

# THE LONG ISLAND SOUNDER



# IN THIS ISSUE



President's Message .....	3
Meeting Program .....	4
Monthly Meetings .....	5
Long Island Chapter Officers .....	6
Long Island Chapter Past Presidents .....	8
YEA .....	9
Government Affairs Committee .....	14
Historian .....	16
Sustainability.....	18
Refrigeration .....	19
Diversity .....	24
CTTC .....	26
Research Promotion .....	28
Student Activities .....	30
ASHRAE Certifications .....	33
ASHRAE 365 .....	34
ASHRAE Conferences .....	35
Advertisements .....	36



---

# President's Message

---

Hello ASHRAE Long Island!

We kicked off the year on a high note with our September meeting on ASHRAE 62.1 and the Indoor Air Quality Procedure. The session highlighted how IAQP can raise the bar for healthier indoor environments while keeping energy use and costs in check. It was a timely reminder that innovation in our field isn't just about new equipment — it's about smarter strategies that make a difference in every building we touch. The questions, discussion, and energy in the room showed exactly why our chapter is such a strong community of professionals.

Now it's time to look ahead — and October is bringing a program you won't want to miss. LG will be joining us to discuss VRF systems and the A2L refrigerant transition. With the Kigali Amendment and AIM Act reshaping refrigerant regulations, and ASHRAE 15 and 15.2 guiding design requirements, this is a conversation we all need to be part of. The transition to A2Ls may look a little intimidating on paper, but this program will break it down into clear, practical steps. By the end, you'll walk away ready to tackle the changes with confidence. And since it's October, let's be honest — the only "scary" things this month should be Halloween decorations, not refrigerant codes.

I also want to recognize the incredible support of our members, sponsors, and volunteers. Every time you attend a meeting, share your insight, or lend a hand, you're helping keep our chapter strong and vibrant. This year is off to a fantastic start, and the momentum is only building.

So mark your calendars, bring your curiosity, and join us at Westbury Manor for another evening of learning, networking, and connection. October is about moving forward together — with fresh ideas, new opportunities, and maybe even a little Halloween spirit. See you there!

Cheers,  
Matthew Catan  
President, ASHRAE Long Island Chapter

# MEETING PROGRAM

Attendees  
Will Earn  
1 PDH!



Anthony Frizalone

## Fees:

Members - \$50 pp  
Guests - \$70 pp  
Students - \$15 pp

**Date:** Tuesday, Oct. 14th 2025

**Time:** 6PM-9PM

6:00 PM - Cocktails/Networking

7:00 PM - Dinner Presentations

8:45 PM - Conclusion

**Location:** *Westbury Manor*

1100 Jericho Tpke., Westbury, NY 11590

Directions are posted at @ [www.ashraeli.org](http://www.ashraeli.org)

## Presentation Topic: VRF and The A2L Refrigerant Transition

1. Understanding the Regulatory Shift
2. Kigali Amendment & AIM Act driving refrigerant specification changes
3. Designing to Meet Key Transition Milestones –
4. EPA phaseout timelines and implications for equipment selection and installation
5. Evaluating R-32 for Performance and Safety –
6. R-32 vs. R-454B: thermodynamic benefits, discharge temp, and LG's mitigation strategy
7. Interpreting the New Code Landscape –
8. What ASHRAE 15 & 15.2 require for charge limits, connected spaces, and mitigation controls
9. Questions & Assessment of Learning

## About our Speaker:

Anthony Frizalone is a Sr Regional Sales Engineer with LG Electronics Air Conditioning Technologies group with over 25 years of experience in the HVAC industry. Anthony lives in Buffalo, NY but is originally from NYC. He graduated from Steven's Institute of Technology with a Bachelor of Engineering degree in Mechanical Engineering. He has extensive knowledge of various HVAC systems including chilled water, hot water, VRF, DOAS, water source heat pump, and air handling systems. Outside of his professional life he is actively involved in his son's various sports teams, and they enjoying traveling together to ride the country's tallest and fastest roller coasters.

# Chapter Monthly Meeting - Program for 2023/2024

<p>September 9, 2025* At Westbury Manor</p> <p>Dinner Presentation – ASHRAE 62.1 Understanding the Indoor Air Quality Procedure</p> <p>Presenter: Tim Boyd</p> <p style="text-align: right;">**1 PDH*</p>	<p>March 10, 2026* At Westbury Manor</p> <p>Long Island Trade Show</p>
<p>October 14, 2025* At Westbury Manor</p> <p>Dinner Presentations - VRF and The A2L Refrigerant Transition</p> <p>Presenter- Anthony Frizalone</p> <p style="text-align: right;">**1 PDH**</p>	<p>April 14, 2026</p> <p>Dinner Presentation— TBD</p> <p style="text-align: right;">**1 PDH**</p>
<p>November 11, 2025 * At Westbury Manor</p> <p>Dinner Presentation— TBD</p> <p>Presenter- TBD</p> <p style="text-align: right;">**1 PDH**</p>	<p>May 2026 * Cherry Valley Club, Garden City, NY</p> <p>ANNUAL GOLF OUTING</p>
<p>December 9, 2025 * At Westbury Manor</p> <p>Dinner Presentation—TBD **1 PDH**</p>	<p>May 12, 2026</p> <p>Annual Field Trip—TBA</p>
<p>January 13, 2026 * At Westbury Manor</p> <p>Dinner Presentation— TBD</p> <p style="text-align: right;">**1 PDH**</p>	<p>June 2026 * At Westbury Manor</p> <p>Free Buffet Dinner for Members</p> <p>PAST PRESIDENTS NIGHT &amp; OFFICER INSTALLATION STUDENT SCHOLARSHIPS TO BE AWARDED ASHRAE History Quiz and prize Give-A-Ways</p>
<p>February 10, 2026</p> <p>Dinner Presentation— TBD</p> <p>Presenter: TBD</p>	<p>July 2026- TBD (4pm-8pm) * Dixie II @ Captree State Park Boat Basin, NY</p> <p>ANNUAL FISHING TRIP</p>
	<p>August 2026</p> <p>Chapters' Regional Conference (CRC) Region I GRANIT STATE</p>

# Long Island Chapter Officers & Committees

ASHRAE 2024/2025 OFFICERS		
POSITION	NAME	EMAIL
President	Matthew Catan	c006@ashrae.net
President-Elect	Michael Razzano	c006pe@ashrae.net
Vice President	Zhiganag XU	c006vp@ashrae.net
Treasurer	Richard Smith	c006tr@ashrae.net
Secretary	Michael S. Gerazounis	c006sec@ashrae.net
Board of Governors	Thomas DiBenedetto	c006bog1@ashrae.net
Board of Governors	Pete Conte	c006bog2@ashrae.net
Board of Governors	Steven Gerazounis	c006bog3@ashrae.net
Board of Governors	Michael Nigro	c006bog4@ashrae.net
Board of Governors	Richard Smith	c006bog5@ashrae.net

ASHRAE 2023/2024		COMMITTEES	
COMMITTEE	NAME	EMAIL	
Programs & Special Events	Michael Nigro	c006pe@ashrae.net	
Membership (MP)	Michael Gerazounis	c006mep@ashrae.net	
Refrigeration	Kenny Balci	c006ref@ashrae.net	
Chapter Technology Transfer (CTTC)	Michael Razzano	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	Elizabeth Jedrlinic	c006his@ashrae.net	
Student Activities (SA)	Katlyn Coolbaugh	c006sa@ashrae.net	
Young Engineers in ASHRAE (YEA)	Steven Gerazounis	c006yea@ashrae.net	
Webmaster	Frank Paradiso	c006web@ashrae.net	
Nominating	Michael Gerazounis, PE, LEED AP	nominating@ashraeli.org	
Reception & Attendance	Steven Gerazounis	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			

**Editor's Note: The appearance of any technical data, editorial material, or advertisement in this set of publications does not constitute endorsement, warranty or guaranty by ASHRAE of any product, service, procedure, design, or the like. ASHRAE does not warrant that information is free from errors, and ASHRAE does not necessarily agree with any statement or opinion in this set of publications. The entire risk of the use of any information in this set of publications is assumed by the user. Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without special permission.**

# Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1982	Timothy Murphy, PE	2006	John Nally
1959	Clyde Alston, PE	1983	Leon Taub, PE	2007	Peter Gerazounis, PE, LEED AP
1960	Sidney Walzer, PE	1984	Raymond Combs	2008	Steven Friedman, PE, HFDP, LEED AP
1961	Sidney Gayle	1985	Edward W. Hoffmann	2009	Steven Giammona, P.E., LEED AP
1962	William Kane	1986	Jerome T. Norris, PE	2010	Nancy Román
1963	Louis Bloom	1987	Abe Rubenstein, PE	2011	Carolyn Arote
1964	Milton Maxwell	1988	Michael O'Rourke	2012	Brian Simkins, LEED AP
1965	Will Reichenback	1989	Mel Deimel	2013	Andrew Manos, LEED AP BD+C
1966	Joseph Minton, PE	1990	Robert Rabell	2014	Richard L. Rosner, P.E.
1967	Irwin Miller	1991	Gerald Berman	2015	Thomas J. Fields, P.E., LEED AP
1968	Walter Gilroy	1992	Donald Stahl	2016	Donald Kane, P.E.
1969	Charles Henry	1993	Ronald Kilcarr	2017	Andrew Dubel, P.E., LEED AP
1970	William Wright	1994	Jerald Griliches	2018	Richard Halley
1971	Louis Lenz	1995	Walter Stark	2019	Frank Paradiso
1972	Ronald Levine	1996	Joe Marino	2020	James Hanna
1973	Henry Schulman	1997	Norm Maxwell, PE	2021	Matthew J. Vitrano
1974	Myron Goldberg	1998	Alan Goerke, PE	2022	Murat Bayramoglu
1975	John N. Haarhaus	1999	Frank Morgigno	2023	Michael Nigro
1976	Richard K. Ennis	2000	Michael Gerazounis, PE, LEED AP	2024	Elizabeth Jedrlinic
1977	Kenneth A. Graff	2001	Ray Schmitt		
1978	Evans Lizardos, PE, LEED AP	2002	Steven M. Stein, PE		
1979	Albert Edelstein	2003	Andrew Braum, PE		
1980	Ralph Butler	2004	Claudio Darras, P.E.		
1981	Robert Rose, PE	2005	Craig D. Marshall, P.E.		



# YEA

Hello everyone, I am your YEA chair, Steven Gerazounis. I hope you all are looking forward to another great year! For all the new members if you are unfamiliar with the YEA committee, its purpose is to provide ASHRAE members 35 years old or younger with opportunities to network, educate and grow themselves through chapter events. Please check back regularly to the newsletter and on ASHRAE's website for all the news and opportunities available. I look forward to seeing as many of you as possible in the upcoming months at ASHRAE and YEA events!


We are currently planning two events for October, one factory tour and one social event. Stay tuned and check your emails for more details!

On a Society level, ASHRAE offers many programs and events that can enhance the professional development of YEA members, such as Leadership Weekend, Leadership U, LeaDRS, ASHRAE Connect, and the HVAC Design Scholarship.

### YEA Events


		
<b>YEA Leadership Weekend 1.0</b>	<b>YEA Leadership Weekend 2.0</b>	<b>YEA Leadership International</b>
<a href="#">LEARN MORE</a>	<a href="#">LEARN MORE</a>	<a href="#">LEARN MORE</a>

**YEA Programs**




**Leadership U**

LEARN MORE




**LeaDRS**

LEARN MORE




**HVAC Design Scholarship**

LEARN MORE



**Presidential Initiative Challenge**  
(formerly YEA Design Initiative)

LEARN MORE



**ASHRAE Connect**

LEARN MORE

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

### Leadership Weekend 1.0

Coming to Seattle this fall (November 7th-9th) is YEA Leadership Weekend 1.0 (YLW)! This event is for young professionals who are looking to improve in the areas of leadership, networking, communication, and professional development. YLW is led by Ralph Kison as he guides individuals through a self-discovery process that reveals their strengths, talents, gifts, and passion. In addition, there will be an optional technical tour of Benaroya Hall on November 6th. Please use the link below to register, and hurry if you are interested as registration closes on October 10th!

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

### Leadership U

If you wanted the opportunity to participate and follow regional and society officers there are two great options to do so! With Leadership U (4) YEA members will be selected for the winter or annual conference and attend all of their respective society officer's events, board meetings and social activities. Applications for the 2026 Winter Conference in Las Vegas are open now. Please use the link below to register and for more information.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/leadership-u>



#### **2025 Winter Leadership U Participants**

*Mohammed Murtaza, ASHRAE Falcon Chapter, RAL*

*Kaustubh Deepak Wani, Pune Chapter, Region XV*

*Bin Lin, Macao Chapter, Region XIII*

*Steven Gerazounis, Long Island Chapter, Region I*

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

#### **Leadership Weekend 1.0**

Coming to Seattle this fall (November 7th-9th) is YEA Leadership Weekend 1.0 (YLW)! This event is for young professionals who are looking to improve in the areas of leadership, networking, communication, and professional development. YLW is led by Ralph Kison as he guides individuals through a self-discovery process that reveals their strengths, talents, gifts, and passion. In addition, there will be an optional technical tour of Benaroya Hall on November 6th. Please use the link below to register, and hurry if you are interested as registration closes on October 10th!

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

#### **Leadership U**

If you wanted the opportunity to participate and follow regional and society officers there are two great options to do so! With Leadership U (4) YEA members will be selected for the winter or annual conference and attend all of their respective society officer's events, board meetings and social activities. Applications for the 2026 Winter Conference in Las Vegas are open now. Please use the link below to register and for more information.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/leadership-u>

## **Technical Committees**

Are you looking to get more involved with your industry or ASHRAE as a whole? Take a look to see if there are any technical committees that interest you!

<https://ashrae.org/technical-resources/technical-committees>

Getting more involved gives you the opportunity to directly impact our industry and expand your knowledge base. To learn more about these committees you can also reach out via phone or email at:

404-636-8400

tcstaff@ashrae.net

## **YEA Awards**

So many YEA members are deserving of awards for their hard work, dedication and faithful service to this society but don't receive them because people don't know they are eligible to be nominated. Please look into the numerous awards available for YEA members under the Honors and Awards tab.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/honors-and-awards>

For any awards that you cannot nominate yourself or another YEA member you may need to reach out to your YEA Regional Vice Chair, Society YEA Committee member or Director and Regional Chair to provide them with the information they require to submit a nomination form.

## **ASHRAE Connect**

Are you a first-time attendee at the ASHRAE Conference, or have you attended before but felt overwhelmed by the many options? This new shadowing program offers the perfect opportunity to gain first-hand experience by following a member of ASHRAE through committee meetings and conference events.

Designed for ASHRAE members seeking to build stronger connections and deepen their understanding of ASHRAE's processes, this program aims to help you navigate the conference with guidance and insight from experienced members. By participating, you'll not only gain valuable knowledge but also feel welcomed in committee meetings, ensuring you have a seat at the table and a voice in the discussions that shape our industry.

[ASHRAE Connect](#)

## **2025-2026 Presidential Initiative Challenge**

The Presidential Initiative Challenge (previously the Decarbonization Challenge) is a year-long competitive fund (\$1,000 - \$10,000) program to implement projects within local chapters that are tied to the year's presidential theme. Bill McQuade has announced his presidential theme, Indoor Environmental Quality. This year's program will be centered around implementing IEQ projects. This program is implemented through the YEA committee with grass roots outreach through the YEA chairs/committees at each chapter. Applications for the program will remain open until November 3rd, 2025.

<https://www.ashrae.org/about/yea-presidential-initiative-challenge>

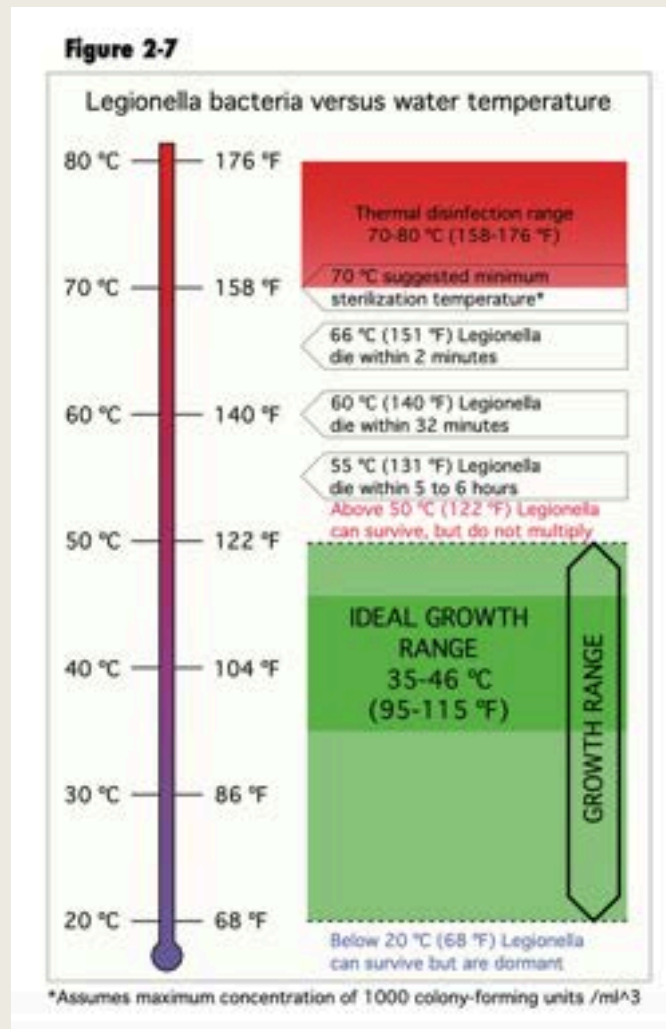
Please feel free to reach out to me with any questions or comments about YEA.

-Steven Gerazounis



# Government Affairs

The Two Subject matters that ASHRAE it Hot to Trot on are Indoor Air Quality and Legionella. My Focus will be commentary on Legionella regarding Energy Policy Vs Public Safety. Let us Look at some Factual information about Legionella.



Download the complete Idronics 22 for more info.

<https://www.caleffi.com/en-us/magazine/22-safe-and-sanitary-hot-water-delivery-systems>

2 Areas of encroachment to a living space are the Water Tower on the roof and the Domestic Hot Water Recirculation systems.

1. Rooftop Tanks /The water tower will be exposed to up to 100deg temperatures in the summer months allowing the stored water to get as warm as 75,80,85,90deg. This is especially true in older buildings and lower income buildings where upgrades haven't been made in decades.

2. Domestic Hot water systems

A. Not maintaining Temperatures above 131 deg. In Storage Tanks due to Standby losses.

B. Poor recirculation design allowing for growth in DHW systems.

Richard Smith – GAC Chair.

006ggac@ashrae.net



---

# Historian

---

*"History cannot give us a program for the future, but it can give us a fuller understanding of ourselves, and of our common humanity, so that we can better face the future."*

*-Robert Penn Warren*

Diving deep into the stacks of Stony Brook University's impressive library, a well-preserved copy of all ASHRAE 1959 journals rests bound on a shelf. Available via special request, this bound set of journals offers a rare glimpse into a world over 60 years past. While the physics and equations littered throughout the journal pages have stood the test of time, the electronic components in the equipment advertisements have noticeably evolved. Reviewing these materials reminds us of the extensive resources available to the Long Island engineering community through our local universities, libraries, and historic museums.

It was no small feat deciding which excerpt from the hundreds of pages from the first ASHRAE journals to share in our own Long Island newsletter this month. Ultimately, the President's page stood out as an opportunity to understand the real meaning of ASHRAE at its inception. In his address, ASHRAE's first president, Cecil Boling, identifies three important aspirations for ASHRAE:

1. Pursue more efficient use of materials, energy, and resources.
2. Present opportunities to those seeking an engineering career.
3. Use the society as a platform from which to make positive changes in society.

Today, ASHRAE continues to hold strong to these powerful aspirations.

Thomas DiBenedetto, PE

Historian



# Sustainability

## Smart & Connected: HVAC in the Age of Intelligence

### Introduction

The HVAC industry is entering an era where equipment no longer just runs—it thinks, predicts, and adapts. The integration of smart thermostats, advanced controls, sensors, and predictive diagnostics is transforming how we design, operate, and maintain building systems. For the New York metropolitan area—home to some of the world’s most energy-intensive buildings—these technologies are not only an upgrade in convenience, but a critical step toward sustainability and compliance with evolving energy codes.

### What Makes HVAC “Smart”?

Smart HVAC systems combine three capabilities:

1. **Data Collection:** Sensors track temperature, humidity, occupancy, CO<sub>2</sub> levels, and equipment status in real time.
2. **Automated Response:** AI-driven controllers adjust airflow, heating, or cooling instantly, reducing energy waste without compromising comfort.
3. **Predictive Diagnostics:** Cloud-based platforms analyze trends to anticipate equipment failures—allowing service before costly breakdowns occur.

A recent DOE report found that buildings adopting smart HVAC and controls can reduce energy consumption by **20–30%**, particularly when paired with demand response programs that align with New York’s push to modernize its electrical grid.

### The New York Context

In the metropolitan area, smart HVAC aligns with Local Law 97 and Local Law 88, which require large building owners to reduce emissions and upgrade sub-metering and controls. These laws make advanced building automation systems (BAS) not just desirable, but essential.

- **Office Towers in Midtown:** Building owners are retrofitting BAS platforms to integrate lighting, HVAC, and plug load controls under one umbrella system.
- **Universities and Hospitals:** Campuses such as NYU and Northwell Health are piloting occupancy-driven HVAC scheduling to reduce energy during nights and weekends.
- **Transit-Adjacent Developments:** Projects in Long Island City and Brooklyn are using IoT-enabled heat pumps and VRF systems that communicate directly with smart meters to participate in demand response—helping Con Edison balance peak loads.

## Benefits Beyond Energy

Smart HVAC also delivers:

- **Healthier Indoor Environments:** Real-time IAQ monitoring (PM2.5, VOCs, CO<sub>2</sub>) ensures ventilation meets ASHRAE 62.1 requirements while avoiding energy waste from over-ventilation.
- **Operational Efficiency:** Facilities teams gain mobile access to dashboards and alerts, streamlining maintenance.
- **Tenant Engagement:** Apps now let tenants personalize comfort preferences within defined ranges—improving satisfaction while still capping energy use.

## Challenges & Considerations

Adopting smart systems isn't without hurdles:

- **Cybersecurity:** Protecting building automation networks is critical in a dense metro environment.
- **Interoperability:** Integrating legacy equipment with new smart platforms requires careful planning.

Equity in Access: Affordable housing retrofits must balance cost with benefits; programs like NYCHA's Clean Heat for All are beginning to incorporate smart controls alongside heat pumps.

## Key Takeaway

Smart HVAC is no longer a luxury—it's becoming the backbone of sustainable building operations in New York. By integrating data, automation, and predictive intelligence, these systems not only reduce emissions but also future-proof buildings for the challenges of climate change and evolving codes.

## Further Reading & Sources

For members who would like to explore this topic in more depth, here are some excellent resources used in preparing this article:

- Extu Blog: "Navigating HVAC Industry Trends in 2025" – <https://extu.com/blog/navigating-hvac-industry-trends/>
- U.S. DOE / ServiceTitan Report on HVAC Energy Efficiency Statistics – <https://www.servicetitan.com/blog/hvac-statistics>
- Affordable Comfort Inc.: "What's New in HVAC for 2025" – <https://affordablecomfortinc.net/2025/01/whats-new-in-hvac-for-2025-trends-to-watch/>



# Refrigeration

Check out an article regarding A2L Commercial Refrigeration Equipment. See below link:

[A2L Commercial Refrigeration Equipment Hits the Market | ACHR News](#)

With the necessary codes and standards in place, A2L systems are finally available.

The transition to mildly flammable (A2L), [lower-GWP refrigerants](#) is well underway, driven by the phasedown of high-GWP HFCs under the federal AIM Act. In commercial refrigeration, this means that new systems must use refrigerants that meet GWP limits of 150 or 300, depending on equipment type and/or size ([compliance dates vary](#)).

The [rollout](#) of A2L refrigeration equipment took a little longer than anticipated, due to the need to finalize the necessary codes and safety standards. But all that work is done, and the first wave of A2L-compatible commercial refrigeration equipment is now available, with more introductions expected later this year.

## **Refrigerant Choice**

Manufacturers had a variety of [A2L options](#) from which to choose for their commercial refrigeration equipment, but most settled on R-454A (239 GWP), R-454C (148 GWP), and/or R-455A (146 GWP). All three can be used in systems with refrigerant charges under 200 lb., which require a GWP below 300. For systems over 200 lb., only R-454C and R-455A meet the stricter 150 GWP limit.

Heatcraft Refrigeration Products is offering all three of these refrigerants in its new commercial refrigeration equipment, said David Bolanos, director of product management and marketing at Heatcraft Refrigeration Products.

“These three A2L refrigerants, developed primarily for refrigeration applications, operate in both medium- and low-temperature applications and offer our customers a flexible choice of refrigerants for their needs.”

He added that these three refrigerants have similar characteristics to their HFC counterparts with regard to performance.

“The difference in refrigeration capacity depends on which HFC or HFO refrigeration system refrigerant it is being compared to, so it’s recommended that designers of refrigeration systems conduct due diligence to ensure proper selection and capacity

matching, especially in replacement-type applications,” he said. “Users should always consult the refrigeration OEM’s published Technical Bulletins for capacity comparisons.”

KeepRite Refrigeration’s A2L-compatible systems will also utilize R-454A, R-454C, or R-455A. When comparing these new refrigerants to the HFCs they replace, the company found that R-454A offered the best capacity and efficiency when compared to R-404A, said Vince Zolli PE, general manager and vice president of engineering at KeepRite Refrigeration.

“It also performed similarly to R-448A, which is already recognized and accepted in the market,” he said. “R-454A demonstrated the best capacity and efficiency compared to R-454C and R-455A in laboratory testing; however, R-454C and R-455A will still be available for customers seeking options below 150 GWP.”

Copeland also selected R-454A, R-454C, and R-455A for commercial refrigeration applications. According to Joe Summers, senior product manager, scroll and drives at Copeland, these three options have different capacities, performance characteristics, and GWP ratings, providing OEMs with the flexibility to meet refrigeration equipment requirements and comply with lower-GWP regulation targets.

“At less than 150 GWP, R-454C offers minor capacity loss — only ~8% — compared to R-404A, while minimizing excess glide, which would require OEMs to implement major system redesigns,” said Summers. “R-454C has a similar glide to R-448A, which is used widely today; thus, it helps OEMs meet the 150 GWP threshold, maintain adequate capacity levels, and have the least impact on system redesigns.”

For OEMs seeking to overcome the capacity loss of R-454C, stay below 150 GWP, and are willing to implement system design changes to support a higher glide level, Copeland is also approving R-455A. Summers noted that when compared to R-404A, R-455A offers higher capacity, but does come with ~22°F evaporator glide, which would require some system redesign, such as new coils.

“R-454A offers similar glide as R-448A and an 8% to 10% capacity gain compared to R-404A,” he said. “However, its 238 GWP rating can only be used in applications that allow refrigerants less than 300 GWP, such as remote condensing units. However, in these applications, it provides exceptional performance and minimizes OEM engineering and system redesign efforts.”

With a GWP of 150 or less required for certain types of equipment, the list of viable refrigerants narrows significantly — mostly to naturals or A2Ls, noted Adam Ciesielski, director of engineering at Zero Zone. “A2Ls, however, behave similarly to HFCs in terms of system performance. Their volumetric capacity for heat exchange is comparable, making them a practical alternative. We selected R-454C specifically for its lower glide compared to other low-GWP options.”

Danfoss offers a full line of system components that are compatible with most A2L and A3 (R-290) refrigerants used across the HVAC market today, said Trenton Yule, application engineer at Danfoss. “Depending on the application, the refrigerant used in any system will change. Many of the OEMs that we work with in the comfort cooling space have elected R-454B as the replacement for R-410A. A few manufacturers have opted for R-32. We also have components that support the product cooling market, with the common A2L refrigerant being R-454A, R-454C, and R-455A.”

### **New Options**

Commercial refrigeration manufacturers are rolling out a wide range of new equipment designed to accommodate A2L refrigerants. KeepRite Refrigeration, for example, has already launched its low-profile evaporators and remote condensing units with capacities ranging from .75 to 20 horsepower. Throughout the year, the company will introduce numerous additional A2L-compatible equipment, said Zolli.

“By the end of the year, our goal is to have A2L-compatible options available across our entire product range, which includes evaporators, condensing units, multi-compressor units, condensers, coils, air handlers, heat reclaim, and parallel compressor systems,” he said. “Safety features on our A2L units include a refrigerant detection system (RDS) with leak sensors, a mitigation board/controller, and safety shut-off valves. If a leak is detected, the mitigation board will keep the evaporator fans running to circulate air throughout the room.”

Danfoss has developed and/or requalified compressors, line components, microchannel heat exchangers, brazed plate heat exchangers, and sensors for use with A2Ls. Basically, everything offered for legacy A1 refrigerant systems needed to be adapted or developed to provide the same quality and performance with new A2Ls, said Yule.

“One highlight is our A2L gas sensor. This new sensor was developed by Danfoss for compliance with UL60335-2-40 for air conditioning and UL60335-2-89 code requirements for gas detection systems in units utilizing A2L refrigerants,” said Yule. “This new code addition states a system sensor must be placed internal to a refrigeration unit and provide one fixed alarm setpoint at or lower than 25% of the lower flammability limit (LFL). The alarm setpoint varies depending on the specific A2L refrigerant.”

Zero Zone is actively developing a full line of A2L-compatible refrigeration solutions across multiple product categories. This includes indoor and outdoor rack systems (up to 500 tons), single- and multi-compressor condensing units, and display cases, said Ciesielski.

“To accommodate A2L refrigerants, Zero Zone has implemented several key design changes focused on safety and compliance. These include integrated leak detectors to identify refrigerant leaks early, safety shutoff valves, and the use of non-arcing or isolated components to minimize ignition risks,” he said. “Additionally, mitigation fans are incorporated into display cases to circulate air in the event of a leak, helping to prevent the accumulation of flammable refrigerant concentrations around the refrigeration system and its components.”

According to Summers, Copeland is qualifying its entire product portfolio for use with A2L alternatives, from refrigeration scroll, semi-hermetic, and hermetic reciprocating compressor platforms and condensing units to valves, system electronics, controls, and VFDs.

“Our E3 supervisory control platform, case controllers, and connected leak detection devices feature built-in A2L refrigeration system optimization logic to oversee safety management, such as shutting off the compressor and other components or activating safety shut-off valves,” he said. To qualify their scroll and semi-hermetic compressor platforms for use with R-455A, R-454C, and R-454A, Copeland implemented numerous design changes, including the following:

- Hermetic housings that seal potential leak paths;
- Reinforced electrical enclosures;
- Spark-free terminals; and
- UL 60335-2-40 and UL 60335-2-89 compliant EVM/EVH variable-speed drives that keep charge sizes and discharge temperatures tightly controlled.

“In addition, our A2L-ready condensing units are all UL 60335-2-89 compliant and approved, assuring the proper design configuration for safety,” said Summers.

Heatcraft Refrigeration Products offers a range of A2L-compatible equipment, including the Pro3 self-contained, packaged, refrigeration system, as well as A2L-ready versions of their core commercial product lines, which include all remote condensing units and unit coolers.

“An exciting design element we introduced with these new A2L models, based on extensive input from our customers, is the capability to use the new A2L units with A1 legacy refrigerants,” said Bolanos. “Our A2L condensing units and unit coolers are UL listed for dual refrigerant class. That means our new A2L equipment can be used with A1 legacy HFC refrigerants, as well as the new A2L refrigerants for a flexible way to manage A1 to A2L conversions.”

Heatcraft's new A2L unit coolers offer a flexible pathway to A2L conversion to contractors and end users, said Bolanos. "Our customers have the choice to purchase a fully configured A2L system (i.e., remote condensing unit and unit cooler) with the RDS installed at the factory — this is great for new A2L applications or new room additions to existing facilities."

When replacing HFC equipment, Heatcraft offers the option to purchase the new A2L/A1 dual-class condensing unit or the new A2L/A1 convertible dual-class unit cooler. The A2L/A1 unit cooler, specifically, can be converted later with a field-installed RDS kit, said Bolanos.

"It's important to note that we are not upgrading existing A1-designed equipment. The conversion with the RDS kit occurs exclusively to our new A2L/A1 designed unit cooler and not to A1 HFC prior unit coolers with older designs."

With codes finalized and equipment now rolling out, the commercial refrigeration sector is fully stepping into the A2L era. Manufacturers are offering a wide range of solutions designed to meet current regulatory demands, as well as future-proof systems for years to come.

Kenny Balci



# Diversity, Equity & Inclusion

## Championing Diversity, Equity, and Inclusion in ASHRAE

In today's rapidly evolving world, the importance of Diversity, Equity, and Inclusion (DEI) cannot be overstated. As a global society, ASHRAE is recognizing more than ever the value of diverse perspectives, equitable opportunities, and inclusive environments. ASHRAE, as a leading organization in the HVAC&R industry, is committed to fostering a culture where every member feels valued, respected, and empowered to contribute to our collective success.

### ASHRAE's Commitment to DEI

ASHRAE has taken significant steps to embed DEI into its core values and operations. Here are some key initiatives and efforts:

1. **DEI Task Force:** ASHRAE has established a dedicated DEI Task Force to develop strategies and recommendations for promoting diversity, equity, and inclusion within the organization. This task force works to identify areas for improvement and implement actionable plans.
2. **Educational Programs:** ASHRAE offers a range of educational programs and resources focused on DEI. These programs aim to raise awareness, provide training, and equip members with the tools to foster inclusive environments in their workplaces and communities.
3. **Scholarships and Grants:** To support underrepresented groups in the HVAC&R field, ASHRAE provides scholarships and grants. These financial aids help ensure that talented individuals from diverse backgrounds have the opportunity to pursue careers in the industry.
4. **Inclusive Leadership:** ASHRAE is committed to promoting inclusive leadership at all levels of the organization. This involves ensuring diverse representation in leadership roles and decision-making processes.
5. **Partnerships and Collaborations:** ASHRAE collaborates with other organizations and industry partners to advance DEI initiatives. These partnerships help amplify efforts and create a broader impact.

## The Impact of DEI on the HVAC&R Industry

Embracing DEI within ASHRAE has far-reaching implications for the HVAC&R industry. A diverse and inclusive workforce brings a wealth of ideas and perspectives, leading to more innovative and effective solutions. It also helps attract and retain top talent, as individuals are more likely to join and stay with organizations that prioritize DEI.

Moreover, a commitment to DEI enhances ASHRAE's ability to address global challenges. As the world faces complex issues such as climate change and energy efficiency, diverse teams are better equipped to develop comprehensive and sustainable solutions.

### How You Can Get Involved

Every member of ASHRAE has a role to play in advancing DEI. Here are some ways you can contribute:

1. **Educate Yourself:** Take advantage of ASHRAE's DEI resources and educational programs to deepen your understanding of these important issues.
2. **Advocate for Change:** Use your voice to advocate for DEI within your workplace, community, and the broader industry.
3. **Mentor and Support:** Offer mentorship and support to individuals from underrepresented groups. Your guidance can make a significant difference in their professional journey.
4. **Participate in DEI Initiatives:** Get involved in ASHRAE's DEI initiatives and task forces. Your participation can help drive meaningful change.

Elizabeth Jedrlnic  
DEI Chair



## **Navigating the A2L Refrigerant Transition and Its Impact on HVAC**

The HVAC industry is entering a pivotal era with the transition to low-GWP (Global Warming Potential) refrigerants, most notably A2Ls such as R-32 and R-454B. This shift is not simply about replacing R-410A with a new refrigerant since it's a comprehensive change that will affect system design, safety protocols, code compliance, equipment availability, and ultimately how we approach projects in our region.

The driving force behind this movement is a combination of international and domestic regulatory actions. The Kigali Amendment to the Montreal Protocol and the AIM Act in the U.S. have set in motion an aggressive phasedown of high-GWP HFCs, requiring manufacturers, engineers, and contractors to rethink how HVAC systems are specified, installed, and maintained. The EPA's schedule to phase down R-410A will have a direct impact on equipment selection and pricing, meaning those who plan will avoid disruptions, redesign costs, and project delays.

A2L refrigerants like R-32 and R-454B provide tangible thermodynamic advantages and significantly lower GWP compared to R-410A. However, their mildly flammable classification brings new challenges. ASHRAE Standards 15 and 15.2 now impose requirements for charge limits, ventilation strategies, connected space considerations, and mitigation controls. These updates mean system designers must carefully evaluate indoor unit selection, piping design, and compliance strategies early in the project cycle. Manufacturers have responded by investing in mitigation technology and control solutions to ensure these refrigerants can be applied safely and reliably.

This transition is more than a technical challenge, along with it's also a business opportunity. Firms that educate themselves and their clients now will be in a stronger position to deliver projects that meet upcoming compliance standards, avoid last-minute design revisions, and maintain profitability. For Long Island and New York City projects, where design timelines and approval processes are often complex, staying ahead of these milestones is critical.

To help our chapter members prepare, ASHRAE Long Island is pleased to feature Anthony Frizalone, Sr. Regional Sales Engineer with LG Electronics Air Conditioning Technologies Group, as this month's presenter. Anthony brings more than 25 years of HVAC industry experience and a wealth of knowledge in VRF, DOAS, chilled water, and air handling systems. A Stevens Institute of Technology graduate in Mechanical Engineering, he has spent his career helping engineers and contractors solve complex design challenges and stay ahead of code changes.

In his PDH presentation, *"VRF and the A2L Refrigerant Transition,"* Anthony will cover the regulatory background behind the Kigali Amendment and AIM Act, explain how EPA phase-down milestones affect equipment availability, compare R-32 and R-454B performance and safety considerations, and interpret ASHRAE 15 and 15.2 requirements in practical terms. Attendees will also gain insight into LG's mitigation strategies and best practices for navigating this transition confidently. This is a timely and important topic for our industry, and we look forward to having you join us for what promises to be an informative and highly relevant session. Looking forward to seeing everyone!

Michael H. Razzano  
CTTC Chair



# Research Promotion

If we knew what we're doing it wouldn't be called research"  
– Albert Einstein

I would like to thank the companies who have participated in the annual 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 website.

This year's overall research promotion goal is \$2,720,000 with many research projects on board. Our chapter is expected to raise \$56,987.00 towards the overall goal. I am hoping that I can count on the continued support of all 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. Last year we were successful in beating our goal and am hopeful that this year we can continuously raise the bar.

We are hosting the 2025 ASHRAE REGION 1 CRC and have sponsorship packages available.

Thank you to our contributors!  
Individuals

Mr. John D. Nally  
Mr. Peter J. Conte, PE  
Ms. Elizabeth Jedrlinic  
Mr. Kenny Balci  
Mr. Steven Gerazounis  
Mr. Murat Bayramoglu  
Mr. Michael Steven Gerazounis  
Mr. Matthew K. Catan  
Mr. Thomas Arthur DiBenedetto

Mr. Zhigang Xu  
Mr. Michael Nigro  
Mr. Richard W. Smith  
Mr. Donald W. Kane, PE  
Mr. Michael H. Razzano  
Mr. Frank Paradiso  
Mr. Michael F Schiavo  
Mr. James R Tauby, PE  
Mr. James W Armstrong

**Contributions can be made in the following ways:**

Mail checks, made out to ASHRAE Research Promotion to:

Peter Conte

ASHRAE Research Promotion Chair

PO BOX 79

Commack, NY 11725

Hand check to me at any of the chapter meetings.

PayPal from the ASHRAE Long Island Website

Click Donate Button

[www.ashrae.org](http://www.ashrae.org)

Please make sure you accredit the contribution to the Long Island Chapter 006





# Student Activities

Hello everyone — and welcome to a brand new year of opportunity, growth, and connection! I'm honored to serve as your Student Activities Chair for 2025–2026, and I look forward to working with all of you to make this year one of our best yet.

This section of the newsletter will keep you informed about programs, events, scholarships, and ways to engage. I encourage you to share your ideas, projects, and successes — we want to spotlight you.

## Society Scholarships — 2026–2027 Cycle

Are you seeking funding for your studies while you contribute to the HVAC&R field?

Through ASHRAE's Scholarship Program, we aim to encourage students to pursue careers in engineering, engineering technology, and related fields that promote sustainable built environments.

### Key Points:

- Scholarships range between \$3,000 and \$12,500
- Applications typically open in October
- Awardees are selected for the upcoming academic year (Fall 2026 onward)
- Available across multiple categories: Undergraduate, Engineering Technology, Regional/Chapter, and University-specific

I strongly encourage eligible students to apply. I'll be sharing reminders and tips when the cycle opens.

[Scholarship Program](#)

## **High School Design Competition**

Calling all middle and high school students (ages 13–18) who are curious about HVAC, sustainability, or design!

This competition gives you the chance to design an HVAC system for a hypothetical building and learn about system integration, energy efficiency, and design best practices.

Important Dates:

- Submissions due: December 30, 2025
- Topic announcement and guidelines will be posted in early fall

Whether your teammates are from your school or a local club, this is a great way to stretch your creative and technical muscles.

[2025-2026 ASHRAE High School Design Competition](#)

## **Undergraduate Program Equipment Grants**

For those working on senior projects or capstone designs: you may be eligible to secure funding for materials and equipment related to ASHRAE-relevant work.

### **Grant Highlights:**

- For engineering, technical, or architectural programs
- Typically supports projects lasting one academic term up to one year
- **Application deadline:** December 15, 2025

[About Undergraduate Program Equipment Grants](#)

## **Additional Opportunities & Reminders**

- Society-level involvement: ASHRAE offers leadership programs (e.g. Leadership U, LeaDRS), committee engagements, and mentoring initiatives. As your chair, I'll help share how you can plug in.
- Newsletter contributions: I welcome news of your accomplishments — research, internships, awards, design projects. Let's celebrate each other.
- Planning your year: In the coming months, I'll be working with Student Branches to organize webinars, local events, and mixers. If you have ideas, I want to hear them.

I'm excited to get started and help make this year meaningful for all of us. If you have any questions, suggestions, or want to collaborate on events, don't hesitate to reach out. Here's to a productive, engaging, and inspiring 2025–2026!

— Katlyn Coolbaugh  
Student Activities Chair, ASHRAE Long Island

## Certification



**Certified**

*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.*

Energy Assessment

Energy Modeling

Commissioning

Healthcare  
Facility Design

High-Performance  
Building Design

Building Operations

### 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>



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.

Follow us on [Twitter](#)



## 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





Thank you to our 2025-2026 Sponsors!

Platinum Sponsors



Gold Sponsors



## **Advertising Rates:**

**Business Card \$200**

**Triple Size \$350**

**Half Page \$500**

**Full Page \$800**

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