter Volunteers

<table>
<thead>
<tr>
<th>Officers:</th>
<th>Voice</th>
<th>Fax</th>
</tr>
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<tbody>
<tr>
<td>President</td>
<td>Rob Teis</td>
<td>382-6134</td>
</tr>
<tr>
<td>President-Elect</td>
<td>Mike Kirk</td>
<td>258-5618</td>
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<tr>
<td>Treasurer</td>
<td>Chad Smith</td>
<td>665-6600</td>
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<td>Secretary</td>
<td>Scott Pollard</td>
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<th>Board of Governors</th>
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<tr>
<td>Robert Allwein</td>
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<td>David Lam</td>
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<td>Bill Hanlon</td>
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<td>Joel Karstetter</td>
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<td>Dan Owens</td>
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<td>Attendance</td>
<td>Robert Schatz</td>
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<tr>
<td>Directory</td>
<td>Bill Hanlon</td>
<td>835-8333</td>
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<td>Historian</td>
<td>Gene L. Redford</td>
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<td>Honors &amp; Awards</td>
<td>Patrick Chapman</td>
<td>382-6344</td>
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<td>Invocations</td>
<td>Paul Roberts</td>
<td>493-2712</td>
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<td>Membership</td>
<td>Brady King</td>
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<td>Programs (Main)</td>
<td>Duane Harmon</td>
<td>877-6000</td>
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<td>Programs (Tech)</td>
<td>Mike Philips</td>
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<td>Publicity</td>
<td>Justin Roush</td>
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<td>Reception</td>
<td>Mike Gulizio</td>
<td>455-1712</td>
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<td>Refrigeration</td>
<td>Jeff Ferguson</td>
<td>877-6000</td>
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<tr>
<td>Research Promotion</td>
<td>Dave Myers</td>
<td>382-6191</td>
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<td>Special Events</td>
<td>Mary Goins</td>
<td>259-3740</td>
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<td>Student Activities</td>
<td>Sam Davis</td>
<td>249-1918</td>
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<td>Sustainability</td>
<td>Todd Lester</td>
<td>743-4419</td>
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<td>YEA</td>
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<tr>
<th>Important Dates</th>
<th>Meeting</th>
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<td>August 19, 2010</td>
<td>Board of Governors</td>
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<td>September 9, 2010</td>
<td>Chapter Golf Tourney</td>
<td>Clary Fields Golf Club</td>
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<td>September 16, 2010</td>
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<td>October 21, 2010</td>
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<td>November 11, 2010</td>
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<td>December 9, 2010</td>
<td>Chapter Lunch Meeting</td>
<td>Tulsa Southern Hills Marriott</td>
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<td>January 13, 2011</td>
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<td>January 20, 2011</td>
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<td>January 29–February 2, 2011</td>
<td>ASHRAE Winter Meeting</td>
<td>Las Vegas, NV</td>
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<td>February 10, 2011</td>
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<td>Uncle Buck’s Grill</td>
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<td>February 17, 2011</td>
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<td>Joe’s Crab Shack</td>
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<td>March 10, 2011</td>
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<td>March 17, 2011</td>
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<td>April 14, 2011</td>
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<td>April 21, 2011</td>
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<td>April 14-16, 2011</td>
<td>CRC</td>
<td>Dallas, TX</td>
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<td>May 12, 2011</td>
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<td>June 16, 2011</td>
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<td>June 25-29, 2011</td>
<td>Annual Conference</td>
<td>Montreal, Quebec Canada</td>
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Statements made in the publication are not the expressions of the Society or of the Chapter and may not be reproduced without the special written permission of the Chapter.
Saturday, Jan 29 – 8:00 a.m. to 11:00 a.m.
Saturday, Jan 29 – Noon to 3:00 p.m.

Standard 62.1-2010 Equations & Spreadsheet Calculation
Fundamental Requirements of ASHRAE Application of Standard 62.1-2010: Multiple Spaces
Technologies and Applications Climat e in an Energy Efficient Manner
Understanding Air-to-Air Energy Recovery Chilled Beam Technology for Excellent Indoor

Sunday, Jan 30 – 2:00 p.m. to 5:00 p.m.

New & Existing Buildings
Existing Buildings: A Sustainable Activity
The Commissioning Process in Implementing Energy Management in New and
Design and Application Existing Buildings: A Sustainable Activity
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Complying with ASHRAE/IES Standard 90.1-2010
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Tuesday, Feb 1 – 2:00 p.m. to 5:00 p.m.

District Cooling & Heating Systems: Central Plants Designing Toward Net Zero Energy
Industrial Facilities New IAQ Guide
Successful Solar Applications for Commercial & Avoiding IAQ Problems: Using ASHRAE's
Air Systems (DOAS) Temperature Radiant Cooling Systems
Understanding & Designing Dedicated Outdoor Low Temperature Radiant Heating & High

Monday, Jan 31 – 2:30 p.m. to 5:30 p.m.

Contracting and LEED Projects: M&V High-Performance Green Buildings
Determining Energy Savings from Performance Understanding Standard 189.1-2009 for
Contracting and LEED Projects: M&V Energy Savings from Performance
Using Standard 90.1 to Meet LEED Requirements
Commissioning Process & Guideline 0

Monday, Jan 31 – 2:30 p.m. to 5:30 p.m.

Understanding Standard 189.1-2009 for High-Performance Green Buildings
Low Temperature Radiant Heating & High Temperature Radiant Cooling Systems
Avoiding IAQ Problems: Using ASHRAE’s New IAQ Guide
Designing Toward Net Zero Energy Commercial Buildings

Tuesday, Feb 1 – 2:00 p.m. to 5:00 p.m.

Wednesday, Feb 2 – 2:00 p.m. to 5:00 p.m.

HVAC/Thermal
HVAC&R

Low Temperature Radiant Heating & High Temperature Radiant Cooling Systems

Tuesday, Feb 1 – 9:00 a.m. - Noon, 2:00 p.m. - 5:00 p.m.

Full Day Professional Development Seminar
$485/$395 ASHRAE Member – Earn 6 PDH/.6 CEU or 6 AIA LU credits

The Commissioning Process in New & Existing Buildings
Healthcare Facilities: Best Practice Design and Application
Complying with ASHRAE/IES Standard 90.1-2010

Half Day Short Courses
$159/$119 ASHRAE Member – Earn 3 PDH/.3 CEU or 3 AIA LU credits

Fundamental Requirements of ASHRAE
Standard 62.1-2010
Understanding Air-to-Air Energy Recovery Technologies and Applications
Using Standard 90.1 to Meet LEED Requirements
Determining Energy Savings from Performance
Understanding & Designing Dedicated Outdoor Air Systems (DOAS)
Successful Solar Applications for Commercial & Industrial Facilities
District Cooling & Heating Systems: Central Plants

Application of Standard 62.1-2010: Multiple Spaces Equations & Spreadsheet Calculation
Chilled Beam Technology for Excellent Indoor Climate in an Energy Efficient Manner
The Commissioning Process & Guideline 0
Understanding Standard 189.1-2009 for High-Performance Green Buildings
Low Temperature Radiant Heating & High Temperature Radiant Cooling Systems
Avoiding IAQ Problems: Using ASHRAE’s New IAQ Guide
Designing Toward Net Zero Energy Commercial Buildings

Energy Modeling Best Practices and Applications: HVAC/Thermal
		Tuesday, Feb 1 – 9:00 a.m. - Noon, 2:00 p.m. - 5:00 p.m.

ASHRAE Learning Institute
Seminars & Courses at ASHRAE’s Winter Conference in Las Vegas, NV

2 WAYS TO REGISTER
Internet: www.ashrae.org/lasvegascourses
Phone: Call 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

Full Day Professional Development Seminar
$485/$395 ASHRAE Member – Earn 6 PDH/.6 CEU or 6 AIA LU credits

The Commissioning Process in New & Existing Buildings
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.
Healthcare Facilities: Best Practice Design and Application
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.
Complying with ASHRAE/IES Standard 90.1-2010
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Implementing Energy Management in New and Existing Buildings: A Sustainable Activity
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.
Integrated Building Design
Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Energy Modeling Best Practices and Applications: HVAC/Thermal
Tuesday, Feb 1 – 9:00 a.m. - Noon, 2:00 p.m. - 5:00 p.m.

ASHRAE Certification Programs
Take advantage of ASHRAE’s special pencil & paper administration of our certification examinations on Wednesday Feb 2, 2011, in conjunction with the 2011 ASHRAE Winter Conference.

- Building Energy Assessment Professional (BEAP)
- Building Energy Modeling Professional (BEMP)
- Commissioning Process Management Professional (CPMP)
- Healthcare Facility Design Professional (HFDP)
- High-Performance Building Design Professional (HBDP)
- Operations & Performance Management Professional (OPMP)

For more info, visit www.ashrae.org/lasvegas certification

New Publications from ASHRAE
- ANSI/ASHRAE 55-2010 – Thermal Environmental Conditions for Human Occupancy
- ANSI/ASHRAE 62.1-2010 – Ventilation for Acceptable Indoor Air Quality
- ANSI/ASHRAE 34-2010 – Designation and Classification of Refrigerants

Visit www.ashrae.org/bookstore to order
Jan. 31- Feb. 2, 2011
Las Vegas Convention Center
Las Vegas, Nevada

Your ASHRAE Chapter

Or Register FREE Online at: www.ahrexpo.com
Register Online by January 2, 2011 Deadline - to have your badge mailed to you!

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Or bring this card to the Show for FREE onsite registration

Register Online by January 2, 2011 Deadline - to have your badge mailed to you!
No one under 16 admitted. 16-17 must be accompanied by an adult.

Concurrent with the ASHRAE Winter Conference...

FREE REGISTRATION
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EVENT HIGHLIGHTS
- Over 1,800 Exhibitors
- 50+ Educational Presentations
- Hundreds of New Products right on the Show Floor
- Special Exhibits and Presentations on new technologies promoting energy efficiency and sustainability
- 2011 AHR Expo Innovation Awards