



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

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President's Message

The summer has come to a close and autumn is already here. I do particularly enjoy the first few refreshing brisk mornings that we encounter this time of year. It reminds us that we are fast approaching the heating season. I'm sure many of you look forward to enjoying some cider and pumpkin flavored or spiced whatnot as much as I am.

At last month's meeting I spoke on the accomplishments and acknowledgments of the men and women who volunteer their time and efforts for the Long Island chapter. One of last year's accomplishments was Rich Halley receiving the Golden Gavel for his Presidential year. I hope to continue the Long Island Chapter's tradition of accomplishments this year as our volunteers, members and supporters warrant recognition.

I would like to thank September's presenter, Mr. Ian Nelson, who spoke on strategic electrification in and around the New York City Metropolitan area. It was a very interesting, informative and well attended presentation.

October is Research Promotion Night. Our Research Promotion Chair, Andrew Manos, LEED AP, for keeping ASHRAE's overall mission in mind: to advance the arts and sciences of heating, ventilating, air conditioning and refrigeration to promote a healthy and sustainable built environment. Andy has returned from this year's resource promotion training in Chicago and this year's overall promotional goal for the ASHRAE Long Island chapter is \$20,400. Please contact Andrew Manos with any Research Promotion related questions.



CHAPTER MONTHLY MEETING

DATE:	Tuesday, September 10, 2019
TIME:	6:00 PM - Cocktails/Dinner 7:00 PM - Dinner Presentation 8:45 PM - Conclusion
LOCA- TION:	Westbury Manor 1100 Jericho Tpke. Westbury, NY 11590
FEES:	
Members -	\$50.00
Guest -	\$60.00
Student -	\$15.00

Research Promotion funding supports thousands of projects addressing topics such as sound, duct design, the effect of oil in refrigerants, load calculations, thermal conductivity, simplified energy analysis procedures, weather data, refrigerant property data, fire and smoke control and solar design. The most significant ASHRAE research is in the areas of human comfort and the properties of materials and systems used in buildings and refrigeration systems.

Keep up with the Long Island Chapter as we will be planning several social events in the upcoming months. These are great informal opportunities to network with peers and meet new faces that may not make it to our chapter meetings.

Interest in volunteering for the chapter and assisting in any of our committees is always welcome so please reach out to myself or anyone within the chapter if you would like to participate in any way.

Check the ASHRAE Website for Society news and to join/renew membership!

<http://www.ashraeli.com>

Frank Paradiso
President - Long Island Chapter

Long Island Chapter Officers & Committees

ASHRAE 2019/2020 OFFICERS

POSITION	NAME	PHONE	EMAIL
President	Frank Paradiso	631.632.2792	c006@ashrae.net
President-Elect	James Hanna	718.269.3768	c006pe@ashrae.net
Vice President	Bill Artis	516.732.2519	c006vp@ashrae.net
Financial Secretary	Matthew Vitrano	212.643.9055	c006tr@ashrae.net
Treasurer	Murat Bayramoglu	631.312.8818	c006tr@ashrae.net
Secretary	Michael Nigro	212.643.9055	c006sec@ashrae.net
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Board of Governors	Andrew Blom	631.626.1695	c006bog2@ashrae.net
Board of Governors	Matthew Catan	407.489.6684	c006bog3@ashrae.net
Board of Governors	Michael Razzano	516.805.3084	c006bog4@ashrae.net
Board of Governors	Richard Halley	516.490.1616	c006bog5@ashrae.net


ASHRAE 2019/2020 COMMITTEES

COMMITTEE	NAME	PHONE	EMAIL
Programs & Special Events	James Hanna	718.269.3768	c006pe@ashrae.net
Membership (MP)	Michael Razzano	516.805.3084	c006mep@ashrae.net
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Historian	Matthew Vitrano	212.643.9055	c006his@ashrae.net
Student Activities (SA)	Elizabeth Jedrlnic	516.490.1621	c006sa@ashrae.net
Young Engineers in ASHRAE (YEA)	Michael Nigro	212.643.9055	c006yea@ashrae.net
Webmaster	Bill Artis	516.732.2519	c006web@ashrae.net
Nominating	Michael Gerazounis, PE, LEED AP	212.643.9055	nominating@ashraeli.org
Reception & Attendance	Matthew Catan		reception@ashraeli.org
PR & Engineering Joint Council of LI (EJCLI) Liaison	Andrew Manos, LEED AP	631.632.2792	pr@ashraeli.org
Golf Outing	Peter Gerazounis, PE LEED AP	212.643.9055	golf@ashraeli.org
Awards	Brian Simkins	203.261.8100	c006ha@ashrae.net

ASHRAE LI, P.O. Box 79, Commack, NY 11725

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Chapter Monthly Meeting - Program for 2019/2020

September 10, 2019 * At Westbury Manor  Dinner Presentation – Builds & NYC Code Compliance Presenter: Ian Nelson **1 PDH** Refrigeration Night	March 10, 2020 * At Westbury Manor Dinner Presentation - Natatorium Design Presenter: Joseph Schmitz **1 PDH** Student Activities Night YEA Night
October 8, 2019 * At Westbury Manor Dinner Presentation— Back to Basics: Hot Gas Bypass and Hot Gas Reheat (and why mixing them up will cost you money) Commissioning for Dummies (by dummies) Presenter: Bill Artis **1 PDH**	April 14, 2020 Dinner Presentation - TBD Presenter: **1 PDH**
November 12, 2019 * At Westbury Manor Dinner Presentation-- Energy Efficient Solutions for Commercial Kitchen Ventilation Presenter: Dr. Andrey Livchak **1 PDH** Membership Promotion Student Activities Night and YEA Night Resource Promotion Night	May 4, 2020 * Cherry Valley Club, Garden City, NY ANNUAL GOLF OUTING
December 10, 2019 * At Westbury Manor Dinner Presentation-- Belimo Presenters: Belimo **1 PDH**	May 12, 2020 Annual Field Trip
January 14, 2020 * At Westbury Manor Dinner Presentation– Grow Rooms– And how to Design them Presenter: Geoff Kelman **1 PDH**	June 9, 2020 * 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 1-5, 2020 ASHRAE Winter Meeting Orlando, FL	June 2020 - TBD (4pm-8pm) * Dixie II @ Captree State Park Boat Basin, NY ANNUAL FISHING TRIP
February 11, 2020 * At Westbury Manor – Dinner Presentation– TBD Presenter: **1 PDH** Membership Promotion Night Resource Promotion Night	August 13-15, 2020 CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I
February 16-22, 2020 NATIONAL ENGINEERS WEEK	

Meeting Program



Dinner Presentation

“Back to Basics: Controlling Hot Gas in Direct Expansion Systems”

Presented by

Bill Artis, BEAP, BCxP, BEMP
Principal
Energy Project Consulting, LLC.

**Attendees
Will Earn
1 PDH!**

DATE:	TUESDAY, OCTOBER 8, 2019		
Time:	6:00 PM - Cocktails and Hors D'oeuvres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	Fee:	\$ 50.00 Member \$ 60.00 Guest \$ 15.00 Student
Location:	WESTBURY MANOR (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 Directions are posted at @ www.ashraeli.com		
Presentation:	<p>Do you want to be known as the engineer that mixed up hot gas reheat with hot gas bypass? If not, you should attend this seminar.</p> <p>Refrigerant control valves are used for a multitude of purposes in both refrigeration and comfort cooling HVAC systems. Many different types are available, each with their own unique function and application, but these valves are not interchangeable and specifying or selecting the wrong one may result in project delays, avoidable costs, inadequate performance, and premature equipment failure. In this seminar, we will review commonly used accessories such as hot gas bypass, reheat, low ambient control, heat reclaim, and pressure regulating valves and the purpose that each one serves in the refrigeration system, and where and when to apply them.</p> <p>All attendees will receive 1 PDH.</p>		
About our Speaker:	<p>Bill Artis is a Principal at Energy Project Consulting, a firm specializing in building energy performance and commissioning. He serves ASHRAE as the Chair of the Large Buildings HVAC Applications Committee, Chair of the Regional Refrigeration Committee, and as Vice President of the Long Island Chapter. Bill is also member of the IFMA NY Chapter's Sustainability Committee and a Technical Reviewer for the Refrigeration Service Engineers Society. Prior to founding Energy Project Consulting, his work experience included previous roles as a Commercial Sales Manager, Project Engineer, and as a Journeyman Service Technician for a Local 638 mechanical contractor.</p>		

CHAPTER MAY NOT ACT FOR SOCIETY

An International Organization

Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1989	Mel Deimel
1959	Clyde Alston, PE	1990	Robert Rabell
1960	Sidney Walzer, PE	1991	Gerald Berman
1961	Sidney Gayle	1992	Donald Stahl
1962	William Kane	1993	Ronald Kilcarr
1963	Louis Bloom	1994	Jerald Griliches
1964	Milton Maxwell	1995	Walter Stark
1965	Will Reichenback	1996	Joe Marino
1966	Joseph Minton, PE	1997	Norm Maxwell, PE
1967	Irwin Miller	1998	Alan Goerke, PE
1968	Walter Gilroy	1999	Frank Morgigno
1969	Charles Henry	2000	Michael Gerazounis, PE, LEED AP
1970	William Wright	2001	Ray Schmitt
1971	Louis Lenz	2002	Steven M. Stein, PE
1972	Ronald Levine	2003	Andrew Braum, PE
1973	Henry Schulman	2004	Claudio Darras, P.E.
1974	Myron Goldberg	2005	Craig D. Marshall, P.E.
1975	John N. Haarhaus	2006	John Nally
1976	Richard K. Ennis	2007	Peter Gerazounis, PE, LEED AP
1977	Kenneth A. Graff	2008	Steven Friedman, PE, HFDP, LEED AP
1978	Evans Lizardos, PE, LEED AP	2009	Steven Giammona, P.E., LEED AP
1979	Albert Edelstein	2010	Nancy Román
1980	Ralph Butler	2011	Carolyn Arote
1981	Robert Rose, PE	2012	Brian Simkins, LEED AP
1982	Timothy Murphy, PE	2013	Andrew Manos, LEED AP BD+C
1983	Leon Taub, PE	2014	Richard L. Rosner, P.E.
1984	Raymond Combs	2015	Thomas J. Fields, P.E., LEED AP
1985	Edward W. Hoffmann	2016	Donald Kane, P.E.
1986	Jerome T. Norris, PE	2017	Andrew Dubel, P.E., LEED AP
1987	Abe Rubenstein, PE	2018	Richard Halley
1988	Michael O'Rourke		

PAOE POINTS FOR 2019/2020

Chapter Members	Chapter Operations	CTTC	Communi-cations	GGAC	History	Member-ship	Research Promotion	Student Activities	YEA	Chapter PAOE Totals
282	50	0	50	0	355	300	0	350	450	1,555

Student Activities

As the year continues, Students should consider participating in the 2020 Design competition. ASHRAE sponsors these competitions to encourage students to become involved in a profession that is crucial to ensuring a sustainable future for our Earth – the design of energy-efficient HVAC systems. ASHRAE will recognize the outstanding student design projects at the 2021 ASHRAE Winter Meeting scheduled for January in Chicago, Illinois.



The student design competition guidelines provide enough background information to enable the teams to design or select the HVAC system for the given building, or to design a sustainable building implementing an integrated building design process (the architectural and building design for sustainability, and its supporting mechanical and electrical systems) for the given program.

The Integrated Sustainable Building Design (ISBD) competition's aim is to encourage students to extend their knowledge beyond the core mechanical systems. For the ISBD category, the final design level presented may be in a preliminary stage, as the competition's basic intention is to challenge students' imaginative thinking and creative engineering approach to the building and all of its systems.

Teams may compete in one of the three categories:

HVAC Design Calculations
HVAC System Selection
Integrated Sustainable Building Design (ISBD)

ASHRAE recommends that the project groups consist of at least two members from an undergraduate engineering or architecture curriculum for the HVAC Design Calculations or HVAC System Selection and at least three members (architecture or construction, mechanical and electrical) for the ISBD competition. Team members can be from multiple colleges. All team members must be enrolled during the semester/term in which they contribute to the design.

Participating teams are NOT required to have an ASHRAE Student Branch at their university.

For further details on the competition description, submission instructions, questions, and due dates, please follow the link below.

<https://www.ashrae.org/communities/student-zone/competitions/2020-design-competition>

The first deadline is May 4, 2020.

Elizabeth Jedrlinic
Student Activities Chair
Elizabeth.jedrlinic@trane.com

Research Promotion

I would like to thank the companies who have participated in the annual 2020 Product Directory of Manufacturers and their Representatives. The Product Directory has been prepared as a service to all its members and as a service to the local HVAC industry. It will be made available to all ASHRAE and non-ASHRAE members at no-cost and can be obtained from our monthly meetings or directly from our web-site.

There's still time if you would like your company listed in the directory please contact me. The deadline is December 15th.



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.

This year's overall resource promotion goal is \$2,600,000 with over 75 research projects on board. Our chapter is expected to raise approximately \$20,500 towards the overall goal of which we have already raised \$750. 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 coming year. Please help support ASHRAE in any way you can.

I would like say 'thank you' to all the contributors listed below whom have already donated to ASHRAE this year:

INDIVIDUALS

Brian Simkins
Peter Gerazounis, PE
Michael Gerazounis, PE
John D Nally
Andrew E Manos
Mordechai Chetrit
Evan Lizardos
Elizabeth Jedrlinic
Frank Paradiso

COMPANIES

Catan Equipment Sales
Accuspec, Inc
Gil-Bar Industries, Inc.

CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

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

Andrew Manos, LEED AP BD+C
ASHRAE Research Promotion Chair
c/o Stony Brook University
Campus Planning, Design and Construction
Research and Support Services, Building 17, Suite 160
Development Drive, Stony Brook, NY 11794-6010

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

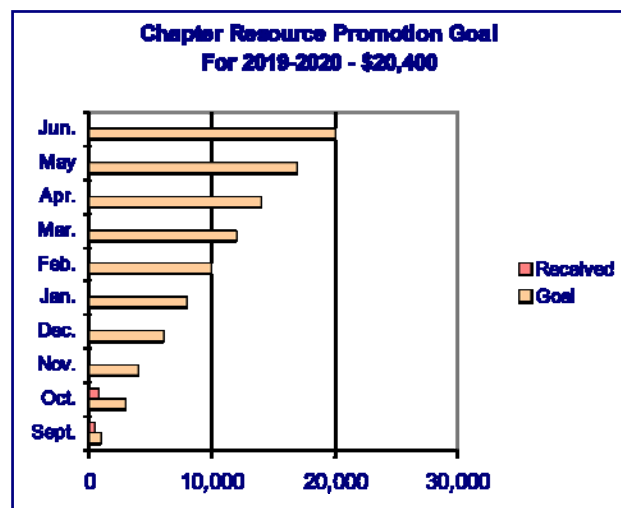
3) You can contribute via PayPal from the ASHRAE LONG ISLAND web site, just click on the donate button.

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 of your support!

Andrew Manos, LEED AP BD+C - Research Promotion Chair



YEA

ASHRAE offers a wide variety for YEA and (non-YEA) members. In this month's sounder, we will focus on the **LeaDRS** and **HVAC Design Essentials Training Programs!**

LeaDRS

This regional program allows for the development of future regional leaders thru shallowing of current DRC's at an ASHRAE conference. The LeaDRS program is open to All ASHRAE Members! As a participant in the program, the DRC would select a participant from the Region at a Society Winter or Annual Conference. This great experience is a great way to gain an understanding of how ASHRAE works at the Society level.



<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/ashrae-region-leadsr-program>

HVAC Design Essentials Training

This program presented by the ASHRAE Learning Institute allows attendees to gain the fundamentals and technical aspects to design, install and maintain HVAC systems. The full cost of registration to Level I or Level II of this training are covered. Any additional costs such as airfare/hotel are not covered by the scholarship. **THE NEXT ROUND OF APPLICATIONS WILL OPEN IN NOVEMBER 2019.**

As a reminder, YEA Leadership Weekend 2.0 registration is open! Please reach out to me if you have any questions. YEA Leadership Weekend 1.0 is a prerequisite.

YEA Leadership Weekend 2.0

Clearwater, Florida – February 8-10, 2019

YEA Leadership Weekend 2.0 (YLW 2.0) is designed to provide additional, more advanced resources to YLW alumni. For this continuation of YLW, we bring back Ralph Kison to facilitate and expand on the skills he taught at the existing YLW event. As YLW alumni, you've had the opportunity to use the resources and connections you gained at YLW to not only grow your professional careers, but develop your participation within ASHRAE. The purpose of YLW 2.0 is to continue that growth and development, and hopefully inspire even further leadership skills and aspirations!



Michael Nigro
YEA Chair

CTTC

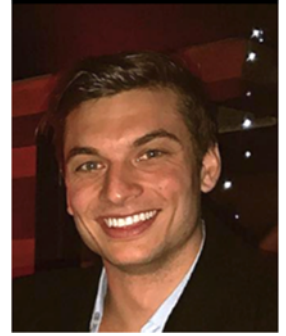
Hello Long Island Chapter!!! We hope you enjoyed last months presentation on strategic electrification in NYC utilizing VRF systems presented by Ian Nelson. It was very interesting to hear about the increasing initiatives of Passive House and Zero Net Energy!

Joke of the Month:

The optimist says: "The glass is half full."

The pessimist says: "The glass is half empty."

The engineer says: "The glass is twice as big as it needs to be."



ASHRAE Certification Review: *ASHRAE offers a number of unique and beneficial certifications. Each month I will briefly review a new certification that could possibly be just the knowledge base you were looking for to take you career/ position/ company to the next level.*

CHD – Certified HVAC Designer: The Certified HVAC Designer (CHD) certification validates competency of the HVAC Designer to Design HVAC systems to meet building/project requirements, including load calculations, equipment selection and sizing, mechanical equipment room design, duct and piping design and layout for the development of HVAC plans for permit and construction.

Earning the Certified HVAC Designer (CHD) certification will let your employer, peers and customers know that you have the knowledge, skills and abilities needed to get the job done, and position you for continued recognition and help differentiate yourself.

Chapter HVAC Technology Update

As the year progresses, we will be reaching out to the Chapter to assist earning PAOE points. One of the best ways to contribute would be to submit a project for a Technology Award.

The ASHRAE Technology Awards program recognizes, on an international scale, successful applications of innovative design, which incorporate ASHRAE standards for effective energy management, indoor air quality, and good mechanical design.

The purpose of the ASHRAE Technology Awards is threefold: 1. To recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data. 2. To communicate innovative systems design to other ASHRAE members. 3. To highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

HVAC Global Technology Watch

Global HVAC Equipment Market CAGR Growth 7.6% by 2020 - Trends, Technologies & Forecasts Report 2015-2020 - Key Vendors: Gree, Nortek, Sharp - Research and Markets

<https://www.prnewswire.com/news-releases/global-hvac-equipment-market-cagr-growth-76-by-2020---trends-technologies--forecasts-report-2015-2020---key-vendors-gree-nortek-sharp---research-and-markets-576739511.html>

Matthew K. Catan
CTTC Chairman

History

Welcome, everyone, to the October newsletter. For this month, I have interviewed our very own President from 2018/2019, **Richard Halley**! Please read below to find out more about him.



1. What do you like to do in your free time? When I'm not driving to Swim Practice, Soccer Games, Gymnastic Practice and Track team work outs I enjoy all types of water sports. As a boating family we like to cruse whenever possible. We also like to hit the slopes in the winter and play board games

2. Where have you worked in the past? I started my career as an Applications Engineer for Johnson Controls. I spent 7 years on the World Financial Center project and the Area Management. In 1997 I joined the Trane Company as the General Manager of the Building Automation Division. In the last 22 years I have held multiple positions with Trane and took over the Long Island Area Management in 2009. I also serve on the industry advisory committee for Suffolk County Community College HVAC&R Program



- 3. When and why did you decide to pursue a career in HVAC&R?** I have always liked to tinker with mechanical things. Growing up I spent a lot of time with my father taking apart fixing and putting back together all types of things. Graduating from SUNY Farmingdale I attended a work fair and was fascinated mechanical systems in buildings and the rest was history
- 4. What was the year you held the president position in ASHRAE LI?** 2018/2019
- 5. When/Why did you decide to join the board?** In 2009 when I moved back to the Long Island Market I wanting to give back to the industry that has been so good to me over the years.
- 6. What do you feel was the greatest contribution you made in ASHRAE?** Many things... As the student advisory chairman I was given the opportunity to work with many talented young people and help them start their careers in HVAC&R. I enjoyed working on both the chapter and regional level as the 2017 CRC Chairman. Last year it was my pleasure to see the Long Island Chapter recognized as the best operating chapter in Region I for the fourth year in a row.
- 7. How has ASHRAE played a significant role in your career?** I have made so many personal connections and relationships it's impossible to count them all. On a technical side ASHRAE has kept me up to date with current technologies and industry codes and regulations
- 8. What recommendation would you make towards students showing interest in HVAC&R?** Join a student chapter, Get involved with people who have spent the life in HVAC&R, Ask lots of questions. HVAC&R is an industry that touches so many organization and is way more than Heating and Cooling. HVAC&R is all was changing, always doing things better and you will never be board

Matthew Vitrano
History Chairman

Refrigeration

HALOCARBON REFRIGERATION SYSTEMS (SUMMARY OF ASHRAE HANDBOOK 2018 CHAPTER 1)

Refrigeration is the process of moving heat from one location to another by use of refrigerant in a closed cycle. Refrigeration has:

- Oil management
- Gas and liquid separation
- Subcooling
- Superheating
- Desuperheating
- Refrigerant liquid piping
- Gas and two-phase flow



Halocarbon refrigerants are classified into four groups:

- CFCs (Chlorofluorocarbons)
- HCFCs (Hydrochlorofluorocarbons)
- HFCs (Hydrofluorocarbons)
- HFOs (Hydrofluoroolefins)

Montreal Protocol Agreement in 1987 and its subsequent revisions, which restricted the production and use of CFC and HCFC refrigerants. All CFC refrigerant production was phased out in the US in 1996. Kigali Agreement revised the Montreal Protocol in 2016 by including regulation of HFC refrigerants. As phasedown begins, interest in the future cost and availability of these refrigerants is likely to increase. The Kigali agreement aims to reduce HFC refrigerant sales to one fifth of 2014 levels by 2030.

HFO refrigerants as an alternative have significantly lower GWP values than HFCs. However, flammability is an obvious barrier to adoption.

SYSTEM SAFETY

ASHRAE Standard 15 and ASME Standard B31.5 should be used as guides of safety. The designer should know the specific requirements of the installation site. Only A106 Grade A or B or A53 Grade A or B should be considered for steel refrigerant piping.

The rated internal working pressure for Type L copper tubing decreases with increasing operating temperature, increasing tubing size and increasing temperature of joining method. Some refrigerants can operate at as high as 500 psia and 300°F at a typical saturation point of 130°F.

REFRIGERANT LINE VELOCITIES

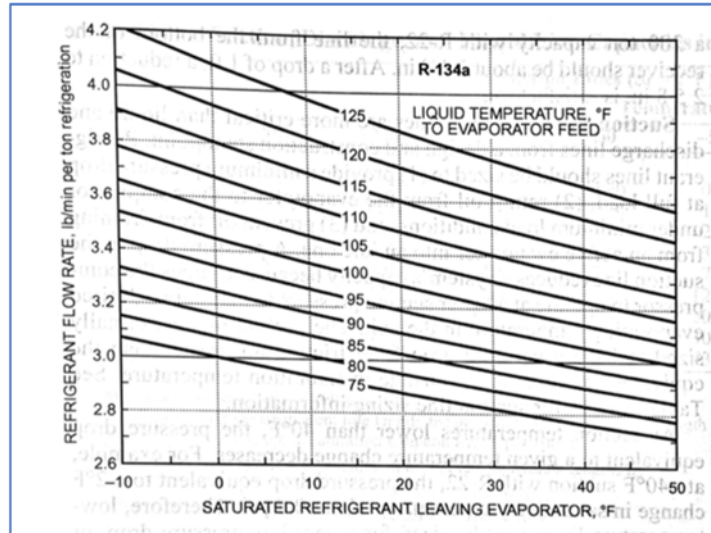
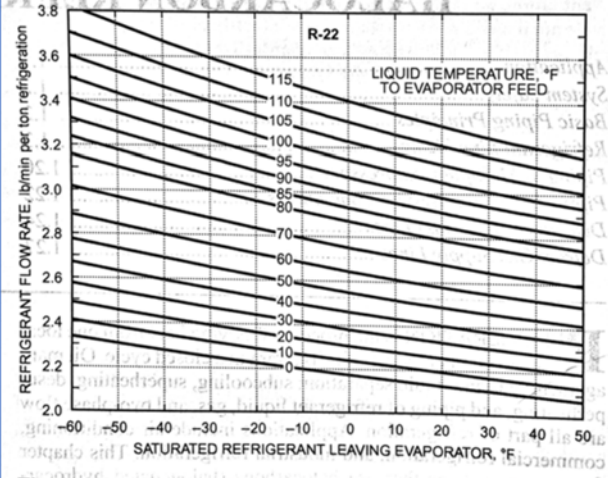
Higher gas velocities can be found on comfort AC or other applications where the operating time is 2000 to 4000 hours per year and where the initial cost of the system may be more significant than low operating cost. Industrial or commercial applications, where equipment run continuously, should be designed for low refrigerant velocities for most efficient compressor performance and low equipment operating costs.

Refrigeration

2018 ASHRAE Handbook—Refrigeration

Table 1 Recommended Gas Line Velocities

Suction line	900 to 4000 fpm
Discharge line	2000 to 3500 fpm



REFRIGERANT LINE SIZING

When sizing refrigerant lines, designers must consider both the effects of the velocity and pressure drop in the pipe on system performance, and system cost and safety. Cheaper smaller pipes inflict operating costs for life of the system due to excessive pressure drops. However, larger pipes sizes reduce the efficiencies.

Working pipe pressures for any pipe material decrease as pipe diameters increase. Pipes should be carefully selected, ensuring that internal system pressures will not exceed the pipe's rated working pressure while the system is in operation or at standstill. Brazed copper piping will be weakened by the annealing that occurs during brazing.

PRESSURE DROP CONSIDERATIONS

Suction and discharge line pressure drops cause loss of compressor capacity and increased power usage. Excessive liquid line pressure drops can cause liquid refrigerant to flash, resulting in faulty expansion valve operation. Friction losses should not exceed a pressure differential equivalent to a corresponding change in the saturation boiling temperature. The primary measure for determining pressure drops is a given change in saturation temperature.

Table 2 Approximate Effect of Gas Line Pressure Drops on R-22 Compressor Capacity and Power^a

Line Loss, °F	Capacity, %	Energy, % ^b
Suction line		
0	100	100
2	96.4	104.8
4	92.9	108.1
Discharge line		
0	100	100
2	99.1	103.0
4	98.2	106.3

^aFor system operating at 40°F saturated evaporator temperature and 100°F saturated condensing temperature.

^bEnergy percentage rated at hp/ton.

Refrigeration

LIQUID LINES

Pressure drop should not be so large as to cause gas formation in the liquid line, insufficient liquid pressure at the liquid feed device, or both. Pressure drop in the liquid line from friction should be greater than that corresponding to about a 1 to 2°F change in saturation temperature.

SUCTION LINES

Suction lines are more critical than liquid and discharge lines. Refrigerant lines should be sized to:

- Provide a min pressure drop at full load
- Return oil from the evaporator to the compressor under min load conditions
- Prevent oil from draining from an active evaporator into an idle one

DISCHARGE LINES

Pressure loss at hot gas lines increases the required compressor power per unit of refrigeration and decreases compressor capacity. Pressure drop is minimized by generously sizing lines for low friction losses, but still maintaining refrigerant line velocities to entrain and carry oil along at all loading conditions.

PIPING INSULATION

All piping joints and fittings should be thoroughly leak tested before insulation is sealed. Suction lines should be insulated to prevent sweating and heat gain.

VIBRATION AND NOISE IN PIPING

Effects of vibration:

- Physical damage to the piping, which can break brazed joints and consequently lose charge
- Transmission of noise through the piping itself

Piping vibration can be caused by rigid connection of the refrigerant piping to a reciprocating compressor. Flexible metal hose is sometimes used to absorb vibration along smaller size pipes. On large pipe connections flexible piping and isolation hangers can be used.

Murat Bayramoglu
Refrigeration Chair

Membership Promotion

As ASHRAE grows, more and more employers value ASHRAE membership. The reason ASHRAE membership is held in such regard is it allows each individual to show personal growth as a profession and a continuing effort to develop and fine tune their skills. This is a testimony to our members voluntarily dedicating their time to go above and beyond the normal measures for the HVAC community. Currently, our networking opportunities & membership are growing daily. Having new members and the growth of our chapter is critical, as well as it is just as import for our current members to stay up to date with their memberships. Unfortunately, & if you allow your membership to lapse, you will not be able to renew. **HERE'S THE GREAT NEWS!** Renewing is easy at www.ashrae.org. Just log in, hit the membership tab and click "renew!"



For our members, are you interested in being published & do you have a testimonial about the benefits of ASHRAE that you'd like to share? If YES, then please forward it to me at michael.h.razzano@gmail.com for publication in our monthly newsletter.

Michael Razzano
Membership Chair

Grassroots Government Activities Committee (GGAC)

The following is from the ASHRAE's government affair update:

ACEEE Report Identifies Policy Opportunities for Energy Efficiency

The American Council for an Energy-Efficient Economy (ACEEE) has released a road map for reducing energy use and greenhouse gas emissions by 50 percent by 2050. The road map identifies 11 policy opportunities for state and local governments to examine, including zero energy buildings and homes, appliance and equipment efficiency in buildings, commercial and residential retrofits, and smart homes and buildings. According to the report, new homes and commercial buildings could cut emissions by 70 percent with better design and the use of cleaner energy, while existing homes and buildings could cut emissions with energy efficient upgrades and the electrification of heating and cooling systems. The report also calls for a growth in the ENERGY STAR product certifications.



House Members Introduce Energy Tax Credit Legislation

On September 12, Congressmen Jim Langevin (D-RI) and Peter Welch (D-VT) introduced the Building Efficiently Act of 2019. The bill would extend residential construction tax credits that expired in 2017 such as 179D. The 179D tax deduction sets incentives for building owners that reduce their building's total energy and power cost by 50 percent or more in comparison to past versions of ASHRAE Standard 90.1 (directly citing the standard).

Andrew Blom
Grassroots Government Activities Chair

BOG Meeting Minutes

BOG September Meeting Long Island Chapter
September 10, 2019 / 5:00 PM / Location: Westbury Manor

Board of Governors		
President	Frank Paradiso	X
President Elect	James Hanna	X
Vice President	William Artis	X
Financial Secretary	Mathew Vitrano	X
Treasurer	Murat Bayramoglu	X
Secretary	Michael Nigro	X
BOG-1	Elizabeth Jedrlinic	X
BOG-2	Andrew Blom	X
BOG-3	Mathew Catan	X
BOG-4	Michael Razzano	X
BOG Immediate President	Richard Halley	X
Committee Member	Matthew Catan	X
Committee Member	Brian Simkins	
Committee Member	Andy Manos	X

President (Frank Paradiso) Chapter Operations [min-600/Par-1200] Total Points: 0

- Review Minutes. **Rich moved, James seconded. All approved. Quorum Achieved 5:08.**
- Newsletter: Newsletter and meeting notice separate. **Aim for all articles to be in my mid-month.**
Prior to ASHRAE Monthly Meetings: Reminder E blast with presenter Meeting reminder, presenter information, and bio goes out the Monday prior to the meeting.
Committee Articles: The articles are due about **one** week after the chapter meeting.
Templates: two templates – one has a newsletter, one doesn't have a newsletter.
Make sure you copy myself and Liset on all the newsletter emails.
- Update Email Aliases for BOG/Committee members (update your preferred email in ASHRAE profile), Email alias option through Society, will be updated by next newsletter.

Programs (James Hanna)

- Fundraising opportunities for cocktail hour sponsorship **Set thru March 2020, but had cancellations**
- Suggestions for topics & presenters for James keeping with the 2019-2020 theme: Building for People & Performance-Achieving Operational Excellence,' focuses on adapting ASHRAE's resources, investments and technology to energize our membership and empower our chapters
- Potentially get more DL's**
Bill Artis possible back to basics?
- Webcasting meeting idea for LI chapter (Society hosts go to meeting.)
E-comm and membership committee to discuss logistics.
- Field Trip: Early thoughts with Membership committee
Sterilization Plant
Brewery
Dry-aging Room
- Frank: E-comm committee possibility?**

Chapter Technology Transfer (Matthew Catan) [min-550/par-1050] Total Points: (0)

- MBO's for the year?
- Work with James (Programs) for PDH certified presentations **Commissioning sub-committee**
- PDH Sign in sheet and Presentation Survey sheets
- Distinguished Lecturer ideas for the year.
Potentially for October – possibly unallocated

Financial Secretary (Matthew Vitrano)

- Develop Monthly finance report with using actual bank statement with all the credits and debits accounted for.
- Review at BOG meetings - monthly income and spending. **Every month**
- Bill to bring financial book w/ tax forms. File tax extension.
Financial committee meeting next week

BOG Meeting Minutes

Treasurer (Murat Bayramoglu)

- Account status? **Received Treasurer's report.**
- Cherry Valley Golf Invoice payment status (Check has been received and cashed by Cherry Valley)
- 2019-2020 Long Island Chapter Assessment (\$2,688.00) by December 31, 2019.
- CRC 2017 profit share still outstanding, review accounting to find paperwork and update amount if incorrect.
- Bank Account:
- Frank, Murat, Matt V., James H. and Bill A. went to TD bank in early August (prior to CRC) and updated the people on the account
- Updated W-9 form needed for Paypal account, change email from Andy's work email address to an ASHRAE LI email
- Possibly eliminate the PO Box and replace with a UPS mailbox or similar due to NYS tax requirements
- Do we have any paperwork or confirmation of this requirement?
- Frank renewed in August the PO box for the year until we iron out the mailbox details.
- All hands on deck to seek and fundraise sponsorships for chapter operations
- Invoice/update Newsletter Advertisements early in the chapter year (Andy with help from Matthew V. & Michael N.)
- **Motion to pay assessment by 12/31. Approved.**
- **Andy to send to Murat/Matt/Mike**

Government Affairs (Andrew Blom) [min-500/par-650] Total Points (0)

- MBO's for the year?
- Activities: **Day on the hill**
- Update local Politician list
- Public relations Andy Manos

Historical (Matthew Vitrano) [min-100/par-300] Total Points (0)

- MBO's for the year?
- Articles/interviews of past president's Potential life-members/fellows.
- Boards are going to be updated.

Honors and Awards Chair (Brian Simkins)

- Service awards/Technical Awards
- Candidate Projects
- If there are any projects let Brian know

Research Promotion (Andy Manos, Michael Nigro, Matthew Vitrano) [min-800/par-1050] Total Points (0)

- Vendor Book status.
- 50/50, (other ideas to increase raffle purchases)
- Head Start on Full circle, 150 pp.
- MBO's for the year?
- RP Goal is \$20,400.

Refrigeration (Murat Bayramoglu)

- Northrop Grumman visit (Mike R)
Mike R to contact
- MBO's for the year?

Membership Promotion (Michael Razzano, Co-chairs, Elizabeth Jedrlinic, Michael Nigro) [min-500/par-800] Total Points (0)

- MBO's for the year?
- Membership Upgrades:
- Discussion/suggestions on increasing chapter meeting attendance & Increase chapter membership:
- Reach out to companies and Design firms that may have engineers that are not aware of ASHRAE LI and its chapter meetings.
- Combined Membership/YEA/Student activities Social events ideas:
 - Happy Hours
 - Pub crawls
 - Brewery visits: Great South Bay Brewery (Bay Shore); Plattdeutsch Brewery (Franklin Square)
 - Bowling, Billiards
 - Paintball
 - BBQ or potluck with yard games at a park, fundraiser? Cedar Beach BBQ?

BOG Meeting Minutes

Student Activities (Elizabeth Jedrlinic) [min-500/par-800] Total Points (0)

- MBO's for the year?
- Stony Brook, Suffolk Community College, Hofstra (Reach out again), NYIT and others.
- Discuss which local universities/colleges student chapters are active and which can be re-activated.

YEA (Michael Nigro) [min-300/par-800] Total Points (0)

- MBO's for the year?
- 2019 Collaborate with Membership Promotion and Student Activities for Social events throughout the year in order to interest new chapter involvement, volunteers etc.

Reception & Attendance (Matt Catan, Michael Razzano)

- Crushing it 2.0 :
Actively monitor membership list at reception.

Electronic Communications [min-250/par-650] (0)

- Temp address Society is taking over website.
- www.ashraeli.com
- Recovery of old address (Still Ongoing)
Email from Tom Fields, will investigate
- Linked-In
- Add Historical Newsletters to website (2018-19 Chapter year)
- E-Communication committee
Looking for volunteers to assist Bill and learn to maintain:
Email service
Weebly website
Linkedin

New Business...

Next BOG Meeting

Location: Westbury Manor

Date: 10/8/19

Time: 5:00PM

Join ASHRAE on Social Media!



Follow **ASHRAE on Twitter** @ashraenews for up-to-date news, events, and articles about HVAC&R. Search #MyASHRAE on Twitter to see member photos from around the world.

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Most Popular Tweets

Does It Cost More To Build Green? Benefits include reduced operating costs & construction waste.

Online Thermal Comfort Compliance Tool Included In New ASHRAE User's Manual.

87% of households in the US have #AC, 5% do in India. India's tough choice on air-conditioning and climate.



The November issue of the Journal is tested for binding strength to see how many times a page can be turned before the binding would fail.

Harvard & SUNY Upstate Medical University find that workers are healthier and happier in certified green buildings.

ASHRAE Standard 90.1 has been redefining energy savings since 1975. A new version is available now.

Adapting historical buildings for sustainable reuse.

Get To Know ASHRAE



ASHRAE CERTIFICATIONS

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FOR MORE INFORMATION GO TO - <https://www.ashrae.org/education--certification/certification>

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If you would like to place an advertisement in the Long Island Sounder, please contact our Chapter Financial Secretary, James Hanna @ 718.269.3768 or by email at finsec@ashraeli.org for further details. Thank you.

Rates (includes all issues September-June):

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