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# THERMOGRAM

March 2016  
Volume XLX Issue 09

Main: Combined Heat and Power Today  
Tech Session: Pressure-Enthalpy and VRF DOAS

A SPECIAL THANKS  
TO OUR NETWORKING  
SPONSORS FOR THE  
EVENING:



## **ASHRAE March 3rd MEETING:**

<b>Tech Session:</b>	<b>5:00 pm – 5:45 pm</b>	<b>Dinner:</b>	<b>6:30 pm – 7:00 pm</b>
<b>Network Hour:</b>	<b>5:30 pm – 6:30 pm</b>	<b>Main Speaker:</b>	<b>7:00 pm – 8:15 pm</b>

### **Main Meeting: Combined Heat and Power Today**

Speaker: Patrick J. Barrett, Territory Manager / Americas Gas of Caterpillar Distributed Generation

Mr. Barrett has over 30 years of experience in the electric power industry and has been involved in numerous aspects of the industry focusing mainly on on-site power solutions including reciprocating engines, gas turbines, hydro electric, power boilers and steam turbine generators. He also has experience in combined heat and power and renewable energy including landfill gas to energy projects.

The Main Meeting presentation will consist of a short overview of Combined Heat and Power (CHP) and Combined Cooling Heating and Power (CCHP) then move into the following areas:

- Turbines? Reciprocating? or Both?
- General Market Attributes
- High Level Economic Evaluation for Go / No-Go Consideration

### **Tech Session: Pressure-Enthalpy and VRF DOAS**

Speaker: Joe Cefaly, CEM, LEED AP, OEM Applications Manager of Mitsubishi Electric US Cooling & Heating

Mr. Cefaly has worked with Mitsubishi Electric Cooling & Heating for the past 5 years, and was a mechanical engineer before taking on his current role of OEM Applications Manager. With 10 years of experience in the HVAC industry, he has achieved his LEED AP certificate as well as CEM accreditation. This presentation will discuss the refrigeration cycle in terms of how variable refrigerant flow condensing units are now being applied to dedicated outside air systems. Emphasis will be made on how to interpret the pressure-enthalpy chart when designing VRF systems in general.

The March meeting will take place at the Engineers Club.  
11 West Mount Vernon Place Baltimore, MD 21201



## 2015-2016 Chapter Leadership Roster

### Officers

<b>President</b> P:410-303-3125	Adam Fauer F: <a href="mailto:president@ashrae-balto.org">president@ashrae-balto.org</a>
<b>President-Elect</b> P:410-316-7800	Dave Reese F:410-316-7900 <a href="mailto:vp@ashrae-balto.org">vp@ashrae-balto.org</a>
<b>Treasurer</b> P:410-323-0600	Craig Parks F:410-377-2543 <a href="mailto:treasurer@ashrae-balto.org">treasurer@ashrae-balto.org</a>
<b>Secretary</b> P:410-880-0850 x123	Brad Watkins F: 301-490-7156 <a href="mailto:secretary@ashrae-balto.org">secretary@ashrae-balto.org</a>
<b>Board Member</b> P:410-329-8100	Steph Kunkel F:301-490-7156 <a href="mailto:asstsecretary@ashrae-balto.org">asstsecretary@ashrae-balto.org</a>
<b>Board Member</b> P:410-793-0202	James Cote F:410-721-7472 United Energy Products <a href="mailto:gov2@ashrae-balto.org">gov2@ashrae-balto.org</a>
<b>Board Member</b> P:443-977-9741	Sherry Abbott-Adkins F:410-374-5471 A Squared Plus Engineering <a href="mailto:senioradvisor@ashrae-balt.org">senioradvisor@ashrae-balt.org</a>
<b>Past-President</b> P:410-645-1552	Dave Lawson F:410-645-1616 Siemens Bldg Technologies <a href="mailto:pastpresident@ashrae-balto.org">pastpresident@ashrae-balto.org</a>

### Committee Chairs

<b>Attendance/Recpt.</b> P:443-224-1594	Theresa R Schroeder F:410-243-5716 <a href="mailto:reservations@ashrae-balto.org">reservations@ashrae-balto.org</a>
<b>Chapter Programs</b> P:410-316-7800	Dave Reese F:410-316-7900 KCI Technologies, Inc. <a href="mailto:programs@ashrae-balto.org">programs@ashrae-balto.org</a>
<b>Historian</b> P:410-704-2717	Alex Clark Towson University <a href="mailto:historian@ashrae-balto.org">historian@ashrae-balto.org</a>
<b>Membership</b> P:410-381-7100	Alan Kratz F: Allen & Shariff <a href="mailto:membership@ashrae-balto.org">membership@ashrae-balto.org</a>
<b>Refrigeration</b> P:410-403-2200	Jon Olmstead F:410-403-2225 The Trane Company <a href="mailto:refrigeration@ashrae-balto.org">refrigeration@ashrae-balto.org</a>
<b>Research Promotion</b> P:410-531-1600	Jeff Shook F:443-561-1601 Chesapeake Systems <a href="mailto:research@ashrae-balto.org">research@ashrae-balto.org</a>
<b>Scholarship</b> P:410-298-2400	Saqib Ashraf F:860-353-2462 Carrier <a href="mailto:scholarship@ashrae-balto.org">scholarship@ashrae-balto.org</a>
<b>Student Activities</b> P:410-329-8100	Sam Philipp F: 410-472-2200 JMT <a href="mailto:studentacts@ashrae-balto.org">studentacts@ashrae-balto.org</a>
<b>Student Activities</b> P:410-652-5437	Robert Broczowski F: 410-646-4738 Mueller Associates <a href="mailto:studentacts@ashrae-balto.org">studentacts@ashrae-balto.org</a>
<b>Young Engineers</b> P:443-921-8718	Kaylee Haupt F:410-377-2543 BKM <a href="mailto:yea@ashrae-balto.org">yea@ashrae-balto.org</a>
<b>CTA</b> P:410-316-7800	Dave Reese F:410-316-7900 KCI Technologies <a href="mailto:cta@ashrae-balto.org">cta@ashrae-balto.org</a>
<b>CTTC</b> P:410-316-7800	Dave Reese F:410-316-7900 KCI Technologies <a href="mailto:cttc@ashrae-balto.org">cttc@ashrae-balto.org</a>
<b>Thermogram</b> P:443-832-5733	Kelly Brennan F:410-381-7654 Schneider Electric <a href="mailto:newsletter@ashrae-balto.org">newsletter@ashrae-balto.org</a>
<b>Engineers Week</b> P:410-329-8100	Sam Philipp F: 410-472-2200 JMT <a href="mailto:engweek@ashrae-balto.org">engweek@ashrae-balto.org</a>
<b>Web Technician</b> P:410-303-3125	Adam Fauer F: <a href="mailto:ashtech@ashrae-balto.org">ashtech@ashrae-balto.org</a>
<b>Christmas Party</b> P:410-527-2612	John Prusak F:410-472-4928 Johnson Controls, Inc. <a href="mailto:Christmas@ashrae-balto.org">Christmas@ashrae-balto.org</a>
<b>Golf Outing</b> P:443-561-1600	R L Gladden F:443-561-1601 Chesapeake Systems <a href="mailto:golf@ashrae-balto.org">golf@ashrae-balto.org</a>
<b>Women in Engineering</b> P:240-542-5568	Jennifer Leach F:301-490-7156 Cummins-Wagner <a href="mailto:wie@ashrae-balto.org">wie@ashrae-balto.org</a>
<b>Grassroots Activities</b> P:443-348-2017	Matthew Grice F:410-298-3940 Gannett Fleming <a href="mailto:gga@ashrae-balto.org">gga@ashrae-balto.org</a>

### ASHRAE Reservation Hotline

Phone: 443-224-1594      ASHRAE Baltimore Chapter  
Attn: Theresa R Schroeder      [reservations@ashrae-balto.org](mailto:reservations@ashrae-balto.org)

*In alignment with the "Green Trends" of ASHRAE we have eliminated the paper copies of the Membership Roster. An electronic copy will be available at meetings, upon request.*

## President's Pen

With March right around the corner, I can only hope we are inching closer to Spring and leaving this Winter behind. I for one have had enough of the below average temperatures and snow! It also means we only have 3 more formal meetings for the 2015-2016 year. I encourage all ASHRAE members (and guests) to come to the last 3 meetings as we have great speakers and topics for you.

I would like to thank Dave Reese, Dave Lawson and Jon Olmstead for putting together a great tour this year. For the February meeting, we met at Of Love & Regret Pub prior to boarding buses to MTC Logistics for a tour. Many thanks to the tour guide for a great event.

As is my custom, I would like to take a minute to recognize one of our great volunteers: Dave Lawson. Dave is our chapter past-president and a vital member of the board of governors. Among many crucial responsibilities, Dave has allocated countless hours working to revamp our chapter website, which we hope to be active by April. Our website is a pivotal outlet for Chapter communications and information, which is in desperate need of updating. We will be informing all members when our revamped site is active and will invite everyone to visit the website and explore what our chapter has to offer ([www.ashrae-balto.org](http://www.ashrae-balto.org)). The website will be another example of what makes Baltimore the best chapter in the Region!

### Upcoming events:

- March Meeting: March 3<sup>rd</sup>, 2016 at the ESB
- April Meeting (past presidents night): April 7<sup>th</sup>, 2016 at the ESB
- 5<sup>th</sup> Annual Fishing Event: April 25<sup>th</sup>, 2016 (tentative)
- May Meeting: May 5<sup>th</sup>, 2016 at the ESB
- Golf Outing: June 3<sup>rd</sup>, 2016

### Presidential Award of Excellence (PAOE):

In an effort to recognize our chapter and members for their contributions to the ASHRAE community please let me know if you or a chapter member you know has fulfilled any of the following:

- Chapter member that submits for a bEQ rating
- Chapter member presentation on bEQ to an outside organization
- For each Professional Development Hour (PDH) earned by a chapter member on a building science topic other than HVAC&R (e.g., fenestration, insulation, lighting)

Please send me any applicable information at [adamfauer@gmail.com](mailto:adamfauer@gmail.com).

While our website is under construction, please reference the Thermogram for all event information and schedules. Thank you for your support of the Baltimore Chapter of ASHRAE.

See you soon,

Adam



# 2015-2016

## Meeting Schedule

Please mark you calendar with the following dates for the 2015 through 2016 Baltimore Chapter meetings. A complete schedule indicating seminar, technical session and main meeting topics will be published in the coming month's Thermogram and is also available on the chapter website

[www.ashrae-balto.org](http://www.ashrae-balto.org).

August 13, 14 & 15, 2015	Chapter Regional Conference	Johnstown, PA
September 9th, 2015	6th Annual Product Show: 3:00—8:00pm	Radisson Timonium
October 8th, 2015	Main Meeting: Advanced Energy Design Guides to Net Zero Buildings Tech Session: Airflow Measurement - Building/Space Pressurization (Volume Tracking) and Intake Control <i>Research Promotion Night</i>	ESB
November 5th, 2015	Main Meeting: Chilled Beam Systems Tech Session: SMACNA New Duct Construction Manual	ESB
December 4, 2015	Christmas Party	Timonium Fairgrounds
January 7, 2016	Main Meeting: Panel discussion What have I learned? Panel: Engineer, Contractor, Mfr's. Rep. Tech Session: Tentative - Energy Modeling	ESB
February 4, 2016	Main Meeting: Refrigeration Tour Tech Session: N/A	MTC Logistics/Of Love & Regret
March 3, 2016	Main Meeting: Combined Heat and Power Tech Session: Pressure-Enthalpy and VRF DOAS	ESB
April 7, 2016	Main Meeting: Hybrid Condensing/Non-Condensing Boiler Systems Tech Session: Air Management in Hydronic Systems	ESB
May 5, 2016	Main Meeting: Refrigerants Tech Session: TBD	ESB
June 3, 2016	57th Annual Golf Outing	Turf Valley CC

Main Meeting Schedule: 5:30 pm social hour, 6:30 pm dinner, 7:00 pm speaker

Tech Session Schedule: 5:00 - 5:45 pm

Cost: \$25 dinner fee for full members, \$10 dinner fee for students



## Honors and Awards

Greetings Members,

Each year, ASHRAE recognizes members at every level of the organization for outstanding achievements. We are very proud of the contributions our colleagues have made on behalf of the Society, as well as the industry in general. We encourage you to help us recognize these members by nominating them for an appropriate award.

There are several categories for these achievements, including:

- Personal Honors
- Honors for Society Activities
- Society Awards to Groups or Chapters and,
- Chapter and Regional Awards

Nominations for these awards can be made by chapters, regions, committees, and even individual ASHRAE members. If you have an idea for an award nominee, please contact me by emailing [dave.lawson@siemens.com](mailto:dave.lawson@siemens.com).

In the meantime, all ASHRAE Award nominations require a current biographical record, which are located at the ASHRAE site. For your ASHRAE Bio, please follow this link: <https://www.ashrae.org/membership--conferences/my-membership>. You will need to sign in to update your bio, and/or access your profile.

They're your achievements, be proud of them... take a few minutes to update your ASHRAE Bio today!

*Best Regards,*



*Dave Lawson*





**ASHRAE Baltimore Chapter**  
**GOLF OUTING & BANQUET**

*Friday, June 3, 2016*

**TURF VALLEY COUNTRY CLUB**

**ELLCOTT CITY, MARYLAND**

**\$140/PERSON**

**\$150 FOR HOLE SPONSOR**

**\$700 FOR FOURSOME**  
 (including hole sponsor)



<b>SHOTGUN START</b>	<b>9:00 AM</b>
<b>CASH BAR &amp; LUNCH AVAILABLE</b>	<b>9:00 AM TO 2:00 PM</b>
<b>RECEPTION</b>	<b>2:00 PM TO 3:00 PM</b>
<b>DINNER</b>	<b>3:00 PM TO 5:00 PM</b>
<b>AWARDS &amp; PRIZES</b>	<b>3:30 PM</b>

**GOLF & DINNER RESERVATIONS**

**R.L. GLADDEN**  
**CHESAPEAKE SYSTEMS**  
**TEL: 443.561.1600**  
**GOLF@ASHRAE-BALTO.ORG**

CHECKS PAYABLE TO: ASHRAE BALTIMORE CHAPTER C/O CHESAPEAKE SYSTEMS LLC  
 7400 COCA COLA DRIVE, HANOVER, MD 21076 NO TICKETS WILL BE ISSUED

COMPANY: \_\_\_\_\_

CONTACT: \_\_\_\_\_

PHONE: \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_

NAMES OF FOURSOME: \_\_\_\_\_

(PLEASE INCLUDE  
 EMAIL ADDRESS AND PHONE) \_\_\_\_\_

NO. OF PLAYERS \_\_\_\_\_ @ \$140/EA

HOLE SPONSOR: YES \_\_\_\_\_ @ \$150/EA

TOTAL FOR PLAYERS: \_\_\_\_\_

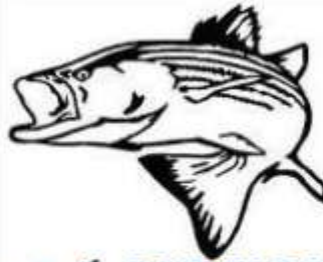
TOTAL FOR HOLE SPONSOR: \_\_\_\_\_

TOTAL AMOUNT OF CHECK: \_\_\_\_\_

PLEASE NOTE THAT ALL CORPORATE LOGOS FOR HOLE SPONSORSHIPS MUST BE SUBMITTED  
 ELECTRONICALLY

EMAIL R.L. GLADDEN AT GOLF@ASHRAE-BALTO.ORG OR FAX TO R.L.'S ATTENTION: 443-561-1601

# A.S.H.R.A.E. BALTIMORE CHAPTER



2016 5<sup>th</sup> ANNUAL  
ROCKFISH EVENT  
MONDAY APRIL 18, 2016

ENTRY FEE IS \$975.00 PER 6-PERSON BOAT SPONSOR  
AND \$1,900 PER 12-PERSON BOAT\*  
\$175.00 PER PERSON\*\*  
\$110.00 PER ASHRAE YEA MEMBER (35 & Younger)\*\*

**ALL PROCEEDS GO TO ASHRAE RESEARCH AND PROMOTION**

## TOURNAMENT RULES:

The tournament will be held at Dockside Restaurant and Marina located at 421 Deale Road, Deale, MD. The weigh-in will begin at 1:30 PM and all boats must be present at the marina by 1:30 PM in order to qualify for prizes. Lunch will be provided at Dockside Restaurant located at the marina and will be buffet style with beverages provided. Coffee will be provided in the morning.

**PAID ENTRY TO THE TOURNAMENT INCLUDES CHARTER FISHING TRIP  
AND AWARDS BUFFET LUNCH.**

## SCHEDULE

REGISTRATION: 5:30-6:00 AM  
BOATS LEAVE MARINA: 6:00 AM  
BOATS RETURN TO MARINA: 1:00 PM  
AWARDS LUNCH: 1:00 - 2:30 PM

\*DUE TO AN INCREASED INTEREST WE ARE LIMITING EACH COMPANY TO A MAXIMUM OF 2 BOATS  
\*\*ENTRIES WILL BE RESERVED ONCE THE PAYMENT IS RECEIVED  
PLEASE NOTE THAT TIPS FOR THE FIRST MATE ARE INCLUDED IN THE ABOVE PRICE

# A.S.H.R.A.E. BALTIMORE CHAPTER



## 2015 FOURTH ANNUAL ROCKFISH EVENT OFFICIAL ENTRY FORM

### PARTICIPANTS

(Please list quantity and provide list of participants if a whole boat is purchased)

- 6-PERSON BOAT SPONSORSHIP: \_\_\_\_\_ (\$975 Per Boat)
- 12-PERSON BOAT SPONSORSHIP: \_\_\_\_\_ (\$1,900 Per Boat)
- INDIVIDUAL FISHERMEN: \_\_\_\_\_ (\$175 Per Person)
- YEA MEMBER FISHERMEN: \_\_\_\_\_ (\$110 Per Person)

### SPONSORSHIP

(Please list quantity)

Sponsorship includes a sign at lunch or at the bar

- BREAKFAST SPONSOR: \_\_\_\_\_ (\$75)
- LUNCH SPONSOR: \_\_\_\_\_ (\$300)
- BAR SPONSOR: \_\_\_\_\_ (\$250)

Please return completed form and checks no later than April 1<sup>st</sup>, 2016 to:  
Jeff Shook  
7400 Coca Cola Dr.  
Hanover, MD 21076

**Make checks payable to ASHRAE Baltimore Chapter**  
**Additional donations to RP can be made with entry fee**

Call (443-561-1652) or email (research@ashrae-balto.org) with any questions or to find out sponsorship availability

