April 2013

THE LONG ISLAND SOUNDER

ASHRAE Long Island Chapter

ASHRAE Long Island Chapter, Region 1...*Founded in 1957* www.ashraeli.org

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

Inside this issue:

President's Message

It was great to finally see some nice weather, I hope you were able to get out and enjoy it this past weekend. This year is going by very fast for me as chapter president, it has been a long road and rewarding trip. I am lucky to have such a great group of board members to work with, that being said if you are interested in joining our team please let us know.

It seems like business in our area is starting to pick up as the weather turns warmer. It is nice to see some good activity for our engineers on Long Island. Hopefully they will be able to support some of our Engineer Students with internships this summer. Please contact Rich Halley if you need any help to get the word out.

Here is an ASHRAE National update:
Seven proposed addenda to the ASHRAE/USGBC/IES high performance green building standard, Standard 189.1-2011, are open for public review. Also open for public review are an addendum to ASHRAE's thermal comfort standard and an addendum to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. Learn More >

These standards are very important to how we design, rate, and improve today's buildings. If you have time please take a look at these proposed addenda and make comments if you see fit.

Also, it's not too late to make plans to attend the Summer ASHRAE meeting in Denver

Registration for the ASHRAE Annual Conference is now open! The Conference will take place in Denver, CO, June 22-26. A full program is planned for attendees, encompassing technical presentations, educational offerings, certification and social and technical tours. A newly created Research Summit will be held in conjunction with the conference.Learn More or To Register >

I look forward to seeing you at the Sysco Distribution Warehouse Factory tour. Looking at the agenda there should be plenty to see and learn about. We are fortunate to have the local chapter of Refrigeration Service Engineers Society (RSES) joining us for this tour as well. If you have any comments or questions please feel free to contact me at any time.

Brian Simkins, LEED AP
President - Long Island Chapter

CHAPTER MONTHLY MEETING

DATE:	**Tuesday, April 9, 2013**
TIME:	**ANNUAL FIELD TRIP** **SEE PROGRAM SECTION FOR DETAILS**
LOCATION:	**SEE PROGRAM FOR DETAILS**
FEES: Members - Guest - Student -	 **$40 per person** **$45 per person** ***(Includes Dinner Afterwards)***

Reservations requested, but not required.
Call (516) 333-7117

Long Island Chapter Officers & Committees

ASHRAE 2012/2013 OFFICERS

POSITION	NAME	PHONE	FAX	EMAIL
President	**Brian Simkins, LEED AP**	203.261.8100	203.261.1981	bsimkins@accuspecinc.com
President-Elect	**Andrew Manos, LEED AP**	631.632.2791	631.632.1473	andym22@optonline.net
Vice President	**Richard Rosner, P.E.**	631.737.9170	631.737.9171	rrosner@csfllc.com
Financial Secretary	**Thomas Fields, P.E., LEED AP**	212.643.9055	212.643.0503	thomas.fields@mgepc.net
Treasurer	**Charles Lesniak, P.E**	516.484.1020	516.484.0926	charles.lesniak@leapc.com
Secretary	**Don Kane, P.E.**	631.737.9170	631.737.9171	dkane@csfllc.com
Board of Governors	**Andrew B. Dubel, P.E.**	212.967.7651	212.967.7654	andrew.dubel@leapc.com
Board of Governors	**Richard Halley**	718.269.3809	718.269.3725	rchalley@trane.com
Board of Governors	**Carolyn Arote**	516.568.6550	516.568.6575	carote@adehvac.com

ASHRAE 2012/2013 COMMITTEES

COMMITTEE	NAME	PHONE	FAX	EMAIL
Programs & Special Events	**Andrew Manos, LEED AP**	631.632.2791	631.632.1473	andym22@optonline.net
Membership	**Charles Lesniak, P.E.**	516.484.1020	516.484.0926	charles.lesniak@leapc.com
Chapter Technology Transfer (CTTC)	**Don Kane, P.E.**	631.737.9170	631.737.9171	dkane@csfllc.com
Newsletter Editor	**Liset Cordero**	212.643.9055	212.643.0503	liset.cordero@mgepc.net
Research Promotion	**Richard Rosner, P.E.**	631.737.9170	631.737.9171	rrosner@csfllc.com
Historian	**Thomas Fields, P.E., LEED AP**	212.643.9055	212.643.0503	thomas.fields@mgepc.net
Student Activities	**Richard Halley**	718.269.3809	718.269.3725	rchalley@trane.com
Young Engineers in Training	**Andrew B. Dubel, P.E.**	212.967.7651	212.967.7654	andrew.dubel@leapc.com
Webmaster	**Thomas Fields, P.E., LEED AP**	212.643.9055	212.643.0503	thomas.fields@mgepc.net
Nominating	**Michael Gerazounis, P.E., LEED AP**	212.643.9055	212.643.0503	michael.gerazounis@mgepc.net
Reception & Attendance	**Lee Feigenbaum, LEED AP BD+C**	516.558.2075		lfeigenbaum@emcor.net
PR & Engineering Joint Council of LI	**Brian Simkins, LEED AP**	203.261.8100	203.261.1981	bsimkins@accuspecinc.com
Golf Outing	**Peter Gerazounis, P.E., LEED AP** **Steven Friedman, P.E., HFDP, LEED AP**	212.643.9055 212.354.5656	212.643.0503 212.354.5668	peter.gerazounis@mgepc.net sfriedman@akfgroup.com

Young Engineers in ASHRAE (YEA)

YEA will be hosting a HVAC Design Essentials Level 1 workshop at ASHRAE Headquarters in Atlanta. Scholarships are available but must be completed by April 1st. The training will be held June 3-5. Get your applications in now!

Are you interested getting involved in an ASHRAE Technical Committee (TC)? TC are the heart of ASHRAE's technical efforts and help determine the future of our industry. Find out how to get involved here: https://www.ashrae.org/File%20Library/docLib/YEA/YEA-TC-Guide-2012.pdf .

Evans Lizardos completed our back to basics seminars last month at our last YEA night. Our back to basics seminars went very well this year and we look forward tackling more topics next year. This month we will be touring an Ammonia refrigeration plant on Long Island. We hope to see our YEA members at the field trip.

Have you liked ASHRAE YEA on Facebook yet? Take a look at http://www.facebook.com/ashraeYEA.

ASHRAE can be found at http://www.facebook.com/ASHRAEupdates. They can also be followed on twitter at https://mobile.twitter.com/ashraenews.

Andrew B. Dubel, P.E.
YEA Chairman

Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1985	Edward W. Hoffmann
1959	Clyde Alston, PE	1986	Jerome T. Norris, PE
1960	Sidney Walzer, PE	1987	Abe Rubenstein, PE
1961	Sidney Gayle	1988	Michael O'Rouke
1962	William Kane	1989	Mel Deimel
1963	Louis Bloom	1990	Robert Rabell
1964	Milton Maxwell	1991	Gerald Berman
1965	Will Reichenback	1992	Donald Stahl
1966	Joseph Minton, PE	1993	Ronald Kilcarr
1967	Irwin Miller	1994	Jerald Griliches
1968	Walter Gilroy	1995	Walter Stark
1969	Charles Henry	1996	Joe Marino
1970	William Wright	1997	Norm Maxwell, PE
1971	Louis Lenz	1998	Alan Goerke, PE
1972	Ronald Levine	1999	Frank Morgigno
1973	Henry Schulman	2000	Michael Gerazounis, PE, LEED AP
1974	Myron Goldberg	2001	Ray Schmitt
1975	John N. Haarhaus	2002	Steven M. Stein, PE
1976	Richard K. Ennis	2003	Andrew Braum, PE
1977	Kenneth A. Graff	2004	Claudio Darras, P.E.
1978	Evans Lizardos, PE, LEED AP	2005	Craig D. Marshall, P.E.
1979	Albert Edelstein	2006	John Nally
1980	Ralph Butler	2007	Peter Gerazounis, PE, LEED AP
1981	Robert Rose, PE	2008	Steven Friedman, PE, HFDP, LEED AP
1982	Timothy Murphy, PE	2009	Steven Giammona, P.E., LEED AP
1983	Leon Taub, PE	2010	Nancy Román
1984	Raymond Combs	2011	Carolyn Arote

ASHRAE™ Long Island Chapter

PAOE POINTS FOR 2012/2013

Chapter Members	Membership Promotion	Student Activities	Research Promotion	History	Chapter Operations	CTTC	Chapter PAOE Totals
301	350	440	845	350	900	1,025	3,910

Chapter Monthly Meeting - Program for 2012/2013

September 11, 2012 * At Westbury Manor
Dinner Presentation – International Building Code Requirements for Design & Installation of HVAC&R Components from the Effects of Wind, Seismic, Snow & Flood Loads!

Presenter: Richard Berger

****1 PDH****

October 9, 2012 ** At Westbury Manor*
Dinner Presentation—ASHRAE 52.2, Testing Air Filters on Particle Size versus Efficiency
Presenter: Danja McMillan

****1 PDH****

Resource Promotion Night

Back to Basic Session I -
Fundamentals of Pumping System Design *****1 PDH*****

November 13, 2012 ** At Westbury Manor*
Dinner Presentation-- HVAC Air Duct Leakage Testing and Testing Methodology

Presenter: Lee Feigenbaum, LEED AP BD+C ****1 PDH****

JOINT MEETING WITH SMACNA

Student Activities Night, Membership Promotion, & YEA Night

December 11, 2012
Holiday Party - Westbury Manor

January 8, 2013 ** At Westbury Manor*
Dinner Presentation—Dispute Resolution such as Mediation, Arbitration and Litigation, the pros and cons of each and what to expect
Presenter: Michael D. Ganz, Esq.

****1 PDH****

Back to Basic Session II -
Design and Analysis of Pumping System Design *****1 PDH*****

January 2013
ASHRAE Winter Meeting
Jan 28-30
Convention Center, Dallas

February 12, 2013 ** At Westbury Manor*
Dinner Presentation—Introduction to BEQ Labeling Program
Presenter: T. David Underwood P. Eng

Joint Meeting with USGBC
Resource Promotion Night
Membership Promotion Night ****1 AIA****

February 2013
NATIONAL ENGINEERS WEEK
Feb 17 through Feb 23

March 12, 2013 ** At Westbury Manor*
Dinner Presentation—Condensing Boilers Designs and Applications
Presenter: Ian Rowburrey

****1 PDH****

YEA Night

Back to Basic Session III -
The Rise of Variable Flow Primary and Fall of Primary/Secondary/Tertiary Pumping Systems
*****1 PDH*****

April 9, 2013
ANNUAL FIELD TRIP
Sysco Long Island
199 Lowell Avenue
Central Islip, NY 11722

400,000 sq. ft. Food Distributor including 88,000 sq. ft. of Freezer, Ammonia Refrigeration Plant and Hydrogen Fueled Fork Lift Trucks (Indoor Air Quality)

Dinner to follow

May 6th, 2013 ** Cherry Valley Club, Garden City, NY*
ANNUAL GOLF OUTING

May 14th, 2013 ** At Westbury Manor*
Dinner Presentation—Update on Refrigerants: Past, Present and Future
Presenter: Eckhard A. Groll, Dr. Eng.
ASHRAE DISTINGUISHED LECTURER

****1 PDH****

Student Activities Night
Refrigeration Night

June 11, 2013 ** At Westbury Manor*

PAST PRESIDENTS & OFFICER INSTALLATION

Chapter Regional Conference (CRC) Region I
Burlington, VT August 15-17

Board of Governors Meeting Minutes

Attendees: Brian Simkins-President; Andy Manos – President Elect; Rich Rosner - V. Pres; Don Kane – Secretary; Carolyn Arote - BOG-Past President

The meeting was called to order at 5:15 pm by Brian Simkins – President, at Westbury Manor

Secretary Don Kane noted that there were no corrections or additions to the minutes, as published in the Sounder. It was voted to approve the minutes as published.

President
Brian Simkins noted that the key tasks facing the BOG are:

- Encouraging involvement of more members in the working of the BOG and Chapter committees, to develop future leadership of the organization
- Increase attendance at monthly Chapter meetings
- Increase Chapter income through fund raisers, vendor nights, vendor book and the like.

Our committee line-up for next year presently has several people doing double (or triple) duty.

- Rich Rosner - Programs & Special Events, Research Promotion (RP) and Webmaster
- Don Kane - Chapter Technology Transfer (CTTC) and Government Relations
- Tom Fields - Historian
- Rich Halley - Student Activities
- Lee Feigenbaum/Carolyn Arote - Membership Promotion

Brian also noted that ASHRAE training for membership promotion takes place May 24th.

President-Elect/Programs Andy Manos reported that April's meeting will be our annual field trip (this year to Sysco, LI in Central Islip) which will also be a refrigeration night and a joint meeting with RSES.

Chapter Technology Transfer Don Kane reported that Larry Lowe of Sysco is drafting the presentation and we will arrange for review and accreditation for PDH's. For the after meeting dinner, either Carrabbas, in Central Islip or the Irish Coffee Pub are nearby. Andy Manos will handle arrangements for dinner and report back with availability and costs.

Treasurer All financials have been given to the accountant, who should be processing the tax filing. The account balance is $5,869.25

Research Promotion Rich Rosner reported that currently there is $8,390 at HQ, $500 to be transmitted to HQ and $7,500 due to be collected for Vendor Directory listings for a total of $16,390.

YEA Andy Manos provided an update on the Chapter Fishing Trip, which is scheduled for June 7th. Andy will check availability of a boat at Captree.

Student Activities Brian Simkins noted that the joint ASHRAE/ASME meeting at Stony Brook had around 55 attendees.

Honors and Awards Carolyn Arote reported that many of the ASHRAE national awards require accomplishments on a nationally recognized level. Possible candidates for awards are being researched.

Golf Brian Simkins noted that the cost of entry had to be increased to $350 this year due to increasing costs.

Old Business None

New Business None

Time/Place of next BOG Meeting– April 9, 2013. Prior to Field Trip at Sysco, LI, Central Islip**.**

Motion to Adjourn

The meeting was adjourned at 6:00pm

Respectfully submitted,

Donald W. Kane, PE
Chapter Secretary

April Field Trip - Tuesday, April 9, 2013

ASHRAE Long Island Chapter

ANNUAL FIELD TRIP
TUESDAY, APRIL 9, 2013

Sysco

Attendees Will Earn 1 PDH!

DATE:	TUESDAY, APRIL 9, 2013
ITINERARY:	5:00 pm: **TOUR OF THE FOOD WAREHOUSE AND DISTRIBUTION FACILITY OF SYSCO, LI**
FEE:	$40 per person (member-ASHRAE/RSES), $45 (non-member), $15 Student ***Includes Dinner and Soft Drinks (cash bar available) afterwards @ Carrabbas, located at 20 N Research Pl, Central Islip, New York***
LOCATION:	199 Lowell Avenue, Central Islip, NY 11722
ABOUT THE TOUR:	Sysco, LI operates a 400,000 Ft^2 facility in Central Islip, NY for the storage and distribution of food to supply food service operators in the NY/LI area. The facility includes 88,000 Ft^2 of frozen storage space, ammonia refrigeration plant as well as the use of hydrogen fueled fork-lift trucks to enhance the interior air quality.

April Field Trip - Tuesday, April 9, 2013

ASHRAE Long Island Chapter

ANNUAL FIELD TRIP
TUESDAY, APRIL 9, 2013 – 5:00PM

Attendees Will Earn 1 PDH!

SYSCO, LI FOOD DISTRIBUTION FACILITY
199 LOWELL AVENUE,
CENTRAL ISLIP, NY 11722

*RSVP Form - **Reservations are required!***

Email to Andy Manos – andrew.manos@stonybrook.edu

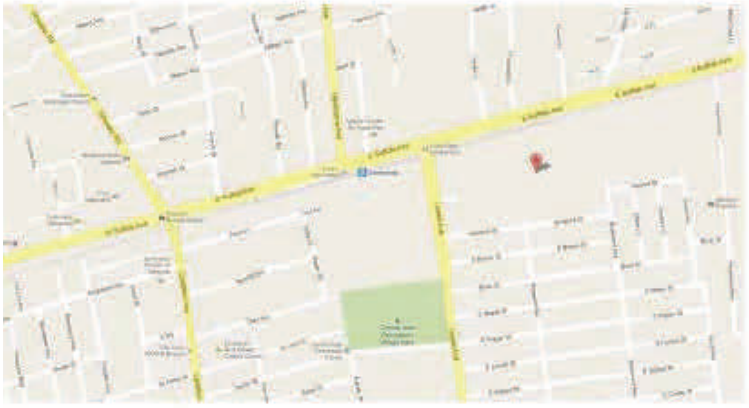
By April 5, 2013

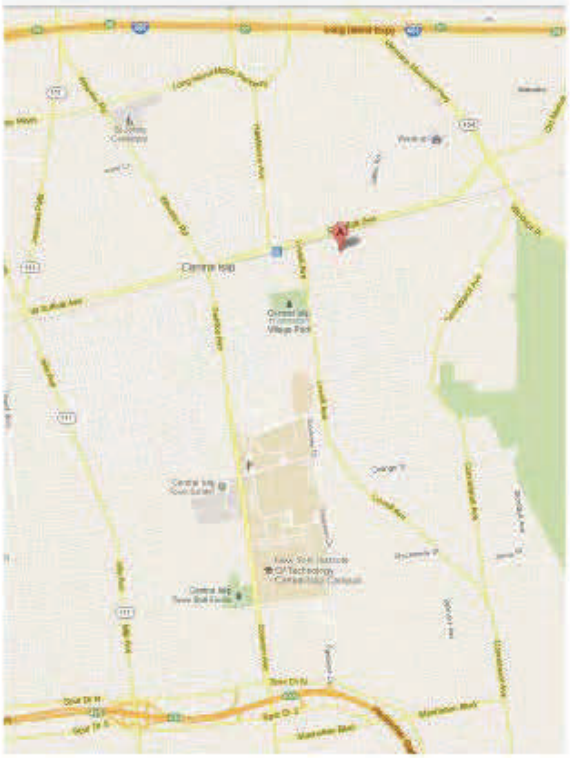
I would like to Attend (NAME):	
Phone #	

DIRECTIONS TO SYSCO:

From LIE Exit 56 Take CR17 (Wheeler Road) South to Suffolk Avenue. Take Suffok Avenue East to Lowell Avenue, make a right (south) on Lowell Avenue, just over the LIRR crossing, and enter SYSCO.

From Southern State Parkway take Exit for CR17 (Carleton Avenue) North to Suffolk Avenue. Take Suffok Avenue East to Lowell Avenue, make a right (south) on Lowell Avenue, just over the LIRR crossing, and enter SYSCO.





Research Promotion

Thanks again to those who have supported the Product Directory and those who have made donations directly to ASHRAE. I am pleased to say the directory will be ready to hand out at the April meeting however since the meeting is a field trip/tour we will be handing out the directories at the May meeting. The directory is easy to use and all are encouraged to support our loyal advertisers.

Of the $14,681 or more we are expected to raise this year I am happy to say we are getting close and have crossed the five figure barrier. We now have $10,040 to date. I have been reminded that all monies for this year have to be at national by June 28th. If the monies have to go through me first, like for the directory payment, they must be to me even earlier. That's not a lot of time, leaving us just over two months to wrap things up. This is a busy time of the year also for most, so don't put off getting those funds out today while you are thinking about it.

As soon as we master how do it, the Product Directory will appear online at http://ashraeli.org/productdirectory.html. There is a wealth of information online about ASHRAE LI and in general. If you have young ones going to college you are reminded that the chapter and national give out scholarships at this time of year and it is not too late to apply.

The board is looking for your company to have a product showcase during the cocktail hour at our meetings. This is a fund raiser for the group and a wonderful way for you to introduce your products. Why not consider having a showcase, just let me or any board member know and we will set it up.

CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

1) You can mail your checks, made out to **ASHRAE Research Promotion**, to:

Richard L. Rosner, P.E.
ASHRAE Research Promotion Chair
c/o Nassau Suffolk Engineering & Architecture, PLLC
801 Motor Pkway, Suite 103
Hauppauge, NY 11788

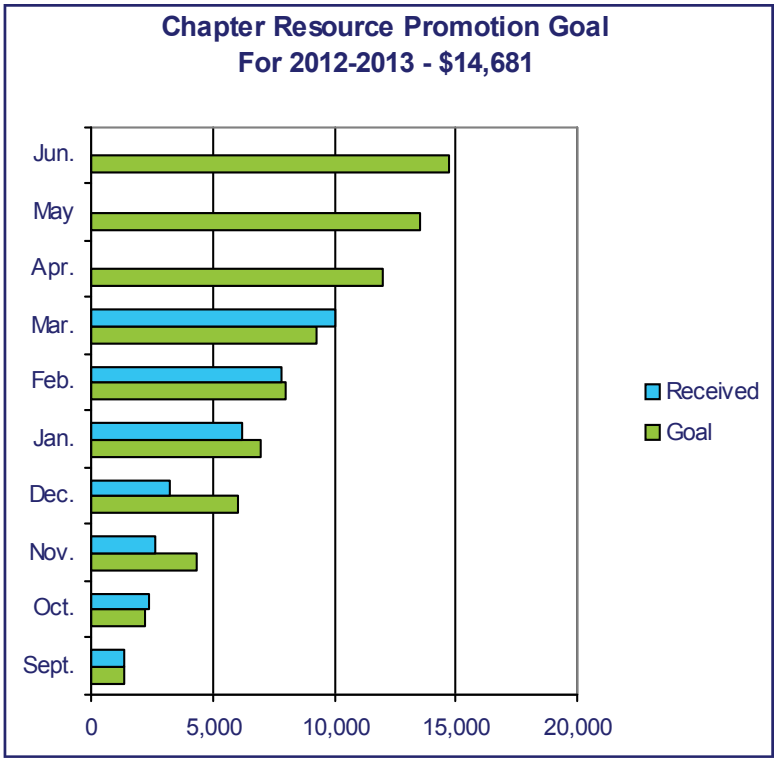
2) You can bring your check to any of the meetings and give it to me. I will mail it into headquarters.

3) You can contribute via paypal from the ASHRAE LONG ISLAND web site just click on the donate button.
4) You can contribute directly on-line. www.ashrae.org

*** Please make sure you accredit your contribution to the LONG ISLAND CHAPTER 006 ***

Thank you again for all your support!

Richard L. Rosner, P.E.
Research Promotion Chair



CTTC - RETRO-REFRIGERANTS - WHAT'S OLD IS NEW

It is hard for many today to imagine a time when comfort cooling was not considered a basic amenity, not a luxury or an extravagance. Yet, it was not until the 1920's to 1930's that comfort cooling became more readily available for the masses. Even until the mid to late 1950's air conditioning for the home was not the norm and, when installed, usually comprised one or two window mounted or through the wall units. Air conditioning in automobiles was, in those rare cases where it was provided, generally in the form of an "add-on" with the evaporator unit sitting between the transmission hump (remember them) and the bottom of the dashboard.

Fast-forward to the present, when comfort cooling is the norm. If a home doesn't have central A/C, it probably has a combination of window units and/or mini-splits to keep the occupants at a comfortable temperature while they go about their business. What could possibly be wrong with this picture? Only that we are now being told that we are smothering mother earth in a blanket of ozone depleting, global-warming inducing gases which are going to do result in our demise some day. We are told that our leaking air conditioning systems are the source of this blanket and that we have to change our ways. Whether or not one is in agreement with the global-warming/ozone depletion scenario (as opposed to a cyclical occurrence based on naturally occurring events) one has no choice but to agree that governmental limits are in place which determine what refrigerants we can and will be able to use now and for the future. What is one to do? Certainly giving up our accustomed comfort levels will never fly, human nature being what it is, so alternatives must be found. The good news? There already exists several "natural" refrigerants, one of which is R-717. That's right, Ammonia! NH_3 . Anhydrous ammonia, to be precise, 99.98% pure ammonia (not to be confused with its cousin, household cleaner ammonia, which is a 10% ammonia solution in water).

It turns out that not only does ammonia have a 130-150 year (depending on which side of the Atlantic Ocean one resides) history of use in refrigeration but it is about as "natural" a refrigerant that one can find. Consisting of a molecular amalgam of hydrogen and nitrogen, not only is ammonia considered to have Zero Ozone Depletion Potential (ODP) and Zero Global Warming Potential (GWP) but, if it **is** released into the atmosphere it has a life cycle of approximately one week, whereupon it breaks down into its constituent parts. Some of the nitrogen so liberated may even find its way back into mother earth, providing nutrient for local flora. It seems to be a veritable environmental bonanza. What else can one say about ammonia? It turns out it is more thermally efficient, thus generally permitting smaller tubing, requiring less system charge and, due to lower mass flow rate, uses less power to pump the required amount of refrigerant around to achieve rated cooling.

One might ask oneself why we ever got away from using ammonia in the first place. In fact, much of the heavy duty, large scale cooling plants have been using ammonia all these years because of the many positive attributes. However, use in small equipment for residential use waned with the development of the earlier noted halogen based refrigerants we have embraced, which eliminated concerns about ammonia's odor and toxicity. Ironically, it is ammonia's odor which, in many ways, makes it less problematic than odorless non-toxic refrigerants which are still capable of displacing breathable oxygen, and causing death by asphyxiation. Since the level at which one can smell ammonia is about 5 parts per million (ppm) and the level of toxicity is about 300 ppm, in case of an ammonia leak, there exists a better chance of knowing about it with sufficient warning to evacuate the area. Ammonia, being a lighter than air gas, tends to rise (without getting trapped in "pockets" as some other refrigerants do) which tends to dilute the concentrations of ammonia and keep it below the toxic level. It has been estimated that at one time, there was as much Halocarbon refrigerant in the atmosphere (from leaking systems) as was contained in all the systems from which it escaped. In that case, being odorless was not a positive point.

Apart from the odor and toxicity, what else precluded the widespread use of ammonia for smaller cooling installations? There are a few other negative characteristics, none of which are complete "show stoppers", but still significant enough to require additional consideration during the design process. Ammonia has a tendency to be absorbed into any porous material. While this would appear to be a major concern, the fact that the food processing industry has experienced a

Continued on Pg. 10

CTTC (Cont'd. from Page 9)

long time success with ammonia refrigeration indicates that with proper precautions it need not be a deterrent. As noted earlier, with an ammonia based system, everyone in the area is a leak detector, resulting in early detection of any leakage issues. Ammonia is not compatible with copper or any copper alloy. This requires the use, generally, of steel tubing. Since the size of tubing is generally smaller due to the thermal efficiency of the ammonia, and steel tubing is generally cheaper than copper, this alone is a benefit that results in lighter, smaller, less expensive coil assemblies. Of more concern is the use of ammonia with semi-hermetic compressors, requiring the use of aluminum conductors for the windings and electrical conductors, and compatible lubricants. While the anhydrous ammonia has little water content, prolonging the interior condition of tubing, extra care must be taken to insure that external corrosion does not take place under the insulation on connecting piping. As any exposed sections would have a tendency for external condensation, which could find its way under the insulated covering, some program of preventative maintenance is required (both visual and ultrasonic) for larger systems. Without long runs of external piping, smaller cooling units would not be expected to encounter this problem to a significant degree. While considered flammable, within narrow ranges of ammonia/air mixtures, ammonia generally will not burn unless in the presence of an external flame, minimizing the possibility of explosive occurrences. Last but not least, there is the issue of regulation. The use and storage of ammonia are subject (at least in the workplace) to numerous OSHA regulations. While an additional consideration, the existence of these regulations provides a clear-cut path to compliance, removing some of the ambiguity that sometimes accompanies the implementation of different technology. With no negative characteristics without solutions, and the positive attributes associated with ammonia one might expect to see an increase in its use, displacing the more conventional, but "environmental unfriendly" refrigerants normally used in smaller comfort cooling systems. Since ammonia's closest "natural refrigerant" competition is carbon dioxide which is presently under attack by the various environmental enforcers, ammonia may have another 150 years or more to go before it is displaced as a refrigerant.

Don Kane, P.E.
CTTC Chair

Student Activities

I would like to welcome our newest Student Member Gagandeep Singh from New York Institute of Technology this bring our yearly total to five new Members.

March continued to be busy as we held a basic controls class for the Student Chapter at Stony Brook. I would like to thanks Andy Manos for his leadership with the chapter in scheduling their meeting and utilizing the committee as much as possible.

The committee also met with New York Institute of Technology to review possible student chapter and explore ways the ASHRAE Long Island can support their program.

Our chapter student scholarship program is waiting for your applications to be received. If you do not have an application,

Email me at rchalley@trane.com . Don't forget the deadline for applications is May 1, 2011.

Richard Halley
Student Activities Committee Chair

Membership

ASHRAE's SmartStart Program for Student Members
By: Randy Schrecengost, Region VIII RVC, Austin Chapter

As indicated many times in the past, a Chapter MP Chair has three major items to be concerned about: recruiting new members, retaining existing members, and advancing memberships. Let's discuss retaining members, and specifically our student members. Talk to your Student Activities and/or YEA Chairs prior to May graduations, to transfer your student members into ASHRAE's SmartStart Program.

What is the SmartStart Program? It's the greatest way for ASHRAE student members to transfer to Associate membership and receive ASHRAE member benefits after finishing college!

Why transfer? When a student member transfers to an Associate membership they gain access to all ASHRAE benefits, including:

- The ASHRAE Handbooks, which are essential for all HVAC&R professionals;
- The *ASHRAE Journal*, a monthly magazine full of technical resources; *High Performing Buildings*, a magazine for building technologies (electronic only);
- *ASHRAE Insights*, the monthly newsletter of key Society news and activities;
- *HVAC Industry News*, a weekly news resource of the latest industry news and information;
- Access to more than 300 of the industry's leading technical publications;
- Access to online education, satellite broadcasts and professional education classes;
- Online training; Professional certifications;
- Critical industry research;
- Tremendous networking opportunities through chapters and committees; and
- The ASHRAE Job Board

How does it work?
1. The first year out of college annual membership is $20.
2. Then it is only $50 for the second year and $50 for the third year.
3. You save up to $420 and get three years of membership for $120. ($20-$50-$50)

The SmartStart program is the most affordable and practical way for a student member to continue being connected to ASHRAE. But, **don't wait!** Only current, active student members are eligible for this program. You need to contact and transfer your graduating seniors **NOW**!

Consider the following ideas when creating an action plan:

1. Coordinate with the Student Activities and/or YEA Chairs to attend the local student branch meetings. Provide technical presentations and/or "real world experiences" that occur within the industry.
2. Organize a graduation event and celebrate their achievement. Explain how the industry actually works, and encourage them to stay in ASHRAE. Explain the importance of having networking opportunities, and the benefits of the ASHRAE job board, educational opportunities and the technical resources that are available to ASHRAE members.
3. Have the chapter perform a raffle to pay for a graduating student's dues on SmartStart (only $120 for all 3 years). Maybe provide first year dues (only $20) for a couple of students. You can have them all complete some task such as volunteering at a chapter event, or reward them for attending a certain number of chapter meetings while a student.

Don't forget that the students are part of ASHRAE's future!

We need the MP Chairs to help retain and transfer students. We need them to help us all improve HVAC&R for the built environment. It's part of the ASHRAE culture and for all members with a common interest to provide solutions to set standards around the world.

If you have any questions about the SmartStart program, please contact your RVC and/or Rhiannon Loomis at rloomis@ashrae.org.

Charles Lesniak, P.E.
Membership Chairman

History

Timeline of low-temperature technology
From Wikipedia:

The following is a **timeline of low-temperature technology and cryogenic technology** (refrigeration down to –150 °C, –238 °F or 123 K and cryogenics).

18th century BC – 18th century

- 1700 BC – Zimri-Lin, ruler of Mari in Syria commanded the construction of one of the first ice houses near the Euphrates.[citation needed]
- 500 BC – The yakhchal (meaning "ice pit" in Persian;) is an ancient Persian type of refrigerator. The structure was formed from a mortar resistant to heat transmission, in the shape of a dome. Snow and ice was stored beneath the ground, effectively allowing access to ice even in hot months and allowing for prolonged food preservation. Often a badgir was coupled with the yakhchal in order to slow the heat loss.
- 1396 AD - Ice storage warehouses called "Dong-bing-go (meaning "east ice storage warehouse" in Korean) and Seo-bing-go ("west ice storage warehouse") were built in Han-Yang (currently Seoul, Korea). The buildings housed ice that was collected from the frozen Han River in January (by lunar calendar). The warehouse was well-insulated, providing the royal families with ice into the summer months.[citation needed] These warehouses were closed in 1898 AD but the buildings are still intact in Seoul.
- 1650 – Otto von Guericke designed and built the world's first vacuum pump and created the world's first ever vacuum known as the Magdeburg hemispheres to disprove Aristotle's long-held supposition that 'Nature abhors a vacuum'.
- 1656 – Robert Boyle and Robert Hooke built an air pump on this design.
- 1662 – Boyle's law (gas law relating pressure and volume) is demonstrated using a vacuum pump
- 1665 – Boyle theorizes a minimum temperature in *New Experiments and Observations touching Cold*.
- 1679 – Denis Papin – safety valve
- 1702 – Guillaume Amontons first calculates absolute zero to be −240 °C using an air thermometer, theorizing at this point the gas would reach zero volume and zero pressure.
- 1756 – The first documented public demonstration of artificial refrigeration by William Cullen[2]
- 1782 – Antoine Lavoisier and Pierre-Simon Laplace invent the ice-calorimeter
- 1784 – Gaspard Monge liquefied the first gas producing liquid sulfur dioxide.
- 1787 – Charles's law (Gas law, relating volume and temperature)

19th century

- 1802 – John Dalton wrote "the reducibility of all elastic fluids of whatever kind, into liquids"
- 1802 – Gay-Lussac's law (Gas law, relating temperature and pressure).
- 1803 – Domestic ice box
- 1803 – Thomas Moore of Baltimore, Md. received a patent on refrigeration.[3]
- 1805 – Oliver Evans designed the first closed circuit refrigeration machine based on the vapor-compression refrigeration cycle.
- 1809 – Jacob Perkins patented the first refrigerating machine
- 1810 – John Leslie freezes water to ice by using an airpump.
- 1811 – Avogadro's law a gas law
- 1823 – Michael Faraday liquified ammonia to cause cooling
- 1824 – Sadi Carnot– the Carnot Cycle
- 1834 – Ideal gas law
- 1834 – Jacob Perkins obtained the first patent for a vapor-compression refrigeration system.
- 1834 – Jean-Charles Peltier discovers the Peltier effect
- 1844 – Charles Piazzi Smyth proposes comfort cooling[4]
- c.1850 – Michael Faraday makes a hypothesis that freezing substances increases their dielectric constant.
- 1851 – John Gorrie patented his mechanical refrigeration machine in the US to make ice to cool the air[5][6]
- 1856 – James Harrison patented an ether liquid-vapour compression refrigeration system and developed the first practical ice-making and refrigeration room for use in the brewing and meat-packing industries of Geelong, Victoria.
- 1857 – Carl Wilhelm Siemens, the Siemens cycle
- 1858 – Julius Plücker observed for the first time some pumping effect due to electrical discharge.
- 1859 – Ferdinand Carré – The first gas absorption refrigeration system using gaseous ammonia dissolved in water (referred to as "aqua ammonia")

Continued on Pg. 13

History (Cont'd. from Page 12)

- 1862 – Alexander Carnegie Kirk invents the Air cycle machine
- 1864 – Charles Tellier patented a refrigeration system using dimethyl ether
- 1869 – Charles Tellier installed a cold storage plant in France.
- 1871 – Carl von Linde built his first ammonia compression machine.
- 1876 – Carl von Linde patented equipment to liquefy air using the Joule Thomson expansion process and regenerative cooling[7]
- 1877 – Raoul Pictet and Louis Paul Cailletet, working separately, develop two methods to liquefy oxygen.
- 1879 – Bell-Coleman machine
- 1882 – William Soltau Davidson fitted a compression refrigeration unit to the New Zealand vessel *Dunedin*
- 1883 – Zygmunt Wróblewski condenses experimentally useful quantities of liquid oxygen
- 1885 – Zygmunt Wróblewski published hydrogen's critical temperature as 33 K; critical pressure, 13.3 atmospheres; and boiling point, 23 K.
- 1888 – Loftus Perkins develops the "Arktos" cold chamber for preserving food, using an early ammonia absortion system.

- 1892 – James Dewar invents the vacuum-insulated, silver-plated glass Dewar flask
- 1895 – Carl von Linde files for patent protection of the Hampson–Linde cycle for liquefaction of atmospheric air or other gases (approved in 1903).
- 1898 – James Dewar condenses liquid hydrogen by using regenerative cooling and his invention, the vacuum flask.

20th century

- 1905 – Carl von Linde obtains pure oxygen and nitrogen.
- 1906 – Willis Carrier patents the basis for modern air conditioning.
- 1908 – Heike Kamerlingh Onnes liquefies helium.
- 1911 – Heike Kamerlingh Onnes discloses his research on metallic low-temperature phenomenon characterised by no electrical resistance, calling it superconductivity.
- 1915 – Wolfgang Gaede – the Diffusion pump
- 1920 – Edmund Copeland and Harry Edwards use iso-butane in small refrigerators.
- 1922 – Baltzar von Platen and Carl Munters invent the 3 fluids absorption chiller, exclusively driven by heat.
- 1924 – Fernand Holweck – the Holweckpump
- 1926 – Albert Einstein and Leó Szilárd invent the Einstein refrigerator.
- 1926 – Willem Hendrik Keesom solidifies helium.
- 1926 – General Electric Company introduced the first hermetic compressor refrigerator
- 1929 - David Forbes Keith of Toronto, Ontario, Canada received a patent for the Icy Ball which helped hundreds of thousands of families through the Dirty Thirties.
- 1933 – William Giauque and others – Adiabatic demagnetization refrigeration
- 1937 – Pyotr Leonidovich Kapitsa, John F. Allen, and Don Misener discover superfluidity using helium-4 at 2.2 K
- 1937 – Frans Michel Penning invents a type of cold cathode vacuum gauge known as Penning gauge
- 1944 – Manne Siegbahn, the Siegbahn pump
- 1951 – Heinz London invents the principle of the dilution refrigerator
- 1955 – Willi Becker turbomolecular pump concept[8]
- 1957 – Lewis D. Hall, Robert L. Jepsen and John C. Helmer ion pump based on Penning discharge
- 1959 – Kleemenko cycle
- 1972 – David Lee, Robert Coleman Richardson and Douglas Osheroff discover superfluidity in helium-3 at 0.002 K.
- 1973 – Linear compressor
- 1978 – Laser cooling demonstrated in the groups of Wineland and Dehmelt.
- 1983 - Orifice-type pulse tube refrigerator invented by Mikulin, Tarasov, and Shkrebyonock
- 1986 – Karl Alexander Müller and J. Georg Bednorz discover high-temperature superconductivity
- 1995 – Eric Cornell and Carl Wieman create the first [9] Bose–Einstein condensate, using a dilute gas of Rubidium-87 cooled to 170 nK. They won the Nobel Prize for Physics in 2001 for BEC

Thomas J. Fields, P.E., LEED AP
History Chair

Pictures from March's Chapter Meeting

ASHRAE Annual Student Scholarship Application

American Society of Heating, Refrigerating & Air Conditioning Engineers
Long Island Chapter, Region 001

ANNUAL STUDENT SCHOLARSHIP

The Long Island Chapter awards up to two (2) $1,000.00 or (1) $1,000.00 and (2) $500.00 scholarships annually to those who are well rounded and show an interest in pursuing an engineering career. Eligible entries for the 2012/2013 year must be submitted by May 1, 2013. Email address rchalley@trane.com

Application date:_____

Personal information:
Last Name First Middle

Home address City State Zip

School address City State Zip

Phone # E-mail address -Home

Cell # -School

Faculty Reference:
Name Address Phone #

1._____

Personal Reference:
Name Address Phone #

1._____

2._____

Education:
High School: Location Years Attended Graduation Date

College/University graduating Location Years Attended Date

College major GPA

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Essay: Please describe your interests, activities, goals and why you deserve this scholarship (Attach additional sheets as necessary).

I also agree that my misstatement or omission of any information requested in this application shall be valid reason for rejection of this application. In the event I am selected to receive the application, I agree to attend the local chapter award dinner. The dinner will be free of cost to the award recipient.

No question on this application is asked for the purpose of limiting or excluding any applicant's consideration for reasons proscribed by federal, state or local law, and discussions are based entirely on knowledge, skills and ability. Qualified applicants are considered without regard to race, color, religion, sex, national origin, disability or age to the extend prohibited by law.

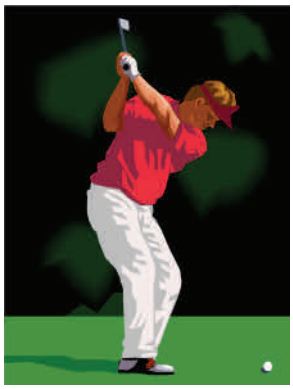
Applicant signed

Faculty advisor signed

ASHRAE Golf Outing - Monday, May 6, 2013

14th Annual LI ASHRAE GOLF OUTING

Monday – May 6th, 2013



Place:	**Cherry Valley Club**
Brunch:	**11:00 am**
Shotgun:	**12:30 pm**
Reception:	**5:30 pm**
Dinner:	**6:30 pm**

This Event fills up fast, to guarantee a spot RSVP Soon.

(2) Foursome Limit Per Company.

Proper golf attire and shoes are required. Locker room and shower privileges are included.

CHECKS MUST BE IN BY APRIL 12, 2013 (No Exceptions)

Fax, Email or Mail entire sheet or cut this half and return

Name: _____ Company: _____

Address: _____ Phone: _____

City, State, Zip: _____ Fax: _____

I have read and understand the Cherry Valley Rules and Regulations (Signature): _____

Guest 1: _____ Company: _____

Guest 2: _____ Company: _____

Guest 3: _____ Company: _____

Please make check payable to:

ASHRAE – Long Island Chapter

Mail Checks To:

MG Engineering, P.C.
Attn: Peter Gerazounis, P.E. LEED AP
116 West 32nd Street
New York, NY 10001
Fax No.: (212) 643-0503
Email: peter.gerazounis@mgepc.net

Fund raising is primarily through the contributions of our sponsors. Please consider our sponsorship opportunities listed below.

Golf & Meals:	**$ 350 pp x ____**		**= $_____**
Reception & Dinner:	**$ 130 pp x ____**		**= $_____**
Sponsor Dinner:	**$1,000**	☐ **Yes**	**= $_____**
Sponsor Lunch:	**$ 500**	☐ **Yes**	**= $_____**
Sponsor Reception:	**$ 500**	☐ **Yes**	**= $_____**
Sponsor Prizes:	**$ 500**	☐ **Yes**	**= $_____**
Sponsor Beverage Cart:	**$ 500**	☐ **Yes**	**= $_____**
Sponsor Hole:	**$ 200**	☐ **Yes**	**= $_____**

ASHRAE Golf Outing - Monday, May 6, 2013

Cherry Valley Club
28 Rockaway Avenue at Third Street
Garden City, NY
Telephone: (516)746-4420
Fax: (516)746-4421

Program:

11 a.m. Brunch in the Clubroom & Lounge – including Omelet station, deluxe deli board with rolls, chicken scarpiello, danish, croissants, bagels & cream cheese, sliced nova, fresh fruit and cheeses, Good Humor ice cream cart.

12:30 p.m. Shotgun Start Golf – Playing individual scores. Prizes for long drive, closest to the pins, low gross and callaway. Refreshments at the halfway house will include packaged snacks and whole fresh fruit, hot dogs, beer & soda. A snack cart will also be on the course. Carts, forecaddies, driving range, locker room and showers are all included in the price.

5:30 p.m. Following Golf - Open Bar with hot and cold horsd'ouvres in the Main Lounge. Fresh mozzarella with sundried tomatoes, cajun chicken, spring rolls, baby lamb chops, sesame chicken, turkey canapés, fried oysters, cheeses, fresh fruit, lobster halves, fresh clams & oysters, shrimp and crab claws.

6:30 p.m. Reception Dinner – Awards and raffle in the Main Dining Room. Carving stations of beef tenderloin & turkey breast. Chafing dishes of chicken & salmon featuring the chef's specialty, pasta station with marinara or vodka sauce, and choice of tossed or Caesar salad. Viennese dessert table following the dinner featuring pastries, fruit, cookies, assorted cakes and pies. Full beverage service throughout is included.

Women are also invited to attend and participate. There are locker room facilities available. The Cocktail hour and Dinner will also be available for those who cannot attend during the day for the golf.

Note: We are limited to 128 golfers. Openings will be filled on a first come-first serve basis. Corporate sponsorships will be available and raffle items will be welcome. Proper golf attire is a requirement for the golf course. Soft spikes are required. Please wear a jacket for the dinner.

Directions:

From the North Shore of Long Island: Take the Long Island Expressway to Exit 34 South (New Hyde Park Road Southbound), Grand Central Parkway (Northern State Parkway) to Exit 26 South (New Hyde Park Road Southbound) or Jamaica Avenue (Jericho Turnpike) Eastbound to New Hyde Park Road. Travel Southbound on New Hyde Park Road for approximately 5 to 7 miles to Stewart Avenue (You will cross over a set of railroad tracks). Take Stewart Avenue eastbound for approximately 1-1/2 miles to Cherry Valley Avenue. Travel Southbound on Cherry Valley Avenue for 1/2 mile, Cherry Valley Avenue becomes Rockaway Avenue. Continue on Rockaway Avenue and the entrance to Cherry Valley Club will be on your right.

From Local Points North: Take Old Country Road or Stewart Avenue to Franklin Avenue. Travel Southbound on Franklin Avenue to Fourth Street (just after crossing over railroad tracks). Turn right on Fourth Street and continue until it ends (Rockaway Avenue). Cross over Rockaway Avenue into the Cherry Valley Club's parking lot.

From the South Shore of Long Island: Take the Southern State Parkway to Exit 19 (Peninsula Boulevard-Hempstead/Garden City). Travel Northbound on Peninsula Boulevard for approximately 1/2 mile to President Street. Bear left on President Street (Northbound) for approximately one mile and cross over Hempstead Turnpike. President Street will become Cathedral Avenue. Continue on Cathedral Avenue for one mile to Fourth Street. Make a left on Fourth Street (Westbound) and continue until it ends (Rockaway Avenue). Cross over Rockaway Avenue into the Cherry Valley Club's parking lot.

From Local Points South: Take Hempstead Turnpike to Franklin Avenue. Travel Northbound on Franklin Avenue to Fourth Street. Turn left on Fourth Street and continue until it ends (Rockaway Avenue). Cross over Rockaway Avenue into the Cherry Valley Club's parking lot.

ASHRAE Golf Outing - Monday, May 6, 2013

Cherry Valley Club
Golf Outing Guidelines

To add the enjoyment of your day, we ask that you abide by Cherry Valley Club's basic rules of The Club, dress, golf etiquette & safety, golf carts, and care of the course.

Club Rules

1. **Smoking is not permitted in the Club House.**
2. **Cell Phones are permitted in the parking lot only. Use of Cell Phones beyond the parking lot is strictly prohibited. This includes the Golf Course.**

Dress Code

1. Jeans, designer or otherwise, are not acceptable on club property. This not only includes pants, but skirts, and cut-offs.
2. T-shirts and tank tops are not in keeping with the atmosphere of the club and as such, are not acceptable. The definition of T-shirt includes those with psychedelic coloring or suggestive printing.
3. If the Main Dining room is going to be utilized for any purpose, jackets are required.
4. Short shorts are not permitted on the golf course, practice tee or putting green by either male or female. Bermuda shorts of acceptable length are permitted. Jogging attire and denim pants are not considered proper attire for the golf course.
5. **Soft spikes** are mandatory at all times on our fine golf course. If your shoes need soft spikes, arrive early so we can change them. There is a nominal fee. There is **no** exception to this rule.

Golf Etiquette and Safety

1. Slow play shows lack of consideration for the players in your group and, more important, for the players behind you. Golf is made much more enjoyable if all players adhere to the following points in the conduct of play:

    - Minimize the time spent looking for balls by watching the flight of balls hit by everyone in your group. If a ball appears to be lost or out of bounds, hit a provisional ball before leaving the tee.
    - Signal the players behind you to play through if it becomes apparent that a ball will not easily be found and you are holding up play.
    - Don't rush addressing and striking the ball but move briskly between shots.
    - If your ball is some distance from the golf cart and the exact club selection is in doubt, take several clubs with you when you leave the cart to walk to the ball.
    - When play reaches the area of the green, park the golf cart(s) behind the green or adjacent to the next tee. Walk briskly off the rear or side of the green after putting out. Mark your score cards after your group is off the green.
    - Once a score of double par has been posted, pick up and move on to the next hole.

2. No player should play until the players in front are out of range.
3. If your ball appears headed for a player or group of players immediately shout "fore" in a loud clear voice.
4. No one should move, talk or stand close to or directly behind the ball or the hole when a player is addressing the ball or making a stroke.

ASHRAE Golf Outing - Monday, May 6, 2013

Cherry Valley Club
Golf Outing Guidelines (Cont'd.)

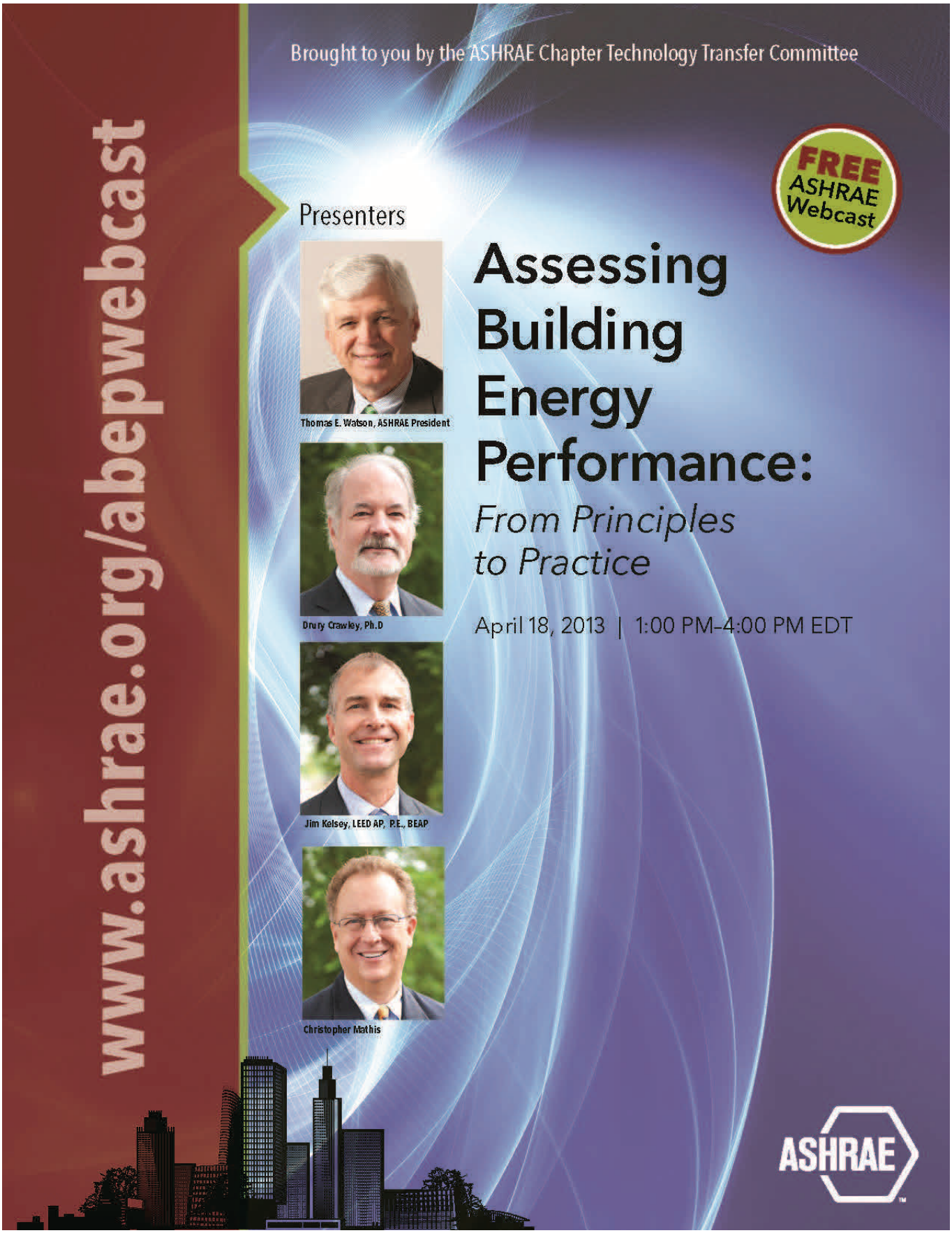
Golf Carts

1.No more than two people are to be in a cart at one time.
2.No more than 2 bags are to be carried on one golf cart.
3.Members and their guest must observe all cart directional signs and use cart paths and designated golf cart parking areas where provided.
4.Good judgment, reasonable care, and observation of club rules are expected of any member or guest when operating a golf cart. Damaged golf carts will be repaired at the responsible member's expense. Each member or guest who rents a golf cart agrees to indemnify and hold Cherry Valley Club harmless of and free from any and all damages, judgment, court costs, attorney's fees or other expenses incidental to and incurred by Cherry Valley Club which may arise from misuse of a golf cart by such member or guest.
5.Members and their Guests must keep golf carts at least 10 yards away from greens trees or traps. They should keep a reasonable distance away from soft or wet areas and they must respect directional signs.

Care of the Course

1.Before leaving a sand trap, a golfer should carefully rake and smooth over all holes and footprints made by him.
2.From tree to green, a player should ensure that any turf cut or divot displayed by him is replaced at once and pressed down, and that any damage to the putting green made by a ball is carefully repaired.
3.Golf bags should never be brought onto a green. The flagstick should be carefully handled to ensure that no damage is done to the hole or the putting green. Don't dent the green with the flagstick or by leaning on your putter.
4.In taking practice swings, players should avoid causing damage to the course by taking divots. This is particularly true on the tees and in the vicinity of the greens.
5.Only putters are to be used on the practice greens. A separate practice green adjacent the driving range is available for chipping and sand trap practice.

Assessing Building Energy Performance



Assessing Building Energy Performance

The Presenters

Thomas E. Watson,
ASHRAE President

Drury Crawley, Ph.D

Jim Kelsey, LEED AP, P.E., BEAP

Christopher Mathis

How a Webcast Works

A webcast is the streaming of audio and video to an audience over the internet. The "live" webcast will originate from Encompass Digital Media in Atlanta, GA. The internet link to access the webcast page will be emailed to participants when they complete registration. The link to access the webcast will be added approximately five (5) minutes prior to the start of the webcast.

Tentative Program

1:00 PM Part I – Opening Presentations, Q & A

2:30 PM Break

2:40 PM Part II – Roundtable Presentations, Q & A

3:55 PM Closing

Thomas E. Watson, ASHRAE President
Chief Engineer | Daikin McQuay | Staunton, VA
Thomas Watson is the 2012–13 Society President. His presidential theme is "Broadening ASHRAE's Horizons", which emphasizes the role of ASHRAE members as leaders in the application of sustainable design and practices worldwide. Watson's past service includes Director-at-Large, ASHRAE Vice President, and ASHRAE Treasurer.

Drury Crawley, Ph.D
Director of Building Performance | Bentley Systems | Washington, DC
Drury Crawley has more than 30 years of experience in buildings energy efficiency, renewable energy, and sustainability. He is a registered architect and has a Ph.D in Mechanical Engineering. Crawley is Chair of ASHRAE Standard 169, and is a current and past member of numerous ASHRAE technical and standards committees.

Jim Kelsey, LEED AP, PE, BEAP
Principal | kW Engineering | Oakland, CA
Jim Kelsey is a licensed mechanical engineer and a LEED accredited professional. He has a B.S. in Physics and earned a Masters in Mechanical Engineering. Kelsey is interested in the technical side of energy efficiency to develop ways to save energy in commercial and industrial facilities. He is a voting member of ASHRAE Technical Committee 7.6 and Standard 100.

Christopher Mathis
President | MC Squared | Asheville, NC
Christopher Mathis has spent the past 30 years focusing on how buildings and building products perform. He earned a Bachelors degree in Physics and a Master of Science in Architecture Studies. Mathis has published a variety of technical papers and books, and is an active participant in ASHRAE Standard development.

Assessing Building Energy Performance

What Will I Learn?
After attending this webcast, participants will be able to:

- Explain the importance of building energy performance and its far-reaching implications in both new and existing buildings
- Assess various tools and approaches available for assessing building energy performance
- Recognize the opportunities that Assessing Building Energy Performance (ABEP) presents
- Explain the differences among, and application of, ASHRAE building audit levels 1, 2, and 3
- Recognize the different approaches, team skills, and knowledge needed to properly assess building energy performance in new and existing buildings

How Do I Register?
You must register for the webcast. On-line registration for the Webcast begins **March 18, 2013** on our website at **www.ashrae.org/ABEPwebcast**. There is no fee for registration. The registration form requests that you confirm your email address. Your email address will be required to login to the live webcast. The Internet link to access the webcast page will be emailed to participants when they complete registration.

How can I participate?
- Host a webcast site for your colleagues.
- View the webcast at a site.
- Register to view the webcast on your PC

Can I earn PDHs?
YES! Three (3) Professional Development Hours (PDHs) or Three (3) American Institute of Architects (AIA) Learning Units may be awarded to viewers who complete the **"Participant Reaction Form" by May 3, 2012**. Visit **www.ashrae.org/ABEPwebcast** for more information.

Unable to Attend?
If you are unable to participate in the live webcast, it will be archived online for two weeks following the broadcast. Registration will be necessary to view the archived program.

You may also purchase a DVD by:
- Calling ASHRAE Customer Service at 1-800-527-4723
- Sending an email to: orders@ashrae.org
- Going to the website at: www.ashrae.org/Bookstore

Test Your Equipment
When you complete registration, you will be given a link to test your system. This test will alert you immediately if your computer system is not properly set to see and hear a webcast.

Group Logistics/Planning Checklist

One to Two Months in Advance
- Secure a viewing location. Know and coordinate your technical support staff names, phone numbers, and addresses.
- Promote the webcast program. Target a wide audience. Use the media kit at **www.ashrae.org/ABEPwebcast**.
- Register online March 18, 2013 at **www.ashrae.org/ABEPwebcast** and save the link provided with your email confirmation to access the webcast.
- Reserve and test your equipment.
- Initiate and maintain an accurate participant headcount. Use a signup sheet or email RSVP. Site coordinators are responsible for maintaining accurate attendee headcount.
- Encourage participants to arrive at least 20 minutes prior to the webcast.

Two Weeks Prior to the Webcast
- Test your equipment. Confirm technical arrangements.
- Confirm headcount.

One Day before the Webcast
- Test your equipment.
- Inspect your viewing location.
- Check seating capacity and, if possible, reserve extra chairs.

Assessing Building Energy Performance

- Expect participant questions and, if possible, provide 3"x 5" question cards.
- Talk to prospective participants to identify questions for the speakers.
- Make arrangements for coats and other personal items to be safely stored (closets, coat racks, coat hooks, etc.).

At Least One Hour Prior to the Webcast

- Arrive at the site.
- Check with the technical support staff to ensure that equipment is operational.
- Notify your technical coordinator if problems occur with audio or video transmission, and if necessary, contact technical assistance. Resolve any communication or technical problems that may arise at your site.
- Welcome attendees and help them feel comfortable with the set-up ("housekeeping notes") and to field any last-minute questions. (Note: You may wish to include your own educational programming information as part of the schedule of events.)
- Remind viewers to be in their seats 10 minutes before the program begins.
- Plan to complete all activities before the webcast is scheduled to start. The Internet link to access the webcast page will be emailed to you when you complete registration. Site Coordinators should log on with their email address approximately ten (10) minutes prior to the start of the webcast.
- Check your program agenda so you are aware about 5 minutes ahead of time when the Question and Answer segments will begin. You should move to the side/front of the room so that the audience can see you.

During the Webcast

- Have a technical support manager on site.
- Be prepared for troubleshooting and problem solving.
- Facilitate interaction.
- Email your questions to the webcast presenters using the interface on your screen.
- Download the program presentation slides. The link to download the slides will be accessible in the webcast viewing auditorium on April 18th.

Technical Personnel

Please ensure that someone who knows how to operate the equipment is available prior to and during the webcast. The technician must be onsite by 11:00 a.m. EDT the day of the webcast to set up and test the equipment. Please use this time to resolve any technical problems that may arise.

The technician should—

- Recommend the type of equipment to be used.
- Set up any needed audio or video lines from the PC to the video projector and audio system. Make sure that the audio can be heard in all areas of the room.
- Be prepared to access the link to the webcast approximately ten (10) minutes prior to the start of the webcast.
- Set up a house microphone for in-room speeches and announcements at your site before, during, and after the webcast (optional).
- Assure that the room is dark enough for the attendees to easily see the video image on the screen.

Following the Webcast

Direct participants to complete the "Participant Reaction Form" online at **www.ashrae.org/ABEPwebcast.**

For More Information About the Webcast

Visit **www.ashrae.org/ABEPwebcast** for information and complete details about the program, continuing education credits, speakers, and registration.

You can also scan this tag with your smart phone for more information.

If you have additional questions, contact us at: 678/539-1200, or ashraewebcast@ashrae.org

ASHRAE Annual Conference - June 22-26, 2013

Join ASHRAE in sharing lofty ideas, high-level concepts and rock-solid applications on what's new in the building industry in Denver, Colo., at the 2013 Annual Conference, June 22–26. ASHRAE helps you rise above it all and advance your career with its outstanding technical program, learning courses, technical tours and chances to network and socialize. Earn PDHs, while hearing the latest updates from the Society and other leaders in the industry. ASHRAE in the Mile-High City will elevate you to new heights.

REGISTER EARLY & SAVE!

Early registration fees (until April 22):

- $345 member/$535 non-member
- First-time Conference attendee: $320 member/$510 non-member
- $90 Life Member

NEW registration fees for the following:.

- $95 speakers
- $25 student branch advisors
- $25 student member/ $50 full-time student non-member

Register now at **www.ashrae.org/denver**

Research Summit

A newly created **Research Summit** is being held as part of the Conference. The Summit comprises a major portion of the technical program with 33 sessions scheduled, 22 of which are paper-based sessions, presenting the latest research results, innovative research and updates on research in progress. Other sessions of interest to the research community are also presented, including how to apply for ASHRAE research funding.

ASHRAE Annual Conference - June 22-26, 2013

Technical Program

Integrated Project Delivery mini-conference is featured on Sunday and Monday. Other focused tracks on Energy Modeling vs. Verification; Energy Efficiency in Buildings and Equipment; Renewable and Alternative Energy Sources; and HVAC&R Applications and Systems Tracks. **Learn more here**.

ASHRAE Learning Institute

Further your professional development through onsite classes offered by the **ASHRAE Learning Institute,** which provides real-world training presented by industry-recognized subject matter experts. ALI offers seven in-depth training courses including a new professional development seminar on *Operations and Maintenance of High-Performance Buildings* and a new short course on *Optimization of HVAC Systems and their Components*.

Technical Tours

Technical tours offer you an inside view of how technology developed by ASHRAE members is practically applied in building environments. Tours include the Denver Zoo, the National Renewable Energy Laboratory, SolarTAC and Pepsi Center Stadium. **Learn more here**.

2013 AIA National Convention in Denver

ASHRAE Conference attendees can extend their learning and networking opportunities through the 2013 AIA National Convention and Design Exposition. The AIA Convention, which takes place June 20–22 at the Colorado Convention Center—less than half a mile from the ASHRAE Conference hotel. Of note to ASHRAE attendees is the AIA Expo 2013, which will feature over 700 exhibitors. The Expo Only registration is ***free***, and includes entrance to the expo hall and access to the three keynote presentations. See who's exhibiting at the AIA Convention website and register at **www.aig.org/convention.**

Register now at **www.ashrae.org/denver**

We look forward to seeing you in Denver.
If you have any questions, please contact us at **meetings@ashrae.org**.

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