**THE LONG ISLAND SOUNDER** 





2022-2023



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# PRESIDENT'S MESSAGE



#### SPRING ON LONG ISLAND

Spring on Long Island is always so inspiring when mother nature wakes up from its winter break. Long Islanders enjoy the beautiful colors of plant and flower surroundings. Seasonal cycles are also similar to engineering project phases. The design phase starts with trimming down all leaves to reveal the bare minimum. Only successful project planning will survive the winter. The design team sleeps on the project to plan the details in the winter. And in the spring, the projects start shaping up their final versions to prepare for commissioning. The project team completes the final touches in the summer season to hand off assignments. Whereas ASHRAE, in spring, starts planning for the subsequent BOG and committee chairs. Current BOG starts preparations like plants blossom to create a

smooth transition in the spring. Now, it's time for the HVAC-R industry professionals to volunteer for The Chapter's board by reaching out to any chapter officer to join the team.

Traditional Golf Outing is scheduled for May 8 at Cherry Valley Club in Garden City. Look out for the e-mails containing the application forms from The Chapter. The application form can also be downloaded from the website, and completed application forms can be submitted to the Chapter Golf Outing Committee Chair, Mr. Peter Gerazounis. The traditional Golf Outing is the pinnacle of The Chapter's events bringing hundreds of golfers together with numerous sponsors' support. This full-day event is an excellent asset for connecting with hundreds of professionals.

Last month, Mr. John Knowles - Senior Vice President of Application Engineered Design for Wales Darby, INCpresented to over thirty guests about Automated Flow Balancing. It's been a presentation full of critical knowledge for mechanical engineers to learn about the impact of the balancing valves on well-distributed water distribution infrastructures. Now we know better how the balancing valves also play a crucial role in high efficiency in pumping. We host new guests interested in the monthly presentation topics to learn more about the latest or standard technologies. We'll maintain selecting the best presentation topics for our guests to reach out to more HVAC-R professionals. Check your inboxes and follow us through social media and our website for future events.

Engineers Joint Committee of Long Island held a seminar for Engineers Week on February 15 between 8:00 am and 4:30 pm. Over 130 engineers attended this seminar to listen to numerous presentations by great speakers at Holiday Inn Plainview, as always. I encourage our members to participate in this seminar next year at precisely the same time. This event is a great resource for engineers to maintain their professional development hours by gaining 6 PDH credits for whom signed up for full sessions.

ASHRAE-LI's Young Engineers committee will announce the traditional Go-Kart racing event anytime soon. The race we had last year was highly competitive. We hope to have the same competition this year with new participants. The ASHARE-LI's YEA group will soon announce a unique beer blend in the Bay Shore Brewery for Long Islanders. We will visit Bay Shore Brewery along with YEA members of the Chapter in March, hoping to take sips from the ASHRAE-LI beer.

For the first time, ASHRAE-LI's recently formed Sustainability Committee is planning to organize a panel at NYIT in April. We expect support from our members to enhance the sustainability committee and proposals for new activity ideas. Sustainability and decarbonization efforts are for our younger generations to ensure a better future with a peaceful connection between mother nature and civilization that is economically beneficial to all.

Now, ASHRAE-LI Chapter is accepting student scholarship applications. Our student connections are not limited to college students. We want to encourage more students to engage in engineering practices, have them learn more about engineering, and introduce ASHARE. The student scholarship application forms have been delivered to numerous schools.

ASHRAE-LI chapter also accepts applications from Long Island's HVAC-R industry members for the "Engineer of the Year" award nominations. The awards and the student scholarship will be given at the very last meeting of this season in June. The Chapter encourages members and HVAC-R industry professionals to nominate engineers to recognize success and encourage all to be more competitive. Reach out to any chapter official and request the nomination form if you want to appoint an engineer for the award. The Chapter will also issue a press release for the awards ceremony to reach out to Long Island residents.

Max Rohr from Caleffi will be presenting at the third meeting of 2023 on March 14. He will discuss "Zero Building Efficiency with Hydronics." It will be an informative presentation for all engineers and HVAC-R industry professionals. Guests, please reach out to any board member if you want to learn more details about the events.

We hope to see you all at Westbury Manor for the March meeting.

Murat Bayramoglu Chapter President

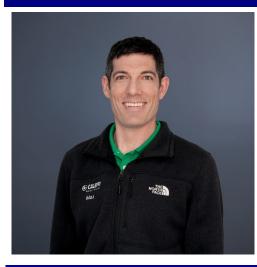
#### Chapter Monthly Meeting - Program for 2022/2023 September 13, 2022 \* At Westbury Manor March 14, 2023 \* At Westbury Manor Dinner Presentation— Zero Energy Building with Hydronics Dinner Presentation – Heat Pump and Heat Recovery in Hv-Presented by: Max Rohr from Caleffi dronic Systems Construction Law Fundamentals – Presenter: Albert Stark A Practical Guide. Presented by: Michael Ganz \*\*1 PDH\*\* \*\*1 PDH\*\* **Student Activities Night YEA Night** April 11, 2023 October 11, 2022 \* At Westbury Manor **Dinner Presentations -Dinner Presentation— TBA** \*\*1 PDH\*\* HVAC Retrofit Best Practices for GHG Emissions Reduction to Meet the LL97 Mandate presented by Adrian Zebrowski The Impact of the Inflation Reduction Act (IRA) on the Energy Industry presented by Jacob Goodman \*\*1 PDH\*\* November 8, 2022 \* At Westbury Manor May 2023 \* Cherry Valley Club, Garden City, NY **Dinner Presentation**— ANNUAL GOLF OUTING Gasket Technology presented by Stanley Funk \*\*1 PDH\*\* Membership Promotion **Student Activities Night and YEA Night Resource Promotion Night** May 10, 2023 December 13, 2022 \* At Westbury Manor Dinner Presentation— **Annual Field Trip** Extending Condensing Boiler Heat Exchanger Durability presented by: Kyle Bottorff \*\*1 PDH\*\* January 10, 2023 \* At Westbury Manor June 2023 \* At Westbury Manor Dinner Presentation— Free Buffet Dinner for Members Electrical Engineering Fundaments (for Mechanical Engineers) **PAST PRESIDENTS NIGHT & OFFICER INSTALLATION** Presented by: Andy Siegelson STUDENT SCHOLARSHIPS TO BE AWARDED \*\*1 PDH\*\* ASHRAE History Quiz and prize Give-A-Ways June 2023 - TBD (4pm-8pm) \* Dixie II @ Captree State Park February 6-8, 2023 Boat Basin, NY **AHR Expo** ANNUAL FISHING TRIP Location: Atlanta, GA February 21, 2023 \* At Westbury Manor August 2023 **CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I** Dinner Presentation— Automatic Flow Balancing **GRANIT STATE** \*\*1 PDH\*\* Presented by: John Knowles Membership Promotion Night **Resource Promotion Night** February 20-26, 2023 NATIONAL ENGINEERS WEEK

# Long Island Chapter Officers & Committees

ASHRAE 2022/2023	OFFICERS	
POSITION	NAME	EMAIL
President	Murat Bayramoglu	<u>c006@ashrae.net</u>
President-Elect	Michael Nigro	c006pe@ashrae.net
Vice President	Elizabeth Jedrlinic	c006vp@ashrae.net
Treasurer	Michael Razzano	c006tr@ashrae.net
Secretary	Matthew Catan	c006sec@ashrae.net
Board of Governors	Zhigang Xu	c006bog1@ashrae.net
Board of Governors	Rich Smith	c006bog2@ashrae.net
Board of Governors	Michael S. Gerazounis	c006bog3@ashrae.net
Board of Governors	Thomas DiBenedetto	c006bog4@ashrae.net
Board of Governors	Matthew J. Vitrano	c006bog5@ashrae.net
ASHRAE 2022/2023	COMMITTEES	
COMMITTEE	NAME	EMAIL
Programs & Special Events	Michael Nigro	c006pe@ashrae.net
Membership (MP)	Michael Razzano	c006mep@ashrae.net
Refrigeration	Matthew J. Vitrano	c006ref@ashrae.net
Chapter Technology Transfer (CTTC)	Thomas DiBenedetto	c006cttc@ashrae.net
Government Activities (GGAC)	Rich Smith	006ggac@ashrae.net
Newsletter Editor	Alexis H. Smith	c006ne@ashrae.net
Research Promotion (RP)	Peter Conte	c006rp@ashrae.net
Historian	Steven Gerazounis	c006his@ashrae.net
Student Activities (SA)	Zhigang Xu	c006sa@ashrae.net
Young Engineers in ASHRAE (YEA)	Michael S. Gerazounis	<u>c006yea@ashrae.net</u>
Webmaster	Frank Paradiso	c006web@ashrae.net
Nominating	Michael Gerazounis, PE, LEED AP	nominating@ashraeli.org
Reception & Attendance	Zhigang Xu / Matt Catan / Michael S. Gerazuonis	reception@ashraeli.org
PR & Engineering Joint Council of LI (EJCLI) Liaison	Andrew Manos, LEED AP	pr@ashraeli.org
Golf Outing	Peter Gerazounis, PE LEED AP	golf@ashraeli.org
Awards	Brian Simkins	c006ha@ashrae.net
	ASHRAE LI, P.O. Box 79, Commack	, NY 11725

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# Meeting Program



# Dinner Presentation Zero Building Efficiency with Hydronics



Presented by: Max Rohr Education & industry Engagement Manager at Caleffi Hydronic Solutions

DATE:	TUESDAY, MARCH 14TH, 2023		
Time:	6:00 PM - Cocktails and Hors D'ouevres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	Fee:	Members - \$50 pp Guests - \$70 pp Students - \$15 pp
Location:	WESTBURY MANOR (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 Directions are posted at @ www.ashraeli.org		
Presentation:	<ul> <li>The presentation will discuss define the following:</li> <li>Why Hydronics?</li> <li>Distribution efficiency</li> <li>Adaptability for future energy sources</li> <li>Radiant cooling</li> <li>Case Studies</li> </ul> All attendees will receive 1 PDH.	zero	energy buildings and discuss
About our Speaker:	Max Rohr is an education & industry Engagements is a Diversity, Equity and Inclusions Chair for th		•

The Long Island Chapter is looking for presenters for the remainder of the year. Please contact us if you are interested in presenting to our membership.

## **Meeting Program**



# **Dinner Presentation**

Construction Law Fundamentals – A Practical Guide



Presented by: Michael Ganz

DATE:	TUESDAY, MARCH 14TH, 2023		
Time:	6:00 PM - Cocktails and Hors D'ouevres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	Fee:	Members - \$50 pp Guests - \$70 pp Students - \$15 pp
Location:	WESTBURY MANOR (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 Directions are posted at @ www.ashraeli.org		
Presentation:	The presentation will focus on how to probasic construction contracts, dispute res	-	
About our Speaker:	Michael Ganz focuses his practice on construction experience in construction transactional matters construction industry clients including private an contractors, trade and subcontractors, design pr attorney, he was a mechanical and project engin	s and litig nd public rofessior	gation. He represents a wide range of s-sector owners, developers, general hals and sureties. Prior to becoming an

The Long Island Chapter is looking for presenters for the remainder of the year. Please contact us if you are interested in presenting to our membership.

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#### THE LONG ISLAND SOUNDER

# Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1990	Robert Rabell
1959	Clyde Alston, PE	1991	Gerald Berman
1960	Sidney Walzer, PE	1992	Donald Stahl
1961	Sidney Gayle	1993	Ronald Kilcarr
1962	William Kane	1994	Jerald Griliches
1963	Louis Bloom	1995	Walter Stark
1964	Milton Maxwell	1996	Joe Marino
1965	Will Reichenback	1997	Norm Maxwell, PE
1966	Joseph Minton, PE	1998	Alan Goerke, PE
1967	Irwin Miller	1999	Frank Morgigno
1968	Walter Gilroy	2000	Michael Gerazounis, PE, LEED AP
1969	Charles Henry	2001	Ray Schmitt
1970	William Wright	2002	Steven M. Stein, PE
1971	Louis Lenz	2003	Andrew Braum, PE
1972	Ronald Levine	2004	Claudio Darras, P.E.
1973	Henry Schulman	2005	Craig D. Marshall, P.E.
1974	Myron Goldberg	2006	John Nally
1975	John N. Haarhaus	2007	Peter Gerazounis, PE, LEED AP
1976	Richard K. Ennis	2008	Steven Friedman, PE, HFDP, LEED AP
1977	Kenneth A. Graff	2009	Steven Giammona, P.E., LEED AP
1978	Evans Lizardos, PE, LEED AP	2010	Nancy Román
1979	Albert Edelstein	2011	Carolyn Arote
1980	Ralph Butler	2012	Brian Simkins, LEED AP
1981	Robert Rose, PE	2013	Andrew Manos, LEED AP BD+C
1982	Timothy Murphy, PE	2014	Richard L. Rosner, P.E.
1983	Leon Taub, PE	2015	Thomas J. Fields, P.E., LEED AP
1984	Raymond Combs	2016	Donald Kane, P.E.
1985	Edward W. Hoffmann	2017	Andrew Dubel, P.E., LEED AP
1986	Jerome T. Norris, PE	2018	Richard Halley
1987	Abe Rubenstein, PE	2019	Frank Paradiso
1988	Michael O'Rourke	2020	James Hanna
1989	Mel Deimel	2021	Matthew J. Vitrano

# PAOE

#### What is ASHRAE PAOE?

The ASHRAE Presidential Award of Excellence (PAOE) is a society-wide point system to track and reward chapter achievements.

Each year, the Society President establishes the point-earning activities. In this way, chapters are mobilized to work toward common Society goals. Chapters enter points they earn in our online system, and earn awards at the Region and Society level for their achievements and commitment to excellence.

			PAO		ITS FC	OR 2022/	2023			
Chapter Members	Chapter Operations	СТТС	Communi- cations	GGAC	History	Member- ship	Research Promotion	Student Activities	YEA	Chapter PAOE Totals
277	805	400	185	100	150	750	475	1000		

#### FROM: Farooq Mehboob SUBJECT: PRESIDENTIAL AWARD OF EXCELLENCE (PAOE)

I am writing to you on 'Securing our Future,' a subject near and dear to us for ourselves, our families, and our beloved Society ASHRAE. This is our theme for this society year. We stand today on the threshold of the new era with its challenges, climate, economic and cultural changes to name a few. Yet we have new opportunities which await us in this digital age by global collaboration using the power of our relationships, knowledge and a willingness to change. To secure our future, every one of us needs to participate passionately in a transparent ASHRAE. The bedrock on which we will build our secure future is Diversity, Equity and Inclusion. Only then will we be able to harness the power of our relationships, harvest information in the service of our members, and embrace changes by breaking down silos and overcoming resistance to change. The PAOE system was created to provide guidance to Chapter leaders in planning your chapter activities. The goal of the 2021-2022 PAOE system was to offer a roadmap for successful Chapter operation. This year's PAOE program is designed to move our Society forward as I have explained and help in securing our future.

## Historian



This month I would like to bring back one of the trivia quizzes that was first run in 2003 by past president John Nally! I like looking at old trivia, because even if you don't know the answer you learn something new about our chapter. Listed below are ten questions relating to a specific year and event of our chapter. See how many you can answer by matching them up. No peeking at the answers. Good luck.

1. Our chapter's annual golf outing was most recently played at this location.

- A. Engineers Country Club
- B. Garden City Country Club
- C. Cherry Valley Club
- 2. Our chapter's first president.
  - A. H. Campbell, Jr.
  - B. Evans Lizardos
  - C. Clyde Alston

3. This past chapter president won the Golden Gavel award at the 2011 Region I CRC (Chapter Regional Conference).

- A. Carolyn Arote
- B. Nancy Román
- C. Peter Gerazounis

4. This former newsletter editor was responsible for transitioning our chapter's monthly newsletter into the digital age.

- A. Liset Cordero
- B. Andrew Manos
- C. Thomas Fields

5. In this year our chapter held its silver anniversary dinner dance celebration.

- A. 1968
- B. 1983
- C. 1994

6. Our chapter hosted the 2004 Region I CRC at this location.

- A. Oheka Castle
- B. Jake's 58 Casino Hotel
- C. Wyndham Wind Watch Hotel

7. Our chapter celebrated the ASHRAE Centennial with historical displays and presentations, during an April dinner meeting at the Maine Main Inn this year.

A. 1959B. 1987C. 1995

8. In 2008, our chapter took a field trip to tour this Long Island business' facilities.

A. PJ MechanicalB. Hofstra UniversityC. Newsday

9. Our chapter's 50th anniversary dinner cruise set sail from this Long Island marina.

- A. Manhasset Bay Marina
- B. Centerport Yacht Club
- C. Treasure Island Marina

10. Our chapter first started meeting at the Westbury Manor in this year.

A.1999 B. 2001

C. 2003

Answers:

- 1. C) Cherry Valley Club
- 2. A) H. Campbell, Jr.
- 3. B) Nancy Román
- 4. A) Liset Cordero
- 5. B) 1983
- 6. C) Wyndham Wind Watch Hotel
- 7. C) 1995
- 8. C) Newsday
- 9. A) Manhasset Bay Marina
- 10. C) 2003

# Refrigeration



## Hello Everyone,

I like to follow the Refrigeration Applications column in the monthly society Journal. This month I read the January 2008 Article about "The Man Behind Principles of Refrigeration" This article dove into the life of Roy J. Dossat, Lifetime Member of ASHRAE. He was the author of *Principals of Refrigeration* which was first published in 1961. It's quite an interesting story how Roy became an author.

Here is a link to the article if you would like to read it: https://technologyportal.ashrae.org/Journal/ArticleDetail/772

- Pete Conte

Chairperson

## CTTC



With the continued push for building electrification, more and more engineers are turning to VRF (Variable Refrigerant Flow) systems to meet their heating and cooling needs. In addition to the benefits of electrification, VRF systems offer quieter operation, simultaneous heating and cooling, and built-in energy recovery. As with any system type, proper installation and design can improve efficiency and performance. Check out this past month's January 2023 issue of the ASHRAE Journal, "The VRF Learning Curve" to learn VRF system installation and design best practices.

We look forward to seeing you at the next ASHRAE meeting on Tuesday, February 21<sup>s</sup>.

Thomas DiBenedetto CTTC Chairman

Murat Bayramoglu CTTC Co-Chairman

#### The VRF Learning Curve

From the January 2023 ASHRAE Journal

Authored by Michael Gallagher, PE

#### Article Summary

While the concept of VRF has been around since the 1970s, the invention of variable speed compressors and improvements in control systems solved the issue of incomplete oil return and allowed VRF systems to reach their full potential. A properly functioning VRF system requires good design and installation practices.

#### **Pipe Expansion**

Designers often neglect to include provisions for expansion and contraction. Designers should work with manufacturers to confirm maximum lengths before expansion joints or loops are required.



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### CTTC

#### **Distribution Box Service Access**

With the advent of stepper motor flow regulating valves to replace solenoid valves in the distribution boxes, the distribution boxes no longer make annoying clicking sounds and may now be installed in more accessible locations rather than hidden away.

#### System Refrigerant Charge

VRF systems work better when they are properly charged with refrigerant. When VRF piping is run through shafts, the shafts must be designed with adequate space to identify and repair refrigerant leaks.

To properly charge refrigerant systems, installers must share actual installed piping layouts with the product manufacturer to identify proper refrigerant charge. System total piping length can be too short or too long. Overcharged systems are common when installers rely on design drawings rather than as-builts to determine refrigerant charge, and this puts major strain on compressors.

"A good VRF installation is an iterative redesign process between the field foreman and the project manager, with periodic reruns through the manufacturer's software based on actual distribution box and fan coil locations."

#### **Isolation Valves**

To permit repair work on VRF systems, isolation valves should be installed for each fan coil unit either near the terminal unit or at the distribution box to avoid requiring full system shutdowns for minor repairs.

#### **Filtration**

The COVID era brought a high demand for MERV 13 filtration. Designers should not assume that every ducted VRF fan coil can use a MERV 13 filter, and recognize that there may be filter housing alterations or accessories required.

#### **Condensate Pumps**

VRF terminal units are typically furnished with condensate pumps that have only 2 to 3 feet of pump head. For systems requiring higher condensate line elevation, alternate pump arrangements are required.

#### **Control System Upgrades**

For tenant fit out systems, the condensing units are often installed prior to the tenant terminal fan coil units. Because of the rapid improvements in VRF systems year after year, the terminal units are often 1 or 2 generations newer than the condensing units, and control systems require software and firmware updates to be compatible. While typically inexpensive, these updates can delay system startup and project turnover, and should therefore be identified early.

## YEA



## Leadership Weekend 1.0

Registration for the spring YEA Leadership Weekend is still open until February 24th! This event will be hosted in Miami, Florida from March 17<sup>th</sup> through the 19<sup>th</sup>. Please visit the link below for additional information on this event.

https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yeaevents-and-programs/yea-leadership-weekend

## Leadership Weekend 2.0

Additionally, registration for Leadership Weekend 2.0 is open until March 16th. If you had previously attended 1.0 last year, please look into this event as Ralph expands upon the skills taught during 1.0.

## <u>LeaDRS</u>

Similar to the Leadership U program, LeaDRS, allows a region to select any ASHRAE member to shadow their Director and Regional Chair (DRC) at an ASHRAE Conference. To apply for this program you must contact the DRC directly. For Long Island that would be Steven Sill.

Region	DRC	Email
Region I	Mr. Steven C Sill	r01drc@ashrae.net

### - Michael Steven Gerazounis

YEA

## **Student Activities**



Welcome back! Hope everyone has enjoyed the nice weather in the past weeks. As the clock is ticking, we have a couple of due dates around the corner.

First, the ASHRAE Student Activities Committee is offering two \$1,000 USD **Travel Grants** to help subsidize students to travel to the Winter Conference in Atlanta, Georgia in February 2023.



Applications are due by September 30, 2022. So, if interested, apply online NOW:

https://www.ashrae.org/communities/student-zone/scholarships-and-grants/student-activities-travel-grant

Second, the **ASHRAE Undergraduate Program Equipment Grants Program** provides grants to engineering, technical and architectural schools worldwide with the goal of increasing student knowledge, learning and awareness of the HVAC&R industry. Grants shall be used to fund equipment and supplies for undergraduate projects and 2-year technical school projects that focus on ASHRAE-related topics. Grants may cover projects lasting from one academic term up to one year.

Early-bird deadline for Undergraduate Equipment Grant Applications are November 15, 2022.

Third, the **ASHRAE 3D Modeling Competition** will provide students with the opportunity to take the first steps in designing a building's HVAC system. This competition will expose students to the process that designers and engineers go through when designing building systems.



Registration Deadline for <u>Modeling Competition</u> is the **November 30, 2022.** 

Please reach out for more information if you are interested in participating of any of the above programs. I look forward to seeing you in the 2023 ASHRAE Winter Conference!

- Zhigang Xu

Student Activities Chair

# Sustainability Committee



Please join ASHRAE Long Island in an Earth Day Panelist event being hosted at the New York Institute of Technology. We will be having an open discussion on sustainability in HVAC, and how it affects our day-to-day lives, as well as our careers. We hope to see you there!

Event Details: New York Institute of Technology (NYIT) Harry Schure Hall - Room #130 April 19 @ 12:45pm

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## **Government Affairs Committee (GAC)**



## Eeny, meeny, miny, moe, Which refrigerants should actually Go? 410a, 134a, R32, R1234YF, R744

Sorry for the Childish intro, but it makes a point of a how people with a single-minded perspective and no knowledge of maintenance and manufacturing are the ones making the decisions and the pathway forward more challenging.

To throw another wrinkle into the mix the different agencies; EPA, NY State, NY City are all looking at different timelines and environmental Impact info. For instance the EPA is looking at GWP# based on a 100 year scale.

NY state has decided to look at a 20-year scale. Of course, the EPA has reorganized their thoughts and now revamped the numbers.

Well, you probably guessed it everyone has different villains and heroes.

Alphabet Soup Translator.... GWP – Global Warming Potential

Here is a chart that shows some major number shifts when you change the measurement timeline.

	Refrigerants	Standard 100-Year GWP	Latest 100-Year GWP	20-Year GWP	ASHRAE
	R- 134a	1430	1530	3710	A1
High GWP	R-410a	2088	2256	4260	A1
	R-32	675	771	2430	A2L
EPA 700-300	R-513a	629	673	1663	A1
GWP	R-454b	465	531	1675	A2L
	R-515b	287	324	490	A1
	R-1234yf/1234zeE	<1-3	<1-1-4	1-4	A2L
	R-290 (Propane)	3	<1	<1	А3
EPA 150 GWP	R-744 (CO <sub>2)</sub>	1	1	1	Al
	R-717 (Ammonia)	0	0	0	B2

Now you can see that the main focus that sticks out is the R-410a vs R-32, R-454B.

410a is bad at 100 years but Horrible at 20 years.

Even R-32 (our savior) we are at numbers Appx 3.5X of our max targets(700) on the 20 year model. My guess is if we lowered this down to the 7-year model (The End of the World) all would be much worse. There is some good news here CO2 R-744 has a very low GWP rating. It is also listed as an A1 type refrigerant which means it's pretty harmless in those safety categories. So, what the bad news? Pressure- Generally 1250psi and above. I can't imagine a VRF system being allowed to have 200-400 ft runs through a building at that pressure. Not to mention heat pump reversing valves, Heat Exchangers, Compressors all operating atV those pressures is surely going to drive up costs and increase service requirements. So while a CO2 Heat Pump may work as a package system, there is no one bullet for every gun solution.

Till Next Time...

Richard Smith – GAC Chair. 006ggac@ashrae.net

## **MEMBERSHIP PROMOTION**



Did you know that there are four membership grades with different benefits, and that they are based on your time in ASHRAE? Many people enter ASHRAE as students. At the student level, they may not hold office in ASHRAE, BUT can participate in technical committees that essentially shape the industry. In addition, students can begin to network with HVAC professionals and build bridges that will serve them well when they are ready to enter the workforce. In terms of building a solid resume, there is no better way to spend \$25!

After graduation, students can move into an Affiliate Members through the Smart Start Program. For three years this level of membership allows them to keep their fees relatively low while they build their social and professional networks and

advance their careers. Another key benefit is they gain access to discounted ASHRAE publications and are eligible for various products.

Affiliate members naturally advance to Associate Members after 3 years. Now that you have experience you are ready to get involved and change the world. Associate Members can participate in the governance of their chapters and take advantage of leadership opportunities all over the globe.

Progressing 12 years forward, you become a Member. At this point, you're confident in your professional skills, comfortable in leader-ship positions, and well established in the industry. Even better, you are eligible to hold office and vote all the way up at Society level. As an ASHRAE Member, you really can change the world through ASHRAE's global reach.

Unfortunately, none if this is possible if you <u>allow your membership to lapse</u>. Even if you've been a member for 20 years, if you allow your membership to expire (90 days past due) you lose your seniority, and the clock goes back to zero when you come back. Don't let this happen to you! Don't lose what you've worked so hard for. Renew your membership and hold your esteemed place in the conversation. Don't forget to check our website at <u>www.ashraeli.org</u> for the most current information about your Long Island chapter.

I would like to informally welcome our new members this month:

- 1. James Purcell
- 2. Jafet Tavarez
- 3. Laura L St Germain
- 4. Jonathan Rodriguez

Looking forward to another great month and thank you in advance for your support, time and guidance.

Michael H. Razzano Membership Promotion Chair

Michael Gerazounis Membership Promotion Co-Chair

## ASHRAE CERTIFICATIONS

## Certification



ASHRAE, accredited by ANSI under ISO/IEC 17024 for the High-Performance Building Design Professional (HBDP) program, has certified more than 2,000 Built Environmental Professionals.



#### ASHRAE certification programs:

- Are developed by industry practitioners who understand the knowledge and experience that are expected for superior building design and system operation
- Assure employers and clients of subject mastery
- · Serve as a springboard for continued professional development
- Offer an easy-to-apply process

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

## Join ASHRAE on Social Media!



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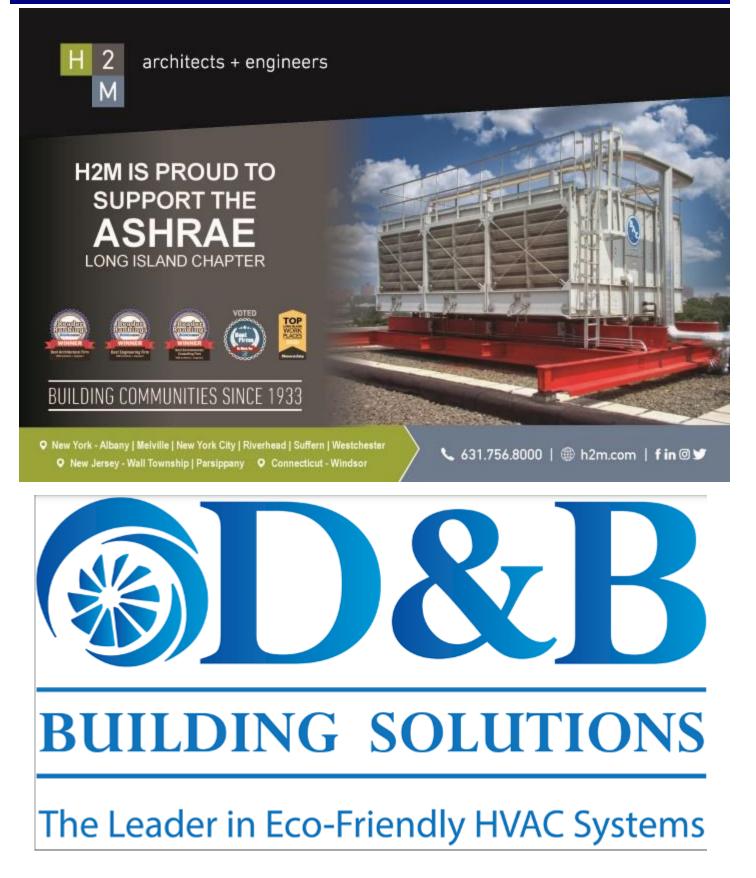




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