We THANK all those who joined us on March 25 for our eMeeting with our featured presenter Charles "Chuck" E. Gulledge, III

We had good attendance for this meeting and were even joined by Region VII Officers and members from other Chapters. Again, Thanks to all who attended, our presenter, and the meeting organizers and coordinators.

JOIN WVASHRAE April 29 for our Day Of Learning Webinars Scheduled from 10 am - 1 pm EDT
We are hosting three FREE Webinars for Members, Students and Guests
Seminar attendees will earn 1.0 PDH certificate from WV ASHRAE for each seminar attended.

**Schedule:**

10:00AM-10:50AM  **Opening Announcements and Introduction**  
*The Logic of Dedicated Outside Air Systems and The Core Technologies That Make Them Effective* - presented by Patricia Graef, P.E., ASHRAE Fellow

10:50AM-11:00AM  **Break**

11:00AM-11:50AM  **Update on how high performance VAV DOAS can meet the latest ASHRAE 62.1 and 90.1 Standards** - presented by Arthur D. Hallstrom, P.E. ASHRAE Fellow, BEMP

11:50AM-12:00PM  **Break**

12:00PM-12:50PM  **Business Ethics for the HVAC Professional** - presented by Patricia Graef, P.E. ASHRAE Fellow

12:50PM-1:00PM  **Closing statements and Chapter Announcements** - WVASHRAE Chapter President - Chase Thomas, P.E.

**Registration details:**

Please register for WV ASHRAE DOL Meeting on April 29, 2020 starting at 10:00AM EDT at:

[https://attendee.gotowebsinar.com/register/3807335394523016716](https://attendee.gotowebsinar.com/register/3807335394523016716)

After registering, you will receive a confirmation email containing information about joining the webinar.
Featured Presenters
Patricia T. Graef, P.E., ASHRAE Fellow and Distinguished Lecturer
Patricia Graef, P.E., Fellow ASHRAE, LEED GA, retired from Munters Corp., Fort Myers, Fla. Graef has spent more than 40 years focusing on engineering and developing products that control temperature and moisture in building air as well as the water associated with the processes. Graef received her bachelor of science in mechanical engineering from the University of Florida. In the time Graef has worked for Munters, she served as a Scientist in the cooling tower division, was the Director of Core Technology for Humidification and Engineering and Development Manager for the HumiCool division. She has more than a dozen international patents in her name.
Graef previously served as Society Vice President. Her other recent service includes five years in leadership positions for the ASHRAE Rules Committee, chair of Technology Council, member of the Advanced Energy Design Guide Steering Committee, member of Finance Committee, Standards Committee, Technical Committees (TC) 3.6, Water Treatment, 5.7 Evaporative Cooling and 5.11 Humidification. She also serves on the Board of Governors of her local ASHRAE Chapter.

Arthur D. Hallstrom, P.E., ASHRAE Fellow and ALI Instructor
Mr Hallstrom is an ASHRAE Fellow, P.E. and now retired after a 40 year HVAC applications career with a major manufacturer and a noise cancellation company. His is currently the ALI instructor for ASHRAE DOAS course and a consultant to the ALI courses on humidity and air-to-air recovery. Mr Hallstrom is currently Chair of WV High Performance Building Day, Past Regional Director and Chair, Past President of 3 ASHRAE Chapters and has received numerous ASHRAE awards at the local, regional and national level. He is currently a member of TC 1.6 Terminology which maintains ASHRAE Terminology Online

Presentation Descriptions:

Session 1: The Logic of Dedicated Outside Air Systems and The Core Technologies That Make Them Effective
A dedicated outdoor air system (DOAS) uses separate equipment to condition all of the outdoor air brought into a building for ventilation and delivers it to each occupied space, either directly or in conjunction with local or central HVAC units serving those same spaces. The building’s local or central HVAC units maintain space temperature. Reasons to use DOAS include energy reductions while ventilation loads remain large, the economic need to balance indoor air quality vs. ventilation operational costs, building closures caused by mold and energy costs during unoccupied hours.
This session will begin with a quick review of the psychrometric chart and then look at West Virginia weather to illustrate how much work must be done to make it suitable for building ventilation. We will review the psychrometrics of air as it relates to the components used in DOAS. The individual components, how they work and how they interact with each other will be explained. Components discussed include heating and
cooling coils, desiccant dehumidifiers, heat recovery wheels, air to air heat exchangers and evaporative coolers.

**Session 2: Update on how high performance VAV DOAS can meet the latest ASHRAE 62.1 and 90.1 Standards**

DOAS and DOAS units are continuing to evolve. DOAS is internationally recognized as a method to manage ventilation, indoor humidity and building pressure with exceptionally low energy use. The new Zero Energy Advanced Energy Design Guides (AEDG) utilize a DOAS system as the base system to be used with all of the sensible heating/cooling system options.

This intermediate level session will build on the DOAS basics session and will cover the latest technology - VAV DOAS. See the layouts, application guidance and equipment that can deliver high performance and meet the latest ASHRAE Standard requirements. For example, ASHRAE 62.1-2019 now defines the maximum indoor air dewpoint in mechanically cooled buildings. Systems need to provide dehumidification equipment that limits indoor conditions to 60°F dewpoint during occupied and unoccupied hours when outdoor dewpoint is above 60°F. The design conditions used are the dewpoint and coincident dry-bulb temperature when space interior is at cooling design values and space solar loads are at zero. Learn how DOAS can meet this requirement.

**Session 3: Business Ethics for the HVAC Professional**

ASHRAE’s code of ethics prescribes “we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others…” It goes on to list specific examples of ethical behavior for its members to follow. Engineering laws also prescribe certain ethics criteria.

Ethics for business is not easily defined and, in many cases, is not governed by laws. Ethics must be part of the business culture, starting at the top and filtering down through supervisors and employees. Leaders who make a commitment to be ethical and socially responsible find that their employees will follow. They will strengthen and grow their businesses by improving customer and employee trust and loyalty.

This session will discuss engineering/business ethics and then go on with several examples and case studies illustrating how business ethics improved or conversely ruined some companies. The audience will have a chance to participate in some “what would you do?” scenarios.

**ASHRAE RP Sponsorship:**

Our annual Day of Learning Sponsorship donations are dedicated funds toward our ASHRAE RP Fund Raising Campaign. Currently, we are $2,400 short of our established goal for this year and cancellation of our event will make it difficult for us to raise the remaining funds to meet (or exceed) our goal.

We are asking if interested Vendors/Sponsors that were planning to participate, or have previously participated in our Day of Learning/Trade Show would consider being a sponsor of these Webinars and make a tax-deductible Sponsorship Donation toward our RP Campaign? Your support is greatly appreciated.

Levels of Sponsorship are:

**DIAMOND:** $750

**GOLD:** $500
SILVER: $350

BRONZE: $200

Your company name will be displayed on the Webinar opening slides, on our website, recognized in a future Newsletter, and included in ASHRAE’s annual publication of RP Donors.

To become a Sponsor, please fill out our Sponsorship Form at:

https://wvashrae.wufoo.com/forms/z361bfo1s1ixzm/

Individual RP Donations:

If you would personally like to make a donation to help us reach our RP Goal and support all the great research and programs that ASHRAE puts 100% of your donation towards, we welcome all contributions!

To make a donation, please visit the ASHRAE Donations page at the following address, and be sure to indicate the West Virginia Chapter in the donation form so that the donation is credited to our Chapter:

https://xp20.ashrae.org/secure/researchpromotion/rp.html

To see our current fund raising status and our current donors, please visit our 2020 RP Campaign page.

For more WV ASHRAE information, please visit our website at: wvashrae.org