

# The COMPRESSOR



AACP E-Newsletter

NOVEMBER 2023



AACP's Annual Golf Tournament Highlights

Thank you to everyone who attended our Annual Golf Tournament on September 8th! We loved seeing you there. Below are our 1st, 2nd, and 3rd place foursomes. We can't wait to see you next year!



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## Legislative Updates

Members receive access to legislative and regulatory updates and resources.

**Maryland PSC Updates**

**DC General Assembly Updates**

- [October Regulatory Update](#)
- [September Regulatory Update](#)

- [October Legislative Update](#)
- [September Legislative Update](#)

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## AACP News

### AACP MEMBERS: VOLUNTEER ON A COMMITTEE!

- Membership & Marketing Committee
- Programs & Sponsorship Committee
- Legislative & Regulatory Committee
- Training & Certification Committee

If you are interested in volunteering, email [Info@aacpnet.org](mailto:Info@aacpnet.org) with your preferred committee choice.

The AACP Board of Directors invites you to serve the HVAC Industry as a volunteer on one of our committees. As a volunteer, you will have the opportunity to connect with technicians and industry experts who want to give back to the industry and contribute to the success of the AACP. Most of all, however, this is a valuable opportunity to gain leadership knowledge and experience.

#### **What is Expected of a Volunteer?**

We need volunteers who are diligent, enthusiastic, and dependable. To be eligible, you must maintain your membership in AACP. Volunteers are asked to participate in monthly/quarterly 30–45-minute committee calls, bring ideas and suggestions, and assist with the implementation of action items.

#### **Committees**

- **Membership & Marketing Committee** – Identify HVAC companies and technicians to recruit as members, assist to on-board new members, and follow-up with members in the renewal process. Develop the communications plan to support the efforts of the AACP through various platforms [IE: Website, social media, e-Newsletters, and Broadcasts].
- **Programs & Sponsorship Committee** – Create a schedule of in-person and virtual meetings with members, inspectors, and industry experts [IE: legal, human resources, insurance/risk management]. Identify potential sponsors for our programs and meetings.

- **Legislative & Regulatory Committee** – Work with our legislative advocates and lobbyists to address regulatory issues [IE: Public Service Commission (PSC), EmPowerMD program, rebates] and legislative matters before the Maryland General Assembly.
- **Training & Certification Committee** – Assist in the development and delivery of specialized industry training [IE: Apprenticeship Program], and certification [IE: NATE, OSHA, CFC].

### How to Apply?

Send an email to our Executive Director, Peter Constantinou, at [Info@AACPnet.org](mailto:Info@AACPnet.org). Be sure to include your preferred committee choice.

[Email Us](#)

## Industry News

### Not Your Old-School HVAC System: AI proactively saves energy and cuts costs

Reprinted from [North American Clean Energy](#)

How many times a day do you get up and adjust your room's temperature? Or call your office building's landlord and ask them to lower the air conditioning? Heating, Ventilation, and Air Conditioning (HVAC) systems were built to be reactive. But what if we could use artificial intelligence (AI) to make them *proactive* instead? AI is all around us, from self-driving cars in the transportation industry, to the voice recognition software in our smart phones. If we applied this knowledge and technology to HVAC systems, imagine the impact it could make.

#### Energy efficiency in the built environment

The amount of energy being consumed by buildings is staggering. It is estimated that built environments and industry account for [70 percent of yearly energy consumption in the United States](#). According to the U.S. Department of Energy, heating and cooling systems - including air conditioners, boilers, chillers, furnaces, and heat pumps - [account for nearly half of the energy consumed by built environments](#). These systems, together with lighting, are a major source of energy usage. Even new 'state-of-the-art,' commercial HVAC systems experience significant loss in operational efficiency post-installation because of the way they are designed, installed, and maintained. This means that achieving HVAC efficacy is a priority for tackling the problem of overall energy efficiency in the building sector.

For some time, industry professionals have been promoting the magnitude of the potential energy savings for owners of various building types, such as commercial retail, office buildings, nursing homes, manufacturing facilities, and many others. The question has

been, how to achieve those savings quickly - and without having to change the entire HVAC system that is currently in place?

When buildings move away from the reactive technology that currently manages most HVAC systems, they can achieve much greater energy efficiency and savings, as well as an increase in occupant comfort.

### **Comfort doesn't equal cost and carbon footprint**

For anyone who has ever spent any time in a commercial or corporate building, you know that the temperature can make or break occupant comfort. This means that an HVAC system can have a big impact on employee productivity, wellness, and even customer satisfaction. By allowing AI to study a building and learn how it operates, the technology can then identify potential improvement opportunities, and autonomously optimize the system. This means no human intervention would be necessary and, by being proactive, it ensures maximum savings and comfort.

By allowing AI to control the HVAC system, you can allow your building to autonomously self-regulate, which will ensure energy efficiency without compromising occupant comfort. With predictive technology, the temperature only changes and equipment is only used when the AI deems it necessary. This can ultimately reduce energy bills upwards of 25 percent, and is a perfect illustration of how commercial buildings can help fight climate change.

Technically speaking, AI combines building energy equations with deep learning and time series data to calculate how each zone will react to changing conditions (e.g. weather) over time. The deep learning neural network, using the thousands of data points at hand (coming from the HVAC equipment, Building Management System and/or access control systems), can "look into HVAC equipment, Building Management System and/or access control systems), can "look into the future" to predict the state of each zone in a building. From these predictions, the AI engine determines the best way to manage the energy flow for every zone in the building. Using algorithms working in real-time, the AI can then instruct the system by writing back directly to the controller of the existing HVAC system, telling it how to operate more intelligently and efficiently.

AI constantly learns and improves; the technology can make hundreds of adjustments to an HVAC system every few minutes, and becomes savvier every day. To achieve the same outcome using human intervention, a building operator would have to hire dozens of engineers to spend the day staring at a BMS system and decide, every few minutes, if they should make an adjustment.

AI understands the built environment as an ecosystem of interconnected components, and focuses on achieving real efficiency by modulating the energy flowing throughout a building at any given time. Buildings today are complex. AI helps achieve energy savings and occupant comfort by anticipating the impact of internal and external variables on a building's thermal load, operating proactively to maintain the ideal work environment.

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## 7 Safety Tips for Winter Construction

Reprinted from [Carrier Articles](#)

In the construction industry, there are a number of safety hazards workers need to be aware of to prevent injury. In addition to the safety hazards that are present year round, the winter brings its own set of challenges. During the winter, workers need to be protected from the extreme cold and high winds, as well as snow and ice. To help you minimize construction accidents and injuries this winter, consider the following safety tips.

### 1. Know the Signs of Winter-Related Injuries and Illness

Winter conditions can expose workers to severe health problems, including hypothermia, frost bite and trench foot. It's essential to educate your workers and supervisors about these cold-related injuries and illnesses and their warning signs and symptoms. For instance, shivering, clumsiness and lack of coordination, and slurred speech or mumbling are symptoms of hypothermia. If a worker exhibits any signs of illness or



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injury, emergency help must be called immediately.

## 2. Be Aware of Weather Forecasts

Keeping an eye on the weather forecasts will prevent you from sending your workers out in dangerous, unfit conditions, such as a blizzard or hail storm. Routinely check the weather through your local weather channel and the National Weather Service, so you know what to expect.

## 3. Require Workers to Wear the Proper Clothing and Gear

Wearing the right clothing and gear will help workers avoid cold weather-related injuries and illnesses. The required clothing and gear should be based on the temperature, weather conditions, and duration of activity. Workers should wear layers whenever necessary, including an insulating, moisture-wicking base layer and a waterproof outer layer. Workers should also wear insulated, waterproof boots with extreme traction, as well as warm socks and hats, and gloves with grips for the safe handling of equipment. When temperatures drop below -17 degrees, insulated mittens should be worn.

## 4. Provide a Heated Break Area

It's important for workers to limit their exposure to extreme cold, snowy, and windy conditions. Provide your workers with a heated break area, where they can warm up and get relief from the elements. Your break area can be a trailer or tent heated with portable temporary heaters. Make sure supervisors know how to properly operate the temporary heaters.

## 5. Remove Snow and Ice from the Work Site



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Before work begins, make sure the site is free of snow and ice than can threat the safety of your workers. Put down salt or sand to melt ice and provide better traction, and remove large pieces of ice to prevent slips, trips and falls.

## **6. Have Supervisors Inspect the Site**

Each day before work resumes, the site supervisor should inspect the site to ensure it's free of potential hazards. Overnight, a tree may have fallen or ice might have accumulated on the site. These new hazards must be addressed and taken care of before work is resumed.

## **7. Discourage Workers from Drinking Caffeine**

Many construction workers work overnight and turn to coffee to help them get through their shift. However, drinking caffeinated beverages in winter conditions should be avoided. Coffee and other caffeinated beverages can increase workers' heart rates, making them feel falsely warm. Instead, encourage workers to drink water to stay hydrated or sports-type drinks to replace depleted electrolytes.

With these tips, you are ready to tackle the unique challenges winter brings to the construction industry and help protect your workers from potentially life-threatening accidents and injuries.

## Industry Articles

### **Is A Circulator A Pump?**

By [Andrew Knicley](#)

*Andrew is the owner of All-Air Systems, an HVAC and hot water home services provider serving Baltimore, Anne Arundel County, and surrounding areas. Andrew started in the HVAC industry in the 80's when he started working for his dad's*





*sheet metal business. He later entered Steamfitters Local Union 602 in Washington, D.C. when he was 19 years old. He graduated from the apprenticeship school and worked in both the construction and service side of the industry where he worked on both large commercial and small residential systems. He holds the master license(s) for All-Air Systems and takes an active role in its daily operation. He also teaches at the AACP Apprenticeship School.*

I was on the job the other day installing a circulator. My co-worker handed me the part and said, "Do you want this pump?" to which I said, "That's not a pump, it's a circulator." He then retorted, "Pump, circulator....same thing."

I explained to him that an older mechanic had once done the same thing to me. It happened when I was calling him on a job and I was having water flow issues. It was when I explained to him that the "pump" wasn't working, that he sternly told me "Don't ever call it a pump, it's a circulator!" That conversation always stuck with me for better or for worse.

Ever since that older mechanic did that to me, I would from time to time wonder what makes a circulator a circulator and a pump a pump. In my hectic work days, I never took the time to look it up or to spend much time thinking about it. I always kept that dialogue in my head and sometimes made a quick remark whenever someone called a circulator a pump.

The day finally came when I decided to get to the bottom of this. My research quite naturally started with the internet. That's right, I Googled it. I found some forum pages distinguishing a device that creates a pressure difference versus a device which just simply pushes water around a closed circular loop. I then read the comments below and people were on both sides of the fence.

One group believed there was a clear difference between a pump and a circulator. The other group pointed out that whether something was a pump or circulator depended on what application it was being used in.

Next, I went straight to the English definitions of the words in the dictionary. This is what I found in the Merriam Webster:

Pump – (*noun*) a device that raises, transfers, delivers, or compresses fluids or that attenuates gases, especially by suction or pressure or both; (*verb*) an act or the process of pumping. The example given is a heart.

Circulator – This word is a noun. However, the online Merriam-Webster did not have the word circulator in its database. It did have the verb form of the word (1) to move in a circle,

circuit, or orbit especially: to follow a course that returns to the starting point. Example: blood circulates through the body, (2) to cause to circulate.

These definitions didn't quite do it for me. So where did I think to go next? How about the HVAC book that was test material for the Maryland HVAC Journeyman and Master exam.

To my surprise, that book didn't even have the word pump in its Glossary or Index. Ironically, however, I was able to find the term "circulating pump". Wait a minute, this book is joining the two words together to be one thing!? The definition given in the glossary is "a motor-driven pump that circulates heated water through a hydronic system. In the Hydronic Heating section of that book, it further states that there are "[m]any types of circulating pumps...used in hydronic systems..."[sic].

Here I thought I was perhaps going to get closer to the distinguishing factor between a circulator and a pump, and yet this book actually combines them into the same thing.

What about checking another older book I've used in my HVAC studies? Could it shed some light on this question? Well, unlike the first book, this second book includes the word pump in its glossary. "Pump – A device that forces fluids through a system." Its Index also included the word pumps, and a pump subcategory "circulating". Moreover, the water pumps section of the book, states that a "condenser water pump is normally a centrifugal pump. It uses centrifugal action to impart velocity to the water that is converted to pressure. Pressure may be expressed in pounds per square inch or feet of head."

Unlike the first book, this book also actually included the term "Circulators" in its Index. It states: "Circulators. See Centrifugal pumps." And like the first book, this book also included the term "circulating pump" in its Index. Furthermore, in the Centrifugal Pumps section of the book, there is a statement that "Centrifugal pumps, also called circulators, force the hot water from the boiler through the piping to the heat transfer units and back to the boiler." This book then continues the discussion about how "these pumps" use impellers to create centrifugal force to "circulate" the water through the system. The book goes on to use the term "circulating pumps" and then also goes on to state that the "water begins to recirculate in the pump."

So, what have we learned up to this point? Are the two the same – circulator and pump? Are they not?

The HVAC study books seem to use the terms interchangeably and together as one concept. It appears as though the dictionary differentiates them. The definitions treat a pump as a noun; a thing that moves a medium (like water). The other term, in contrast, describes an action word – the actual act of moving the water and specifically around a circuit returning back at the starting point.

Perhaps when someone says "Circulator" they are referring to a pump that "circulates" water around a loop where the supply comes right back to the pump's return. So, does this logically mean that a pump can be a circulator, but not all pumps are circulators?

Are you confident when you say, "Here is the circulator you wanted" versus "Here is the pump you wanted"?

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## The Interactive Process

By [Frank Coleman](#)



*Frank Kollman is a graduate of the Johns Hopkins University (1974) and the Syracuse University College of Law (cum laude, 1977), where he was an editor of the law review and the Survey of New York Law.*

*Frank has practiced law in Maryland since 1977 and established the Kollman & Saucier Firm in 1988. Frank has consulted with the AACP organization for well over 35 years.*

I just got off the phone with a client who uses large cranes to erect structural steel columns and beams. One of its crane operators had a seizure a couple of weeks ago originally attributed to dehydration; yesterday, the same crane operator had a seizure in a car wash and caused damage when his truck went into reverse.

The client wanted to know if it could just fire the crane operator. Certainly, you cannot allow someone with seizures to operate a crane, so it seemed a simple question. It was not.

I asked how many employees the company had. They had fewer than 50, so the federal Family and Medical Leave Act leave was not in play. Had it been, they might have been required to give the employee up to 12 weeks unpaid medical leave. Instead, the problem was compliance with the Americans with Disabilities Act (ADA).

Whenever an employee is identified as having a disability, and seizures are certainly a disability, an employer must engage in what is called the "interactive process" before making an employment decision. That process requires a thorough discussion with the employee and possibly his medical provider over what limitations the employee has as a result of the disability and what, if any, accommodations can be made to permit the employee to do the job.

In some cases, the accommodation is simple, such as special equipment or modified job requirements. Sometimes, there is no accommodation that is safe or reasonable. But you have to talk about it with your employee and not make the decision without the employee's involvement, regardless of the inevitability of the outcome.

If safety is a concern, it helps to put together a detailed job description to allow the medical provider to state whether the employee can do all the essential functions of the job safely. This makes it clear to the medical provider what the employee must do throughout the day, not leave it to speculation on the doctor's part. A crane operator, for example, must climb into the cab, lift tons of materials and swing them into place, lower loads into place over other employees, and so on.

Even where there are no accommodations possible, the interactive process requires you to consider and discuss the possibility of another job with the company that the disabled employee could perform. You do not have to create a job, but if you have an opening that the employee could fill, and he is willing to do so, offering that job may be a required accommodation. Of course, the employee would receive the wages and benefits of the new job, not his old one.

In the case of the crane operator, I told my client to start the interactive process with that job description and require the employee's medical provider to confirm that he could safely perform the essential functions in the job description. If it turns out that after the interactive process the employee cannot perform the job and needs to be terminated, I told the client to tell the employee that if he becomes able to perform safely in the future, he would be considered for any future openings. I would make it clear, however, that the employee would have to apply for future openings and the company would not be responsible for making contact with the former employee.

Once all this is done, I told the client to write up the circumstances, the discussions, and the decision to be placed in the employee's personnel file. I also told the client to give the crane operator a copy of the documentation. One of my rules is that nothing goes into a personnel file that the employee has not seen.

Disability law presents complicated issues whenever an employee's medical condition interferes with his performance of the job. Remember that interactive process is a necessary first step, even if you are convinced the effort is futile.

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## Leading to Build Trust During Economic and Social Uncertainty

By [Mary Kelly](#)

*Commander Mary Kelly, US Navy (ret) is the CEO of Productive Leaders. Author of 15 leadership and business books, Mary is usually found near dogs and wine, or online at [Mary@ProductiveLeaders.com](mailto:Mary@ProductiveLeaders.com).*



“Fake it until you make it” is often used to build confidence or to change behaviors in the moment, such as “smile until you feel like smiling.” But this is poor advice for leaders who are trying to build trust with their teams.

A 2023 survey by Gallup found trust in the workplace is decreasing. There is a significant decline from 2019, when 24% of employees in America said they trusted their leadership.



## **Cultivating trust is a definite need in today's workplace.**

Trust is built when employees are inspired by senior leaders and see strategic actions leading to business success. Declines in employees' confidence in their leaders and the future of their organization causes a drop in employee engagement.

The 2016 Edelman Trust Barometer shows that many **midlevel leaders** don't trust their senior people. This is consistent with our findings in the book, **Why Leaders Fail and the 7 Prescriptions for Success**. In our study of over 100,000 employees, poor communication created more problems with trust than any other factor.

All of our research indicates that real and sincere trust is missing in many workplaces, and trust has decreased post-pandemic.

What should leaders do?

**They need to communicate an exciting vision, a clear mission, and achievable goals, and they need to reiterate their priorities.**

### **Craft a Compelling Vision**

A compelling vision serves as a guiding star, illuminating the path towards success. It paints a vivid picture of the future and inspires employees to rally behind a common goal. When leaders articulate a vision that resonates with their teams' values and aspirations, they create a sense of purpose and meaning in the workplace.

People need a powerful sense of purpose beyond themselves. A compelling vision fuels enthusiasm and commitment, fostering trust among employees who feel a part of something bigger than themselves. It provides a sense of direction and stability, even during times of change, encouraging collaboration and driving collective effort.

### **Understand and Convey the Mission**

A well-defined mission bridges the gap between the vision and the day-to-day operations. It articulates the organization's core purpose.

When employees can clearly comprehend the importance of their work, they develop a stronger sense of ownership and engagement. A clear mission aligns individual efforts with broader organizational goals, fostering a sense of unity and trust among team members. It enables employees to see the significance of their contributions and understand how they fit into the larger picture.

### **Set Clear and Measurable Goals**

Clear and measurable goals transform strategy into tangible outcomes. Leaders need to work with their teams to establish specific targets and milestones.

No one wants to guess what they need to do to be successful at work. Clear goals create a sense of focus and direction, allowing employees to prioritize their work and align their efforts accordingly. When progress is measurable, employees and their managers track their achievements, celebrate successes, and make the necessary adjustments. Transparent goal setting fosters trust by providing a framework for accountability and recognition.

## **Promote Collaboration and Transparency During Change**

A solid framework built on a compelling vision, understandable mission, and clear goals fosters a culture of collaboration and transparency. When employees have a shared understanding of the organization's direction and objectives, they can work together towards common goals.

Clear communication channels, open dialogue, and regular updates ensure that everyone is aware of progress and any changes. This transparency builds trust, as employees feel valued and respected when they are kept informed. Collaboration thrives when individuals have a clear framework within which to contribute their unique skills and perspectives, resulting in enhanced trust and teamwork.

### **What other reminders do leaders need to increase trust in this post-pandemic world?**

**1. Be consistent.** No employee wants to wonder whether the action they took on Monday is going to be wrong on Tuesday. If it was okay on Monday, it should be okay on Tuesday. Set clear standards, and be consistent.

**2. Provide feedback quickly and appropriately.** People in any relationship, whether at work or at home, need to know when they are doing things correctly and when they are not. Providing course corrections when you are in a leadership role is not optional – it is expected. Employees should be able to trust that their managers will care enough about them to let them know both when they are being successful and when they are not.

**3. Appreciate information, even if the news is bad.** Many employees will not tell leadership when there is an issue because they are afraid of being labeled as complainers, or worse, treated as though they are the cause of the problem. Great leaders want to know when there are problems so they can fix them. They appreciate those people who help them identify and solve obstacles.

**4. Tell the truth.** Tell people the truth, especially in tough situations. Let people know what is going on quickly and completely. People would rather work for an honest, straight shooter than someone disingenuous. Bad news is better than uncertainty.

Great leaders need to be mindful of their actions and work continuously to build and maintain relationships, loyalty, and focus at work.

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## **How Will The HVAC Market Change In The Next Five Years?**

Reprinted from [HVAC Informed](#)

### **Editor Introduction**

The HVAC market is a rapidly changing environment on a variety of fronts, from the introduction of new refrigerants to the increasing use of artificial intelligence to the embrace of interconnected systems in the Internet of Things (IoT) environment. We asked

our Expert Panel Roundtable: **How will the HVAC market change in the next five years?**

**Shelby Breger Conduit Tech:**

In the upcoming five years, the HVAC industry will undergo significant transformation, driven by several key trends:

1. Smart systems and IoT: HVAC systems will become increasingly interconnected, using the Internet of Things (IoT) to communicate with other home automation systems, allowing for real-time adjustments to factors like occupancy and external temperature.
2. Energy efficiency and green tech: With the push for sustainability, we expect to see more energy-efficient models and systems driven by electricity or geothermal energy.
3. AI-driven predictive maintenance: Leveraging AI, HVAC systems will predict when maintenance is due, ensuring optimal performance and longer equipment life.
4. Variable refrigerant flow (VRF) systems: VRF systems can heat and cool different areas simultaneously, offering efficiency and versatility.
5. Personalized air quality solutions: In a post-pandemic, systems that integrate air purification and monitor air quality are increasingly demanded. Investing in training on these newer technologies and prioritizing customer education will undoubtedly lead the market.

**John Keating Honeywell Refrigerants:**

Honeywell has a more than 100-year history of developing new technologies to address emerging needs and evaluating megatrends in global markets. This includes anticipating the market demand to cut carbon emissions and greenhouse gases (GHGs) and increasing energy efficiency decades ago. As the market continues to evolve to meet legislative requirements and other changes, we too are evolving to ensure our customers have the solutions they will need readily available to them. U.S. federal, state, and EU regulators are in various stages of establishing and enforcing a 150 GWP limit for refrigerants in new systems.

Important to managing the transition away from high-GWP HFCs is finding the right solutions that can meet environmental requirements while maintaining performance. Honeywell offers a number of ready-now solutions that support this. For example, our Solstice® ze refrigerant, built upon our innovative HFO technology, offers an HFC alternative that has an ultra-low-GWP of less than one, is energy-efficient and is designed to maintain or enhance performance levels. Honeywell Solstice HFO technology is meeting our customers' current and future regulatory needs and supporting their sustainability and energy efficiency goals.

**Paul Schubert Rapid Locking System (RLS):**

In terms of installation practices, a variety of influences are driving change from upcoming refrigerant shifts to trying to achieve efficiencies in estimates to be awarded more jobs, contractors are seeking new solutions. One option is to look at alternative pipe connection solutions that are more efficient and flameless, reducing costs and permits required. Since Rapid Locking System introduced the first HVAC/R press fittings in 2015, more than 15

million fittings have been installed worldwide. We expect the demand for press fittings to double in the next five years, driven by the shift to more flammable refrigerants and increasing adoption by contractors globally.

**Brandon Marshall The Chemours Company (formerly ICOR International):**

We expect the HVACR market will continue to emerge from supply chain and labor-related issues elevated by the pandemic. We will need to continue to monitor the rather volatile global economic situation as this could have short-term impacts that slow the recovery. We will see the decreasing availability of HFC refrigerants and the increasing availability of hydrofluoroolefins (HFOs) and HFO blends. The industry will need to prioritize investments in R&D that allow businesses to support current needs and future growth.

With the continued phasedown of HFC refrigerants and the need for businesses to demonstrate environmentally responsible operations on all levels, we expect to see an increase in the availability of equipment that supports the use of A2L refrigerants—which at present are the ideal solution for integrating zero ozone depletion potential and low to ultra-low global warming potential. A2Ls are high-performing, safe, and cost-effective. We see this already with Chemours Opteon™ XL41 (R-454B), which has been selected by several leading global OEMs, including Carrier, Johnson Controls, and Rheem, who announced alignment with us for the utilization of this new-generation A2L in air conditioning and heat pump applications. With these market changes there's a major risk of illegal or counterfeit products. When Europe implemented the phasedown of HFC several years ago, illegal and counterfeit products became one of their largest issues. These products diminish the objectives of the phasedown and frequently are not safe.

**Editor Summary**

Five years is a long time, especially for an environment in radical transition, such as the HVAC market. Our Expert Panelists point to a variety of emerging headwinds as we look five years into the future, although clearly, a lot can change in that amount of time. The HVAC market will continue to thrive by embracing new technologies responsibly and realizing a more sustainable, and more comfortable, future.

**Call for Articles**

Do you want to be featured in the next edition? We invite you to share your HVAC/R expertise and submit an article for the Compressor!

Here's what we need for your article's consideration:

- The article must be timely and relevant.
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