



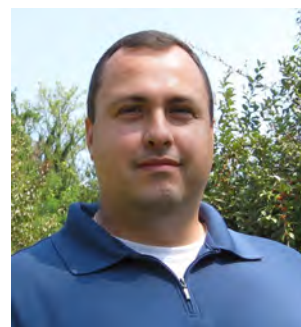
American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

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President's Message

Welcome to the February issue of the "Long Island Sounder". We thank all those who attended last month's meeting. We were fortunate enough to have Evans Lizardos give us a "Back to Basics" Presentation on Design of Variable Air Volume Systems. Thank you again to John Knowles of Wales Darby and his presentation of "Automatic Flow Balancing", an enlightening look toward auto hydronic balancing. This presentation touched on different types of hydronic boiler and chiller systems along with methods of reducing energy consumption.



Thank you to MGE for sponsoring January's cocktail hour and the following companies; Apollo and Accucspec for offering to sponsor the February and March meetings. If your company is interested in sponsoring a cocktail hour please contact Rich Rosner or myself.

This month we will have our joint meeting with USGBC and IFMA-LI. We will have two excellent presentations; Richard Gerbe will be presenting on LEED Ver 4 Rating System & ASHRAE 191P Water Efficiencies in Buildings. Following we have Mark Piegay presenting on Desiccant Dehumidification System for Energy Recovery Efficient Temperature and Humidity Control. Both of these presentations are PDH approved.

CHAPTER MONTHLY MEETING

DATE:	Tuesday, February 11, 2014
TIME:	6:00 PM - Cocktails/Dinner 6:45 PM - Dinner Presentation 8:45 PM - Conclusion
LOCATION:	Westbury Manor South Side of Jericho Tpke. 25 Westbury, NY 11590
FEES:	
Members -	\$40.00
Guest -	\$45.00
Student -	\$15.00

Reservations requested, but not required.

Call (516) 333-7117

If any companies have openings for internships now is the time to find some students to fill them. Please see Rich Halley or myself so we can get your position posted with our student advisors.

National Engineers Week is February 16-22. Engineers Week celebrates us—Engineers, Engineering Students, and Technicians—inclusive of all the amazing things we do every day to make the world a better place. Our local EJCLI chapter will be having a one day seminar on February 13 with multiple opportunities to gain PDH credits as well. More information along with the registration form can be found towards the back of this newsletter on pages 19-24.

On a National level, Last month was the ASHRAE Winter Conference and Expo in NYC. ASHRAE President Bill Bahnfleth Ph.D., P.E., presented an update on his Presidential Theme for this year; *Shaping the Next* "Our goals should address, first of all, our world—using our talents and resources for the benefit of the general public, as our governing documents charge us with doing.

Long Island Chapter Officers & Committees

ASHRAE 2013/2014 OFFICERS

POSITION	NAME	PHONE	FAX	EMAIL
President	Andrew Manos, LEED AP	631.632.2791	631.632.1473	president@ashraeli.org
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Treasurer	Don Kane, P.E.	631.737.9170	631.737.9171	treasurer@ashraeli.org
Secretary	Andrew B. Dubel, P.E.	212.967.7651	212.967.7654	secretary@ashraeli.org
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Board of Governors	Lee Feigenbaum, LEED AP BD+C	212.243.2555		bog2@ashraeli.org
Board of Governors	Brian Simkins, LEED AP	203.261.8100	203.261.1981	bog3@ashraeli.org

ASHRAE 2013/2014 COMMITTEES

COMMITTEE	NAME	PHONE	FAX	EMAIL
Programs & Special Events	Richard Rosner, P.E.	631.737.9170	631.737.9171	programs@ashraeli.org
Membership	Lee Feigenbaum, LEED AP BD+C	212.243.2555		membership@ashraeli.org
Chapter Technology Transfer (CTTC)	Don Kane, P.E.	631.737.9170	631.737.9171	cttc@ashraeli.org
Grassroots Government Activities Committee	Charles Lesniak, P.E	516.484.1020	516.484.0926	ggac@ashraeli.org
Newsletter Editor	Liset Cordero	212.643.9055	212.643.0503	editor@ashraeli.org
Research Promotion	Richard Rosner, P.E.	631.737.9170	631.737.9171	rp@ashraeli.org
Historian	Thomas Fields, P.E., LEED AP	212.643.9055	212.643.0503	historian@ashraeli.org
Student Activities	Richard Halley	718.269.3809	718.269.3725	sa@ashraeli.org
Young Engineers in Training	Lee Feigenbaum	212.243.2555		yea@ashraeli.org
Webmaster	Richard Rosner, P.E.	631.737.9170	631.737.9171	web@ashraeli.org
Nominating	Michael Gerazounis, P.E., LEED AP	212.643.9055	212.643.0503	nominating@ashraeli.org
Reception & Attendance	Frank Paradiso Ken Mueller	631.632.2791 201.395.3761	631.632.1473 763.231.6924	reception@ashraeli.org
PR & Engineering Joint Council of LI	Andrew Manos, LEED AP	631.632.2791	631.632.1473	pr@ashraeli.org
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	golf@ashraeli.org

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President's Message (Cont'd. from Page 1)

This is primary. In order to achieve these goals, we must also set goals for ourselves—developing a workforce that is capable of meeting the challenges of the future, and for our work—what we do, how we do it, and with whom.” The Technical Program featured more than 200 sessions addressing building information systems; Hydronic system design; Improving building performance; Indoor environmental air health/IEQ; Refrigeration; HVAC&R systems and equipment; and HVAC&R fundamentals and application.

Thank you to all the volunteers and board members, I appreciate all your time and dedication to our chapter and community.

We look forward to seeing everyone at the February meeting and thank you for your continued support of the Long Island Chapter of ASHRAE.

Andrew Manos, LEED AP BD+C
President - Long Island Chapter



Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1986	Jerome T. Norris, PE
1959	Clyde Alston, PE	1987	Abe Rubenstein, PE
1960	Sidney Walzer, PE	1988	Michael O'Rourke
1961	Sidney Gayle	1989	Mel Deimel
1962	William Kane	1990	Robert Rabell
1963	Louis Bloom	1991	Gerald Berman
1964	Milton Maxwell	1992	Donald Stahl
1965	Will Reichenback	1993	Ronald Kilcarr
1966	Joseph Minton, PE	1994	Jerald Griliches
1967	Irwin Miller	1995	Walter Stark
1968	Walter Gilroy	1996	Joe Marino
1969	Charles Henry	1997	Norm Maxwell, PE
1970	William Wright	1998	Alan Goerke, PE
1971	Louis Lenz	1999	Frank Morgigno
1972	Ronald Levine	2000	Michael Gerazounis, PE, LEED AP
1973	Henry Schulman	2001	Ray Schmitt
1974	Myron Goldberg	2002	Steven M. Stein, PE
1975	John N. Haarhaus	2003	Andrew Braum, PE
1976	Richard K. Ennis	2004	Claudio Darras, P.E.
1977	Kenneth A. Graff	2005	Craig D. Marshall, P.E.
1978	Evans Lizardos, PE, LEED AP	2006	John Nally
1979	Albert Edelstein	2007	Peter Gerazounis, PE, LEED AP
1980	Ralph Butler	2008	Steven Friedman, PE, HFDP, LEED AP
1981	Robert Rose, PE	2009	Steven Giammona, P.E., LEED AP
1982	Timothy Murphy, PE	2010	Nancy Román
1983	Leon Taub, PE	2011	Carolyn Arote
1984	Raymond Combs	2012	Brian Simkins, LEED AP
1985	Edward W. Hoffmann		

PAOE POINTS FOR 2013/2014

Chapter Members	Membership Promotion	Student Activities	Research Promotion	History	Chapter Operations	CTTC	GGAC	Chapter PAOE Totals
296	500	505	885	275	950	505	250	3,870

Chapter Monthly Meeting - Program for 2013/2014

September 10, 2013 * At Westbury Manor  Dinner Presentation – Characteristics of Throw (Overhead Air Distribution Fundamentals) Presenter: ADE - Frank Bergamini **1 PDH** Membership Promotion Night	February 2014 NATIONAL ENGINEERS WEEK Feb 16 through Feb 22
October 8, 2013 * At Westbury Manor  Dinner Presentation—Optimizing Efficiency of Multiple Hydronic Boiler Systems Presenter: Joel Southwell **1 PDH** Resource Promotion Night <i>Back to Basic Session I - Evans Lizardos **1 PDH**</i> <i>"How to Select & Specify Heating & Cooling Coils"</i>	March 11, 2014 * At Westbury Manor Dinner Presentation—GeoThermal Systems – Design and Installation Considerations Presenter: Ray Schmitt and Panel **1 PDH** Joint meeting with LI-Geo / YEA Night <i>Back to Basic Session III – Evans Lizardos **1 PDH**</i> <i>"Design & Theory of dedicated Outside Air Systems for Humidity Control"</i>
November 12, 2013 * At Westbury Manor  Dinner Presentation—Seismic Design for Building Systems Presenter: Jim Sadler from Mason Industries **1 PDH** Joint meeting with SMACNA Student Activities Night & YEA Night as well as Membership Promotion and Upgrade Night	April 8, 2014 (5 PM) ANNUAL FIELD TRIP Long Beach Ice Skating Rink – See the refrigeration system and hear about the storm damage and recovery. **1 PDH** Dinner to follow at a local Restaurant with a "Sandy" story Joint meeting with RSES
December 10, 2013 * At Westbury Manor  HOLIDAY PARTY Free Buffet Dinner for Members VISIT FROM DRC - Joseph Furman	May 5th, 2014 * Cherry Valley Club, Garden City, NY ANNUAL GOLF OUTING
January 14, 2014 * At Westbury Manor  Dinner Presentation- Automatic Flow Balancing Presenter: John Knowles **1 PDH** <i>Back to Basic Session II - Evans Lizardos **1 PDH**</i> <i>"Design of Variable Air Volume Systems"</i>	May 13th, 2014 * At Westbury Manor Dinner Presentation—Introduction to Ammonia Refrigeration Systems Presenter: Douglas T. Reindl, Ph.D., P.E. **1 PDH** ASHRAE DISTINGUISHED LECTURER Student Activities Night / Refrigeration Night
January 2014  ASHRAE Winter Meeting Jan 18-22 New York Hilton 1335 Avenue of the Americas, New York, NY	June 10, 2014 * At Westbury Manor Free Buffet Dinner for Members PAST PRESIDENTS NIGHT & OFFICER INSTALLATION STUDENT SCHOLARSHIPS TO BE AWARDED ASHRAE History Quiz and prize Give-A-Ways
February 11, 2014 * At Westbury Manor Presentation #1—Leed Ver 4 Rating System & ASHRAE 191P Water efficiencies in Bldgs. Presenter: Rich Gerbe **1 PDH** Presentation #2—Desiccant Dehumidification System for Energy Efficient Temperature & Humidity Control Presenter: Mark Piegay **1 PDH** Joint Meeting with USGBC and IFMA-LI Resource Promotion Night / Membership Promotion Night	August 2014 Chapter Regional Conference (CRC) Region I Bi-State Chapter Hosting August 14-16, 2014

Board of Governors Meeting Minutes

Attendees: Andrew Manos (AM); Rich Rosner (RR); Don Kane (DK); Andrew Dubel (AD); Richard Halley (RH); Lee Feigenbaum (LF); Tom Fields (TF)

The meeting was called to order at 5:15pm by Andrew Manos - President, at Westbury Manor.

President: The meeting was called to order at 5:10. Presidents PAOE points are currently at 950. It was noted November's 12th meetings minutes were approved last meeting. Motion to approve Dec 10th meeting minutes was approved. Members are to update PAOE points every month.

President Elect/Programs: RR noted all meetings were booked. In the event of a no show, RR and DK noted they could put on a technical presentation which would not have PDH approval on grounding, power quality etc. January will be a double header with a back to basics session on VAV systems and Automatic flow balancing. February meeting to be joint meeting with USGB on LEED V4 and ASHRAE 191P water efficiencies in building for 1 PDH point. There will also be a desiccant dehumidification presentation for a second PDH point. Sponsors for cocktail hour: Past sponsors – Daikin (Sept), October (ATI), November (Trane), January (MGE); February – Sponsor will be Apollo; March – Sponsor will be Accuspec; April – Feld Trip meeting; May – Sponsor needed

Chapter Technology Transfer: CTT PAOE points are current at 450. Generally, CTTC PAOE update follows the meeting, after speaker evaluation reports are filed. DK will continue to send special events information to Liset for incorporation into the sounder. DK will work with Long Beach Ice Rink to develop presentation for PDH credit for field trip.

Treasury: As of December 10th, account balance is \$9,380.50. IRS rejected this year extension. An appeal has been filed by DK. IRS notice of penalty for last year's tax was received. An appeal has been filed by DK. Additional sources of revenue are required to fund 2017/2018 CRC planning.

Grassroots Government Activates: GGA PAOE points are current at 250. CL to promote meetings with local, state, and government entities. Joint effort underway with EJCLI (ATI and Accuspec will handle) Feb 13 is a national engineering week event by EJCLI. 6 PDHs will be available. Event cost is 110.

Historian: Historian PAOE points are currently 250. Records are current being digitized.

Research Promotion: RP PAOE points are currently at 825. 8555 RP has been sent to society. Over 12,000 has been collected. End-of-Year Goal is \$14,900. High five is \$21,422. We are currently over 50% of goal. 30% of vendor book revenue has been collected.

Membership Promotion: MP PAOE points are currently at 225.

Student Activities: SA PAOE points are currently at 505. 34 students have joined thus far.

YEA: The 2nd annual Brooklyn Brewery outing will be scheduled for next year. The Stony Brook chapter has been meeting weekly. LF will review leadership retreat. TF to give presentation in Wantagh elementary school.

Webmaster: The website has been updated. RR noted that Anthony has been updating the site content promptly. Chairs to copy relevant files onto chapters FTP site. Links to the FTP site have been sent to all of the chairs and directories have been added.

Golf: The golf outing has been confirmed for May 5th.

Old Business: Ticket books – Books will be needed prior to next month's meeting for USGBC. Region 1 dinner will be held on January 20th at 7:00 PM at Johnny Utah's. It was voted to increase chapter dues \$5, which will be in line with NJ and NY. RR to follow up with society.

New Business: AM to hold webinar at Stonybrook on IEQ on April 17, 2014.

The next meeting will be held on Feb 11th at Westbury Manor.

The meeting was adjourned at 5:55.

Andrew B. Dubel, P.E.
Chapter Secretary

February Program



Presentation No. 1 "Rainwater Reuse and Storm Water Control"

Presented by
Richard Gerbe
Highmark



Presentation No. 2 "Desiccant Dehumidification System for Energy Efficient Temperature & Humidity Control"

Presented by
Mark F. Piegay
**Kathabar Dehumidification
Systems, Inc.**

DATE:	TUESDAY, FEBRUARY 11, 2014		
Time:	6:00 PM - Cocktails and Hors D'oeuvres 6:30 PM - Dinner Presentation #1 7:30 PM - Dinner Presentation #2 8:45 PM - Conclusion	Fee:	\$ 40.00 Member \$ 45.00 Guest \$ 15.00 Student
Location:	WESTBURY MANOR (516) 333-7117 Jericho Tpke (South Side), 3/10 of mile east from Glen Cove Rd., Nassau County, NY. Directions are posted at @ www.ashraeli.org.		
Presentations:	<p>Presentation #1 will discuss water management issues around the world and how rain water harvesting solves issues pertaining to water shortages as well as storm water discharge pollution.</p> <p>Presentation #2 will discuss effects of poor humidity control, methods of dehumidification, overview of dry and liquid desiccant and energy comparison between dry and liquid desiccant systems.</p> <p>All attendees will receive 2 PDH's. In addition February's meeting is our joint meeting with the USGBC and IFMA-LI and will be sponsored by Apollo.</p>		
About our Speaker(s):	<p>Richard E. Gerbe is an engineer with over 15 years of design and sales experience. As an engineer, he started his career at a prestigious consulting engineering firm and later in his career as a sales professional. Richard has been able to utilize his engineering expertise to better serve members of the engineering community in facilitating the design of innovative and energy efficient systems. Richard later founded Highmark, where he current serves as President. Richard holds a Bachelor of Science degree in Mechanical Engineering from the New York Institute of Technology. He is an Engineer in Training and a LEED Accredited Professional.</p> <p>Mark Piegay is the Northeast Regional Sales Manager for the dehumidification and energy recovery division of Kathabar Dehumidification Systems, Inc. in Buffalo, NY. Mr. Piegay received his BS degree in Mechanical Engineering from The University of Buffalo. He began his career with Kathabar as an Applications Engineer in 2010 and moved to the role of Northeast Regional Sales Manager in 2013.</p>		

**Attendees
Will Earn
2 PDH's!**



CHAPTER MAY NOT ACT FOR SOCIETY

An International Organization

Research Promotion

I am wondering how many of you went to the winter conference and AHR Expo. This was my first time and I was amazed at the huge participation. I attended as many lectures as I could fit in, attended some TC meetings and walked as far as my feet would carry me attending from Saturday through Thursday (except Tuesday when I took a snow day) but I still couldn't take it all in. A few things caught my eyes, the first being the amount of attendees from around the world. Truly people from all over are just as excited about the HVAC field as us Americans and ASHRAE plays a big part in their lives and businesses. From the lectures I gathered that computerized modeling of energy use has grabbed much more attention than I thought it was getting but I am still skeptical that the tools are being used to turn out practical designs. The last thing notable was that although giants in the field had huge displays and were heavily manned, they were dwarfed by the small ones with few product vendors who were there to strut their stuff. Overall I took away with me the feeling we are part of something bigger than I had been thinking and that it takes large and small companies to advance this field and all of our jobs are important. On a disturbing note one of the lecturers was asked when he felt the tipping point would come for us to stop global warming. His answer was that he felt we had passed it and that it was no longer reversible. After seeing the great minds at work with the products and designs shown and the energy of members in our field I have to think we can accomplish anything we set our goals to.

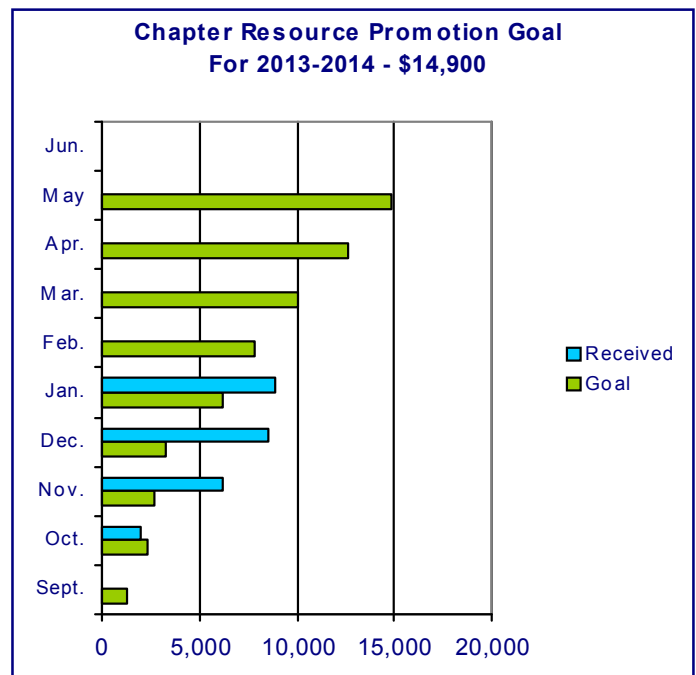


Speaking of energy, our February meeting is being sponsored by Apollo, please show the guys your appreciation. Like last month we have two lecturers planned and there will be 2 PDH's given out for these lectures. The lectures will be Mark Piegay from Kathabar presenting "Desiccant dehumidification System for Energy Efficient Temperature and Humidity Control" for our first presentation and Rich Gerbe from Highmark presenting "Leed Ver 4 Rating System & ASHRAE 191P Water Efficiencies in Buildings" will present the second presentation. I have seen both presentations and can assure you there will be much important information given that you are probably not aware of.

On the money end, our chapter is doing well thanks to all of your help. Of the \$14,900 or more we are expected to raise by June we have raised \$8,905 to date and have 895 PAOE points. This takes us to second place in Region 1 at this time but so close to first place which is at \$9,445 and 910 points. As I said I am going to press all to keep up with the good work and keep those RP checks coming in as I have set my goals on the High Five Challenge level this year which is way up at the \$22,514 level.

The 2014 Product Directory of Manufacturers and their Representatives should be at the printer when this newsletter is published. Thank you for your support. If you haven't sent in your payment please do so at this time. If you need an invoice just let me know. Books will be made available to all ASHRAE and non-ASHRAE members at no-cost and can be obtained at our monthly meetings or directly from our web-site at <http://ashraeli.org/productdirectory.html> The Directory is intended to provide better communications between manufacturers and their sales representatives; engineers who specify products; contractors who purchase and install the equipment; and other interested parties. Product Directory listings are not limited to ASHRAE members and the listings are not to be considered as advertising or endorsement by ASHRAE of any product, manufacturer or representative.

I am hoping I can count on the continued support of all of our past contributors who have generously supported us over the years. I also look forward to gaining the support of new contributors this year. Please help support ASHRAE in any way you can.



Thank you again for all your support!

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

CTTC - WATER, WATER EVERYWHERE.....SOMETIMES EVEN WHERE, AND IN THE FORM WE WANT IT!

Had the HVAC industry existed in the time of Samuel Taylor Coleridge, his ancient mariner would, no doubt, have been lamenting not just the lack of drinking water, but would also be pondering where to get non-corrosive water for his cooling tower. While listening to some of the presentations at the recent ASHRAE Winter Conference in NYC and during my perambulation of the AHR EXPO it became clear that water and HVAC are inexorably linked. Much as a thespian's anagnorisis, that "aha" moment of critical discovery (in this case of the obvious) came while viewing equipment to heat water, cool water, purify water, remove water (from air), add water (to air), as well as hearing discussion of the critical effect of humidity on the ability of bacterial agents, such as Legionella, to exist and be communicated. This year at both the Conference and the Expo (more on both a little later on) there was definitely a conservation thread woven through the presentations and product rollouts. Much of this appears to be driven by the desire to accumulate LEED credits and comply with ASHRAE 191P, generally a good thing.



How are we to more efficiently use this liquid resource? Certainly we can reduce the quantity of water used for various activities. Low-flush toilets and waterless urinals are a step in that direction (even if some localities require the installation of all the piping needed to "convert" to conventional urinals should the waterless ones not perform...talk about design to fail!). There is a practical limit, where the fixture which worked fine in the test lab at a much reduced flow, does not perform as expected in the "real world" requiring "double flushing". There goes the water saving. We can look to find other sources of water to perform these functions, leaving the potable water source for those applications requiring that higher degree of purity. Rainwater and gray water are two sources that come to mind, and ones which, somewhat surprisingly, require similar treatment in order to successfully use for such functions as toilet flushing. We have all heard stories of the pioneer days when the runoff from the roof was channeled to a barrel or cistern (even in our suburban area, one can see "rain barrels" advertised for sale, to collect rain water to be used, ostensibly, for such chores as watering ones lawn or garden). Whether ignorance was bliss, or the somewhat shorter lifetimes enjoyed by these pioneer spirits were ended before contamination from rainwater stored in barrels could do them in, we know now that, alas, rainwater, left without filtering and antibacterial treatment forms a breeding ground for all kinds of organisms which, if not always fatal, will certainly make one's life miserable for the short term. That's right, there is no free ride. Certainly rainwater is a great source of water (in some areas in the southern end of Hawaii's Big Island it is the ONLY source), but even for secondary uses such as toilet flushing it requires treatment. The use of gray water for flushing toilets will require filtering and bacterial treatment as well as the use of specifically identified piping, to avoid improper interconnection with the potable water. To supply potable water needs, yet even more filtering and treatment is required.

What kind of treatment/processes are available? To get to the first plateau...where water is to be used for sanitary flushing only, one can elect to use one of several methods of treatment, including "Ultra-Violet", "Ozone" or chemical means. Generally, due to the need for low turbidity for the UV process to be effective, water with high solids content will have to be pre-filtered or processed using flocculants. Ozone, and chemical treatment can take place prior to filtering. The solids removed from the water prior to UV treatment may require additional treatment and/or handling. Should potable water be required, additional processes, such as reverse osmosis and de-ionization may be used. Reverse osmosis membranes may be rendered ineffective by some contaminants, requiring a carbon pre-filter. In the extreme, distillation may be used, resulting in pure but relatively tasteless water.

We have now successfully taken, for instance, rainwater and created a source of water for sanitary flushing which will not draw down the potable water supply. But are we finished? Remember, the hydrologic cycle? The rain coming down today, will one day end up in the oceans or lakes, destined to be rain once again. We need to be mindful of where our potable water comes from and how it is recharged, and how our use and disposal of rainwater can affect this cycle. For those of us living on an island whose water comes from underground aquifers there can be a wrinkle to the hydrologic cycle if we capture rainwater or re-use gray water sourced from an aquifer fed water utility and proceed to discharge it into a sanitary sewer system which transports it, for example, far (or not so far) off-shore. If this were done to the extreme, one could postulate that, due to lack of groundwater recharge, eventually, saltwater ingress could render our aquifers unusable. The solution to this is something that every person was instructed by their parents while growing up.....put things back where you got them from! If the water came from the sea.....send it back to the sea. If it came from the ground, we need to make provision for recharging the water table. The above has been concerned primarily with water for human consumption and use, rather than process industries. Those uses exacerbate the problem noted above, because the water withdrawn is sometimes used in a product which does not have a direct path back to the

CTTC - WATER, WATER EVERYWHERE.....SOMETIMES EVEN WHERE, AND IN THE FORM WE WANT IT! (Cont'd. from Page 8)

source. The government of India is presently in a battle with a well known beverage producer, whose use of local water is claimed to be resulting in dry wells in the surrounding area.

Why is all of this of importance to the HVAC community? Clearly, much of the comfort conditioning equipment requires water to function, either as a heat transfer agent, heat storage agent or to increase humidity levels to desired levels. We can design the most efficient, closed loop systems, use heat/moisture recovery (dry or wet type) equipment and reduce the need for water significantly. However, if conservation is not practiced on a larger scale, there someday may not be enough water for the most efficient system. If the supply of gasoline dried up, it wouldn't make a difference if you had a 15 mpg car or one that got 45 mpg. With an empty tank, they will both go the same distance.

Since this "aha" moment started at the ASHRAE Winter Conference and AHR Expo, I would be remiss in not spending a few moments rambling about the things seen and heard at both. First, kudos to the New York Chapter for the effort they expended to make the conference a success, in spite of mother nature's wintery blast. The number of international attendees and presenters not only helps to broaden everyone's exposure to different constraints faced in other parts of the world, but certainly speaks to ASHRAE's presence in the world scene as a source of HVAC/R information. Both at the conference and the Expo, the stress on modeling could not be missed. During the four hour block of presentations which I attended, teams of engineers from Japan detailed their approach to maintaining occupant comfort, while reducing the electrical demand, to make up for the loss of the facilities at Fukushima Daiichi and the temporary loss of other generation facilities. The approaches taken include: dedicated humidity control to permit comfort levels at higher workplace temperature (cooling), thermal storage to offset electrical demand to off-peak times and double walled facades, using convective flow to assist in cooling structures. In these cases, extensive use of modeling was noted, as well as comparison to actual results after implementation of changes to permit correlation of the models to the real-world installation.

Time constraints limited my attendance at the Expo to one day, resulting in a very quick tour through, primarily, the main floor of the Javits Center. So, as they say on TV, what's hot...what's not....**Computer Modeling**-as noted above, is finding its way into every facet of HVAC...design, manufacture, trouble shooting. There is still a need, though, for additional correlation with the "real world" to refine the models...**Brazing/Soldering**- Ok...maybe not everyone's cup of tea....but for those who need to join aluminum...there are a lot of neat products out there...self-fluxed spools make for quick and effective joining. Self-fluxed pre-forms, although of more interest in the manufacturing (rather than repair) field can be a real time saver and increase quality/reliability of joints...**Induction Heating**..not a new technique, but one company was showing a set up with an adjustable jaw, handling a wide range of tubing diameters....still not something to lug to a job site for a one-off job...but where flameless brazing is needed and various tube sizes are involved..could be a time saver....**Duct Hangers**...using the duct seam as the point of suspension (with the use of reinforcing brackets sandwiching the seam)...the duct becomes part of the suspension structure...not sure how this plays out when seismic constraints are needed....more study is needed on this one....**Roof Pipe Supports (Sleepers)**...many substantial, molded parts, some with integral strut...much cleaner than 4x4's.....but NONE have any provision for attachment to the structure, to prevent movement from seismic or wind up-lift...**Viscous Sealant**...interesting demo....kind of yucky looking...oil based sealants (compatible with refrigerants)...advertised as non-toxic, NSF certified...closer examination shows NSF certification is for applications where it cannot possibly come in contact with food.....MSDS shows a 300 degree F limit...hopefully it won't end up near a soldered or brazed connection. Web site shows use on flare fittings and schrader valves...if these are leaking...I'm not sure a band aid is called for.....**Crimp Connections**...at least one additional supplier of crimp type fitting and valves which incorporates intentional leak point if NOT crimped....**Heat Protective Gel**...if you're NOT using the crimp fittings and valves...this is an improvement over wet towels to protect valve internals when soldering and/or brazing....spray on....after a while it dissipates....also for protecting wood and sheet rock surfaces....**Smart Valves**...valves seem to be incorporating more electronics and sensing capability....good for tie-ins with Building Management systems....**Roof Curb Framing**-framing which clamps onto the building structure..on the inside....no penetration through the roof...curb mounts to frame...provides path to structure...**Hollow Core Nut Runners**...you'd have thought that this would have been invented when all-thread was first made.....better late than never....and finally.....for the fabrication arena.....some really nice **CNC Plasma** tables and metal forming and **welding equipment**...One box...does everything (stick, TIG, spool gun) except plasma cut....and that may be in the works few years down the road....the electronics allows asymmetrical waveforms for controlling cleaning/penetration cycles.

All in all, a really nice show....and one can only infer from the magnitude of show that the industry is alive and well.

Don Kane, P.E.

CTTC Chair - cttc@ashraeli.org

Membership

Diversity remains one of the primary strengths of ASHRAE. There are few professional organizations that have the strength to bring experts together to advance an entire industry. Our family continues to grow through the addition of 8 new members last month alone! Our new members continue to offer a varied skill set that makes them valuable additions to our community. Welcome!



In addition to recognizing diversity through our organic membership, we are especially excited for this month's joint meeting with the USGBC. By maintaining close ties with HVAC professionals from a variety of backgrounds both organizations benefit from the synergy that exists between multiple organizations working toward the common goal of improving the industry.

With this being the second of four scheduled joint meetings, we are fortunate to offer excellent networking and educational opportunities for all of our members and their guests. We look forward to another excellent turnout this month. As always, our meetings are always open to new members and guests.

Don't forget to visit our website at www.ashraeli.org for a complete schedule. It's easy to sign up as a new member by visiting the membership section.

Lee Feigenbaum, LEED AP BD+C
Membership Chairman

Grassroots Government Activities Committee (GGAC)

As most of you know ASHRAE is no longer a US based society it has moved itself to a global society. During this past summer CRC ASHRAE wanted to started a new committee in their local chapters to help it grow globally so it created the GGAC. The main purposes of the GGAC is to serve as a communicator between the local ASHRAE chapters and national, serve as a communicator between the local ASHRAE chapters and other trade organizations, and to update local government officials on ASHRAE standards and technical issues. Please look at the ASHRAE's main GGAC Facebook page at www.facebook.com/ASHRAEGGAC for more information what the GGAC is doing nationally.



So for this ASHRAE season we are having at least four joint engineering meetings. We are having our joint meetings with SMACNA, USGBC, LI-Geo, RSES. And we are looking to see if other organizations would like to join us for joint meetings. So far we've had our first joint meeting with Long Island Chapter of SMACNA back in November when we went over the topic of Seismic Design for Building Systems. Now this month we have our second joint meeting, and it is with the Long Island Chapter of USGBC. Which we look forward to seeing everyone while we go over the topics of LEED V4 and ASHRAE 191P water efficiencies in building and Desiccant Dehumidification.

We will be sponsoring four seminars for the National Engineer's Week. EJCLI will be holding seminars on February 13, 2014 at Dave & Busters in Farmingdale. Please see the attached flyer in this month's ASHRAE Sounder or at EJCLI webpage at www.ejcli.org for further details.

Charlie J. Lesniak, P.E.
Grassroots Government Activities Chair

Energy Efficiency from Building 'Green': Passing out Financial Returns

Article from Energy Manager Today, by John Mandyck

There has been a noticeable renewed interest from the building sector in carbon footprint issues, linked not only to President Obama's recently announced Climate Action Plan but also out of genuine concern for shepherding a positive relationship between buildings, climate change and public health. Specifically, opinion leaders and executives alike are recognizing that the built environment has tremendous power lower greenhouse gas emissions from our nation overall, and even possibly exceed newly fashioned goals.

Even better, emerging energy efficient technologies and policies for buildings are standing out more plainly as a means to boost the economy. Years of research, and now an growing accumulation of real world data, have borne this out.

Here in the US for example, improving energy efficiency in buildings by 30% would create a \$275 billion market for advanced technology, engineering and design services, and construction activity. In corporate finance terms, investing in this same 30% improvement in building energy efficiency would have an internal rate of return (IRR) of 28.6% over a 10-year period. An IRR of 28.6% is four times better than average corporate bond yields or average equity performance, and more than double the returns even high-performing venture capital firms enjoy!

This was one of many findings of a recent report by the Rhodium Group and United Technologies, entitled "Unlocking American Efficiency: The Economic and Commercial Power of Investing in Energy Efficient Buildings."

To be sure, energy efficiency has played an important role in past American productivity improvements, but we can now safely say that building efficiency is simply a smart and attractive corporate investment strategy. Improving the energy efficiency of a company's building portfolio increases the productivity of existing assets, guards against future energy price hikes and offers some of the most attractive rates of return available to the business community today.

And if we look beyond US borders, we'll see that urbanization trends over the past decade have increased the energy needs of developing countries by 70% more than the International Energy Agency predicted back in 2002. With more than half of the world's population now living in urban areas, energy efficiency in both current and future buildings must improve, or we risk further straining global resources and environmental quality.

The good news is, significant improvements are possible with existing technology and design practices. In fact, today's building efficiency technology and design options cost the same or only slightly more than conventional alternatives, but deliver powerful energy cost savings.

Let us explore some additional data revealed by the Rhodium Group report:

- Globally, companies now pay more than twice as much for energy than they did a decade ago. And with growing demand from emerging economies, the International Energy Agency predicts that energy prices will rise by a further 17% over the next two decades.
- The developed world accounts for less than 45% of global energy demand today, down from 51% in 1990.
- Over the next two decades, the US will account for only 2% of global energy demand growth, while China, India and the Middle East will account for 36%, 15% and 8% percent respectively.
- U.S. government and utility-sponsored programs are only beginning to have an impact on the efficiency finance opportunity, reaching only five percent of eligible businesses and households. As awareness of the benefits of building efficiency grows, these types of financing programs will need to be expanded.

The first step to improve energy efficiency in buildings is to increase public awareness of the need and the opportunity. We must let building owners, tenants and investors know the scale of the opportunity at hand. Americans spent an estimated \$432 billion to power their homes, stores and offices in 2011. That's on par with what US businesses spend on employee health insurance and more than they pay in payroll taxes.

The next step is smart policy. Policies that improve building efficiency will serve as a catalyst for the investment in building efficiency solutions. This should include things like building labels and codes, effective standards, efficiency finance, portfolio standards and regulatory reform.

Energy Efficiency from Building 'Green': Passing out Financial Returns (Cont'd. from Page 11)

With a growing appreciation of the environmental and economic benefits of reducing energy consumption, renewed by the dialogue on carbon emissions in America and abroad, now is the time to make energy efficiency the driver of world-class innovations—and there's no better place to start than with our buildings. Buildings consume 40 percent of all energy and present immediate opportunities to make good business decisions that are also good environmental decisions.

John Mandyck serves as Chief Sustainability Officer for United Technologies Climate, Controls & Security. He assesses global environmental trends to guide product development and market opportunities with leading brands such as Carrier heating, air conditioning & refrigeration. He regularly interfaces with global environmental stakeholders and leading organizations such as the U.S. Green Building Council, which Carrier helped found in 1993. John serves as co-chairman of the U.S. Department of Energy's Appliance Standards and Rulemaking Federal Advisory Committee. He is the co-vice chairman of the Board of Directors for Urban Green Council, the U.S. Green Building Council's New York City Chapter, and serves as an official adviser to China's Green Building Council. John was recently named chair of the World Green Building Council Advisory Board. He accepted a gubernatorial appointment to serve on the Connecticut Council of Environmental Quality from 2004-2011 to advise the governor and state legislature on environmental policies. He presents energy efficiency and sustainability strategies to audiences around the world.

Charlie J. Lesniak, P.E.

Grassroots Government Activities Chair

Governor Cuomo Announces Energy Efficiency Projects at 10 SUNY Campuses to Save \$3.5 Million per Year and Build Cleaner Communities

Albany, NY (January 23, 2014)

Governor Andrew M. Cuomo today announced a partnership between the New York Power Authority (NYPA) and the State University of New York (SUNY) to undertake energy efficiency measures at 10 SUNY campuses that will save the university system \$3.5 million each year and contribute to cleaner communities. The projects will reduce the university system's peak energy use by approximately 3.6 megawatts (MW)—enough to power some 3,600 typical homes—and help to eliminate 21,000 tons of greenhouse gas emissions annually.

"Under Build Smart NY, we are ensuring that New York State government is reducing our impact on the environment and saving taxpayers money," Governor Cuomo said. "This partnership between NYPA and SUNY is a great example of government working together to achieve efficiencies and lower energy use and greenhouse gas emissions – in addition to promoting job growth in this high-tech industry. These projects will lead to savings of \$3.5 million each year and enhance our efforts to build cleaner communities across the state."

The projects, which are either in development or were completed in 2013, are part of Governor Cuomo's Build Smart NY initiative, which seeks to reduce energy use at state-owned or managed facilities by 20 percent by the year 2020. The \$80 million in energy efficiency installations at 10 SUNY campuses across the state include projects involving new lighting, heating and ventilation upgrades, new electric motors, and replacement of outdated boilers and chillers.

SUNY and NYPA officials gathered today at SUNY Purchase College, near White Plains, where more than \$22 million in NYPA-financed and -implemented energy efficiency projects were on display. In addition to the work at Purchase College, the event also highlighted energy-saving improvements at the following SUNY campuses: University at Buffalo, College at Brockport, SUNY Buffalo State, SUNY Canton, SUNY Cobleskill, SUNY Downstate Medical University (New York City), SUNY College of Environmental Science and Forestry (Syracuse), SUNY Maritime College (New York City) and SUNY Upstate Medical University (Syracuse). [Click here](#) for more information on projects on these campuses.

"Partnerships like NYPA and SUNY's exemplify the kind of self-sustaining business models that are being pursued under the Governor's leadership for upgrading infrastructure and creating and retaining jobs in collaboration with private-sector firms," said Richard L. Kauffman, chairman of Energy and Finance for New York State and chairman for the New York State Energy Research and Development Authority (NYSERDA).

Governor Cuomo Announces Energy Efficiency Projects at 10 SUNY Campuses to Save \$3.5 Million per Year and Build Cleaner Communities (Cont'd. from Page 12)

"NYPA is working hand-in-hand with SUNY to achieve its energy efficiency goals," said Gil C. Quiniones, NYPA president and CEO. "There's a saying that 'you can't manage what you don't measure,' and thanks to the rigorous reporting requirements established under Governor Cuomo's Build Smart NY program, New York State has never been better positioned to achieve meaningful energy reductions."

"SUNY is deeply committed to rehabilitating, renovating, and building its facilities in the most cost-effective and energy-efficient manner, and every new building constructed on a SUNY campus in the last decade has been designed to LEED silver standard or higher," said SUNY Chancellor Nancy L. Zimpher. "As a result of our partnership with the New York Power Authority, energy savings projects have been initiated at campuses across New York, achieving significant improvement in energy efficiency. We look forward to enhancing these efforts in continued support of Governor Cuomo's Build Smart NY initiative."

At SUNY Purchase College, NYPA completed three high-impact energy efficiency endeavors in 2013, including:

- Installing an \$11 million replacement of a nearly 40-year-old chiller with an ice-storage cooling and ventilation system serving the entire campus and saving the college \$380,000 annually.
- Implementing a \$10 million project to replace the existing 40-year-old HVAC system to meet the temperature and humidity requirements at the on-campus Neuberger Museum necessary for the facility's re-accreditation from the American Association of Museums. The project reduces the museum's energy consumption by over 30 percent and delivers 30 percent more cooling.
- Developing the first Energy Master Plan for any SUNY campus under Build Smart NY to help the college achieve greater energy-savings in the future.

The work at SUNY Purchase was performed by New York contracting firms, RCM Technologies and AECOM.

NYPA has committed to providing \$450 million in low-cost financing for state facilities and an additional \$350 million for other energy efficiency programs benefiting county and local governments under the Governor's Build Smart NY initiative.

Charlie J. Lesniak, P.E.
Grassroots Government Activities Chair



History - The History of ASHRAE, 2nd in a Series

First and Last – The Truth

Refrigeration as an industrial practice was already established by 1885. In the United States, which was a recognized world leader in refrigeration at this time, the main applications were the production of ice and beer and cold food storage. Australia and New Zealand were also industry leaders. Their primary uses were mechanical refrigeration for food preservation, for shipping frozen meats to other countries and for producing beer.



By 1900, manufactured ice in the United States could be made for the same low cost as storing natural lake ice, and it was not weather dependent. One contributing factor was due to polluted lakes and rivers near metropolitan areas, ice harvesters had to go further away to obtain their supplies, which increased their shipping costs and provided ice manufacturers' with claims that their product was purer.

"Volumes were written by the two sides as between the merits of lake and machine-made ice....Much that was written was technically unsound as reported from both sides," wrote Willis R. Woolrich in 1969. Those who harvested and sold natural ice touted it as having a greater cooling capacity. Those who manufactured ice said there was no difference, except manufactured ice was made from distilled water.

For many years, there was an intense competition for the ice market. With the invention of electric and gas household refrigerators, the market changed for household ice and the natural ice market virtually disappeared by 1950.

Air conditioning or comfort cooling, as it was known then, was not used in every day practice in 1904. There were a few installations, however, which were used primarily to keep valuable records and manuscripts.

Many other uses of refrigeration that are considered modern conveniences were also common in 1904. These include artificial skating rinks, bakery and candy cooling, fur storage, cooling of drinking water and the use of refrigeration in the making of camera film and ice cream.

Other industries that looked to refrigerating engineers to help make their businesses more cost effective included textiles, tobacco, perfume production, chemicals, and mining. Civil engineers sought the expertise of refrigerating engineers in the building of shafts and tunnels.

Issues Leading to Organization

In the United States the only engineering organization suitable for engineers interested in refrigeration was the American Society of Mechanical Engineers (ASME). Although some very outstanding papers had been presented at ASME meetings from 1889 to 1892, by the turn of the century, ASME members interested in refrigeration "found very little on the programs bearing directly on their professional work," recalled Harry Sloan from Vilter Manufacturing Company. They "had been in a huddle in a corner discussing their problems, but with a new society the whole program would be of interest."

Another factor that inspired the organization of a society of refrigerating engineers was the formation of the American Ice Machine Builders Association in 1903. The work of the American Ice Machine Builders Association, whose members were primarily manufacturers, pointed out the advantages of working together, cooperating with other organizations, and of sharing information. More than one-half of the men who would join the refrigerating engineer's society were also members of this association.

In addition, technological advances and new applications were prompting a need for fundamental data on which to base standards within the refrigeration industry. Some engineers felt that it was time to form a scientific society to meet this need.

The Society Organizes

William H. Ross, who was employed by *Cold Storage and Ice Trade Journal* and was secretary of the Eastern Ice Association, organized a meeting of thirty to forty refrigeration engineers on April 2, 1904 at the ASME headquarters in New York City to discuss forming a new society. John E. Starr was elected temporary chairman to run the meeting, and Mr. Ross acted as secretary.

History - The History of ASHRAE, 2nd in a Series (Cont'd from Page 14)

Mr. Sloan recalls the meeting: "He [Mr. Starr] opened the meeting with a carefully prepared talk pointing out the needs of such a society, and predicting a rapid growth and secure future for the refrigerating industry. This coming from the leading consulting engineer, who had engineered many large projects, such as cold storage warehouses, distribution of refrigeration by pipe lines through city streets, etc., presented in a very earnest and convincing manner, resulted in carrying the unanimous favorable action of the meeting. I do not remember a single dissenting voice when the subject was opened for discussion."

Following the discussion, a committee was appointed to draft a constitution and by-laws. The committee consisted of L. Howard Jenks, chairman; John E. Starr; W. Everett Parsons; James Wills; Henry Torrance, Jr.; William H. Ross; and George Richmond. Mr. Richmond died before the committee's work was completed. E.L. Phillips took his place.

On December 4 and 5, 1904, in New York City, these engineers met again to adopt the Constitution and By-Laws and to elect officers, thus forming The American Society of Refrigerating Engineers – the only engineering society in the world solely dedicated to promote the arts and sciences connected with refrigerating engineering.

There were seventy-four charter members of this new society. The officers and directors elected at the meeting were:

<i>President</i>	John E. Starr
<i>Vice Presidents</i>	P. De C. Ball and H. B. Roelker
<i>Treasurer</i>	Walter C. Reid
<i>Directors</i>	W. Everett Parsons; Henry Torrance, Jr.; E. L. Phillips; D. S. Jacobus; Howard Jenks; Louis Block; Edgar Penney; W. T. Robinson; and Thomas Shipley

The business affairs of the Society were managed by a committee called the Council. It consisted of the Society's president, two vice presidents, treasurer and nine Members or Associate members. The secretary was permitted to take part in the Council's deliberations but could not vote.

During the first meeting of the Council, held on January 14, 1905 in New York City, William H. Ross was appointed as secretary of the Society at a salary of \$25.00 per month, out of which all office expenses would be deducted. President Starr appointed standing committees on finance, publications and membership, and the Council voted to have the Society incorporated under the laws of the State of New York, which was done on August 30, 1905. In addition, the Council voted to locate the Society business offices at 258 Broadway, New York City.

First Annual Meeting

Exactly one year after the December 1904 organizational meeting, the Society convened its First Annual Meeting in the chambers of ASME in New York City on December 4 and 5, 1905. Eight papers were presented and debated on such topics as plate and can systems for manufactured ice, pipe line refrigeration, and carbonic acid and refrigerating machines.

To comply with the laws in the State of New York, the date of the annual meeting was specified in the Society's Constitution and By-Laws. The founding members specified that the date "shall be on the Monday before the first Tuesday in December" so the Society meeting would be held as close to the ASME meeting as possible, thus allowing out-of-town members of both societies to conveniently attend both meetings.

During his address, President Starr eloquently defined the Society's guiding principles: "To define our field in a word, I may say that we claim as our own all that relates to the production of temperatures, below the ordinary, for useful purposes...."

"We have undertaken the responsibility of speaking with authority, of finding the truth, and proclaiming it, and a critical world will hold us to our task or pass us by as unworthy."

"Our forum, however, must be a forum for all the membership, and its discussion for the good of all. The truth is our aim and the seeking of it our work. Within our doors a perpetual truce should prevail, and the sword and buckle of everyday strife is to be laid aside at the threshold."

History - The History of ASHRAE, 2nd in a Series (Cont'd from Page 15)

In echoing the theme of cooperation and exchange of information that inspired the founding members of the Society, President Starr said, "In carrying out our work...there will be no feeling of jealousy between ourselves and our brother organizations...whose field embraces our own, unless it be that fair and honest emulation to be of use to the world."

The financial report, given by Treasurer Walter C. Reid was very encouraging. The Society had received \$1,495.10 in revenue during its first year and expended \$892.93, for a surplus of \$602.17 cash on hand.

Membership

The Society's Constitution and By-Laws established three levels of membership: Member, Junior and Associate. Each member paid an initiation fee of \$5.00, and membership dues were set at \$10.00 for Members and Associates and \$5.00 for Junior members for the first six years of membership, after which their dues would be the same as Members and Associates.

Each member received a membership certificate and could purchase an emblem pin, with a different color defining each level of membership -- dark blue for Members, white for Associates and light blue or turquoise for Junior members. The emblem was the seal of the Society and measured 5/8 inch in diameter.

Although the Society was organized as a national institution, by 1906 it already had members from Canada, England, India, the Argentine Republic, Australia and New Zealand. Membership in 1906 totaled 146.

Primary Issues and Early Actions

The objective of the Society was to conduct research, develop standards, hold technical meetings and present and publish technical articles in journals and handbooks. The founding members of the Society immediately went to work to meet these objectives and the greatest need of refrigerating engineers: the search for fundamental data upon which more accurate data could be published and standards developed.

In an effort to share information, the proceedings of the Society's annual meeting were published and made available for sale each year in a bound book, titled *Transactions of The American Society of Refrigerating Engineers*. It was distributed to other technical publications that might find the technical papers published therein of interest.

Early actions of the Society reflected the members' earnest desire to meet the stated objectives of their society. During the First Annual Meeting, for example, members unanimously passed a resolution recommending that the U.S. Congress appropriate sufficient funds so the U.S. Department of Agriculture could equip and maintain a cold storage plant for the purpose of research. In addition, the Society responded to the issue of establishing a standard unit or "ton" of refrigeration by appointing a committee of five to work with other engineering organizations.

Another example of an early action by members is that at the January 14, 1905 meeting of the Council, members voted to accept an invitation from Thomas Shipley, chairman of the York Manufacturing Company of York, Pennsylvania, to visit the company's test plant to conduct tests on mechanical refrigeration.

The actions taken during the Society's first meetings, as well as the members' dedication to the work of the Society, planted the seeds of research and committee efforts that would provide significant results and benefits to the refrigerating industry for years to come.

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

History Chair

Student Activities

The Snow and cold weather was no match for the Students who attended the 2014 AHR EXPO in New York City. Long Island Student participated in the Student Programs and were out in force for the Student Tour of the Hearst Building (NYC's first "Green" high rise) you can get more information on the EXPO activities by visiting the ASHRAE Student Zone at <https://www.ashrae.org/membership--conferences/student-zone>



Our next Student Activities night is scheduled for the May Long Island Chapter Meeting. We are looking for another big turnout. In preparation to send out flyers I'm looking for business owners and Engineering firms who are looking to hire entry level Engineers and College Interns for the summer. If you have such a need please email me at rchalley@trane.com

During the next few weeks we will start distributing the Annual Long Island Chapter Scholarship applications and will present the awards during our May meeting. If you know a Student who could benefit from the scholarship please send their information to me and I will make sure they are on our distribution list

As always I want to thank you for your support and if you have any slightly used ASHRAE Hand Books that could be re-distributed to our Students please bring them in the February meeting.

Richard Halley
Student Activities Committee Chair

Young Engineers in ASHRAE (YEA)

We value the continuing professional development of our young engineers and HVAC professionals. In addition, your Long Island Chapter of ASHRAE strives to present superior educational and networking opportunities for our student members. With that being said, let's get excited about this month's joint meeting with USGBC!

The relationship between ASHRAE and USGBC is important as ASHRAE standards and LEED credits are often closely intertwined. Being knowledgeable about one makes you better at the other. This holds invariably true for many professional organizations we partner with. With this being the second of four joint meetings scheduled for this year, there is still lots of time to get involved with ASHRAE. Our introductory rates for new members are nominal, but the benefits are great. There couldn't be a better time to get involved!



For more information about upcoming events, or to sign up, be sure to visit our website at www.ashraeli.org. As always, we look forward to seeing you at our next meeting, and we encourage you to bring a friend.

Cheers!

Lee Feigenbaum
YEA Chairman

January Meeting Photos



Engineers Week Seminars Series



Engineers Joint Committee of Long Island

Anthony Cacioppo, P.E., Co-Chair

Paul Lanzillotta, P.E., Co-Chair

ENGINEERS WEEK SEMINAR SERIES

Thursday, February 13, 2014

Place: **Dave & Busters** • 261 Airport Plaza Blvd., Farmingdale, NY (631) 249-0708
www.daveandbusters.com

Program:	7:45 am – 8:45 am	Registration & Continental Breakfast
	8:45 am – 10:45 am	Morning Seminars
	10:45 am – 11:00 am	Break
	11:00 am – 1:00 pm	Morning Seminars Cont'd.
	1:00 pm – 2:30 pm	Lunch
	2:30 pm – 4:30 pm	Afternoon Seminars

LUNCHEON SPEAKER

Marjaneh Issapour, MSEE, PE

Marjaneh Issapour, MSEE, PE, a member of the Farmingdale State College Electrical and Computer Engineering faculty, will address us on the status of Engineering and Technology in K-12 education in light of the New Science Education Standard. The presentation will highlight the need to fortify our K-12 Science and Math curriculum to encourage more students to pursue advanced science and engineering education to meet the future needs of industry. Ms. Issapour will be presenting a paper on this topic at the ASEE Conference for Industry and Education Collaboration in Savannah, GA on February 6th.

EXHIBITORS

- *Expo Technologies, Inc. (Enclosure Purge & Pressurization Systems)*
- *ProTech Solutions, Inc. (Instrumentation for Process Control)*
- *CIMQUIST (3-D Printing)*
- *ONICON Incorporated (Flow and Energy Measurement Products)*
- *Applied Technologies of NY, Inc. (Boiler systems)*

Engineers Week Seminars Series

Seminars & Descriptions

“Improving Efficiency with Combustion Control Technology” (1 PDH) 8:45am – 9:45am
Presented by: Robert Brough, NE Regional Manager – Honeywell Commercial/Industrial Control Group

This presentation includes a detailed overview of a variety of control options utilized in combustion management for burner systems. The speaker will define several control technologies and discuss the theoretical efficiencies of select strategies. A specific emphasis will be paid to the cause and effect of various strategies in different applications. The discussion will also include detailed information on legislative mandates that will regulate how boilers are designed to operate in the future, including influences from Smart Grid and other environmental initiatives.

“Reducing Emissions and Improving Efficiency in Commercial and Industrial Boiler Applications” (1 PDH) 9:45am – 10:45am
Presented by: Mark Wehmeier, Vice President of Engineering – Power Flame

This presentation will include two segments. The first segment provides basic information relative to the identification of greenhouse and pollution gases, how they are formed and the environmental concerns involved in their emission. The discussion will include the technologies available for reducing these emissions. The second segment will cover methods of improving boiler/burner efficiency by reducing the power consumption and utilizing various burner control strategies. The data will include potential savings and cost analysis information.

“Application of Mixed or Hybrid Boiler Systems for Energy Efficiency”
(1 PDH) 11:00am – 12:00pm
Presented by: Paul Pack, Industrial Product Manager – Fulton Boiler Company
Kyle Botoruff, Application Engineer – Fulton Boiler Company

This presentation will consist of a review of traditional and modern boiler sizing methods as a function of building load and standby capacity. It includes a review of boiler efficiency definitions and measurement methodologies. The second segment discusses increasing boiler and system operating efficiency with reduced temperature operation and boiler base loading. The presentation includes information on the identification of boiler types, sensible and condensing, and the supporting control strategies for optimizing efficiency and energy reduction. The lecture concludes with selection and comparison of boiler equipment for hybrid systems, cost analysis and potential savings.

“Flow & Energy Measurement for Hydronic Systems” (1 PDH) 12:00pm – 1:00pm
Presented by: Rob Neumann, Vice President of Sales & Service – ONICON, Inc.

As energy costs increase, more attention is being given to the accuracy and reliability of flow, temperature and energy measurement instrumentation for Hydronic HVAC systems. The presentation will cover topics including: Measurement Applications; Applying BTU Energy Measurement Systems; Networking Energy Measurement Systems; Reliability and Performance Characteristics of Flow Meters; Steam Flow Measurement; and Natural Gas, Propane & Compressed Air Measurement.

Engineers Week Seminars Series

“Risk Based Design” (2 PDH) 2:30pm – 4:30pm

Presented by: Dr. Joseph R. Fragola, Vice President – Valador, Inc.

Design, a distinctly human process and one that distinguishes man, has existed since prehistoric times and has always involved risk; addressing risk directly as part of the design process has facilitated the rapid advances in the designs we see today. The course will cover the history of design going back to the Greeks and Romans; minimizing and controlling risk; rules of thumb and factor of safety; qualitative and quantitative methods; risk assessment using reliability and game theory. Examples of real world creations will be shown to illustrate design and risk concepts.

“Communication Based Train Control: A System Engineering Overview”

(2 PDH) 8:45am – 10:45am

Presented by: Wilson M. Millan, BSEE, P.E., MBA, Design Manager – NYC Transit Signals & Train Control Group

The MTA New York City Transit is committed to upgrading its conventional subway signaling system to a more modern Communication Based Train Control system (CBTC). CBTC is a complex system involving the development of new wayside and on board hardware and software components which would provide greater safety and service for millions of subway riders in New York City. The CBTC system provides constant speed monitoring and brake control as well as safe and efficient spacing between trains, allowing more trains to run on the line and thereby increasing service to riders.

“Theory & Applications of Fiber Optic Communications Technology”

(2 PDH) 11:00am – 1:00pm

Presented by: John Lopinto, President – Communications Specialties, Inc.

Mr. LoPinto will cover the basics of fiber optic technology, including dispelling myths, light wave propagation through glass fiber, single mode vs. multimode cable, connector types, field terminations, link budget and wave division multiplexing. Reasons for using fiber vs. copper wiring and typical applications will also be presented.

“Station Battery and Charger Systems” (2 PDH) 2:30pm – 4:30pm

Presented by: Art Salander – Salander Enterprises, LLC

This presentation will discuss the history and fundamentals of Stationary DC Power systems consisting of Batteries and Chargers for utility, power plant, switchgear and critical infrastructure applications. A history of battery technologies will be presented dating back to the 1700's, Designing More Reliable Battery Systems Using Steering Diodes, Battery Charger technology and sizing, Mobile (trailer) DC Power Systems for utility applications, Standards for DC Battery and Charger systems from NEMA, IEEE, etc.

Engineers Week Seminars Series

“Achieve Greater Productivity through SolidWorks Analysis Tools”

(2 PDH) 8:45am – 10:45am

Presented by: Jimmy Barerra, Elite AE – Cimquest, Inc.

The application of Dassault Systèmes' SW Simulation products will be presented to help you create and validate your product designs. To stay competitive in today's fast paced global market, it is imperative to continuously innovate and shrink the overall time to develop and market your product. These visualization & analysis tools enable you to add more value to existing or new products and reduce rework as well as prototype cost. It also gives you an option to ensure your design is sustainable based on the principles of Life Cycle Assessment.

“Design & Operation of Wastewater Treatment Plants” (2 PDH) 11:00am – 1:00pm

Presented by: John Lewyta, P.E., BCEE, Equipment Commissioning and Operations Manager – URS Corporation

The design and operation of industrial and municipal wastewater treatment plants draws upon a number of engineering and technical disciplines in order to meet strict effluent guidelines while maintaining a safe working environment in the communities where they are located. This presentation will discuss the characteristics of wastewater and the physical, chemical and biological unit operations and processes used in its treatment. The design guidelines based on the Ten States Standards are illustrated with examples on the sizing of reactors and tanks. For a successful operation, NY State certified personnel monitor the water and solids balances of the wastewater plant in order to meet the SPDES permit conditions. A Case History from the Rockland County Sewer District #1 is presented to highlight the challenges of upgrading a wastewater treatment plant while it's in operation.

“Art of Bulkhead Design” (2 PDH) 2:30pm – 4:30pm

Presented by: Thomas J. Petracca, P.E., Principal – Petracca Design and Engineering, P.C.

Designing and engineering bulkheads is a structural engineering project fraught with hazards of potentially unknown soil conditions, loadings, etc. but it is still one of the areas where engineering evaluation and calculation are paramount. Today's choices of materials – including steel, vinyl and fiberglass – and their differing qualities, as well as structural alternatives of cantilevers versus tied-back methods, means that in meeting the challenge of providing a cost effective and stable bulkhead there is more than one way to 'skin the cat.' This course will examine the alternatives above and includes an example of designing a bulkhead in sandy conditions, typical of Long Island's South Shore and portions of its North Shore.

Engineers Week Seminars Series

SCHEDULE

	Room A	Room B	Room C
8:45 am -9:45 am 1 hr	Efficiency w/Combustion Control Tech.	Communication Based Train Control (CBTC)	SolidWorks Analysis Tools
9:45 am - 10:45 am 1 hr	Boilers Emissions/Efficiency		
10:45 am – 11:00 am	BREAK		
11:00 am – 12:00 pm 1 hr	Mixed/Hybrid Boiler Systems Efficiency	Fiber Optic Communications Technology	Design and Operation of Wastewater Treatment Plants
12:00 pm – 1:00 pm 1 hr	Flow & Energy Measurement for Hydronic Systems		
1:00 pm - 2:30 pm	LUNCH		
2:30p-4:30p 2 hrs	Risk Based Design	Station Batteries and Charger Systems	Art of Bulkhead Design

Engineers Week Seminars Series



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To register, complete and return this form with payment by February 10, 2013 to: Amanda J. Haimes, 172 Sherry St, East Islip, NY 11730. Email questions to: ajhaimes@gmail.com

ALL FIELDS MUST BE COMPLETED. PRINT NEATLY. CHECK ALL SEMINARS YOU WISH TO ATTEND.

Fee: _____ \$110 for full day (6 PDH's); includes lunch

NO CREDIT CARDS OR PURCHASE ORDERS ACCEPTED.

- | | |
|-------------------------|---|
| _____ 8:45am – 9:45am | “Improving Efficiency with Combustion Control Technology” (1 PDH) |
| _____ 9:45am – 10:45am | “Reducing Emissions & Improving Efficiency in Boiler Applications” (1 PDH) |
| _____ 11:00am – 12:00pm | “Application of Mixed or Hybrid Boiler Systems for Energy Efficiency” (1 PDH) |
| _____ 12:00pm – 1:00pm | “Flow & Energy Measurement for Hydronic Systems” (1 PDH) |
| _____ 2:30pm – 4:30pm | “Risk Based Design” (2 PDH) |
| _____ 8:45am – 10:45am | “Communication Based Train Control: A System Engineering Overview” (2 PDH) |
| _____ 11:00am – 1:00pm | “Theory & Applications of Fiber Optic Communications Technology” (2 PDH) |
| _____ 2:30pm – 4:30pm | “Station Battery and Charger Systems” (2 PDH) |
| _____ 8:45am – 10:45am | “Achieve Greater Productivity through SolidWorks Analysis Tools” (2 PDH) |
| _____ 11:00am – 1:00pm | “Design & Operation of Wastewater Treatment Plants” (2 PDH) |
| _____ 2:30pm – 4:30pm | “Art of Bulkhead Design” (2 PDH) |

Total PDH _____ Total Amount Enclosed \$ _____

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- Graduates new to consulting practices and engineering teams
- Facility engineers with assigned HVAC responsibilities
- Experienced engineers who would benefit from a review of the basics and the new technology options to save energy
- Engineers, technicians and building operating personnel in career transition

See Why Your Peers Recommend This Training:

"Although my background is not in HVAC design or other environmental control systems, I certainly appreciate the value that this course has given me in terms of how it has expanded my ability to converse effectively with contractors. This basic knowledge should greatly improve my ability to act as an owner's rep in my project management work involving HVAC Design."
Evan B. — Dallas, TX

"The most valuable HVAC course I have attended. I learned numerous nuggets that I will implement immediately. Valuable for engineers at all levels of experience."
Kevin T. — Saskatoon, Canada

"This course was very valuable and will be applied completely to the scope of work that I do. The knowledge obtained through the very detailed and explained presentations will help a lot in design."
Jose G. — Houston, TX

HVAC Design: Level 1—Essentials

When: February 24–26, 2014

Where: Ted Weiss Federal Building
New York, NY

Cost: \$1,239 (ASHRAE Member: \$989)

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ASHRAE HVAC Design Training

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- Engineers with HVAC design experience
- Architects who want an in-depth understanding of HVAC design
- Participants who attended HVAC Design: Level I—Essentials
- Construction project managers involved with mechanical systems

See Why Your Peers Recommend This Training:

"I wish this training was mandatory for everyone in the HVAC industry, especially design engineers! When applied, the instructors' accurate and concise suggestions make the whole HVAC design process clear and effective. Their examples prove that the design process can be simplified while still resulting in higher performing and healthier buildings."

Tiffany B. — San Diego, CA

"This course served as an effective means of combining lessons learned from the Level I course in real-life mock design scenarios."

Justin B. —
San Francisco, CA

"I learned about new ASHRAE codes, standards and HVAC developments. I wish to recommend this training for all engineers involved in HVAC design."

Sunday S.—
Kaduna, Nigeria

HVAC Design: Level II—Applications

When: February 27–28, 2014

Where: Ted Weiss Federal Building
New York, NY

Cost: \$829 (ASHRAE Member: \$679)

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BONUS!

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