

# THE LONG ISLAND SOUNDER



**Long Island**  
Chapter

**2024-2025**

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# PRESIDENT'S MESSAGE



## Introduction

It is hard to believe that summer is already ending, and we will soon be starting our new year with ASHRAE. I would like to thank Michael Nigro for an incredible year under his presidency. Through his leadership we hosted the first ASHRAE LI Trade show at Westbury Manor, gave the largest amount of student scholarships to date and hosted incredible programs and events for all chapter members. Thank you, Mike, for your years of dedicated service the Long Island Chapter. As incoming President, I would also like to thank all our annual sponsors, presenters and chapter members who help this chapter thrive.

As we embark on a new ASHRAE year, we are thrilled to welcome you back with renewed energy and enthusiasm. This year promises to be an exciting one, filled with robust programs, engaging YEA (Young Engineers in ASHRAE) events, and focused student efforts.

## ASHRAE Presidential Theme

This year, we are inspired by the theme set forth by the current ASHRAE President, Dennis Knight. The theme, "Empowering Our Workforce: Building a Sustainable Future" highlights the emergence of new technologies to the HVAC&R and building sciences and how ASHRAE will play a pivotal role in ensuring that the workforce remains adaptive and forward-thinking. We look forward to incorporating these principles into our activities and programs throughout the year. For more details on the president's theme, please visit the ASHRAE website:

[ASHRAE President](#)

## Regional Conference (CRC)

We are excited to announce that the Long Island Chapter will be hosting the regional conference this year! This important event will bring together chapter members and committee chairs from all 15 chapters in Region I. Our CRC committee is working diligently to prepare a memorable conference that will showcase the strength of the Long Island Chapter.

## Get Involved

We encourage all members to get involved and make the most of the opportunities available this year. Whether it's attending events, volunteering, or participating in committees, your engagement is vital to the success of our chapter.

Thank you again for your continued support and dedication to the ASHRAE Long Island Chapter.

Warm regards,

Elizabeth Jedrlnic

President, ASHRAE Long Island Chapter

## Chapter Monthly Meeting - Program for 2023/2024

<p><b>September 10, 2024*</b> At Westbury Manor</p> <p>Dinner Presentation – Pressure Independent Control Valves: Benefit of Electronic vs. Mechanical PI Technology Presenter: Rick Smith</p> <p style="text-align: right;"><b>**1 PDH**</b></p>	<p><b>March 11, 2025*</b> At Westbury Manor</p> <p>Long Island Trade Show</p>
<p><b>October 8, 2024*</b> At Westbury Manor</p> <p>Dinner Presentations - Integrating Renewable Energy Systems into Buildings Presenter- Shelia J. Hayter</p> <p style="text-align: right;"><b>**1 PDH**</b></p>	<p><b>April 8, 2025</b></p> <p>Dinner Presentation— TBD</p> <p style="text-align: right;"><b>**1 PDH**</b></p>
<p><b>November 12, 2025 *</b> At Westbury Manor</p> <p>Dinner Presentation— Refrigerant Leak Detection Guidance + Applications <b>Presenter– Alex Ballegoie</b></p> <p style="text-align: right;"><b>**1 PDH**</b></p>	<p><b>May 2025 *</b> Cherry Valley Club, Garden City, NY</p> <p><b>ANNUAL GOLF OUTING</b></p>
<p><b>December 10, 2024 *</b> At Westbury Manor</p> <p>Dinner Presentation—TBD <b>**1 PDH**</b></p>	<p><b>May 12, 2025</b></p> <p><b>Annual Field Trip—TBA</b></p>
<p><b>January 14, 2025 *</b> At Westbury Manor</p> <p>Dinner Presentation— TBD</p> <p><b>**1 PDH**</b></p>	<p><b>June 9th 2025 *</b> At Westbury Manor</p> <p><b>Free Buffet Dinner for Members</b></p> <p><b>PAST PRESIDENTS NIGHT &amp; OFFICER INSTALLATION STUDENT SCHOLARSHIPS TO BE AWARDED ASHRAE History Quiz and prize Give-A-Ways</b></p>
<p><b>February 11, 2025</b></p> <p>Dinner Presentation— PEX-A Pipe and PP-RCT Pipe Solutions Presenter: John Knowles</p>	<p><b>July 2025- TBD (4pm-8pm) *</b> Dixie II @ Captree State Park Boat Basin, NY</p> <p><b>ANNUAL FISHING TRIP</b></p>
	<p><b>August 2025</b></p> <p><b>CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I GRANIT STATE</b></p>

## Long Island Chapter Officers & Committees

### ASHRAE 2023/2024

### OFFICERS

POSITION	NAME	EMAIL
President	Elizabeth Jedrlinic	<a href="mailto:c006@ashrae.net">c006@ashrae.net</a>
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Board of Governors	Peter Conte	<a href="mailto:c006bog3@ashrae.net">c006bog3@ashrae.net</a>
Board of Governors	Steven Gerazounis	<a href="mailto:c006bog4@ashrae.net">c006bog4@ashrae.net</a>
Board of Governors	Michael Nigro	<a href="mailto:c006bog5@ashrae.net">c006bog5@ashrae.net</a>

### ASHRAE 2023/2024

### COMMITTEES

COMMITTEE	NAME	EMAIL
Programs & Special Events	Michael Nigro	<a href="mailto:c006pe@ashrae.net">c006pe@ashrae.net</a>
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Government Activities (GGAC)	Rich Smith	<a href="mailto:006ggac@ashrae.net">006ggac@ashrae.net</a>
Newsletter Editor	Alexis H. Smith	<a href="mailto:c006ne@ashrae.net">c006ne@ashrae.net</a>
Research Promotion (RP)	Peter Conte	<a href="mailto:c006rp@ashrae.net">c006rp@ashrae.net</a>
Historian	Thomas DiBenedetto	<a href="mailto:c006his@ashrae.net">c006his@ashrae.net</a>
Student Activities (SA)	Zhigang Xu	<a href="mailto:c006sa@ashrae.net">c006sa@ashrae.net</a>
Young Engineers in ASHRAE (YEA)	Steven Gerazounis	<a href="mailto:c006yea@ashrae.net">c006yea@ashrae.net</a>
Webmaster	Frank Paradiso	<a href="mailto:c006web@ashrae.net">c006web@ashrae.net</a>
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Reception & Attendance	Steven Gerazounis	<a href="mailto:reception@ashraeli.org">reception@ashraeli.org</a>
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Golf Outing	Peter Gerazounis, PE LEED AP	<a href="mailto:golf@ashraeli.org">golf@ashraeli.org</a>
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<b>ASHRAE LI, P.O. Box 79, Commack, NY 11725</b>		

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## 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
		2022	Murat Bayramoglu
		2023	Michael Nigro

# Meeting Program



## Dinner Presentation

Sizing and Selecting Actuators for Control Dampers

**Presented by: Rick Smith**

**Regional Applications Consultant Northeast Region**



<b>DATE:</b>	<b>TUESDAY, SEPTEMBER, 10TH 2024</b>		
<b>Time:</b>	6:00 PM - Cocktails and Hors D'oeuvres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	<b>Fee:</b>	<b>Members - \$50 pp</b> <b>Guests - \$70 pp</b> <b>Students - \$15 pp</b>
<b>Location:</b>	<b>WESTBURY MANOR</b> (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 <b>Directions are posted at @ <a href="http://www.ashraeli.org">www.ashraeli.org</a></b>		
<b>Presentation:</b>	<b>All attendees will receive 1 PDH.</b> <p>Damper Actuators should be simple, but when the time comes to choose one for a new installation or replacement, the options and terminology can become overwhelming. Fail-safe, non-fail- safe? Modulating or floating point? Direct or remote mounting? If you don't even understand the questions, you have no chance of answering them correctly. This course will walk through the proper selection of a damper actuator. This will include how to determine how much torque is required; when to use a spring-return actuator; and how to get the proper actuator for the desired control. From there we will explore proper mounting, including mounting on a multi-section and detached damper setup.</p>		
<b>About our Speaker:</b>	<p>Rick Smith is currently the Regional Applications Consultant (RAC) for Belimo Americas representing the North East Region. Rick started at Belimo as the Network Administrator for the Americas and transferred into field sales and support of Belimo's line of Damper Actuators and Control Valves. After 15 years of supporting HVAC Controls and Mechanical Contractors, Engineering firms and end users, Rick assumed the RAC position to offer his assistance in HVAC related applications in regards to product selection, data analytics and advanced technical training. Rick specializes in the pre and post installation and performance monitoring of Belimo's line of energy saving "smart" actuators, control valves, and IoT end devices. Rick was instrumental in the creation and maintenance of Belimo's Energy Valve Data Analysis Tool which imports data from smart actuators to calculate performance values and energy savings reports.</p>		

# YEA



Hello everyone, I am your YEA chair, Steven Gerazounis. I hope you all are looking forward to another great upcoming 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!

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, and the HVAC Design Scholarship.

## YEA Events



**YEA Leadership Weekend 1.0**

LEARN MORE



**YEA Leadership Weekend 2.0**

LEARN MORE



**YEA Leadership International**

LEARN MORE

## YEA Programs



**Leadership U**

LEARN MORE



**LeaDRS**

LEARN MORE



**HVAC Design Scholarship**

LEARN MORE



**YEA Decarb Initiative**

LEARN MORE

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

### **Leadership Weekend 1.0**

Coming to San Francisco this fall (November 8<sup>th</sup>-10<sup>th</sup>) 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 the iconic Salesforce Tower on November 7th. Please use the link below to register, and hurry if you are interested as registration closes on October 5th!

<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 2025 Winter Conference in Orlando are open until October 9th. 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>

### **LeaDRS**

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 Charles Bertuch.

Region I : Mr. Charles Bertuch

Email: [R01drc@ashrae.net](mailto:R01drc@ashrae.net)

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

### **HVAC Design Scholarship**

Are you looking for the chance to get a better grasp of the fundamentals and technical aspects to design, install and maintain HVAC systems? YEA has a fantastic program to cover all of those bases with an attendance scholarship for either level I or II training. Applications for this program will begin in October so please be on the lookout to take advantage of this opportunity!

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/yea-scholarship-for-hvac-design-essentials-training>

### **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](mailto: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.

## **2024-2025 Decarbonization Challenge**

ASHRAE Society President Dennis Knight has unveiled his presidential theme focusing on workforce development and Diversity, Equity, and Inclusion (DEI). As part of his plan, he will continue the Decarbonization Challenge Fund—a year-long competitive program offering grants ranging from \$1,000 to \$10,000. This initiative aims to support decarbonization projects aligned with this year's presidential theme and will be executed through the YEA committee. Applications for the program will remain open until November 15th, 2024.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-decarb-initiative>

## **Decarbonization Challenge Informational Webinar**

**September 12, 2024 at 9am(CST)/10am(EST)**

This webinar will begin with a brief summary of the Decarb Challenge Fund, and then walk through an in-depth explanation of the application, review, award, and implementation of the Challenge Fund. Participants will also have the opportunity to ask questions of the review committee. The meeting will also be recorded for applicants who are not able to attend. If you would like more information on the Decarbonization Challenge or apply, [click here](#).

If you would like to attend the Decarb Challenge Q & A Session, please complete this [registration form](#). Questions can be sent to [youngengineers@ashrae.org](mailto:youngengineers@ashrae.org).

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

- Steven Gerazounis



## Government Affairs Committee (GAC)

### Government Affairs

Welcome Back Folks to a New Season of Turbulence and Contradiction! As we come back to the table, we can see that things have not been completely sorted out yet.

#### **Google's GHG Emissions Have Skyrocketed in the Last Five Years – and Soaring AI Energy Demand is the Main Culprit**

Soaring data center energy demands are also increasing greenhouse gas (GHG) emissions, causing setbacks for companies in their quest for sustainability and carbon footprint reduction.

[Google's GHG emissions alone have increased by half in just the past five years.](#) As a result, companies like Google are struggling to balance their emission reduction goals with keeping up in a competitive race to meet the booming demand of AI centers. As a result, Google canceled its target of net-zero emissions by 2030. Google's total GHG emissions increased 13% per year from 2019-2023, a 48% increase compared to 2019 levels when the target was initially set and a 27% increase from 2022-2023. This was primarily due to increases in data center energy consumption and supply chain emissions.

Google is not alone with Microsoft reporting its total emissions have increased by 29% since 2020. However, Microsoft's GHG emissions increase was due to new construction and work on data centers, not necessarily from existing facilities or infrastructure.

#### **Bipartisan Senate Bill Seeks to Power Up the Grid Through AI**

Senators Joe Manchin (I-WV) and Lisa Murkowski (R-AK) introduced legislation ([Senate bill 4664](#)) that would authorize a new program at DOE called the "Frontiers in Artificial Intelligence for Science, Security, and Technology" to be called the "FASST" initiative. In April 2024, DOE released a report "AI for Energy: Opportunities for a Modern Grid and Clean Energy Economy" citing the need for AI applications to improve grid planning, permitting and siting, operations and reliability, and resilience. You can click [here](#) to read the report in its entirety. You can view details about the legislation [here](#).

## **New York City to Introduce Legislation to Require AC in Rentals**

Landlords in the U.S. are required to provide heating for their tenants in rental housing but are not required to provide air conditioning. Air conditioning usage across the U.S. varies with geography, and often reflects the nation's income and racial inequalities. The proposed legislation would apply to both public and private housing, including high rises, walk ups, and multifamily buildings.

Landlords would be given four years to comply with the mandate before substantial fines would be levied against them. You can read more about this proposed legislation, including the pushback from landlords, [here](#).

## **Reopening of public comment period and public hearing for HFC Phasedown**

The U.S. Environmental Protection Agency (EPA) has reopened the public comment period for [new rules](#) regarding restrictions on the use of hydrofluorocarbons (HFCs) under the American Innovation and Manufacturing (AIM) Act in variable refrigerant flow air conditioning subsector. [Originally proposed June 26, 2024](#), the new rules amends the Technology Transitions regulation by adding an additional year for the installation of new Variable Refrigerant Flow (VRF) systems using HFCs with a global warming potential of 700 or more, and where components were manufactured in the U.S. or imported into the U.S. prior to January 1, 2026. The proposed rule would extend the deadline until January 1, 2027.

### **Closing Thoughts**

It seems that if we just get rid of AI, we could save a ton of Energy. Pushing out refrigerant deadlines and mandating more consumption are additional curiosities I have.

Richard Smith – GAC Chair.

Matt Catan – Co-Chair

[006ggac@ashrae.net](mailto:006ggac@ashrae.net)

# Refrigeration

Check out Key basics of CO<sub>2</sub> Refrigeration system. The article can be found via accessing the below link:  
[Staying Safe with CO<sub>2</sub>: Key Basics You Need to Know | ACHR News](#)

## Staying Safe with CO<sub>2</sub>: Key Basics You Need to Know

### This low-GWP refrigerant can keep food cold without harming the environment

While the need to refrigerate, freeze, and deep freeze will always be with us, it's only been in recent years that scientists have determined a way to do that safely – and without harming the environment.

Beginning January 1, 2025, the Environmental Protection Agency (EPA) will prohibit refrigerants above 150 GWP in new stationary refrigeration equipment. That means that some of the more popular refrigerants, such as R-449A – with a GWP of 1,397 – and many other blends eventually will be [phased out](#). They will be replaced with low-GWP refrigerants, including [carbon dioxide \(CO<sub>2</sub>\)](#), which has a GWP of 1, is non-toxic, and nonflammable, as well as A2Ls, which are also non-toxic but mildly flammable (see Figure 1).

High Flammability (3)	R-290/R-600a A3	R-40 B3
Low Flammability (2)	R-152a A2	R-611 B2
Lower Flammability (2L)	R-32/R-1234yf A2L	R-717 B2L
No Flame Propagation (1)	R-22/R-410A A1	R-123 B1

Lower Toxicity (A)

Higher Toxicity (B)

2L refrigerants have a burning velocity of 10 cm/s or slower.

## **CO<sub>2</sub> Properties**

Heavier than air, CO<sub>2</sub> refrigerant (R-744) is a byproduct of the gas industry. A low-cost refrigerant that is easy to extract, CO<sub>2</sub> carries an A1 safety classification from ASHRAE and also provides better heat transfer properties compared to HFCs. Existing naturally in the environment and with its GWP of 1, CO<sub>2</sub> is also not likely to be phased out for another technology.

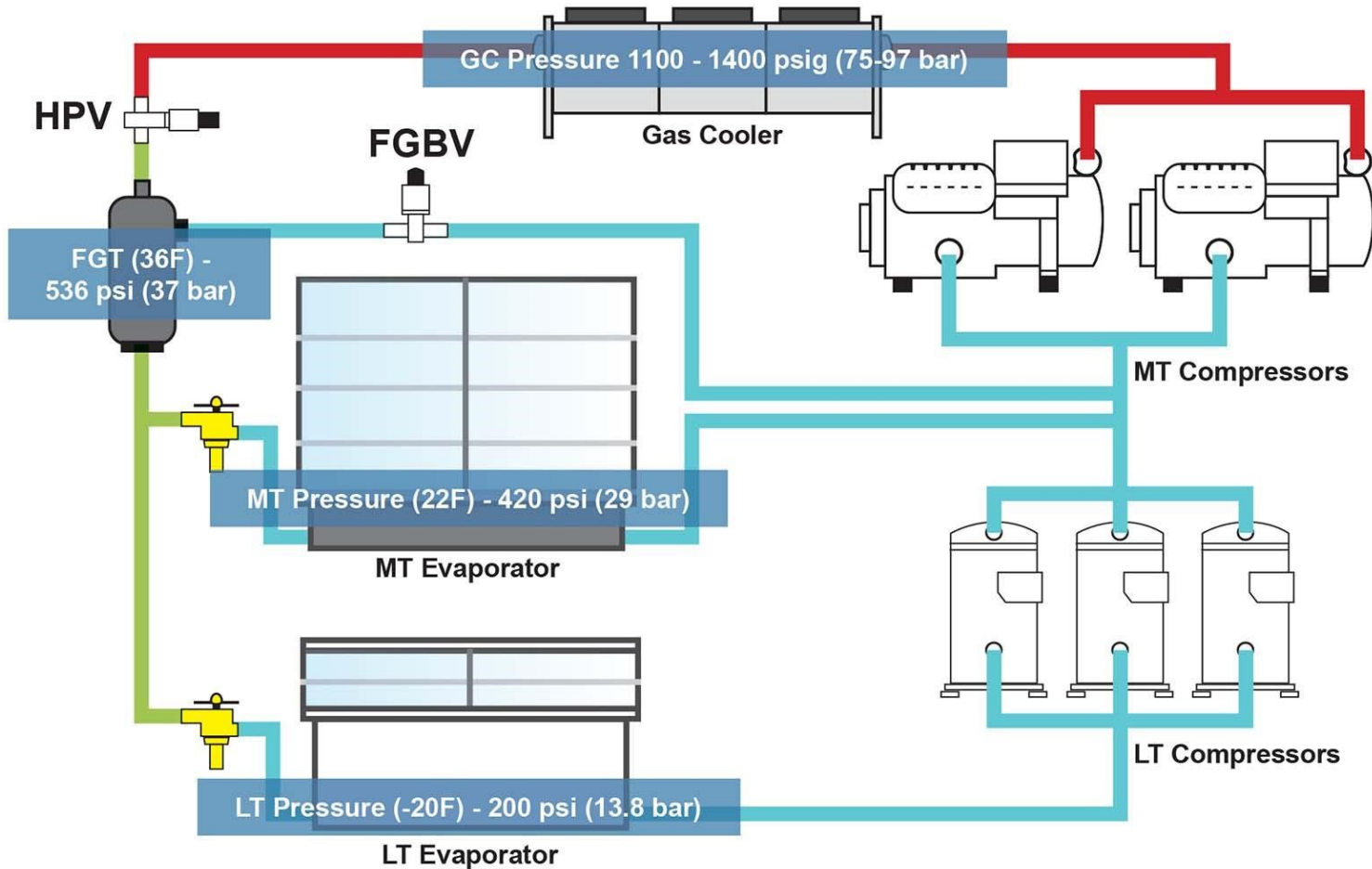
CO<sub>2</sub> pipelines are also typically one to two sizes smaller than an HFC direct expansion (DX) system due to the higher density of CO<sub>2</sub>. For example, consider a 29.3 kW capacity medium-temperature compressor at 20°F saturated suction temperature (SST) and 95°F dry bulb (DB) ambient temperature. A CO<sub>2</sub> compressor would have four to six times smaller displacement than an R-134a or R-407A compressor, and the CO<sub>2</sub> system's piping would be one to two sizes smaller compared to the piping used for the other refrigerants.

The challenge for many technicians lies in the high pressure associated with CO<sub>2</sub>. For example, at 88°F, the pressure of R-404A is 212 psia; with the denser CO<sub>2</sub> at 87.6 °F, the pressure is 1,055 psig. Remember, the perfect gas law states that if a gas in a container is heated so that the temperature increases, then the pressure of the gas also will rise in proportion to its pressure-temperature relationship. Fortunately, engineers have a solution that manipulates temperature to control the high pressure: the CO<sub>2</sub> booster system.

## **CO<sub>2</sub> Booster System**

Note that in Figure 2, both pieces of equipment look similar. However, the R-404A DX uses a condenser, which changes the state of the vapor to a usable liquid refrigerant to feed the medium- and or low-temperature expansion devices. With the high pressure of CO<sub>2</sub> – and the associated high temperature – a gas cooler is needed. That's because in the transcritical high-pressure state ranging from 1,100 psig to 1,400 psig, the CO<sub>2</sub> cannot condense into liquid CO<sub>2</sub>.

# CO<sub>2</sub> Booster



## LT & MT evaporators are on one rack

**FIGURE 2:** The R-404A DX uses a condenser, while the CO<sub>2</sub> booster system uses a gas cooler. (Courtesy of Heatcraft)

A high-pressure valve is used to reduce the pressure and the corresponding temperature. That valve meters the CO<sub>2</sub> into a flash tank, and the flash gas bypass valve (FGBV) at the top of the tank helps reduce the pressure inside the vessel. The target is about 536 psig, at which point the CO<sub>2</sub> can condense into liquid CO<sub>2</sub>, providing cooling to both the low- and medium-temperature loads. Figure 2 shows that even with much higher pressure from the CO<sub>2</sub> system, the same temperature loads can be achieved.

Unlike the HFC DX system, the CO<sub>2</sub> booster system has two sets of compressors. A set of low-temperature compressors boosts the pressure that goes to the intake of the medium-temperature compressors. One set of compressors actually boosts the other, coming out of the low-temperature load of the evaporator outlet that is going to the suction manifold of the low-temperature compressor group. The compressors, in turn, lift the refrigerant pressure to match the outlet pressure of the FGBV and of the gas coming out of the medium-temperature load. The refrigerant being discharged by the medium-temperature compressor group will then feed the gas cooler inlet, completing the refrigeration cycle. The booster system's pressure and temperature monitoring devices are supported by a master controller, which regulates all system refrigerant valve positions. These components work as a team to determine the right amount of pressure in the flash tank, ensuring that enough liquid CO<sub>2</sub> is available for the medium- and low-temperature loads. Although the CO<sub>2</sub> system may seem a bit more complicated than HFC DX systems, it is actually quite similar. In all cases, simply control the temperature to manage the pressure, and you will discover the significant benefits of CO<sub>2</sub> refrigeration for both your customers and the planet.

### **CO<sub>2</sub> Safety**

Only authorized personnel and competent operators should perform maintenance or repairs on refrigeration systems. All staff working on this type of equipment should use personal protective equipment including gloves, glasses, and safety shoes. The safety instructions for working with CO<sub>2</sub> are the same as they are for other refrigerants:

- Prevent liquid from reaching the compressor;
- Provide a pressure relief valve (PRV) for overpressure protection;
- Prevent excessive vibration;
- Ensure proper alignment of piping to prevent connection stress;
- Protect external surfaces from corrosion; and
- Take precautions to avoid refrigerant contact with skin due to the risk of frost or burn.

**Kenny Balci**

Refrigeration Chair

## Membership Promotion



Hello everyone, welcome back after the summer break! As your new membership promotion chair, I'll be focusing on growing our chapter for this year. Currently our chapter membership is at 267 current members with 20 students. Our current goal is to get 10 additional members to get back on track from last year's goals. Through enhanced promotion of events and expanding on the numbers of events from years previous we should be able to draw in new membership with the help of all of you. I hope to see all of you at our many events this year!

As always there are numerous benefits to becoming a member of ASHRAE some of which can be found in the chart below.

Benefits	Full Member and Associate		Student and Affiliate	
	Regular	Developing Economy	Regular	Developing Economy
One free Winter or Annual conference registration ( <i>new members only, within 24 mos</i> ).	Yes	No	No	No
ASHRAE Journal (Monthly)	Yes	Digital	Yes	Digital
Select One Annual Benefit: eLearning Course, PDF of ASHRAE Standard or Guideline, Handbook PDF, Certification Study Guide	Yes	Yes	No	No
Option to select additional Handbook packages at discounted rate	Yes	Yes	Students: Yes Affiliates: No	No
Complimentary first year access to Handbook Online	Yes	Yes	No	No
Member Bookstore discount	Yes	Yes	Yes	Yes
Member access to Technology Portal	Yes	Yes	Yes	Yes
Conference, Bookstore, and education discounts	Yes	Yes	Yes	Yes
Networking at local, region and Society level	Yes	Yes	Yes	Yes
Hold office and vote at Chapter, Regional, and Society level	Yes	Yes	No	No
Participate on committees	Yes	Yes	Yes	Yes
HVAC&R Industry News	Yes	Yes	Yes	Yes
Free online access to Science & Technology for the Built Environment	Yes	Yes	Yes	Yes

I would also like to welcome our new members who have joined us during the summer break!  
I encourage them to join us for our monthly meetings and to join us at all the events.

**Members:**

Antonio Romero

Farzad Dastvar

**Students:**

Nicholas Joseph Capone

Homer Hasis

Membership Promotional Chair

Michael S. Gerazounis

## Student Activities



Hello everyone!

Welcome to the inaugural edition of 2024-2025 ASHRAE calendar! I am thrilled to serve as the Student Activity Chair again. Our goal with this newsletter is to keep you informed, engaged, and inspired as we navigate the exciting world of HVAC&R together.

In this newsletter, you can expect to find updates on upcoming events, opportunities for professional development, and highlights of the incredible work being done by our student members. We aim to provide valuable insights into the latest industry trends and share resources that will help you succeed in your academic and professional endeavors.

This newsletter is designed to be a platform for you – our vibrant and talented student community. We encourage you to share your achievements, projects, and ideas with us so that we can celebrate and learn from each other. Whether you're looking for internship opportunities, tips on career development, or simply want to stay connected with the ASHRAE community, this newsletter has something for everyone.

### **2025 ASHRAE Winter Conference Student Program**

**Join us in Orlando!**



**2025 ASHRAE  
WINTER CONFERENCE**

ORLANDO, FEB 8-12 | AHR EXPO, FEB 10-12

ASHRAE is looking forward to convening in Orlando at the Hilton Orlando February 8-12, 2025. The conference will be an opportunity for students and other HVAC professionals from around the world to share industry ideas and learn more about ASHRAE.

Registration is now open.

[Learn More](#)

## **Kick-Off Virtual Round Table Branch Officers and Advisors**

**Thursday Sept 12th 1-2:30pm**

Come speak to and learn from Student Branch Officers and Advisors in our first Round Table of the year. We will discuss how to get a good start to the ASHRAE year, challenges that you may face in the first few months and some tips and tricks for success!

[Register Here](#)

### **Student Travel Grant**

**Applications due September 30th**

The Student Activities Committee is offering five \$1,000 USD travel grants to help subsidize students to travel to the Winter Conference in Orlando, Florida in February 2025.

[Apply Here](#)

### **44 Society Scholarships Available 2025-2026**

**Applications due December 1, 2024**



Through its [scholarship program](#), ASHRAE seeks to motivate students worldwide to pursue an engineering or technology career in the HVAC&R field that will further promote sustainable technology for the built environment. Scholarships range from \$3,000 to \$12,500 and awarded for the academic year following the application deadline beginning with the fall semester. Qualified students are encouraged to apply at [ashrae.org/scholarships](http://ashrae.org/scholarships). Now accepting applications for our Society Level Undergraduate Engineering, Engineering Technology, Regional/Chapter, & University-specific Scholarships.

[Learn More](#)

## **Undergraduate Program Equipment Grants**

**Applications due December 15, 2024**

The ASHRAE Undergraduate Program Equipment Grants provide funding to engineering, technical and architectural schools worldwide with the goal of increasing student knowledge, learning and awareness of the HVAC&R industry through the design and construction of equipment. Grants are to be used to fund equipment and supplies for senior 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.

**NEW grant award of up to \$25,000 for the top application!**

[Learn More](#)

## **2024 ASHRAE High School Design Competition**

**Submissions due December 30, 2024**



This competition is for students 13-18 years of age and provides the opportunity to take the first steps in designing a building's HVAC system. This competition will expose high school students to the process that designers and engineers go through when designing building systems.

[Learn More](#)

## Registration open for the 2025 Student Design Competition



The 2025 student competition focuses on a new medical office building in the heart of Manchester, England. Each team must register online to participate. The first deadline for the 2025 competition is May 4th, 2025. ASHRAE will recognize the outstanding student design projects at the 2026 ASHRAE Winter Meeting to be held in Las Vegas, Nevada January 31st-February 4th, 2026.

[Learn more and register today!](#)

## 2025 Setty Family Foundation Applied Engineering Challenge



The 2024 Applied Engineering Challenge is focused on an innovative carbon capture and utilization module that integrates with existing HVAC&R systems. ASHRAE will recognize the winner with a \$5,000 prize and invite the entire team to the 2026 ASHRAE Winter Meeting to be held in Las Vegas, Nevada January 31st-February 4th, 2026.

[Learn more and register today!](#)

## 2025 Building Energy Quotient Competition

Students will have the opportunity to evaluate and audit building energy consumption for buildings in operation to give the building a Building EQ score using the ASHRAE Building EQ online tools.

[Learn more and register today!](#)

## Registration is now open for the Solar Decathlon® 2025 Design Challenge!



**Are you a student or professor interested in transforming buildings to tackle the climate crisis?**

Each year, interdisciplinary collegiate teams compete to create high-performance, low-carbon building designs that address real-world issues such as existing building retrofits, community impacts, affordability, and resilience. Learn more about the competition through the [2024 Design Challenge Recap video](#). Collegiate students and faculty—start gathering your team and register by **October 23, 2024**, to compete.

[Learn more and register today!](#)

## Transfer your membership to the Smart Start Program!

SmartStart is a 3-year program that allows Student members to transfer to Associate grade membership at a rate that is recent-graduate friendly. Visit the [SmartStart](#) page to learn more.



Thank you for being a part of our ASHRAE family. If you have any suggestions or would like to assist in anyway with student activities, please let us know. Together, let's make this a year of growth, learning, and success.

Warm regards,

Zhigang Xu  
Student Activity Chair

# Diversity & 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

## 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.*

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>

## 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.

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





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WINTER CONFERENCE**

ORLANDO, FEB 8-12 | AHR EXPO, FEB 10-12



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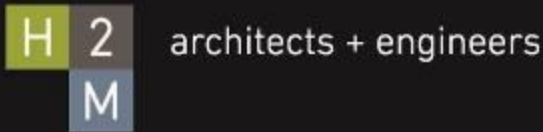


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