

# **HIGH-PERFORMANCE HVAC TODAY™**

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## **Residential Market Forecast**

# 2019

**ALSO IN THIS ISSUE:**

- First Impressions and Lead Generation
- Save Time with an Air Upgrade Procedure
- Contractor Spotlight: Born to High-Performance



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# HIGH-PERFORMANCE HVAC TODAY™

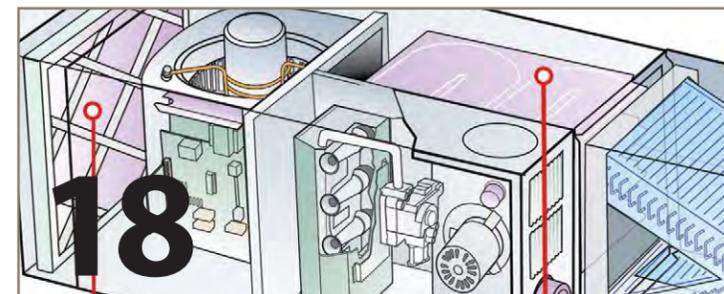
**MARKETING:**

## First Impression Impact on Lead Generation

Do you know how your incoming customer calls are being handled by your team? You should. Here's why.



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**TECHNICAL:**

## Air Upgrade Procedure Saves Time

Can your company benefit from a process that speeds up field diagnosis and repairs? Rob Falke says it will and shows you how to do it.

**MANAGEMENT:**

## Will 2019 Be Kind to the HVAC Industry? Changes are Afoot

Economic expert Connor Lokar examines the tell-tale signs of a weakening cycle and its impact on the HVAC business.



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### FREE Monthly Download



The February 2019 download is how to *Navigate the Fieldpiece SMAN 460 Four-Port Manifold*. This is for use by field technicians who need to measure refrigerant in a residential system.

This one-page data sheet explains how the instrument functions and how to properly set it up. It defines the abbreviations used on the device as well as defines the functionality of every button and control.

Go to [ncilink.com/md0219](http://ncilink.com/md0219), or use your phone with the QR Code below.

By registering for free on NCI's website, access this download and many more.



### Online University

**Featured this month** is the first module in our *Customer Service Training Series: Active Listening*. In this module you will learn the importance of communication in the office as well as in the field, and it should help you develop the skills necessary to meet and exceed customer expectations.

You'll learn the importance of your mindset and body language, building customer relationships, and identifying typical listening problems and how to overcome them.

This is a course that should be taken by everyone in the company, not just the office co-workers. When finished, your people will be able to identify effective methods of communicating, build better relationships based on listening skills, and more.

Go to [ncilink.com/ou0219](http://ncilink.com/ou0219) to learn more.



### BLOG POSTS

#### FOUR COMMON STATIC PRESSURE MEASUREMENT MISTAKES



Most questionable readings start with overlooking and/or ignoring static pressure measurement basics. In this blog post, David Richardson revisits four common mistakes made by some of the best HVAC Industry contractors and what to do to avoid making them yourself.

Find out more at [ncilink.com/4SPMistakes](http://ncilink.com/4SPMistakes).

#### AIR BALANCING AND ENERGY SAVINGS

Rob Falke examines how air balancing reports are now placing manufacturer specifications and measured field data side-by-side to prove how efficient an installed system is operating. He discusses why this is important and what it means to Performance-Based Contractors.



His blog can be found at [ncilink.com/AirBal](http://ncilink.com/AirBal).

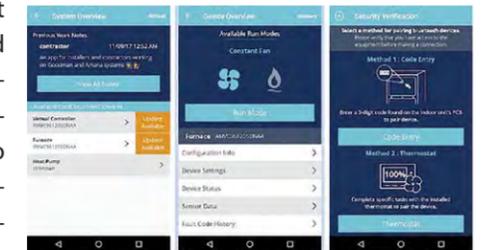
### There's an APP for That...

The February focus is on *Goodman's CoolCloud HVAC App*.



This mobile app enables HVAC contractors to connect and communicate wirelessly via Bluetooth with both Goodman and Amana premium air handler and furnace control boards.

This provides a more efficient means for servicing and maintaining equipment, making configuration adjustments, gaining equipment status, performing diagnostics, viewing fault code history, and ultimately simplifying the technician's ability to ensure energy-efficiency and reliable performance.



This is a FREE app available in both the Apple ([ncilink.com/CC1](http://ncilink.com/CC1)) and Google stores ([ncilink.com/CC2](http://ncilink.com/CC2)).

## Let NCI be Your Support Team on Your High-Performance Contracting™ Journey

Your key to success in Performance-Based Contracting™ is a strong support network – always there when you need it. NCI helps its members overcome the typical hurdles associated with implementing the measured performance approach.

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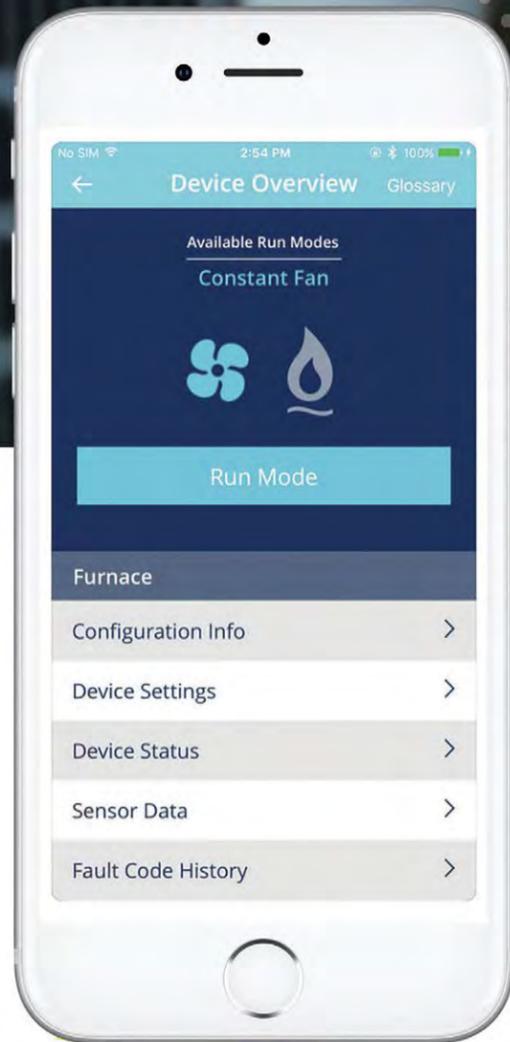
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TODAY'S WORD

By Mike Weil

## Welcoming 2019: The Good, The Bad, and The Ugly



Mike Weil is editor-in-chief and director of communications and publications at National Comfort Institute, Inc. He can be reached at [MikeW@ncihvac.com](mailto:MikeW@ncihvac.com).

**A**s I write this, the AHR Exposition is in the rear-view mirror, a massive cold snap is freezing out the upper mid-western U.S., and the federal government shutdown is on temporary hiatus. I like to call this troika of events The Good, The Bad, and the Ugly.

Like every year at the expo, you can't help feeling the positive energy as the HVAC Industry gathers to talk about the future. Showcased were the latest technologies, equipment, and services designed to take this industry and its customers forward. This includes high attendance in all the educational sessions, crowds working the show floor, and the after-hours events where contractors, engineers, manufacturers, and distributors hobnob and lay the groundwork for the upcoming year.

**The Good** – Having an early year kick-off event like the AHR Expo really can set the stage with all its positive energy.

The **manufacturers** themselves seemed confident that 2019 would be a strong year. This was evidenced in the Economic Outlook Survey conducted by expo management late last year. HVACR manufacturers reported positive 2018 sales growth and forecasted that to carry into 2019.

**Contractors** also cited a good business environment in 2018, many attributing it to positive changes in the tax laws and an easing of regulatory burdens.

Everyone is concerned about price increases due to national and international politics (can you say tariffs?), but for now that hasn't hit yet.

Contractors like Dan Foley, who received the Dan Holohan Award from Taco, Inc. during the show, is an example of a contractor who finds great benefit from attending the expo and using it to kick off the year on a positive footing.

**The Bad** – Not to be a naysayer, but despite all the good feelings of the show, there are realities we all need to face. The economy is the biggest one. Just read Connor Lokar's market forecast article on page 22 and you will see what I mean.

Many manufacturers acknowledge that the economy could negatively impact the costs of their finished goods, but hold out hope that shipments in 2019 will be on the upswing.

**The Ugly** – In a nutshell, the key economic indicators (the U.S. Single-Family Housing Starts growth rate, for example) have been sliding for some time, which Lokar says is a warning sign that the economy is slowing. That means potentially fewer HVACR projects. It also can mean that residential consumers may steer their spending towards more renovation work – the baliwick of High-Performance HVAC contractors.

One reason: the Air Upgrade Process. Check out Rob Falke's explanation of that process in his article on page 18.

More ugliness exists in the form of tariffs, government shutdowns, technician shortages, and the impending patchwork of state-led refrigeration regulations that can be a huge burden to contractors. All this makes 2019 a potentially ugly year.

### WELCOME TO 2019

This mixed bag also includes a bright spot. Lokar sees things turning around in the fourth quarter of 2019. And if you are a Performance-Based Contracting™ company, you are somewhat insulated from the negatives because you offer something no one else can – proveable results in comfort, energy efficiency, safety, and health.

So welcome to 2019. It will be challenging, but opportunities abound. Apply your training and skills for the betterment of your customers, and make this year one of your best ever!

# Initiatives and Announcements from Across the Industry

## RHEEM ANNOUNCES NEW SUSTAINABILITY INITIATIVE

Last month, during the AHR Exposition held in Atlanta, GA, Rheem President and CEO Chris Peel announced the company's commitment to achieving zero waste in its manufacturing processes.

Peel told a group of show attendees that this new Global Sustainability Initiative was called "A Greater Degree of Good." "The intent is to cut Rheem's greenhouse footprint by 50% by 2025," he explained.



Chris Peel

This means the company is focusing on attaining zero waste and zero landfill impact.

"In addition," Peel said, "we have the goal of training 250,000 plumbing and HVAC contractors on sustainability best practices."

Besides making its manufacturing processes and locations more sustainable, Rheem is focused on developing products to help consumers be more energy efficient and reduce their own environmental impact.

Peel explained that the company's vision had a three-tier approach:

- Degree of Innovation
- Degree of Efficiency
- Degree of Leadership.

The **Innovation** approach focuses on

developing and marketing products that minimize waste when in use. Peel says this is combined with the goal of reducing their own greenhouse gas footprint and in alignment with the company's 100th anniversary.

The **Efficiency** approach really focuses on the company's processes -- new efforts to implement environmental processes. "Along with the company's independent efforts to ensure sustainable consumption and production patterns, Rheem is committed to affecting an even greater environmental impact and is calling on other companies to adopt environmentally sound practices and prioritize sustainability in their manufacturing as well," Peel said.

Regarding **Leadership**, Peel says the company is taking a stand in the battle to overcome the technician shortage in the HVAC and plumbing trades.

"Recognizing that our success depends on skilled plumbers and contractors who install and service our products, Rheem is investing in new recruiting and training initiatives."

"We are working to foster a qualified workforce and educate the trade on how to best support Rheem's sustainability goals. By 2025, Rheem will commit to training at least 250,000 plumbers and contractors on sustainable products, sustainable installation, and recycling best practices using our six state-of-the-art *Innovation Learning Centers* located across North America."

"We all feel a shared responsibility to reduce the natural resources required

to make and use our products, and we are excited about the opportunity to affect positive environmental change through these purposeful actions. By working together -- Rheem associates, our contractors, and consumers -- we will create a Greater Degree of Good," Peel concluded.

## DANFOSS SEES RESIDENTIAL MARKET SLOWDOWN

Danfoss North America President John Galyen took a look back at the economy from an HVAC Industry perspective during a press conference at last month's AHR Expo in Atlanta, GA.

He told attendees that 2018 was a year of solid growth in the HVAC industry, but said that would change in 2019, mostly as a result of the tariff war between the U.S., some of its allies, and China. He added that those tariffs and other economic events were creating uncertainty that would impact the markets.



John Galyen

"All indicators point to positive growth early in 2019," he says, "but we see a slowdown coming in the second half."

Galyen qualified his statement saying that the slowdown would mostly impact the residential arena -- commercial HVAC would continue to grow. He attributed that growth to a new

form of commercial customer collaboration with regard to refrigerants and sustained efficiency.

Furthermore, because of the current administration which has effectively stripped the EPA's powers, refrigerant development is in danger of falling under a patchwork of regulations from individual states and cities, Galyen pointed out.

"That puts a huge burden on HVAC contractors who still service legacy systems," he says.

## TACO PRESENTS 2019 DAN HOLOHAN AWARD

On Monday, January 21st, the first day of the AHR Expo in Atlanta, GA, Contractor Dan Foley, owner of Foley Mechanical Inc. in Lorton, Virginia, was

presented the Dan Holohan Lifetime Contribution to Comfort Award during the Taco Comfort Solutions'® press conference. The award was presented by John Hazen White, Jr., executive chairman and CEO of Taco, Inc.

The annual award is given to an HVAC professional or company that makes substantial contributions to com-



Dan Foley

fort technology, advancement, or training while displaying the exceptional good humor and love of people exhibited by Dan Holohan throughout his long career.

Foley is the

fourth recipient of this award and, according to John Hazen White, Jr., "is recognized for his uncompromising commitment to the quality, comfort, efficiency, and capability provided by hydronic systems."

Foley Mechanical was founded in 2002 in Washington D.C.

## REES FOUNDATION AWARDS \$65,000 TO ASPIRING HVACR TECHNICIANS

The Clifford H. "Ted" Rees, Jr. Scholarship Foundation, a 501(c)(3) charitable foundation of the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), and the Air Conditioning Contractors of America (ACCA), announced scholarship awards totaling \$65,000 to 39 students, including five military veter-

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an program recipients, studying to become technicians in the HVACR and water heating industry.

AHRI President and CEO Steve Yurick says the foundation is geared to providing aid to people interested in careers in the HVAC Industry.

"Each year, the Foundation provides aid to an increasing number of recipients, helping to promote careers in the industry and fill good-paying jobs that cannot be outsourced," he says.

Since the Rees Scholarship Foundation was founded in 2003, it has awarded more than \$800,000 in scholarships to more than 400 deserving students and instructors.

The scholarship foundation has several programs that include:

# Rees

## SCHOLARSHIP FOUNDATION



### HVACR and Water Heating Program

– This supports students enrolled in an HVACR training program at an institutionally accredited school and pursuing a career in the HVACR and water heating industry.

**Veterans Program** – To support veterans enrolled in an HVACR training program at an institutionally accredited

school and pursuing a second career in the HVACR and water heating industry.

"Developing quality workers is a critical initiative that everyone in our industry is working together to accomplish," says ACCA Interim President and CEO Barton James.

"We are proud to partner with the Rees Scholarship

Foundation and AHRI to give these hard-working students and veterans scholarships to help them continue their education, which will develop into a strong workforce for our industry's future."

For more information, visit the Reese Foundation website at [ncilink.com/Rees](http://ncilink.com/Rees).

## High-Performance Thermostats

### THE ECOBEE4

The ecobee4 is a next-generation smart thermostat with Amazon Alexa voice recognition built in. It also has far-field voice recognition to help customers manage their comfort and energy use.

It can be controlled via touch-screen, a



smart device, or voice. The ecobee4 can read temperature and detect occupancy, thus help to manage hot/cold spots. It is Energy Star™ certified.

Features include:

- Wireless room sensors
- Smart Recovery
- Fan Dissipation
- Staging Options
- Free Cooling
- Optimal Humidity Control.

Visit [ncilink.com/ecobee4](http://ncilink.com/ecobee4).

### EMERSON SENSI MULTIPLE THERMOSTAT MANAGER

The Sensi™ Multiple Thermostat Manager is a software application to manage and control multiple heating and cooling systems via one online portal. Works with HVAC systems in most commercial facilities using Sensi WiFi thermostats.

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- Quick Control Batch Operations



- Remote Control and Flexible Batch Scheduling
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  - Smart Alert notifications for when extreme temperature or humidity changes are detected.
- Learn more at [ncilink.com/SensiMgr](http://ncilink.com/SensiMgr).

### HONEYWELL LYRIC T6 PRO

The Honeywell T Series is a portfolio of non-connected and Wi-Fi-connected thermostats. Model TH6320WF2003 has the following features:

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- C-wire only
- Optional dual fuel and ventilation
- Optional wired indoor/outdoor sensors
- Control from anywhere with the Lyric app



- Geofencing, 7-day, 5-2, 5-1-1, or non-programmable.

All T Series thermostats use the same UWP mounting system, helping installers get in and out quickly and efficiently. The Lyric T6 Pro Wi-Fi has an optional ventilation control for residential new construction projects that need to meet the ASHRAE 62.2 standard.

For more information, go to [ncilink.com/LyricT6](http://ncilink.com/LyricT6).

### JACKSON SYSTEMS PROGRAMMABLE T32-P

The T-32-P universal is compatible with most commercial HVAC systems and is ideally suited for use with Jackson



Comfort Systems zoning panels. Features include:

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- Auto or manual changeover
- Smart fan logic for commercial control
- Adaptive recovery
- Optional indoor or outdoor sensor
- Outdoor temperature display with optional outdoor sensor
- Available with integrated Modbus communications (Version 2.20).

Get all the details at [ncilink.com/JacksonT32P](http://ncilink.com/JacksonT32P).

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# Born to the High-Performance Way



Leo Roa conducts a typical Punbar installation. This includes duct sealing as well as doing full combustion and CO safety testing.

“WE DISCOVERED THAT IT WAS NOT JUST HAVING THE IDEA OF PROPER AIRFLOW, IT WAS ALSO HOW YOU DELIVER THAT AIRFLOW”  
— RONALD AMAYA

Everyone says that everything is bigger in Texas (except for those folks living and working in Alaska), and in many cases they are right. Especially when it comes to the energy business. In fact, the city of Houston is known for its giant energy economy, particularly when it comes to oil. Statistically the Houston metropolitan area has the largest concentration of petrochemical manufacturing in the world. It is also the world’s leading center for oilfield equipment construction, home to many of the top oil/gas exploration and production firms, as well as petroleum pipeline operators.

Back in 2004, two Venezuelan engineers – Ronald Amaya and Diego Guerrero – emigrated

to the Houston area to escape troubles at home and make new lives for themselves and their families. They worked in the oilfield industry. They were totally new to the U.S. and quickly discovered that in Houston, it could become unbearably uncomfortable inside their homes. Their air conditioning never seemed to work properly and, though they called on several HVAC contracting firms to come out and fix the problems, they were unsuccessful.

The two engineers witnessed contractors trying to solve the problems by changing out parts or guessing. In Ronald Amaya’s opinion, there seemed to be a basic lack of knowledge in the fundamentals of troubleshooting. He and Diego decided – as many engineers do – to research and try to find solutions on their own.

“We started researching online, and fortunately discovered the National Comfort Institute,” Amaya says. “We decided to take some classes to see if we could find out why our air condition-

ing didn’t work well. Before too long, a light bulb went off and we thought we could start a business using the principles we were learning about in these classes.

“Having an engineering background, I really thought Diego and I could do better than the other HVAC companies in our area.”

## BORN INTO PERFORMANCE

And so Punbar LLC was born in 2015. The two engineers say they felt they’d found the answers to their own personal air conditioning problems and wanted to convert that into a profitable HVAC business.

“When we started,” Amaya says, “we thought

the common problem was more of a system design issue, not house design issue. But the NCI classes showed us that, for the most part, the system designs were usually right. The problems often were in how those systems were installed. We discovered that it was not just having the idea of proper airflow, it was also how you deliver that airflow.”

In the beginning, Punbar only did design work. Because they didn’t hold HVAC contractor licenses, they couldn’t do installations, so they continued their careers in the oil industry. But they did approach other HVAC companies offering to design for them.

“And they laughed at us,” Amaya says. “So, we took our designs to our co-workers in the oil industry and they began asking contractors to do things our way. In essence, we were bringing customers to other HVAC contractors. Those customers suggested we do maintenance work and take care of their HVAC systems for them. So that



Punbar techs balance airflow on all the HVAC systems they come into contact with.



From left to right: Victor Amaya, Diego Guerrero, Ronald Amaya, Hector Martinez and Leo Roa

is what we have been doing for the last few years.”

But it wasn’t enough because the two engineers weren’t making enough profit to keep the fledgling company going. They decided to commit full time to the business, to get licensed, and to begin designing, selling, AND installing and servicing HVAC systems. Therefore, the actual birth of Punbar as a full-on Performance-Based Contracting™ firm was three years ago and there has been no looking back.

## PUNBAR TODAY

In 2016 Punbar was barely turning a profit. Today the residential retrofit and service company is at \$650,000 in gross sales, and according to Ronald Amaya, growth is happening exponentially. Between 2017 and 2018 the company grew from having only two employees to five and currently fields three vehicles.

“We learned the importance of training your people correctly, Amaya adds. “We really don’t want to add people from other companies where they learned bad habits. It takes way too long to change those habits. We spend a lot of time recruiting the right person with the right attitude and who is willing to learn. Then we train them.”

Another interesting fact: Amaya says that four of the five people work-

ing for Punbar today are engineers. The one who isn’t, is an electrician.

## MEASUREMENT AND TRAINING ARE EVERYTHING

He says that in his opinion, an engineer who isn’t focused on accuracy and facts based on data, is an engineer who doesn’t get it. The team at Punbar started their lives in the HVAC business with this attitude, so they are very picky about the tools and instruments they use. They want accuracy. They rely on their tools to get them data they can depend on.

Amaya explains they provide their field technicians with manometers, flow hoods, and thermal cameras.

“Training is the fuel that runs our company,” he continues. “One reason is because I grew up in the oil business and training was a key factor there. It’s how I’ve always done it. If you train your people well, you won’t have as many issues.”

Punbar has a method for conducting training. They start out by doing it themselves to give their people the fundamentals.

Then they send them through NCI courses as well as through manufacturer training. According to Amaya, they typically focus on formal training during slow seasons.

In fact, it is during those slow seasons that they try to hire new team members.

**MANAGING THE BUSINESS**

Both Ronald Amaya and Diego Guerrero manage the business side of this High-Performance Contracting firm. Because the company is small, they want to keep overhead as low as possible, so instead of having an on-staff accountant, they manage the financials using Quickbooks.

“Of course we have a third-party accountant, but he is a sub-contractor,” Amaya says. “We pay him to check our books two times a year.

“We take care of all the calls and dispatching ourselves.”

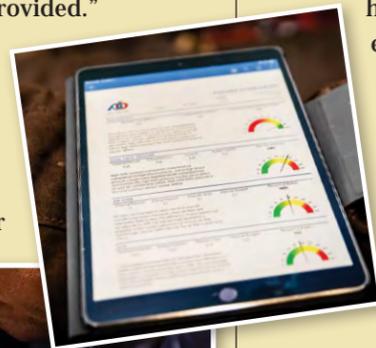
Managing the business to support their High-Performance approach to HVAC contracting is very important to Amaya and Guerrero. But it is equally important to manage all the data they collect, use it to improve

their in-field accuracy, and create better comfort and energy efficiency for their customers. That is why Amaya says they require their technicians to visually check the systems, run them, observe how they operate, and then take static pressure measurements.

He says, “We use the NCI ComfortMaxx™ software to capture this information and do the calculations. We create the before- and after-reports on each job, then share them with the customer so they can see how much improvement we provided.”

**TARGETING YOUR MARKET**

Amaya says the ComfortMaxx reports are perfect for



All Punbar technicians are equipped with iPads with which they run ComfortMaxx™ software to capture measurements and do calculations.

the types of customers Punbar targets. Because the company began by working for friends, family, and oil-industry co-workers, their initial client base consisted of highly specialized, engineering-oriented people.

He says those customers appreciate seeing the data. ComfortMaxx makes it easy to show them that data. He adds that they understand the changes in the data showing how their system was operating before and after the work.

He adds that with ComfortMaxx, his crews can show customers their hot rooms and cold rooms, then explain to them why they have those issues.

“ComfortMaxx has helped us tremendously. We call it our cheat sheet.”

He also points out that Punbar is a bilingual company – every one of their employees speaks both Spanish and English – which is a bonus in their demographic area.

**CLOSING THE SALE**

Obviously, all this good work and best practices means nothing if Amaya and his team don't close the sale. He points out that using ComfortMaxx also helps with that.

“We are one of the only HVAC companies that look at the entire picture of a customer's home. Not just one component. When you do that and explain airflow in the same context as human blood flow, and then give them choices, customers are sold before you even bring up the price.

“We show customers that by doing this amount of work on the duct sys-



Victor Amaya heading up into an attic to begin taking measurements.

“Sometimes,” Amaya continues, “customers try other companies first and find their airflow issues were not resolved. They call us, we come out and test and measure, maybe change out or repair some ductwork, and their home becomes comfortable. Problem solved. And we have a customer for life.”

**IN THE END, IT'S ALL ABOUT TRAINING**

Amaya cannot stress this enough. As an HVAC contractor working in the industry today, if you aren't constantly learning and looking for better ways to

do things, then you cannot grow or be as successful as you want to be.

“We started our life as a contracting company training, training, and training. Because of that, I believe we grew our company by 30 to 50% in our first year. It requires commitment and work. If you aren't committed to Performance-Based Contracting, then you will be out of the game in a few years.

“But if you make the effort to learn, and apply what you learn, you WILL succeed. We are living proof of that,” Amaya concludes.

For these and many more reasons, Punbar LLC is this month's **Contractor Spotlight**. Congratulations to Ronald Amaya, Diego Guerrero, and the entire Punbar team. 

Testing for gas leaks is part of the installation, service, and maintenance work provided by Punbar field technicians.



**Speed Up & Simplify Your Testing Process • Wow Your Customers**

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# First Impression Impact on Lead Generation



have, the phones need to be monitored and you should provide retraining as necessary. Part of that training should include the latest information on your programs, services, and special offers.

Optimally, every call should be completely managed by the person who picked it up without having to forward it to someone else.

If that is not possible, make sure that person gathers all of the necessary information before transferring the call so the customer doesn't need to repeat the scenario a second time. If the call cannot be transferred to someone else, it is just as important to pass along the pertinent information.

Several years ago a number of customers called in and asking for a former service technician who had been promoted to another position. He would return their call when he was available, but sometimes it would take him more than a day to do it. Often, the customers wanted to schedule service, which could have been done on the initial call.

I would also recommend that you have a mechanism to track where your calls come from. We use CUC Software that has this capability built in. This enables us to track where leads originate.

This has saved us thousands of dollars by NOT advertising where our target customer is not engaged. This also allows us to better understand the demographic we are looking to serve. It also allows us to track our cost-per-thousand (CPM) stats.

A simple, "May I ask you how you heard of us?" is all that's necessary. A follow-up may be helpful, "You said that you found us on the internet, may I ask where?"

## RE-EXAMINE PROCESSES

Once you ascertain how your customers' initial calls are being handled, it is time to look at your customer service processes. Think about how, us-

**F**irst impressions are important! This is especially true when customers, either existing or potential, call your office to book an appointment. Do you know how these calls are being handled by your CSR (customer service representative) or anyone else in your company who answers the phone?

Their role/job is to HEAR any concerns and to book an appointment; whether it's for maintenance, demand service, or a sales department lead.

If you don't regularly listen to how calls are being handled, I recommend that you start. Your existing phone system may already have the capacity to record calls, or you may have to contact an outside company that offers that service.

## SINGLE-SOURCE RESPONSIBILITY

My experience is that you will be appalled at what you hear. Despite any training your CSRs

ing today's tech improvements, you can upgrade those processes. Some questions to ask yourself:

- Does the "office paper-flow" need to be altered?
- Do your technicians have more responsibility in the field (data entry, credit card payment)?
- What additional training is necessary?
- Does everyone in the company understand their role and how it impacts other departments? Has all the required information been gathered from the customer to ensure that the requested service will be exemplary? Has that information been communicated to the correct department/employee?

## INTERNAL AND EXTERNAL CUSTOMERS

Remember, as an owner/manager you have two sets of customers; the ex-

ternal set and the internal set. Without your internal customer (co-worker) being in the loop, competent, and confident; your external customer will not necessarily have a great experience. If your processes are neither clear nor followed, you have a problem.

Involving your staff to help in the composition of customer policies can be very beneficial. Often staff is more aware of things that could improve customers' overall experience and satisfaction.

Some of the things we do are just not relevant any longer. Use your employees' knowledge and experience in the field and create positive changes to outdated processes. This nearly always leads to happier client experiences.

## FIRST IMPRESSIONS MATTER

When your customer's first impression is a professional interac-

tion with someone who is efficient and who cares about their needs, it results in a positive experience. It lays the groundwork for 'knock-your-socks-off' service – no matter if it is from the service or the sales department.

If your company's image is on display – and it is – before the phone rings, what does it portray: professionalism or laissez-faire? Here are several questions to consider:

- When the customers meet your field service crews, are their trucks clean and organized? Is there garbage on the dash?
- On your literature and printed/digital information pieces, is your company's information legible and readable?
- Are your employees properly uniformed? Are their uniforms clean?
- Are your trucks parked outside of a beer store/bar or in an appropriate parking location?

Some of these things might seem petty. They all reflect your company's image and that valuable first impression. It also impacts second and third impressions.

## TODAY'S CUSTOMERS AND YOUR BUSINESS

Today's customer tends to be more demanding and more knowledgeable than ever before. Loyalty and trust are not as popular as they once were. We need to earn them every day, not only from potential customers; but from existing ones. We know that it costs less to keep a customer than to attract a new one. AND it can all come back to that all-important first impression. How does yours stack up? 

## Meet Nancy McKeraghan at NCI Summit 2019

High-Performance HVAC Summit 2019 is happening April 15-18 in Orlando, FL. Nancy McKeraghan is one of five Performance-Based Contractors™ presenting how they bring High-Performance into their companies and their marketplace. She is one of the owners of Canco Climate-Care in Newmarket, Ontario, Canada and will discuss how her company turns High-Performance Leads into sales and service appointments.



Come meet Nancy and network with your peers in Orlando. Learn more about the Summit 2019 program at [GoToSummit.com](http://GoToSummit.com).

After Summit ends, stick around for our Post Show Training classes. [Click here for details.](#)

Register today. Questions? No problem. Call 800-633-7058 and talk to your customer care representative.

# Air Upgrade Procedure Saves Time for Techs and Customers

The primary goal of NCI's Air Upgrade Approach is to reduce the time it takes to test, diagnose, and sell HVAC system upgrades. This one-page report includes testing, diagnostics, a pre-determined scope of work, and flat rate pricing. Let's take a look at this testing and sales approach that many have adopted and benefitted from.

## THE BARE ESSENTIALS

Many contractors want a way to find and sell system renovations that makes it easier to incorporate air diagnostics into their daily routines. NCI interviewed many contractors and studied mountains of data and created the Air Upgrade.

The Air Upgrade is a simple and affordable initial system modification designed to solve customer comfort concerns by improving fan airflow. Air Upgrades can be performed by any contracting firm of any size by involving maintenance and service technicians, as well as salespeople.

This quick and simple approach to air diagnostics can be incorporated into most service or change-out sales scenarios. The outcome is a basic system renovation that will increase fan airflow and improve HVAC system performance.

Testing includes a static pressure profile and plotting fan airflow. This test informa-

tion is used to diagnose low airflow causes and prescribe eight specific solutions. Of course, further testing and diagnostics can be added at any time.

Let's review the six steps necessary to complete the process.

### STEP ONE: GATHER EQUIPMENT DATA

To accurately assess the performance of a system, first obtain minimal equipment information from the nameplate to determine the system size, required airflow, and static pressure requirements.

### STEP TWO: STATIC PRESSURE PROFILE

Next, you take four static pressure measurements at the equipment. For a gas furnace with an external coil, take your readings before and after the filter and before and after the coil. This test typically takes less than five minutes and provides important diagnostic information.

### STEP THREE: CALCULATE PRESSURE READINGS AND COMPARE TO BUDGETS

Using the four system pressures, you can determine the resistance to airflow through the system. These include total external static pressure, air filter pressure drop, coil pressure drop, supply duct pressure, and return duct pressure.

Then, based on a rated static pressure of .50 in., you diagnose the impact of each pressure with NCI's static pressure budgets shown in the table (Figure 2).

The pressure of the return duct system in this example should not exceed .10 in. But the measured pressure is .32 in., showing the return duct is restricted three times what it should be. The return duct system needs some improvements.

The filter's resistance is twice what it should be, further restricting airflow and deteriorating system performance. Replacing the restrictive

	System Component	Measured Pressure	.50 Fan Rated Pressure
A	Return Duct	.32	.10
B-A	Filter ΔP	.20	.10
C-D	Coil ΔP	.24	.20
D	Supply Duct	.14	.10
B + C	Total External Static	.90	.50

Figure 2: Pressure Budgets.

filter with a less restrictive filter is a great solution.

Because of these system defects, the measured total external static pressure is .90 in. This is nearly double the fan rated static pressure. Under these conditions, the typical constant speed fan moves less than 270 cfm per ton.

As you can see from this test and calculation procedure, after less than 10 minutes of testing and basic diagnostics, this system is in trouble and would greatly benefit from air upgrades to improve fan airflow and system performance.

### STEP FOUR: PLOT FAN AIRFLOW

Since the fan generates 100% of the system airflow, knowing fan airflow is valuable in diagnosing and determining needed repairs. Fan airflow is typically found from the data you've collected and plotting it on a fan table.

In step one, you find the equipment tonnage and rated static pressure. In step two you measure total external static pressure. Now, all you have left is to identify the fan speed setting before you can plot fan airflow.

The easiest way to find fan airflow is using NCI's AirMaxx™ Lite App. You

can download it for free at the [Google](https://ncilink.com/AML1D) (ncilink.com/AML1D) and [Apple](https://ncilink.com/AML1A) App (ncilink.com/AML1A) stores. NCI's Generic Fan Tables are built into the app so you can easily determine the approximate fan airflow.

Or, you can secure the equipment manufacturer's fan curves and plot the measured total external static pressure and the fan speed to find the fan airflow.

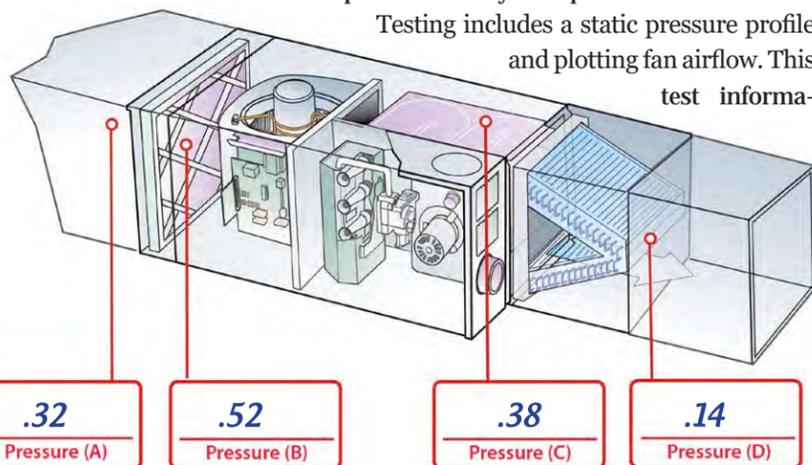
Then compare required system airflow to plotted fan airflow. It's not uncommon to find fan airflow below 300 CFM per ton.

As you can see, this minimum testing and diagnostics quickly gets to the meat of system problems.

### STEP FIVE: PRESCRIBE SOLUTIONS

Based on this abbreviated air diag-

Figure 1: Example of static pressure measurements at the equipment.



## Take the First Step Towards High Performance

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nostics procedure, we discovered a universal set of repairs that solve many air-flow problems detected from this testing.

The exact repair type varies with each system, as it does with any field installed system. We have categorized these repairs into two groups.

**Typical Equipment Repairs:**

- ▼ Upgrade filters to reduce resistance to airflow
- ▼ Adjust the fan speed setting
- ▼ Clean the blower and coil
- ▼ Verify fan airflow once repairs are complete.

**Typical Duct System Improvements:**

- ▼ Increase return duct capacity
- ▼ Increase supply duct capacity
- ▼ Basic duct improvements
- ▼ Reduce duct airflow loss.

**STEP SIX: PRICE AND SELL THE AIR UPGRADE**

Some companies are great at pricing equipment replacement, but haven't developed a method to price duct system upgrades. Our research and contractor interviews helped create a flat rate pricing system for this set of repairs.

This flat rate pricing is based on typical cost for the repairs listed above. It provides adjustable labor costs, local material costs, profit margins, and variables contained in each job. The pricing can be adjusted by each contractor.

The objective of the Air Upgrade is to substantially improve the comfort and efficiency of an HVAC system and allow equipment to perform as intended by the manufacturer. It is most often used as an add-on sale at the time

of equipment replacement where a total system price cannot be shopped.

When it comes to selling Air Upgrades, remember this: they have no set market value because testing and diagnostics create a unique product only you can offer.

Unique products result in a uniquely high profit that is worth the cost to you and your customer. 



**Rob "Doc" Falke** serves the industry as president of National Comfort Institute, Inc., an HVAC-based training company and membership organization. If you're an HVAC contractor or technician interested in more information on Air Upgrades, contact Doc at [rob@ncihvac.com](mailto:rob@ncihvac.com) or call him at 800-633-7058. Or go to NCI's website at [nationalcomfortinstitute.com](http://nationalcomfortinstitute.com) for free information, articles, and downloads.



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**Your Support Team on Your High-Performance Contracting™ Journey**

Your key to success in Performance-Based Contracting™ is a strong support network – always there when you need it. NCI helps its members overcome the typical hurdles associated with implementing the measured performance approach.

**Membership Options:**

Turbocharge your membership with added learning opportunities and financial incentives.

	 High Performance HVAC Alliance	 Learning Excellence Premium Upgrade	 Learning Excellence Live Upgrade	 Learning Excellence Online Upgrade	 Membership
Unlimited Toll-Free Support	✓	✓	✓	✓	✓
High Performance Talk Discussion Forum	✓	✓	✓	✓	✓
Find-A-Certified-Professional Lead Generator	✓	✓	✓	✓	✓
i-NCI: Mobile-Friendly Technical & Sales Tools	✓	✓	✓	✓	✓
Hundreds of Technical & Marketing Downloads	✓	✓	✓	✓	✓
Members-Only Newsletter	✓	✓	✓	✓	✓
Article Library Featuring Technical & Business Articles	✓	✓	✓	✓	✓
Live & Online Training and Conference Discounts	✓	✓	✓	✓	✓
Member Rewards NCI Training Bucks on Purchases	15%	15%	15%	15%	5%
Training Incentive Partner Program Dollars	Maximum	Maximum	Maximum	Maximum	✓
NCI Online Store Discounts	✓	✓	✓	✓	✓
ComfortMaxx Air™ - Airflow Testing Software	✓	✓	✓	✓	✓
Unlimited Online University Courses	✓	✓	✓	✓	✓
Unlimited Webinar Access	✓	✓	✓	✓	✓
Bonus Annual NCI Training Bucks Earned	\$4200	\$4200	\$4200	\$1200	✓
ComfortMaxx Pulse™ - Air & BTU Testing Software	✓	✓	✓	✓	✓
ComfortMaxx Verify™ - Full System Testing Software	✓	✓	✓	✓	✓
Free Print Subscription to High Performance HVAC Today	✓	✓	✓	✓	✓
One Paid NCI Summit Conference Registration	✓	✓	✓	✓	✓
EGIA Premium Membership	✓	✓	✓	✓	✓
70% OFF 5-Day 2019 Success Week Bootcamp	✓	✓	✓	✓	✓
<b>Monthly Investment:</b>	<b>\$999</b>	<b>\$750</b>	<b>\$450</b>	<b>\$450</b>	<b>\$100</b>



Scan this QR code or call NCI Customer Care to learn how NCI Membership can take your HVAC business to the next level!

**Join NCI Today!**

# Will 2019 Be Kind to the HVAC Industry? *Changes are Afoot*



Last year the U.S. economy was kind to the HVAC industry. By one measure, the **2018 U.S. Refrigeration and HVAC equipment new orders**, 2018 trended towards being the best year. New orders to manufacturers during the 12 months through October (most recent data available) totaled \$47.3 billion, the highest annual total ever.

This is an increase of 6.5% from the comparable period through October 2017, marking the swiftest pace of growth for equipment new orders in more than five years.

The new orders measure includes HVAC, commercial and industrial refrigeration, and freezer equipment.

On the employment side, there are more plumbing and HVAC contractors operating in the U.S. than ever before. **Annual U.S. plumbing and HVAC contractor employment** averaged a record 1.12 million individuals during the most recent 12 months, up 5.6% from the year-ago level. This marks the fastest annual employment growth in the industry in two years.

However, that is not to say it has been a year without challenges. Momentum on the doorstep of 2019 is decidedly weaker than when we were heading into 2018.

### CANARY IN THE COAL MINE

We sometimes refer to the U.S. housing market as our “canary in the coal mine” for the broader U.S. economy.

The idiom refers to coal miners’ early-20th century practice of bringing caged canaries into the depths of mines to detect carbon monoxide and other toxic gases. The canaries were more sensitive to the gases and would succumb to them before the miners, their deaths serving as a warning

for the humans to retreat. A somewhat morbid practice by current standards, but effective.

Today, unfortunately, our economic “canary” appears to be under duress and pointing to signs of danger for the overall 2019 U.S. business cycle as well as for the HVAC industry.

### THE ECONOMIC INDICATORS

**U.S. Single Unit Housing Starts** during the 12 months through November totaled 880,000 units, up 3.9% from the same timeframe a year ago. While on the surface this appears positive, it marks the most anemic annual pace of growth for the U.S. housing market in more than six years, and that pace continues to slow. The most recent monthly data indicates a trend of decay, as housing starts in November 2018 alone fell 12.7% below the November 2017 level.

Additionally, the **National Association of Home Builders Housing Market Index** monthly reading, an effective measure of home-builder sentiment, was down 24.3% in December 2018 from the December 2017 level, the sharp-

est year-over-year drop since 2011.

The Single-Family Housing market serves as a leading indicator, because it has historically started to fade in the face of economic headwinds before the U.S. macroeconomy. In this cycle, the toxic gases appear to be rising mortgage rates, home-price inflation due to labor/land/material costs (impacting both housing affordability and builder profitability), and more recently, waning confidence. This suggests a leaner year ahead for HVAC manufacturers, distributors, and contractors tied to the U.S. housing market.

Increasing interest rates are impacting the housing picture both on the new and existing home sale front. **U.S. Conventional 30-year Mortgage Rates** averaged 3.95% in 2017, which is a bargain compared to the most recent level of 4.64% at the end of 2018.

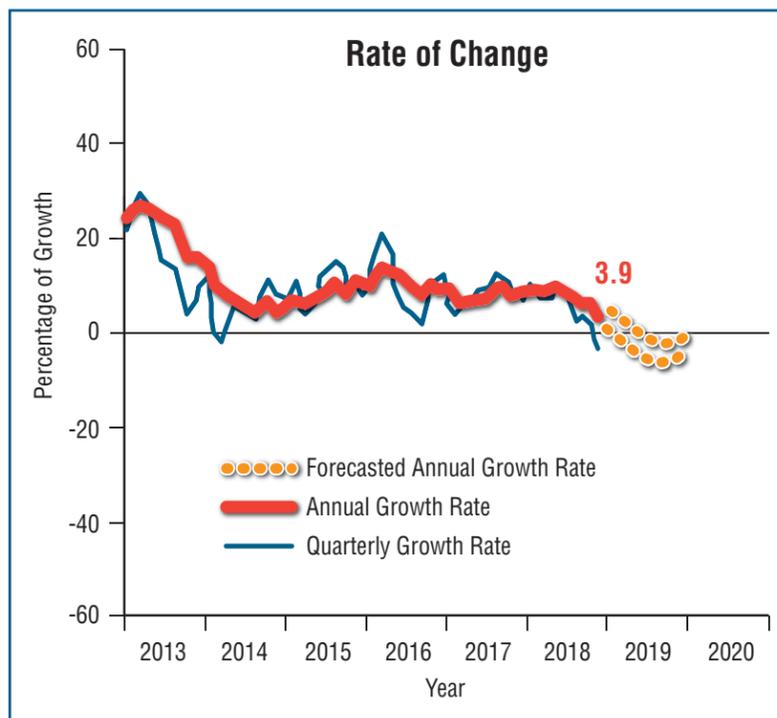
Higher mortgage rates are like-

ly pushing would-be buyers, perhaps first timer millennials, back to the sidelines as the higher financing cost has pushed ownership into an unaffordable range.

### CONSUMER RESPONSE

Existing home owners who may have locked in at attractive, sub-4.0% rates following the Great Recession may also be reluctant to upgrade to larger homes with a higher rate. Instead they may be more content to stick out their current living situation. This has had an apparent effect on home sales.

**New U.S. Home Sales**, in October 2018, were 42,000 units, down 14.3% from the October 2017 level. Again, this is the sharpest year-over-year contraction in monthly data since 2011.



The U.S. Single Family Housing Starts growth rate.

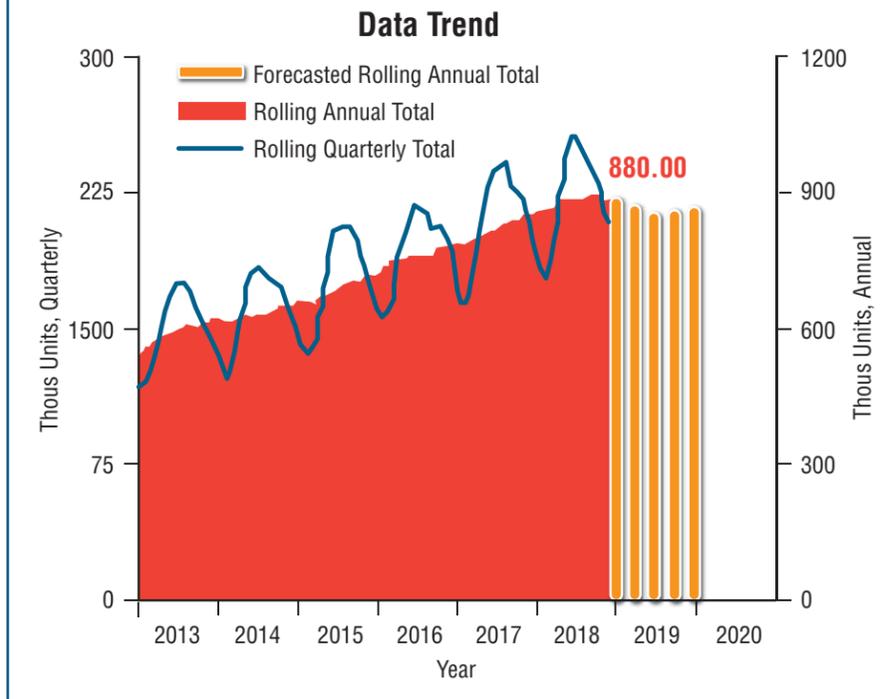


Annual Housing Start Trends.

**U.S. Existing Home Sales**, which account for most of overall home sales, are in recession, down 2.6% during the last 12 months, on average. **Existing Sales** in November alone, at 5.3 million units, were down 7.0% from October 2017.

Softening home sales are problematic for several reasons, the first being it reflects weaker demand. This will likely lead to builders pulling back on new construction in many markets until conditions improve.

Second, having fewer existing home sales typically leads to a slowdown in remodeling expenditures. Studies have shown that homeowners typically incur sizeable remodeling expense in the first year of home ownership, as they spruce up the home to live in. I can anecdotally



attest to this, as one of the first things I did upon buying my first home in 2016 was having a two-zone ductless mini-split HVAC system installed.

Additionally, sizable remodeling expenses also occur in the last year of

homeownership, as owners spend to fix up any blatant weaknesses in the home to prepare for selling. This makes the contraction in existing home sales heading into 2019 problematic.

How? It may stall the robust remod-

eling activity of the last several years as new construction is poised to mildly contract next year as well.

HVAC contractors will want to make a priority of service and maintenance in 2019 as new equipment installation and replacement could be heading for a slowdown.

#### THE IMPACT OF THE STOCK MARKET

An additional, more recent, headwind to the housing market and macroeconomy are the woes of the U.S. stock market. In December, it flirted with bear market territory (typically defined as a 20% drop from a prior peak) before a meek rally to close the month reeled it back from the cliff's edge.

Ultimately, the S&P 500 finished December 2018 down 6.2% from the De-

cember 2017 level, the harshest month-over-month drop since early 2016. The S&P 500 monthly data trend ended 2018 lower than it opened, the worst calendar-year decline for the U.S. stock market since 2008. This could eventually diminish the confidence of the consumer and perhaps contribute to further weakness in the housing and residential remodeling markets.

All of this suggests that 2019 will be a tougher year for HVAC contractors on the residential side of the business. As a lagging sector, nonresidential activity projects to grow throughout the year, but we expect new residential housing construction to contract mildly in 2019.

Some markets, perhaps with stronger population inflows, may fare bet-

ter this year while others will feel more overt contraction. However, decline this year should be mild and brief, so be sure to keep a flexible cash reserve ready or access to financing for late 2019-early 2020 to gear up for the next growth cycle. **NCI**



**Connor Lokar** is a Program Economist at ITR Economics, a 60-year-old economic research and consulting firm. Lokar specializes in the construction industry and provides economic consulting services for businesses, HVAC trade associations, and Fortune 500 companies.

He is a graduate of the economics department of the University of Michigan. His economic insight and forecasting experience play a key role in ITR Economics' 94.7% forecast accuracy. To learn more about ITR Economics, visit [www.itreconomics.com](http://www.itreconomics.com) or follow him on LinkedIn ([ncilink.com/ConnorLokar](https://www.linkedin.com/ConnorLokar)).

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## “Ask the Coaches” – A New High-Performance Summit Event

Be sure to attend this one-hour session following our very popular Idea Meeting at 5 pm on Wednesday, April 16, during Summit Week 2019.

*Ask the Coaches* is a special question-and-answer session where five of the top HVAC industry coaches will focus on customer-facing topics including sales, marketing, and customer service.

This is a unique opportunity to interact directly with industry experts that can help make 2019 your best year ever.

The coaches include:

- ◆ **Steven Dale**, Trainer and Coach, Power-Selling Pros
- ◆ **Drew Cameron**, Owner, HVAC Sellutions
- ◆ **David Holt**, Director of Business Training and Coaching, National Comfort Institute
- ◆ **Ben Middleton**, National Sales Training Manager, Goodman, Inc.
- ◆ **Tom Piscitelli**, President, TRUST Sales Training

Don't miss what is sure to be a spirited and highly informative session with some of the industry's best coaches at Summit 2019!

Register today at [ncilink.com/s19reg](http://ncilink.com/s19reg).



Jennifer Bagley

## Summit Keynote Speaker Announced!

National Comfort Institute has announced the keynote speaker for the High-Performance HVAC Summit 2019, to be held in Orlando, FL.

Jennifer Bagley, CEO of CI Web Group, an HVAC Digital Marketing Agency in both the U.S. and Canada, will talk about how to create a system within your company that produces clarity and focus and the ability to execute.

If you are looking for the inspiration to create dramatic improvements in all your communications, to enhance the perceived value of your company, and to speed up company growth, then be sure to register for the Summit event today.

Visit [GotoSummit.com](http://GotoSummit.com) to learn more about all the sessions and special events happening at Summit 2019. Questions? Be sure to call the **NCI Customer Care line** at 800-633-7058.

## NCI Welcomes Another New Vendor Partner

The latest company to join the growing ranks of National Comfort Institute, Inc.'s Training Incentive Partner Program is Online-Access, Inc., of Port Huron, MI.

Online-Access helps contractors build fully-managed websites that look and work great on every device – desktop computers, laptop computers, tablets, and mobile phones.

NCI members who avail themselves of Online Access' products and services can earn Training Bucks that go toward their NCI training and certification class costs as well as fees for events such as NCI's Summit.



### ONLINE-ACCESS OFFERS MEMBERS THE FOLLOWING:

**Website development:** Three package levels are available based on your market and needs. NCI members who do business with Online access can earn NCI Bucks toward paying for NCI training and event costs. Furthermore, if you are not a user of Online-Access services, you can use this order form at [ncilink.com/PagePReg](http://ncilink.com/PagePReg) to save \$200 off your Website Startup.

**Online Review Management:** Nearby Now is a review and promotion system that captures the goodwill of your current clients and leverages it to generate future leads. It is available for use with PagePilot or WordPress websites and it also Qualifies for the NCI TIPP program.

**Social Media Management:** Depending on the package you choose, you can get daily postings catered to your preferences, Facebook page set up, profile picture and banner design with four seasonal changes, boosting ads, contests, and more. Social media services are available as a standalone subscription. This also qualifies for NCI's TIPP.

Learn more about how the NCI Member rewards program works and how you can earn bucks on the products you buy through our preferred vendors. Go to [ncilink.com/TIPP](http://ncilink.com/TIPP) to learn more about how this member-only benefit works for you.

This program is ONLY available for NCI members who sign up. Learn more on the Online-Access Vendor page (you have to be logged in to the NCI website to access) at [ncilink.com/OLA](http://ncilink.com/OLA).



*“Who says flex can't be done right?”* — **Dustin Cole, Cole Air, Inc., Lake Charles, LA**

Dustin Cole's entry is the February 2019 winner of our Photo-of-the-Month contest, as voted on by the subscribers to the [High-Performance HVAC Today magazine](http://High-Performance HVAC Today magazine) and visitors to the website. He will receive a \$50 gift card.

You can too – submissions are always welcome. If you'd like to submit a photo for consideration in our Photo-of-the-Month contest, [click ncilink.com/POMSubmit](http://click.ncilink.com/POMSubmit) and fill out the information as requested. Be sure to include your photo!!

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You can only be listed if you or your company are currently NCI-certified, so be sure that all your certifications are up-to-date. Become an NCI member to get a premiere listing for your company. **Be sure to take advantage of this lead-generating tool today!**

**Call NCI Customer Care at 800.633.7058 to confirm your listing is correct and up-to-date.**

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## Every Building Has a Unique DNA



**Dominick Guarino** is publisher of HVAC Today magazine and CEO of National Comfort Institute, Inc. He can be reached at [domg@ncihvac.com](mailto:domg@ncihvac.com)

**D**id you know that two identical homes or buildings in the same exact area can have very different characteristics? In fact, even if they were built at the same time with the same specifications, you could say each building has the equivalent of its own DNA.

The most obvious causes include orientation of the building, natural shading, etc. Other differences include more subtle, yet significant changes that occur both during construction and once occupied. Here are some less apparent factors that can contribute to a building's unique DNA:

### BUILDING CONSTRUCTION VARIATIONS

While the same components may be used on two identical structures, each building's characteristics can be changed by how those components are installed.

For example, is the insulation in walls and unconditioned spaces installed properly? Are there gaps and voids in the insulation and sheathing? Was it over-compressed in some cavities? Was blown in insulation applied at a consistent height? Were all penetrations sealed properly?

Then add in variables including skill differences from crew to crew, how late they were on completing the job, uncomfortable attic and crawl space temperatures -- and the unique DNA begins to form before the building is even finished.

Once a building becomes occupied, other subtle changes happen to its makeup. Unrelated work is performed that affects envelope and insulation integrity. The cable or alarm guy disturbs the insulation in the attic, kitchen and bath fans are upgraded, changing building pressures, and so forth.

Then there are the changes made by homeowners with how they use rooms, including blocking off unused rooms, remodeling work, fireplace add-ins, and more. Thus the building's DNA continues to mutate and evolve -- or more likely - devolve.

### HVAC SYSTEM VARIATIONS

Starting at conception, i.e. construction, the HVAC system's genetics are affected by many of the same factors as the building envelope. Different crews and skill levels produce different results. How hot was the attic or roof during installation?

The duct system may have some unique variables like how well joints were sealed, and how tight the flex was stretched in the attic or drop ceiling. Was enough support provided on turns? Was a flex duct running horizontally to a straight boot radius and supported properly?

Add in little or no air balancing and improper refrigerant charge, and the system's fate is locked in.

After construction, we have similar variables to the building issues: The cable or alarm guy disconnects a flex run; They cut into returns to use them as wiring chases. Homeowners seal off registers and close dampers.

Is it any wonder why each home or building is like a fingerprint, or has its own DNA string of genetic instructions?

### THE SOLUTION

There really is only one way to identify these mutations and defects so they can be corrected.

A doctor uses testing to determine predisposition for, and diagnoses of diabetes, cancers, abnormal organ formations, heart disease, etc. As an HVAC professional, you must have the right tools and know-how to test your patients thoroughly. You must understand when to apply which testing and when, as you investigate the causes of defects so you can offer real solutions.

The good news is today we have the best test instruments on the market. We also have the best training ever to help make this level of testing a reality. This lets you offer cost effective solutions for your customers. After all, *If You Don't Measure, You're Just Guessing!*<sup>™</sup> 



## Cutting-edge Training from the Industry leader in Performance-Based Contracting<sup>™</sup>

*Think you know airflow? Think you know carbon monoxide safety? Think you know how to solve your customer's comfort issues? Be sure. Don't guess. Find the training and expertise you need from the National Comfort Institute (NCI). Only at NCI will you find certification courses like Duct System Optimization and Combustion & Carbon Monoxide Safety, taught by leaders and innovators in the HVAC industry. Find out why NCI says "If You Don't Measure, You're Just Guessing!"<sup>™</sup> Visit the link below or call 800-633-7058 to find classes near you.*

### Upcoming 2019 NCI Training Schedule



#### Airflow Testing & Diagnostics and Refrigerant-Side Performance Program

Apr 2-3: Los Alamitos, CA\*

#### Duct System Optimization & Residential Air Balancing Certification Program

Feb 12-14: Los Alamitos, CA\*

Feb 19-21: Austin, TX

Mar 11-13: Cincinnati, OH

Mar 26-28: Atlanta, GA

Apr 2-4: Minneapolis, MN

Apr 2-4: Baltimore, MD

Apr 23-25: Milwaukee, WI

#### Residential HVAC System Performance & Air Balancing Certification Program

Mar 5-7: Salt Lake City, UT

Mar 12-14: Kansas City, KS

Mar 19-21: New Hudson, MI

Mar 19-21: Washington, DC

Mar 26-28: Boston, MA

Apr 2-4: Dallas, TX

Apr 9-11: Omaha, NE

#### Combustion Performance & Carbon Monoxide Safety Certification Program

Feb 5-7: St. Louis, MO

Feb 19-21: Atlanta, GA

Mar 5-7: Philadelphia, PA

Mar 5-7: New Jersey, NJ

Mar 5-7: Los Alamitos, CA\*

Mar 19-21: Richmond, VA

Mar 19-21: Chicago, IL

Apr 9-11: Pittsburgh, PA

#### Commercial System Performance Certification Program

Mar 19-20: Houston, TX

Apr 9-10: New York, NY

Apr 23-24: Tulare, CA\*

#### Introduction to Hydronic Testing, Adjusting, & Balancing

Feb 26-27: Cleveland, OH

Feb 26-27: Los Alamitos, CA\*

#### Commercial Air Balancing Certification Program

Feb 5-7: Dallas, TX

Feb 12-14: Mobile, AL

Feb 19-21: Las Vegas, NV

Feb 19-21: Los Alamitos, CA\*

Mar 19-21: Tulare, CA\*

#### National Balancing Council Commercial Balancing with Certification

Mar 25-29: Cleveland, OH

#### Discover Profitable HVAC Repair Opportunities

Feb 5: Bakersfield, CA\*

Feb 6: Visalia, CA\*

Feb 7: Fresno, CA\*

#### Optimize Economizer Performance with Certification

Apr 25: Tulare, CA\*

\*Subsidized NCI training offered by Southern California Edison



# Summit Week 2019

## High-Performance HVAC Live

NCI's High-Performance HVAC Summit has become the gathering place for Performance-Based Contractors™ from across North America. It's the only event of it's kind completely focused on selling and delivering High-Performance HVAC systems. This year's Summit will heavily feature interactive elements with participation from attendees. Plus, we've extended the breakout sessions - some of which include hands-on learning with live equipment & test instruments.

This year's Summit is shaping up to be the biggest and best ever. In addition to all the many NCI events, Goodman is conducting a pre-conference training event and EGIA has a post-conference training event. If you're not here, you'll be left behind.

Right now, through February 28, you can save hundreds off registration for this game-changing event. NCI Members save even more (and can apply NCI Bucks towards registration). Space is limited and we're looking at sell-out numbers as we gather at the Wyndham Orlando International Drive in April.

### SUMMIT HIGHLIGHTS:

- ✓ Pre-conference training from Goodman
- ✓ Welcome & Awards receptions
- ✓ Extended breakout sessions with hands-on elements
- ✓ Our ever-popular Idea Meeting
- ✓ NCI Partner Reception & Trade Show
- ✓ NEW! Ask the Coaches Session
- ✓ Special keynote speaker
- ✓ Post-conference recertification options from NCI
- ✓ Post-conference training from EGIA
- ✓ And much more!



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