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HAPPY 4th OF JULY

CEC Update

CEC Holds Workshop on Building Decarbonization

New policies would increase market for all-electric heat pumps.

By Ted Rieger
Northern California
Correspondent

The California Energy Commission (CEC) held a public, remote-access workshop via WebEx May 22 on "Building Decarbonization Opportunities and Challenges in the Residential and Commercial Building

Sectors." The CEC is required to assess and report by Jan. 1, 2021 on ways to reduce greenhouse gas (GHG) emissions from California's residential and commercial building stock by at least 40 percent below 1990 levels by Jan. 1, 2030. This assessment report is required by legislation enacted in 2018, AB 3232, authored by Assemblymember Laura Friedman (D-Glendale). CEC Chair David Hochschild

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EPA Proposes New Refrigerants for Refrigeration and A/C Equipment

On May 29, 2020, Environmental Protection Agency (EPA) administrator Andrew Wheeler signed a proposed rule that would list multiple substitute refrigerants for refrigeration and air conditioning equipment. The proposed listings are as follows:

- List R-448A, R-449A, and

R-449B as acceptable, subject to narrowed use limits, for use in retail food refrigeration – medium-temperature stand-alone units for new equipment.

- List R-452B, R-454A, R-454B,

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Industry Events

The Show Must Go On: Date Set for AHR Expo 2021 in Chicago

Event will take place in Chicago from Jan. 25-27.

The 2021 AHR Expo will take place on Monday, Jan. 25, until Wednesday, Jan. 27. It will be held at the McCormick Place, in Chicago, Ill.

AHR Expo Show Management, industry partners, endorsing organizations, and industry colleagues are committed to hosting a safe event experience in January 2021. AHR Expo management is communicating with Chicago city officials, vendors, and industry partners to follow necessary guidelines.

After a successful 2020 debut, the AHR Expo will again host some of the industry's top podcasters in three Podcast Pavilions, including The HVAC Jerks, HVAC School with Bryan Orr, Mike Mayberry HVAC Refer Guy, ToolPros with Brent Ridley, HVAC Uncensored with Gil Cavey, HVAC 360



The 2020 Show welcomed over 50,000 attendees, 1,900+ exhibiting companies — 577 of which were international.

with Matt Nelson, Service Business Mastery with Tersh Blissett, and others.

The 2021 AHR Expo will offer the following:

- A robust educational program, including ASHRAE Learning Institute courses; certification exams; free product and technology previews; free seminars from

industry leaders; and Trend Talks from industry experts.

- Leading Industry Association meetings held in conjunction with the show.
- ASHRAE Winter Conference held concurrently with the show.

For more information, visit www.ahrexpo.com.

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3.5 TON	\$2,290
4.0 TON	\$2,363
5.0 TON	\$2,587

14 SEER ENTRY LEVEL

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- R410A Condenser
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SIZE	PRICE
1.5 TON	\$1,534
2.0 TON	\$1,550
2.5 TON	\$1,619
3.0 TON	\$1,686
3.5 TON	\$2,024
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5.0 TON	\$2,297

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2.0 TON	\$2,432.41
2.5 TON	\$2,451.41
3.0 TON	\$2,611.97
3.5 TON	\$3,011.26
4.0 TON	\$3,386.59
5.0 TON	\$3,677.59

16 SEER ENTRY LEVEL

FER COMPLIANT BUNDLES INCLUDE:

- 16 SEER R410A Condenser
- 80% Furnace
- 13 EER Multi-Position Coil (ADP)



SIZE	PRICE
1.5 TON	\$1,998.41
2.0 TON	\$2,098.41
2.5 TON	\$2,215.32
3.0 TON	\$2,324.97
3.5 TON	\$2,675.80
4.0 TON	\$3,121.59
5.0 TON	\$3,348.59

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CALIFORNIA



Encycle Wins Award for Innovation

San Marcos, Calif. – Encycle Corporation announced that it has won the Frost & Sullivan 2020 North America HVAC Energy Management Industry Technology Innovation Award. The award honors Encycle's Swarm Logic® cloud-based technology.

The Technology Innovation Award is based on Frost & Sullivan's independently evaluated analysis of

technology attributes and future business value for the HVAC energy management market.

"We are honored to be recognized by Frost & Sullivan for the impact, visionary innovation, scalability, and application diversity that Swarm Logic provides to the industry," said Robert Chiste, Encycle Chairman and CEO. "Commercial and industrial businesses are seeking new ways to reduce their energy consumption and lower their carbon footprint. Receiving this award highlights our leadership position and the proven capabilities that our patented IoT-enabled technology brings to our customers to help them achieve specific measurable goals."

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ServiceTitan Buys Pointman

Los Angeles, Calif. – ServiceTitan has announced the acquisition of Pointman. The agreement will allow Pointman's 400+ customers and 6,000+ active users to transition to ServiceTitan in coming months.

"Steve Kiernan and Steve Raines were motivated by the same vision that inspired us: to improve the lives of contractors," said Ara Mahdessian, CEO and co-founder of ServiceTitan. "When we realized that their legacy software partner was terminating their relationship, we knew that that would force contractors to migrate their mobile capabilities to an unproven app with little notice. Together with Pointman's leadership, we saw an opportunity to give these businesses more time and a more reliable mobile option to run their field operations."

"The ServiceTitan team understands that authentic service isn't just about technology," Kiernan said. "We've made it a priority to offer technology that helps build relationships with our users and empowers them to build relationships with their customers. We know that ServiceTitan shares that goal, and our customers will find lasting value with that partnership."

"Over the years, hundreds of businesses who had used Pointman's former software partner have come over to ServiceTitan, and many of them are seeing remarkable success on our platform," added Mahdessian. "ServiceTitan was founded because

we care deeply about tradespeople and the essential work they provide our communities. We know that a sudden change in software can be a disruption to doing business – and, in this extraordinary moment, even worker safety – so we wanted to step in and see what we could do to help."

.....

CoolSys CEO Honored by Paper

Brea, Calif. – The Orange County Business Journal recognized Adam Coffey, CEO of CoolSys in its annual OC 50 Special Report. Known as the Orange County Business Journal's Annual Inventory of Influence, the special report features the most influential business leaders and individuals in Orange County, Calif., who have risen in their careers and professional endeavors beyond their peers.

"It's an honor to be recognized among the most accomplished business leaders in Orange County," Coffey said. "I'd like to take this opportunity to express my gratitude for those who have supported me in my endeavors and to share this recognition with the hard-working team of employees at CoolSys who have been instrumental to fulfilling my vision for the company's growth and success."

In the past year, Coffey has led CoolSys to accelerated growth and industry leadership through a series of mergers and acquisitions that have expanded the company's nationwide footprint and capabilities.

Coffey has been known for building strong employee-centered cultures and managing in fast-growth environments throughout his career. Over the last two decades, he has been president and CEO of three leading national service companies within different industries. He is also a published author of "The Private Equity Playbook," which was released last year. Coffey is a former GE executive, a veteran of the U.S. Army, and is a graduate of the University of California, Los Angeles (UCLA) Executive Program in Management as well as GE's John F. Welch Leadership Academy.

The OC 50 Special Report was published in the May 25 edition of Orange County Business Journal and features profiles on the key executives, entrepreneurs, financiers,

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GAW14L30C21S	2.5	14	29-1/4	36-1/4	29-1/4	150
GAW14L36C21S	3.0	14	35-1/4	33-1/4	31-3/4	195
GAW14L42C21S	3.5	14	35-1/4	33-1/4	31-3/4	195
GAW14L48C21S	4.0	14	38	36-1/4	34-1/4	200
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Not all brands available at all locations

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academics, and others who play key roles in shaping Orange County’s business landscape.



Success Group Hosts Tribute to Home Services

Dallas, Texas – Success Group International (SGI) hosted a “Home Service Heroes Tribute” on June 2, 2020. The two-plus hour, online

motivational event was headlined by several of the biggest names in the professional speaking and sports world. SGI produced the event as a thank you to its member contractors and their teams for the bravery and dedication they have demonstrated to their communities, as they’ve continued to serve homeowners in the face of the COVID-19 pandemic.

“Our members and their teams tirelessly work every day to support and serve homeowners, often who are sick, vulnerable, or in-need,” said Rebecca Cassel, president of SGI. “That has never been more prevalent than in the last several months. We know of many of our SGI members who have knowingly and willingly serviced homes with COVID-19 patients present. They did so because they understood the value of their skills upon the lives of

those people in particular.” “At SGI, we felt such an overwhelming amount of appreciation and pride seeing our members, our SGI family, in action,” she said. “To say thank you to them, we created this Home Service Heroes Tribute. It was our goal to inspire them, but we also wanted them to realize just how much of an impact they make on their communities and the whole of society. With the amount of people we had registered and the feedback we saw and heard from our members, it’s clear the event was a resounding success.”

Over 2,000 people virtually attended the Home Service Heroes Tribute. SGI contracted with several of the biggest names in the professional speaking and sporting world to provide keynote speeches. Among them included:

- Kurt Warner, NFL hall of

famer: Kurt Warner’s story is one of the most memorable rags-to-riches tales in sports history.

- Eric Thomas, master motivator and inspirational speaker: Eric Thomas, PhD, is a critically acclaimed author, world-renowned speaker, educator, pastor, and audible.com Audie Awards finalist.
- Joe Buck, award-winning broadcaster: Joe Buck is one of the most recognizable sports announcers today, as the lead voice for the NFL since 2002 and for MLB since 1996 on Fox.
- Jocko Willink, former Navy SEAL: He’s the author of Extreme Ownership and the creator of the Jocko Podcast—where he shares lessons learned on the battlefield to help others lead and win.
- Nando Parrado, story of survival and perseverance: Nando Parrado is the leader of the famous

plane-crash survival story in the Andes mountains in 1972, which was turned into the 1993 feature film, Alive. In 2010, Nando was selected as “Best Speaker in the World” by the World Business Forum (New York).

In addition to those keynote speeches, SGI coordinated special messages throughout the presentation by motivational speaker Kevin Brown, Super Bowl champion and NFL hall of famer Ray Lewis, 16-time heavyweight wrestling champion Ric Flair, and renowned martial artist and film star Chuck Norris.

SGI used this platform to also honor members and specific employees who received awards and honors for exceptional performances in 2019. These individuals would have otherwise been honored during the SGI Spring Gala, which was scheduled to be in Temecula, Calif., in early April but was canceled due to COVID-19. Even so, SGI wanted to make sure these top performers received the recognition they deserve for their results last year.

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Grundfos Product Wins Award from Magazine

Houston, Texas – The expanded range of Grundfos’ CR vertical inline multistage pump range was selected as one of the Product of the Year Award winners in the Fluid Handling category by Plant Engineering. The program honors the best innovations of 2019, as voted by the magazine’s audience.

The new, expanded generation of Grundfos CR pumps is a more efficient, robust addition to the world-class CR pump range. The CR 95, CR 125 and CR 155 feature a new hydraulic design that improves everything – from impeller and guide vanes to inlet, discharge port, sleeve and diffuser – providing industry-leading energy efficiency and pump reliability across a higher performance range.

“We’re proud to receive this recognition,” said Jonathan Hamp-Adams, president and general manager of Grundfos USA. “The expanded CR range is a water-moving marvel. With efficiencies greater than 80%, offering more than 1,000 gpm

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CLEAResult is a SoCalGas authorized contractor responsible for administering the Residential HVAC Program through December 31, 2020.

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Continued from Page 6

and 1,000 feet of head, the vertical multistage pump is a product without peers.”

Grundfos pioneered the first vertical multistage inline pump in 1972. The new CR expanded range uses less energy and is even more robust for heavy workload conditions. Achieving this required extensive research, development and testing of hydraulic designs, engineered using state-of-the-art methods including a fully-automated and flexible production line.

“We have seen significant demand in the industrial sector for the expanded range of CRs, including in membrane filtration systems, as well as wash and clean and temperature control applications,” explained Jay Stellmacher, vice president of sales for industry at Grundfos. “The new CR significantly moves the limits for performance and energy efficiency,

which is essential when you are working with large pumps.”

For more information on the Grundfos Expanded CR Range, visit grundfos.us/newcr.

NATIONAL



HVAC Business Owner Wins 2020 ACCA Award

Decatur, Ga. – Martin Hoover, owner of Decatur-based Empire Heating and Air Conditioning Inc., was recently awarded the 2020 Distinguished Service Award by the Air Conditioning Contractors of America (ACCA).



Martin Hoover, owner of Empire Heating and Air Conditioning, Inc.

Each year, ACCA presents the Distinguished Service Award to a volunteer who has gone above and beyond the call of duty in service and distinguished him or herself in a manner that calls for additional recognition.

According to ACCA, Hoover was selected for this honor due to his high energy and enthusiasm to help ACCA and its members be better businesspeople by becoming more

active in the industry. He has served on the ACCA board of directors for three years and is currently the chairman for the membership committee.

“It is an honor to be recognized for this award in the company of so many other skilled and dedicated ACCA and HVAC industry peers,” Hoover said. “I am humbled and grateful for this acknowledgement.”

For 35 years, Hoover has owned and operated Empire, a local heating and cooling company servicing metro Atlanta areas in Cobb, DeKalb, Fulton, Forsyth, and Gwinnett counties.

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Arkema Plant Wins Award for Energy Efficiency

Calvert City, Ky. – The American Chemistry Council (ACC) has honored Arkema’s Calvert City, Ky. plant with its Energy Efficiency Award, adding an “Exceptional Merit” designation. According to ACC, this honor recognizes broad programs to achieve energy-efficiency improvements. Arkema Inc. won the award with “Exceptional Merit” in 2019 as well, for its corporate ArkEnergy program.

“This award recognizes companies that have made significant improvements in energy efficiency,” said ACC Managing Director of Responsible Care Tara Henriksen. “The energy savings help reduce greenhouse gas emissions, and are an example of how chemistry is the science behind sustainability.”

The Calvert City plant’s award is a recognition of its efforts under the company’s “ArkEnergy” (Arkema Energy) program, which was launched in 2013. ArkEnergy aims for a 20 percent improvement in Arkema’s energy efficiency by 2030, a goal that is in line with Arkema’s global Climate Plan. The plant significantly enhanced and upgraded its boiler and steam distribution systems and replaced

conventional lighting with LED across the site. Taken together, these changes, along with many other energy reduction initiatives, reduced annual energy use by 264 billion BTUs, which significantly reduces emissions related to energy use.

“I’m proud of the way our Calvert City plant has contributed to Arkema’s global sustainability goals, particularly in terms of reducing our energy usage and overall carbon footprint,” said Rich Rowe, president and CEO, Arkema Inc. “This award, which we’re receiving for the second consecutive year, reflects the strong effort underway across our company, and I thank the ACC for recognizing our progress.”

Abdel Ramadane, Acrylics PT manager, also manages the ArkEnergy program in the Americas. Ramadane noted that the Calvert City plant’s progress is driven by the strong dedication of Dwight Stoffel (site energy leader), active employee engagement in the program, and strong support from Plant Manager Jeff Hall and business leadership.

The ArkEnergy program is an example of the company’s continuous improvement approach, which is also apparent in Arkema’s global vision for talent development, competitiveness, and Climate Plan.

“These achievements in improving our sustainability are fully in line with Arkema Group’s commitment to the Paris Agreement and GHG reduction goal by 2030,” said Virginie Delcroix, Arkema’s vice president for Sustainable Development. “ArkEnergy is a key element of the Climate Plan, and working as a team enables us to achieve our ambitious sustainability targets.”

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ASHRAE Publishes Updated Guideline for Legionella

Atlanta, Ga. – ASHRAE has published an updated guideline to assist in control of legionellosis associated with building water systems.

ASHRAE Guideline 12-2020, Managing the Risk of Legionellosis Associated with Building Water Systems, provides guidance useful in the implementation of ANSI/ASHRAE Standard 188, Legionellosis: Risk Management for Building Water Systems. The guideline is intended for use by owners of human-occupied buildings and those involved in the design, construction, installation, com-

Continued on Page 10

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The campaign will run through 7/13/20 and our focus will be ads on Facebook, Instagram, Google, and Bing. This is a great time to take advantage of SoCal Edison **discounts of up to \$3,000 and our new Synchrony financing program with 12% buydown options for Elite and 9% for Preferred contractors.** There are many no cost or very low cost program fees that will let you run 0% offers for up to 60 months or low monthly payment options.

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Industry News

Continued from Page 8

missioning, management, operation, maintenance, and service of centralized building water systems and components.

“ASHRAE Standard 188 gives direction regarding what to do to control the spread of legionellosis, such as to follow a risk management process, but does not necessarily explain how to do it in a prescriptive way,” said Paul Lindahl, committee chair for ASHRAE Standing Standard Project Committee (SSPC) 188, the committee responsible for writing Guideline 12-2020. “Guideline 12 complements Standard 188 by providing detailed guidance for water management program teams

to develop the necessary elements of an effective water management plan. This can be a particularly important aspect of plans to reopen buildings following the COVID-19 pandemic.”

Guideline 12 applies to spaces such as hotels, office buildings, hospitals, and other health care facilities, assisted living facilities, schools, universities, commercial buildings, industrial buildings, and centralized systems in multifamily residential buildings. Buildings with noncentralized water systems, and single-family residential buildings, though not included, may also benefit.

Three presentations on Guideline 12-2020 will take place during the 2020 ASHRAE Virtual Conference.

- History of Standard 188,

Guideline 12, and Other Guidelines

- ASHRAE Guideline 12 and the Facts about Legionella Growth in Building Water Systems

- Guideline 12 Is a Tool Designed to Support the Preparation of a Water Management Plan Using ANSI/ASHRAE Standard 188

While Legionnaire’s Disease has been known for many years, recent outbreaks have increased awareness of the disease, its causes, and prevention strategies. According to the World Health Organization, because many countries lack appropriate methods of diagnosing the infection or sufficient surveillance systems, the rate of occurrence is unknown.

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ESCO Institute Launches Online Learning Center

Mount Prospect, Ill. – The ESCO Institute announced the launch of an online learning center for the HVACR industry, the ESCO Learning Network (ELN). This network was formed primarily to help address the challenges instructors face knowing that all of their students learn differently.

Highly effective instructors realize that one particular instructional delivery method that helps one person learn may not be successful for another. To confront instructional challenges, instructors typically incorporate various teaching meth-

odologies into their training. By doing so, students are encouraged to use multiple senses to read content, hear content, and ultimately practice what they are learning through questions, quizzes, and other assessment tools.

These same techniques used in the classroom are now being integrated into what is collectively referred to as immersive learning. In an immersive learning environment, learning is approached from many different angles, allowing a person to learn the content in various ways. With multiple levels of exposure, a person’s level of comprehension and content retention are greatly increased. While an e-book, as a singular channel for learning, allows someone to learn by reading, immersive learning goes much further by encouraging continual practice of the concepts being taught.

Presently, the ESCO Learning Network now offers immersive learning courses for the EPA Section 608 and R-410A Certifications, as well as a Refrigeration Cycle course, Water Heaters course, and Gas Heating course. Soon, ESCO will be releasing many of its popular training programs as immersive learning courses to further assist HVACR educators and trainers in better preparing the HVACR workforce.

Learn more about the new online HVACR learning center, its e-books, training videos, the workbench series, free webinars, and immersive learning resources, by visiting elearning.escogroup.org.

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Hunter Industrial Moves into New Tenn. Facility

Nashville, Tenn. – In January, Hunter Industrial, a division of the Hunter Fan Company, signed a lease for a new 101,000-square-foot commercial and industrial headquarters – more than three times the size of its current office space and manufacturing warehouse. It has now moved into the facility.

The facility includes a 5,000 square-foot Customer Experience Center with 40-foot-high ceilings that feature three of Hunter Industrial’s HVLS (high volume, low speed) fans, as well as the full lineup from Jan Fan. The space is interactive, allowing customers to work and feel the company’s HVLS fans and controllers. The space is available for customers and organizations to use for meetings and events as well (after



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*Dual measurements available at launch. Up to 8 measurements available Summer 2020.



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Industry News

the pandemic).

The new building also includes a 75,000 square-foot warehouse and production facility. The facility includes four testing cages to ensure each fan is assembled properly before it's shipped to the customer. There is also a custom-built ramp to fit 12-foot fan blades through as they are loaded onto the fleet.

"As we continue to expand our HVLS and commercial fan offerings, we're excited to move into a larger facility with labs and experience centers unlike any in the industry," said John Alexander, CEO of the Hunter Fan Company.

Goettl Air Holds Charity Drive for Vegas Food Bank

Las Vegas, Nev. – Goettl Air Conditioning and Plumbing donated \$3,000 along with needed food items to Three Square food bank to help the many valley families who are increasingly relying on its services due to the COVID-19 pandemic. This donation will help the food bank supply more than 18,000 meals.

Goettl team members began collecting monetary donations as well as non-perishable food items and toiletries on April 27 to May 7 at their office on 6521 W. Post Road. Additionally, Ken Goodrich, chief executive officer at Goettl, matched every item and dollar contributed throughout the drive.

To thank employees for their generous contributions, Goettl's executive team gave employees a raffle ticket for every item donated for chances to win various prizes. The grand prize included two suite tickets to the Las Vegas Raiders home opening game provided social distancing protocols are lifted.

Goettl Air Conditioning & Plumbing is a leading provider of modernization solutions and services that deliver comfort, indoor air & water quality, and intelligent efficiency for residential customers. The company creates value by acquiring established local brands, applying experienced management talent and implementing proven processes. Initially focused on companies in the Southwest, Goettl is expanding nationally. Current operations are located in Arizona, Nevada and California. Goettl is the winner of Inc. 5000 fastest growing companies in 2017 & 2018.



Goettl employees hold up a donation check of \$3K raised to help food bank Three Square.

Johnson Controls-Hitachi Announces New Manufacturers' Representatives

Milwaukee, Wisc. – Johnson Controls-Hitachi announced that Tech Plan Inc. will be the new manufacturers' representative for

Hitachi Variable Refrigerant Flow (VRF) system and SmartFlex Duct-Free Mini-Split system brands serving northern Texas, Dallas, and Fort Worth Metroplex.

Johnson Controls-Hitachi announced that Lashley South Texas LLC. will be the new manufacturers' representative for Hitachi Variable Refrigerant Flow (VRF) system and SmartFlex Duct-Free Mini-Split system brands serving San Antonio, Austin, and Corpus Christi in Texas.

Johnson Controls-Hitachi announced that Innovative Technology Solutions LLC. will be the new manufacturers' representative for Hitachi Variable Refrigerant Flow (VRF) systems and SmartFlex™ Mini-Split systems in Arkansas.

Johnson Controls-Hitachi announced that Computer Conditioning Corporation will be the new manufacturers' representative for

Hitachi Variable Refrigerant Flow (VRF) systems and SmartFlex™ Mini-Split systems in Louisiana, including the New Orleans region.

BDR Offers Virtual Training Sessions

Seattle, Wash. – Business Development Resources (BDR) announced a series of virtual training sessions through September to help contractors prosper during the current pandemic. The training sessions are all-day or multi-day workshops with the same material and access to instructors that attendees would get from in-person training, but from the comfort and convenience of their own desks.

"During challenging times, the need is even greater for contractors to train their teams," said Bruce

Wiseman, owner and president of BDR. "The virtual training sessions we've developed will help home services contractors increase sales and profits without having to travel to a live session."

The lineup of virtual training sessions includes:

- Aug. 18-20: Lead the Way: Dynamic Leadership Skills
- Aug. 25-27: Top Gun Sales Excellence
- Sept. 1-3: Customer Experience University

"Lead the Way: Dynamic Leadership Skills" teaches owners and managers how to become a leader people will want to follow. Continuous growth of a home services contracting business requires the ability to adapt to changing conditions and the ability to com-

Continued on Page 12

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Continued from Page 11

municate the leader’s vision for the company’s future.

“Top Gun Sales Excellence” teaches home services sales teams the skills of the industry’s top-producing sales professionals who sell \$3 million-plus annually. The key is delivering a unique experience that exceeds the customer’s expectations. The three-day session is aimed at retail salespeople, owners, sales coordinators, and customer experience coordinators.

“Customer Experience University” is a three-day workshop that shows sales and installation coordinators, managers, dispatchers, and customer service personnel how to provide a memorable, positive experience for every customer. Attendees will learn how to build BDR’s well-known

“360° of Trust.”

“Nothing happens until you make a sale, but to truly grow and prosper home service contractors must differentiate themselves from the competition,” Wiseman said. “Anyone can sell a product, but BDR training shows home services professionals how to exceed customer expectations and to build trust to increase both sales and referrals. That’s always been important, but it’s even more important during the COVID-19 pandemic when sales may be hard to come by. A year from now, home services professionals who attend our training sessions will come out of the crisis much stronger.”

Registration for the sessions is open now at <https://www.bdrco.com/upcoming-events>.

NewAge Industries Adds New Facility

Southampton, Pa. – This month NewAge Industries closed a deal to buy two building units at a location within seven miles of its south-eastern Pennsylvania headquarters. The company will renovate the space, then purchase and install new tubing extrusion equipment and presses for injection molding. The site will be used primarily to manufacture high purity tubing and molded assemblies for NewAge’s AdvantaPure® division, which supplies Single-Use fluid transfer systems to biopharm and pharmaceutical manufacturers.

The purpose of the new location is two-fold. One reason is that demand for the company’s products is high, especially during this

pandemic, and NewAge needs to ensure capacity to produce more inventory. The other reason is to maintain an additional manufacturing facility in case of any potential disruption at the main plant.

“It’s growth for the company and a fail-safe,” said Ken Baker, NewAge Industries’ CEO. “Some of our customers have expressed concern about security of supply. Being able to make our products at multiple locations not only lets us increase our output but helps ease those concerns.”

The two building units consist of 46,000 sq. ft. of manufacturing space with an additional 3,000 sq. ft. of offices. The manufacturing area will house tubing extrusion machinery, injection molding presses, clean rooms for high purity product manufacturing and

packaging, and quality inspection areas. Quality department personnel and department supervisors will use the office space. NewAge plans to inventory and ship products directly from the new location.

“Since this site is less than fifteen minutes away from our headquarters, there are efficiencies to be gained,” said Baker. “It’s close enough that current team members will be able to shift to working at the new building, where they’ll train new people, too. We’re growing and have a lot of open positions right now that we need to fill.”

Renovations at the new location will begin this summer with additional remodeling extending into next year. NewAge anticipates moving in, testing, and validating its manufacturing equipment during 2021. The company expects to double manufacturing capacity for its AdvantaFlex® TPE tubing in the short term, and long term, to triple capacity. Silicone tubing manufacturing capacity will also increase substantially.

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Modine Launches New Website

Racine, Wisc. – Modine Manufacturing Company has launched a new website that enhances the user experience with improved functionality and intuitive navigation and additionally provides quick access to information about Modine’s extensive line of top-rated products for commercial and residential customers.

“The entire website was rebuilt and redesigned to be more responsive and dynamic,” said Kimberly Raduenz, marketing manager for Modine. “The new site meets user expectations and provides a seamless experience that showcases Modine and the products we offer.”

The new upgraded www.modinevac.com includes:

- Improved search function.
- Updated, easier to find information about Modine’s products and where to buy them.
- A robust library of product documents.

Streamlined organization and navigation that groups Modine products according to market and product types, making it easier for customers to find what they’re looking for.



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Res HP SEER >=18 and HSPF>=9.7	\$300	\$400
Ductless Mini-Split HP SEER>=15, HSPF>=8.5	\$300	\$400
Ductless Mini-Split HP SEER>=16, HSPF>=8.8	\$400	\$500
Ductless Mini-Split HP SEER>=17, HSPF>=9.4	\$500	\$600
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The incentive for this product is funded by California utility ratepayers and administered by SCE, under the auspices of the California Public Utilities Commission. The program may require verification of installation of solutions and customer agrees to provide SCE and/or its agents, assigns, or contractors, and the CPUC and/or its agents or assigns have reasonable access to the project sites(s) for this purpose.







Geothermal, Lithium Recovery Projects Get Boost from Energy Commission

Funding will help California meet clean energy goals and spur economic development.

The California Energy Commission (CEC) awarded nearly \$10 million in grants for three geothermal-related projects that will help California meet its 100 percent clean electricity goal and expand the state's emerging lithium recovery industry.

The grants were funded through the CEC's Electric Program Investment Charge (EPIC) program, the state's premier public interest research initiative which drives clean energy innovation and entrepreneurship.

Among today's awards is a \$1.7 million project at Lawrence Berkeley National Laboratory designed to demonstrate how seismic and electromagnetic data can map geothermal reservoirs and create enhanced imaging of their structural features to better locate and place production wells. The demonstration will occur at The Geysers, the world's largest geothermal field located in Sonoma, Lake, and Mendocino Counties.

"Geothermal is a clean and sustainable power source, and we are fortunate to have such vast resources in the state," said CEC Vice Chair Janea A. Scott. "Nearly half of the known resources remain untapped mainly because of the high initial costs. EPIC funding can help address those barriers by finding technical solutions that reduce costs, increase productivity, and encourage future commercial investments in geothermal."

California is home to some of the world's most abundant geothermal resources. The more than 40 geothermal power plants operating in the state tap into naturally-occurring superheated underground reservoirs providing more than 2,700 megawatts of renewable energy capacity. In 2018, geothermal energy produced more than 11,500 gigawatt-hours of generation in the state. However, that represents less than 6 percent of the overall energy produced by the state in 2018, far less than the amount of renewable energy produced by wind and solar.

Lithium extraction
California's energy goals will

also be met by using batteries to store energy. Some of the most efficient battery types use lithium as a key element, and uniquely high concentrations of the dissolved soft metal are found in the brine produced by the state's geothermal hotspots.

Lithium recovery projects awarded are designed to help reduce costs and environmental impact. They include:

- \$6 million to BHER Minerals, LLC for a demonstration project at an existing geothermal power facility in Calipatria that can cost-effectively process at least 100 gallons of geothermal brine per minute to produce battery-grade lithium carbonate.

- \$1.8 million to Palo Alto-based Materials Research LLC for a pilot-scale demonstration project that uses a newly developed sorbent material to extract lithium from brine and a separate process for the direct formation of high-purity lithium carbonate, which has additional economic value in industry and medicine.

In recent years the global demand for lithium has increased significantly as clean energy resources rapidly replace fossil fuels in the transportation, building, and energy sectors.

California's vast lithium deposits – as much as one third of the world's current lithium demand according to some industry estimates – are also seen as a way to propel

the state's green economy. Deposits in the Imperial Valley alone could potentially produce up to \$860 million annually in revenues, according to the U.S. Department of Energy's National Renewable Energy Laboratory.

Because of the huge impact lithium recovery could have on the state; the ecosystem of new business, investments, and jobs it could create; and the transformative effect it would have on clean energy, some are dubbing the emerging industry as "Silicon Valley 2.0" or "Lithium Valley."

For more information about lithium recovery efforts in California and beyond, visit [https://www.energy.ca.gov/event/workshop/2020-02/californias-lithium-](https://www.energy.ca.gov/event/workshop/2020-02/californias-lithium-recovery-initiative-symposium)

recovery-initiative-symposium to view presentations and an archived recording of the California's Lithium Recovery Initiative Symposium held Feb. 12, 2020.

Details on other actions are in the business meeting agenda found at <https://www.energy.ca.gov/proceedings/business-meetings>.

The California Energy Commission is leading the state to a 100 percent clean energy future. It has seven core responsibilities: developing renewable energy, transforming transportation, increasing energy efficiency, investing in energy innovation, advancing state energy policy, certifying thermal power plants, and preparing for energy emergencies.



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Energy Commission Holds Workshop on Building Decarbonization

Continued from Page 1

said, “Today, more carbon and GHG emissions come from the building sector than come from natural gas-fired power plants in California.” He also observed that more renewable energy and energy efficient technologies being utilized in the building sector provide significant potential benefits for grid reliability. Alluding to the recent shift to people working at home due to COVID-19 shelter in place orders, Hochschild said, “The prospect of more people working from home will make decarbonization of homes more important as we move forward.”

CEC Commissioner Andrew McAllister, lead commissioner for energy efficiency and the decarb assessment project said, “We need to think of buildings as a platform for decarbonization. Most of the technologies we have available to reduce emissions can be found in buildings.”

The May 22 workshop included three panel presentations of representatives for three different building sectors: single-family residential, multifamily residential, and commercial buildings. The general message of presenters was to work toward the phase-out of natural gas appliances in both new and retrofit construction and move toward the installation of all-electric appliances along with related infrastructure upgrades.

In July 2019, Berkeley became the first city in the U.S. to ban the use of natural gas in new construction, and other California cities and counties are considering similar policies. Meghan Dewey,

manager of income-qualified programs at Pacific Gas & Electric Co. (PG&E), and a presenter on the single-family residential sector panel said, “PG&E supports local governments’ call for all-electric in new construction.” She also noted that this shift is part of PG&E’s future infrastructure planning, “to avoid investments in new gas assets that might later be underutilized.”

Residential Electrification Challenges

The most common uses of natural gas in the residential sector are space and water heating appliances and cooking appliances. According to workshop panelists, the following are challenges and barriers to the conversion to electric heat pumps, electric heat pump water heaters and electric cooking appliances:

- Consumer education and awareness, and consumer belief that gas appliances are more efficient for heating and cooking;
- The need for electrical panel and distribution system upgrades in some homes when converting to all electric appliances. (One panelist estimated that 30 to 50 percent of existing homes would need an electric panel upgrade to retrofit a home to all electric appliances. Estimated costs for a new panel are \$2,500 to \$4,000, and new wiring could be \$300 to \$1,000.)
- Contractor education/training, awareness and readiness to install electric systems and appliances;
- Consumer resistance concerns are also related to utility grid reliability and “Public Safety Power Shutoffs,” now used to shutoff electric transmission during times of high winds and high fire danger.

On the positive side, consumer surveys indicate that consumers believe electrification is safer and healthier than gas, and builder surveys indicate 88 percent of builders are interested in building all-electric homes.

The Building Decarbonization Coalition is an association of building industry stakeholders and energy providers working to create safe, healthy and affordable homes and buildings using all-electric clean energy. Its membership includes utilities such as Southern California Edison, the Los Angeles Department of Water & Power, PG&E, and the Sacramento Municipal Utility District (SMUD); and manufacturers such as Mitsubishi Electric, Johnson Controls, and Rheem. Coalition director and residential sector panelist Panama Bartholomy listed five goals of the Coalition for both new construction and retrofit markets to increase market share of high-efficiency electric heat pumps and electric appliance technologies:

- Customers, contractors and policy makers must be aware of and demand building decarbonization measures;
- Customers must receive a good value from adopting building decarbonization measures;
- Building decarbonization provides a better value to contractors and builders than fossil fuels;
- Supply chains are able to meet rising demand for carbon-free building technologies with quality products;
- Policies are aligned to maximize: customer awareness of, and interest in decarbonization; the customer, builder and contractor value proposition; and the industry’s ability to meet rising demand.

Bartholomy discussed the impacts of residential appliance electrification based on a report prepared for the California Building Industry Association (CBIA)

that estimated the total installed cost for all-electric appliances in a new single-family home in 2020 would modestly increase costs by \$185 to \$418.

Bartholomy provided several recommendations for new construction: stop state funding for gas infrastructure expansion, provide code compliance incentives, provide technical support and training for builders and contractors, create a consumer campaign, and have an emissions-based code. Bartholomy summarized, “We need a clear message from California, and manufacturers need a certainty from California to invest in electric appliance technologies to meet market demand.”

CEC Project Overview and Timeline

The CEC held its first workshop on building decarbonization under AB 3232 on December 4, 2019. Providing an overview of the decarbonization assessment project and timeline, the CEC’s Jennifer Nelson said a draft report is expected this summer followed by a webinar workshop. The proposed assessment report will be posted in November 2020 and a vote of approval by the full commission is planned at a business meeting in December 2020. The assessment is being developed in consultation with the California Air Resources Board (CARB), the California Public Utilities Commission (CPUC) and the California Independent System Operator. The CEC will consider and align this effort with other relevant policies and proceedings, including executive orders and legislation over the past 15 years beginning with the Global Warming Solutions Act of 2006, AB 32 (Nunez).

This decarbonization effort

will also be aligned with legislation enacted in 2018, SB 1477 authored by Senator Henry Stern (D-Calabasas), that requires the CPUC to develop and supervise the administration of the Technology and Equipment for Clean Heating (TECH) Initiative, a statewide market development initiative, to require gas corporations to advance the state’s market for low-emission space and water heating equipment for new and existing residential buildings, and the Building Initiative for Low-Emission Development (BUILD) Program, to require gas corporations to provide incentives to eligible applicants for the deployment of near-zero-emission building technologies to reduce GHGs from buildings. SB 1477 also requires the CPUC to allocate \$50 million annually from fiscal year 2019-20 through fiscal year 2022-23 to the TECH Initiative and the BUILD Program.

The CEC is also hosting remote workshops related to the AB 3232 requirement to develop a Fuel Substitution Scenario Analysis Tool (FSSAT). This is a tool that enhances the CEC’s ability to project GHG emissions, electricity, natural gas, and cost impacts under various fuel substitution scenarios at the utility, sector, and end-use levels. HVAC stakeholders that have filed comments on the FSSAT and the decarbonization assessment are the Air-Conditioning, Heating & Refrigeration Institute (AHRI), and Mitsubishi Electric.

Documents associated with the assessment project, including workshop notices, presentations and public comments are available online through the CEC decarbonization docket at:

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-DE-CARB-01>

EPA Refrigerants

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R-454C, and R-457A as acceptable, subject to use conditions, for use in residential and light commercial air conditioning (A/C) and heat pumps for new equipment and R-32 as acceptable, subject to use conditions, for use in residential and light commercial A/C and heat pumps – equipment other than self-contained room air conditioners, for new equipment (Note: R-32 was previously listed as acceptable, subject to use conditions, in self-contained room air condition-

ers [April 10, 2015; 80 FR 19454]).

EPA is proposing these listings after its evaluation of human health and environmental information on various substitutes submitted to the Significant New Alternatives Policy (SNAP) program. The prepublished SNAP Rule 23 details these new and revised listings.

EPA had previously listed R-32 as acceptable subject to use conditions as a substitute in residential and light commercial air conditioning and heat pumps for self-contained

room air conditioners, including packaged terminal air conditioners (PTACs), packaged terminal heat pumps (PTHPs), window A/C units, portable room A/C equipment, and wall-mounted self-contained A/Cs. In the most current proposed rulemaking, EPA is proposing to find R-32 acceptable, subject to use conditions, for self-contained A/Cs that are typically larger than room-size (e.g., rooftop units, water-source heat pumps, and ground-source heat pumps) and split systems, which are part of the residential and light commercial air conditioning and heat pump end-use.



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The HXV Hybrid Cooler delivers energy-efficient cooling while maximizing water savings. Thanks to the power of evaporative cooling, the HXV is up to 60% more energy-efficient than air-cooled systems. BAC's innovative combined flow technology, which combines parallel air and water paths, ensures peak system energy efficiency. The HXV also offers up to 70% water savings compared to traditional fluid coolers with the ability to run with reduced water during the majority of the year. Even on a design day, 25% water savings can be achieved.

The HXV Hybrid Cooler also offers 25% maintenance savings compared to traditional fluid coolers. Maintenance is easy with immediate access to the cold water basin, prime surface coil, and the fan drive system. Operators can even inspect the spray distribution system while the unit is in operation. Maintenance costs are further reduced by virtue of 70% chemical savings.

When reliable year-round operation is critical, the HXV Hybrid Cooler offers trouble-free winter operation. Additional benefits of the HXV include uninterrupted operation with multiple fans and optional redundant pumps. Longevity and corrosion resistance are further increased with superior material options including EVERTOUGH® Construction and TriArmor® Corrosion Pro-

tection System. For projects requiring plume abatement, the HXV has no plume when operating dry, and the dry coil provides natural plume abatement when running wet.

More information: www.BaltimoreAircoil.com.

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Daikin Pathfinder

Daikin introduces an integrated water-side economizer (WSE) for



its Pathfinder® Air-cooled Screw Chiller. The WSE, providing what is commonly known as “free cooling,” uses outdoor air to naturally

cool water and other process fluids, reducing compressor work and increasing chiller efficiency.

The Pathfinder with Free Cooling also operates without needing water from a cooling tower. This drastically cuts water use, as well as costs for water, sewer and chemical treatment.

Most free-cooling systems require two separate pieces of equipment, a chiller and dry cooler, along with a

layer of controls for coordination. By adding an on-board economizer to the Pathfinder, both tuned at the factory to optimize control and performance, the Daikin technology decreases installation and commissioning times, and related expenses. Overall, the Pathfinder with Free Cooling can trim upfront capital costs by as much

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Commercial Cooling

Continued from Page 15

as 40% compared to traditional economizer applications.

The integrated layout also is more compact, reducing air-flow clearances and interconnecting pipes. Plus, the chiller's pipe headers are made of multi-layer polypropylene to eliminate corrosion and contaminants while trimming weight and the load on a building's roof. They are located on the exterior of the unit for service and maintenance access, and they are removable too, allowing the entire unit to fit in a standard shipping container.

Efficient cooling in a smaller footprint allows for larger facility scale and higher power densities. It enables code-compliant designs as well, helping meet ASHRAE 90.1 and 90.4 standards, and other regional and local codes.

The Pathfinder functions in three different modes – free cooling, mechanical and hybrid – to optimize energy performance and, for a data center, improve power usage effectiveness (PUE). And at low ambient temperatures, the WSE coils reject the heat, allowing the chiller compressors to shut down, eliminating power draw entirely. Daikin's proprietary microchannel fluid coil design also allows the unit to operate at a lower air pressure drop, which decreases the energy required to run the fans, furthering efficiency and contributing to a faster payback.

When the unit operates in high ambient temperature conditions, the Pathfinder uses Daikin's Variable Volume Ratio (VVR®) technology and a variable frequency

drive to maximize efficiency, resulting in substantial cost savings for building owners over the life of the equipment. This is the first factory-packaged air-cooled chiller that provides both an integrated WSE and VVR compressor technology.

More information: www.DaikinApplied.com.

• • • • •

Johnson Controls-Hitachi VRF



Johnson Controls-Hitachi Air Conditioning introduces the Hitachi Water Source Variable Refrigerant Flow (VRF) heat pump and heat recovery systems. The new multi-module systems offer the capability of connecting multiple single-module units, ranging from 6–48 tons. In addition to the benefits of VRF technology, these new compact systems deliver the following:

- Reduced first costs
- Compact size enhances exterior appearance while eliminating outdoor noise
- Design flexibility through a variety of configurations
- Ideal for projects with limited space such as high-rise buildings, office buildings, architecturally restricted properties and apartments
- Optimal where outdoor placement is challenging, including

coastal areas and extremely cold climates

All Hitachi VRF indoor units, controls and gateway products are fully compatible with new water source systems for maximum design flexibility. The unified water source units can be used as heat pump and heat recovery units. They are available in 208/230V and 460V in 22 different capacities. Inverter compressor technology achieves high energy efficiency. The AHRI-certified efficiency ratings for the new Hitachi Water Source VRF systems include:

- Integrated Energy Efficiency Ratio (IEER) of 18.9 to 29
- Heating Coefficient of Performance (COP) of 4.00 to 6.30

More information: www.us.hitachiaircon.com.

• • • • •

Nortek Air Solutions CRAH

Nortek Air Solutions (NAS), the largest manufacturer of custom HVAC equipment in North America, has added catalog computer room air handlers (CRAH) for data centers requiring cooling units with configurable options.

The Nortek CRAH is being released with several models ranging from 9,000 to 48,000-CFM or 63 to 430-kW nominal cooling power capacity. The units are designed to maximize cooling per square foot and require minimal kW input for efficient operation in a very small footprint. Combining these performance features results in a CRAH platform that delivers one of the industry's best total cost of ownership (TCO).

The new catalog models supplement NAS' legacy custom CRAH platform, which will continue providing custom-built units to accommodate data centers requiring air handling systems with site-specific requirements. The new catalog units give NAS a comprehensive CRAH lineup for data center and mission critical applications ranging from custom-built units for any conceivable specification to models that fill an economical, standard operation requirement.

The new catalog CRAHs allow consulting engineers to specify end user desired options while achieving

a cooling capacity the data center requires. The units are available with an optimized copper tube/aluminum fin A-frame coil; however, an optional high-capacity coil is available to achieve a greater cooling capacity in the same footprint.

Additional configurability comes in fan selection. The Nortek CRAH offers two-fan, three-fan and four-fan options, which can be selected and optimized to balance performance, cost, efficiency and project requirements. Supply air discharge can be selected with the most common configurations – downflow for underfloor applications or front discharge. Each model uses ECM fans with an AMCA-certified performance in a horizontal FANWALL® configuration positioned below the cooling coil.

Other Nortek CRAH features include:

- Can be ordered as whole units for new construction, or in three knockdown sections for easy site assembly in retrofit projects;
- Modulating two-way or three-way control valve;
- Humidifier options available and stainless-steel drain pans guard against condensate overflow;
- 2-inch and 4-inch (51 and 102-mm) thick filter media with options for MERV 8 or MERV 13 filters behind hinged, easy-access doors;
- Mechanical safeguards built into the entire unit;
- Installation and service can be executed by NAS service or by its extensive North American rep network.

More information: www.nortekair.com.

• • • • •

Taco Comfort Solution Optimized Efficiency

Taco Comfort Solutions' new Optimized Efficiency (Oe) high performance package for commercial pumps sets new standards for performance, efficiency and lifecycle cost.

By adding a permanent-magnet ECM motor and VFD to pumps in Taco's commercial line, efficiency and service life are increased while exceeding upcoming DOE regulations. Pumps between three and 30hp are available with the Oe Package. Combined with the company's extensive line of residential ECM circulators, Taco now offers the broadest range of high-efficiency, ECM-powered pumps and circulators.

Taco's Oe Package reduces total cost of ownership through advanced motor technology and



decreased energy consumption. Longer service life, more uptime and higher reliability are all benefits of pairing permanent magnet motors with VFDs. Performance is increased, motors operate more quietly, smoother and cooler than equivalent induction motors, and maintenance is decreased.

The Oe Package is available with Taco's factory-programmed SelfSensing technology and ProBalance drives. This reduces or eliminates the need for controls and balancing contractors in the commissioning and start-up process.

More information: www.TacoComfort.com.

• • • • •

Luxaire Optimum



Luxaire has launched a new series of 15–27.5 ton rooftop units that achieve exceptional energy and cost savings. Luxaire Optimum™ Choice units exceed future Department of Energy (DOE) 2023 part-load standards by almost 10% and 2018 DOE guidelines by 25% all within an economical package.

Luxaire Optimum Choice rooftop units are designed to serve both the new construction and replacement markets. Multiple airflow strategies make Choice ideal for a diverse range of applications and include IntelliSpeed multi-speed discrete fan control, constant-volume (CV), variable air volume (VAV) and Continuous Reset Single Zone (CRSZ) control. Units are up to 22% lighter than competing products to reduce building design requirements and eliminate the need for additional structural engineering analysis when used in replacement ap-

Duct Leakage Testing?



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Technical Training

Growing Green Technicians Part 129: Ductwork Design, Installation and Transition Problems

By Jim Johnson
Contributing Editor

In the June issue we discussed total air flow in a building and requirements for individual rooms from a fundamental perspective. In this issue, we'll focus on some of the problems that can occur in the design and installation of a duct system that will negatively affect air flow, and, in the final analysis, the overall performance of the equipment refrigeration system, resulting in customer complaints about the comfort level in the building. One example, shown in **Figure One**, is a duct design that is popular in the Southwest, known as an extended plenum system.

At first glance, the problem with this duct layout that is commonly found in an attic or crawl space may not be immediately evident without a closer look. At the point we're indicating on the main plenum, something that should have been accomplished with this system has not been done: A transition that creates a reduction in the size of the plenum.

This situation, which technicians sometimes encounter when an equipment update was done using duct board and flex duct on-site, will not perform properly in regard to correct air flow to each room in the

building. While the first segment of take-offs and branches will likely deliver sufficient (or, even more than necessary) air flow to their respective room areas, the branches further down along the main plenum will simply not be able to deliver proper air flow due to a decrease in velocity in the final segment of the plenum. **Figure Two** shows a properly designed main plenum.

Another issue that needs to be discussed relative to this situation is that trying to accomplish proper air flow without the reduction transi-

tion by closing supply registers isn't going to be a truly effective solution to solving the problem. **Figure Three** shows why.

In this illustration, note that the flow of air from the air handler and into the main plenum is also reaching the supply registers at the end of the branches. While it's true that closing down the register at the end

of a branch will diminish the air flow into a particular room area, all of the air that is not now being delivered to that room is actually making its way back into the main plenum to accomplish free flow and allow delivery to subsequent branches.

The reason? Turbulence. Turbulence created by the restriction of

air flow through the branch will, in the final analysis, spill back and affect the total volume and velocity of air traveling through the main plenum. Taking a green approach to solving the performance problem with an extended plenum system that was installed without a reducing transition requires more than just adjusting registers.

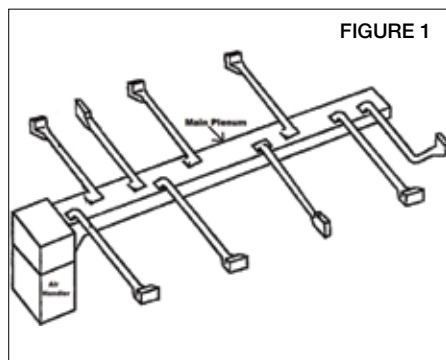


FIGURE 1

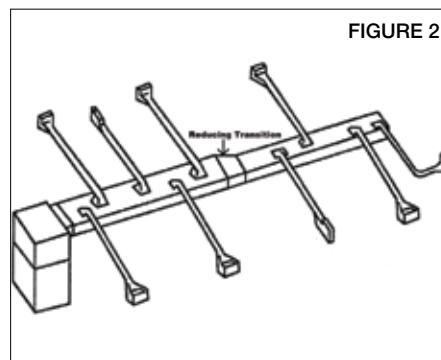


FIGURE 2

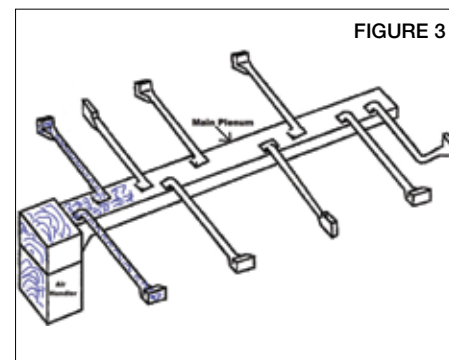


FIGURE 3

Editorial Focus

Continued from Page 16

plications.

Additional features include:

- The footprint can replace approximately 70% of the competitive installed base without the need for costly transition curbs.
 - A wide range of gas heat options including full modulating gas heat with a 2.85 to 1 turndown ratio and 1% incremental change of heating capacity.
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- More information:** www.Luxaire.com/OptimumChoice.



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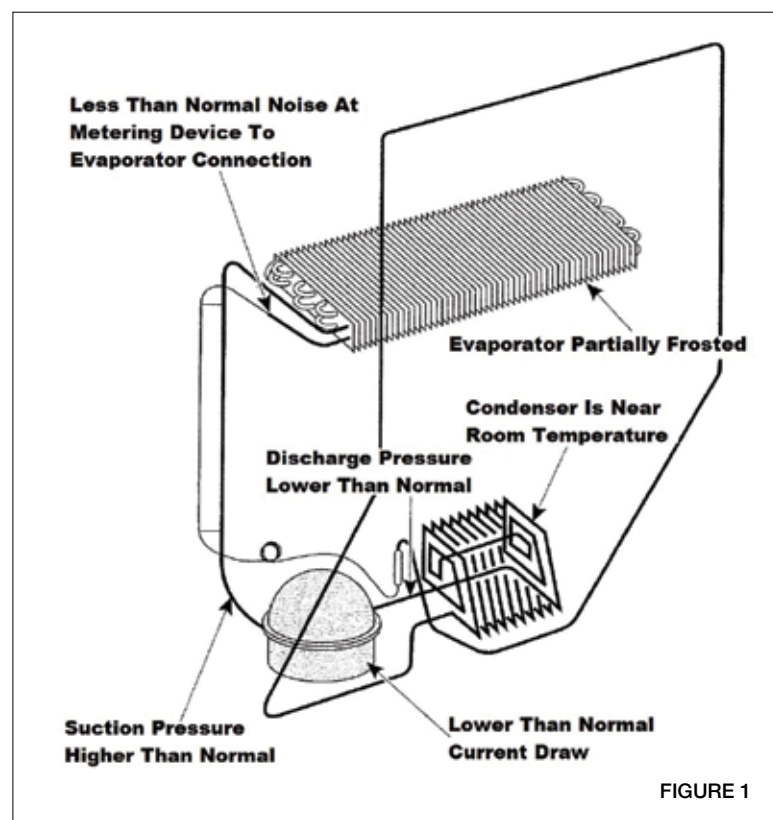
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A Reach-in That's Not Maintaining Temperature

By Jim Johnson
Contributing Editor

In this month's troubleshooting problem, the equipment is a reach-in food and beverage storage unit that is designed to maintain a cabinet temperature of 40°F. The restaurant manager's description of the problem is that the unit seems to run constantly, yet doesn't keep items as cool as they should be. She also said that the unit has only been in service for a month.

The design of this equipment, shown in **Figure One**, employs both a finned evaporator and condenser, a perimeter hot tube to prevent cabinet sweating in a humid environment, and a capillary tube metering device that is also attached to the suction line in order to create a heat exchanger.

Your initial observation of the situation is that there is no electrical issue, nor any air flow issue in regard to the condenser and evaporator, and your overall evaluation of the performance of this system renders the results shown in the illustration.

Your troubleshooting question: *What needs to be done in order*

for this equipment to operate properly and maintain the designed cabinet temperature?

If you believe you have the correct answer to one of Jim Johnson's Troubleshooting Problems, please submit it by email to Jim Johnson at icntroubleshooting@techtrainassoc.com or by U.S. Mail to: Technical Training Associates, PO Box 2259, Green Valley, AZ 85622-2259.

In your email subject line please include "Troubleshooting Answer" and indicate which month the question you are responding to was published.

Correct answers will be entered into a drawing and will be eligible to receive a copy of Jim Johnson's video "Evaluating Refrigeration Systems: Troubleshooting & Identifying Problems."

Answer to Last Month's Troubleshooting

A good correct answer to the first question is that the transformer and the blower motor are OK. You could also say that the fan relay or the printed circuit board that incorporates a fan relay assembly is OK too. All of these components can be eliminated as possibilities because the indoor fan motor is running.

The two correct answers to the second question are the contactor and the condenser fan motor. Without the contactor operating normally, the condenser fan motor wouldn't be running, nor would the compressor be attempting to start.

The final answer to our "blowing warm air" complaint is that we would have to replace the potential relay. When our meter showed infinity at the SR coil, it proved that the coil was open, which would prevent the relay from opening the SR switch. And the end result of that situation would be that the start capacitor would not be taken out of the circuit, causing excessive current draw, which would cause the compressor to kick off on its internal overload.

The winner of last month's problem is:

Steven Pugliese
San Diego, Calif.

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Company Spotlight

Olimpia Splendid Enters North American Market

Olimpia Splendid is a family-owned HVAC manufacturing company established in 1956 in Brescia, Italy and, as of today, present in over 50 countries worldwide: an Italian story of innovation and growth, driven by technology and a "Made in Italy" design. The company operates subsidiaries in China, Spain, France, Brazil, Australia and now, the United States as well as Canada.

The company's vision is to design and manufacture comfort products with a focus on being environmentally friendly, using industry leading technologies and providing innovative solutions with unique aesthetics and best in class efficiencies.

Innovation, design, sustainability and the value of their people are the four pillars on which the company has built its rich history of continued growth and passion for success for the past 60 years.

Innovation. Olimpia Splendid makes a yearly investment of 5% of its revenue in research and development, with the goal

of developing one of a kind patents. They employ 20 R&D engineers, own 12 design patents on existing products and have over 50 registered trademarks.

Design. During the product design phase, Olimpia Splendid selects industry leading technologies and components that provide maximum energy efficiency with minimum environmental impact. Olimpia Splendid has a unique perspective when it comes to their products' aesthetics. By partnering with well-known Italian designers and architecture firms who differentiate their product offering versus the competition from the interior by offering products that are unobtrusive with minimal aesthetic impact and from the exterior by blending in with the building architecture. For example, their Maestro Series product offering of thru the wall air conditioners and heat pumps has saved numerous cities in Europe from the unattractive look of hundreds of thousands of mini split condensing units ruining historic building facades.

Sustainability. Olimpia Splendid is a firm believer that R&D should

always go hand in hand with the utmost respect for the environment. Their products' and manufacturing processes' impact on the environment is a key design concept that accompanies every phase of a product's life cycle: from the product design phase, to selection of components and disposal of materials at the end of product life.

People. Though the company attributes its successful growth to their focus on developing industry leading technology, design and innovation, the key to these initiatives lies solely with the fundamental value of people. They believe it is critical to invest in the right human resources that the whole company believes in and trusts, resulting in maximum efficiency and industry leading quality.

Olimpia Splendid offers two options as part of their Maestro Series thru the wall heat pumps and air conditioners. First, the Maestro Smart, their single stage

Continued on Page 19

Indoor People



BRIAN REDMAN

Koch Air announced the promotion of **Brian Redman** to vice president of residential sales. In this role, Redman will lead the residential sales force and marketing team across the Koch Air footprint in Indiana, Kentucky, Illinois, and Missouri.

Redman brings over 30 years of sales and management experience in the HVAC industry. During his 11 years with Koch Air, Redman has provided sales leadership and management in both the St. Louis and Indianapolis markets. During his time as Residential Sales Manager in

the St. Louis market, Redman opened new branch locations in Mt. Vernon, Illinois, and Fenton, Missouri.

The appointment of a dedicated vice president of residential sales is one of the many investments and transformations happening at Koch Air.

"We are looking to the future and are focused on growth by improving the contractor's business performance and creating a better customer experience through technology," said Brad Muehlbauer, Koch Air president. "These are just several of our top priorities in 2020."

• • • • •

TDIndustries has promoted **Lauren Turner** to senior vice president of Dallas Service.

Turner leads the company's largest Service department, which provides maintenance and life-cycle support for HVAC, plumbing, and more.

Prior to TD, Turner absorbed a decade of process management



LAUREN TURNER

expertise and mechanical experience as part of Lockheed-Martin's missile and fire control production management team. She joined TD in 2014 as a process improvement specialist, using Lean methodology to continuously improve delivery methods. She was promoted to lead TD's manufacturing group the next year.

Under her leadership, the department had its best year on record, producing a record 5.7 million pounds of sheet metal without a

single safety incident. Turner joined the Service team in 2018 as vice president and has guided it since.

Turner holds a degree in mechanical engineering from Texas A&M, and a master's degree from the University of Texas at Austin. She is Lean Six-Sigma Green Belt and Black Belt-certified and serves on several TD leadership councils.

• • • • •

Carrier announced the appointment of **Chris Nelson** as president of its global HVAC products and services business. This appointment combines Carrier's residential and commercial HVAC business units under a single leader, aligning with its planned reporting segments as a soon-to-be public company. Carrier is expected to complete its separation from United Technologies early in the second quarter of 2020.



CHRIS NELSON

Nelson has more than 24 years of sales and general management experience, including 16 years at Carrier.

He most recently served as president, HVAC-Commercial, at Carrier, and before that, president of Carrier's North American HVAC business. Prior to joining Carrier, he held leadership roles with the U.S. Army, Johnson & Johnson, and McKinsey & Company.

Olimpia Splendid

Continued from Page 18

compressor unit with multi speed motor. Second, the Maestro Pro Series, with an inverter driven compressor and variable speed motor for maximum comfort and operating cost savings, both of which were officially launched at the 2020 AHR Expo in Orlando, Fla. Both models have whisper quiet operation and best in class sound transmission ratings.

"Although Olimpia Splendid's product offering is quite vast, the first phase of product introductions for the United States market consists of the Maestro Series," states Diego Stefani, Olimpia Splendid's Director of Sales & Business Development for North America. "There are plans in the next 18 months to introduce our ultra slim line Bi2 Series chilled water 2 pipe and 4 pipe fan coils."

About "Heating and Air Conditioning with no Outdoor Unit"

Olimpia Splendid refers to their Maestro Smart product as providing "Heating and Air Conditioning with no Outdoor Unit" and the "splitless" and "windowless" comfort solution. Their inverter-driven, whisper quiet* indoor sound levels, efficiency, sleek design and easy installation which can be done from inside

the occupied space, combined with the minimal impact on exterior appearance makes these systems a perfect comfort solution for residential and commercial new construction, replacement and historical building applications. Features such as dehumidification and sleep modes, the Pure System 2, which is an electrostatic/active carbon filtration system, multi-function remote as well as wall mounted wireless (WiFi) controller option, provide exceptional comfort in the space and convenience year-round for the user.

"Olimpia Splendid is an industry leader with a rich history in Europe manufacturing air conditioners, fan coils and heat pumps in the Italian tradition of commitment to innovative design and superior quality," Diego stated. "Our made in Italy products, have no competition, as there is nothing similar available in American and Canadian markets, making them a very appealing opportunity for potential distribution partners to differentiate themselves from their competition, and sell a one of a kind product offering."

To learn about distribution opportunities and Olimpia Splendid products, contact Diego Stefani by emailing d.stefani@olimpiaspplendidusa.com or calling 951.534.8901

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SEPTEMBER

CAQI/QM/QS Air Distribution Module

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Instructors: Mike Griffin / Dave Highland

Wed., Sept. 2 – Part 1 • TBD

Thurs., Sept. 3 – Part 2 • TBD

Wed., Sept. 9 – Part 3 • TBD

Thurs., Sept. 10 – Part 4 • TBD

OCTOBER

NATE Training

(Four-Night Class)

Instructor: John Dalton

Wed., Oct. 21 – Part 1 • TBD

Thurs., Oct. 22 – Part 2 • TBD

Wed., Oct. 28 – Part 3 • TBD

Thurs., Oct. 29 – Part 4 • TBD

Sat., Oct. 31 - NATE Exam, 7:30 a.m. • TBD

IHACI

Note: When registering for a training class please make sure you honor that commitment and show up on time and prepared. If you cannot attend, please call (818) 551-1555 and cancel in ample time. Thank you.

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Part 2 • Rescheduled – New date TBD

Part 3 • Rescheduled – New date TBD

Part 4 • Rescheduled – New date TBD

NATE Exam, 7:30 a.m. • Rescheduled – New date TBD

SEPTEMBER

System Diagnostics Module

(Four-Night Class)

Instructor: John Dalton

Wed., Sept. 2 – Part 1 • TBD

Thurs., Sept. 3 – Part 2 • TBD

Wed., Sept. 9 – Part 3 • TBD

Thurs., Sept. 10 – Part 4 • TBD

NOVEMBER

Non-Residential Acceptance Testing

(Two-Night Class)

Instructor: Bill Brown

Wed., Nov. 4 – Part 1 • TBD

Thurs., Nov. 5 – Part 2 • TBD

2019 Non-Residential Title 24

(Two-Night Class)

Instructors: Mike Griffin / Jayme Carden

Wed., Nov. 18 – Part 1 • TBD

Thurs., Nov. 19 – Part 2 • TBD

PACIFIC GAS AND ENERGY ENERGY TRAINING CENTER, IRVING

SEPTEMBER

System Diagnostics Module

(Four-Night Class)

Instructor: Mike Griffin

Wed., Sept. 16 – Part 1 • TBD

Thurs., Sept. 17 – Part 2 • TBD

Wed., Sept. 23 – Part 3 • TBD

Thurs., Sept. 24 – Part 4 • TBD

OCTOBER

CAQI/QM/QS System Diagnostics Module

(Four-Night Class)

Instructors: Mike Griffin / Jayme Carden

Wed., Oct. 7 – Part 1 • TBD

Thurs., Oct. 8 – Part 2 • TBD

Wed., Oct. 14 – Part 3 • TBD

Thurs., Oct. 15 – Part 4 • TBD

NOVEMBER

NATE Training

(Four-Night Class)

Instructor: John Dalton

Wed., Nov. 4 – Part 1 • TBD

Thurs., Nov. 5 – Part 2 • TBD

Wed., Nov. 18 – Part 3 • TBD

Thurs., Nov. 19 – Part 4 • TBD

Sat., Nov. 21 - NATE Exam, 7:30 a.m. • TBD

TRAINING CLASS LOCATIONS

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seminars.socalgas.com

Southern California Edison Energy
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www.sce.com/workshops

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SERVICE (CAQI/QM/QS) & NORTH AMERICAN TECHNICIAN EXCELLENCE (NATE)

have been converted to Webinars while others are being rescheduled (dates to be determined).
or Utility websites. We look forward to your continued participation when classes are available.

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ostics Module

ht Class)

Mike Griffin

- Part 1 • TBD

- Part 2 • TBD

- Part 3 • TBD

- Part 4 • TBD

OCTOBER

Performance Module

ht Class)

Griffin/Jayme Carden

Part 1 • TBD

- Part 2 • TBD

- Part 3 • TBD

- Part 4 • TBD

NOVEMBER

Training

ht Class)

Jeff Painter

Part 1 • TBD

- Part 2 • TBD

- Part 3 • TBD

- Part 4 • TBD

xam, 7:30 a.m. • TBD

SEPTEMBER

Chiller Module

(Two-Night Class)

Instructor: Mitch Bailey

Tues., Sept. 22 – Part 1 • TBD

Wed., Sept. 23 – Part 2 • TBD

Commercial Cooling Tower Module

(Two-Night Class)

Instructor: Mitch Bailey

Tues., Sept. 29 – Part 1 • TBD

Wed., Sept. 30 – Part 2 • TBD

OCTOBER

 NATE Training

(Four-Night Class)

Instructor: Mitch Bailey

Wed., Oct. 14 – Part 1 • TBD

Thurs., Oct. 15 – Part 2 • TBD

Wed., Oct. 21 – Part 3 • TBD

Thurs., Oct. 22 – Part 4 • TBD

Sat., Oct. 24 - NATE Exam, 7:30 a.m. • TBD

NOVEMBER

2019 Non-Residential Title 24

(Two-Night Class)

Instructors: Mike Griffin / Jayme Carden

Tues, Nov. 3 – Part 1 • TBD

Wed., Nov. 4 – Part 2 • TBD

Non-Residential Acceptance Testing

(Two-Night Class)

Instructor: Bill Brown

Tues, Nov. 17 – Part 1 • TBD

Wed., Nov. 18 – Part 2 • TBD

SEPTEMBER

System Diagnostics Module

(Four-Night Class)

Instructor: Dave Highland

Wed., Sept. 2 – Part 1 • TBD

Thurs., Sept. 3 – Part 2 • TBD

Wed., Sept. 9 – Part 3 • TBD

Thurs., Sept. 10 – Part 4 • TBD

OCTOBER

 NATE Training

(Four-Night Class)

Instructor: Dave Highland

Wed., Oct. 7 – Part 1 • TBD

Thurs., Oct. 8 – Part 2 • TBD

Wed., Oct. 14 – Part 3 • TBD

Thurs., Oct. 15 – Part 4 • TBD

Sat., Oct. 17 - NATE Exam, 8:00 a.m. • TBD



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Schedule (Subject to Change)

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Help Wanted



Institute of Heating and Air Conditioning Industries, Inc. (IHACI) Commercial HVAC Instructors Wanted

IHACI is looking for qualified Commercial HVAC/R/SM instructors to join its education team. These are evening classes (typically 4 nights/4 hrs. per night.) Locations: Chatsworth, Downey, Irwindale, San Diego, Stockton, and Tulare, CA. We offer competitive hourly rates, mileage reimbursement, hotel/meal accommodations when needed. Previous training experience very helpful.

HVAC/R/SM disciplines – Candidates should indicate all applicable areas of expertise.

- HVAC/R/SM Industry Certifications
- Commercial Components and Applications
- Boilers
- Chillers
- Water Towers
- Refrigeration Systems
- Water Source Heat Pumps
- Fan Coils & Air Handlers

1. Instructors should have a

Help Wanted

minimum of twenty (20) years of actual field experience in the HVAC/R/SM industry.

2. Instructors should have recognized HVAC/R/SM industry certifications.

3. Instructors should have the ability to teach face-to-face, HVAC/R/SM material as determined by the IHACI Education Committee (typical 80 to 160 seminar attendees).

4. Instructors should have minimum computer skill sets to present existing and future formatted IHACI curriculum.

5. Instructors should be able to pass HVAC/R/SM work history and security background checks.

6. Instructors should be able to travel as needed to the different training venues.

7. Instructors must be able to attend required education and training meetings.

Interested instructor candidates should submit their resumes to the IHACI office for review and evaluation by IHACI's Education Committee. Please send resumes to: s.evans@ihaci.org or fax to 818-551-1115.

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Company Overview

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Contractors can now text their questions to the participating locations highlighted below.

Send a text directly to our product experts Monday – Friday, 7:00 a.m. – 5:00 p.m.

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