

# 2016

March

## Charleston Joint Engineer's Council Banquet a Great Success !

Check out their website for information on the Charleston Engineering Community, <http://www.charlestonejc.org/sponsors/>

## 2016 Charleston ASHRAE Spring Golf Tournament

When: Friday May 6th

Where: Charleston Municipal Golf Course on James Island

**See flyer attached for details on how to sign up!**



## Next Meeting (Lunch) Tuesday, March 8th

Harbor Breeze at Patriots Point, Mt. Pleasant

BOG Meeting 11:30-12:00

Lunch and Tech Program 12:00-1:00

\$25/person

\*Please note that there is also a dinner meeting N. Myrtle Beach at 5:30 and all are welcome to attend. See details in attached flyer.

[REGISTER ONLINE](#)

## Updates and News:

### From Resource Promotion

Thanks to all who have so graciously donated this year! So far we have raised \$6310 toward our goal of \$15,000; so we have some work to do. Our big fundraiser coming up is the Spring Golf Tournament to be held at Charleston Municipal Golf Course on Friday May 6<sup>th</sup>. See the attached flyer for tee times and signup sheet. Someone from the golf committee will be contacting you soon to confirm your team and sponsorship level. Remember, 100% of your donation goes to ASHRAE Resource Promotion, which includes Research, Scholarships, and YEA. You can go to [www.ashraerp.com](http://www.ashraerp.com) to donate online or find out more about how your donations are spent, or contact me directly. Again, many thanks for your support. See you at Muni on May 6<sup>th</sup> for a great afternoon of golf. —Chris Constantine, PE

### March Presenter Biography:

Hoy Bohanon, PE, LEED AP, BEAP is principal in Hoy Bohanon Engineering, PLLC, a firm that focuses on improving the performance of existing mission critical buildings. Mr. Bohanon began his engineering career as a research and design engineer, and then gained experience as a project engineer, facilities engineer, facilities manager, indoor air quality research engineer, environmental engineer, and business owner. He has a master's degree in engineering from North Carolina State University, and a bachelor's degree in mechanical engineering from Georgia Institute of Technology.

Mr. Bohanon has written technical papers and articles on indoor air quality, operations, and maintenance and is a frequent presenter at technical society meetings. He is a recipient of the ASHRAE Distinguished Service Award and is chair of ASHRAE Standard 62.1 committee, *Ventilation for Acceptable Indoor Air Quality*. He also serves on the bEQ committee,. He is chair of the US Technical Advisory Group panel 1 (general principles) and panel 4 (indoor air quality) for ISO TC205 *Building Environment Design*. He is a co-author of *The Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning* and *Performance Metric Protocols for Commercial Buildings: Best Practices Guide*. He also teaches multiple courses for the ASHRAE Learning Institute addressing ASHRAE 62.1 and IAQ. Mr. Bohanon is also a member of the Professional Engineers of North Carolina, US Green Building Council, and I2SL.



## Chapter Sponsors

Thank you for your sponsorship. If you would like to support the chapter, please contact the Research Promotion Chair.

Victaulic  
Raypack  
Cullum Mechanical  
Chapman Company  
Hoffman & Hoffman, Inc.

## ASHRAE Research Investors

Platinum Level Donors (\$800 up)

James M. Pleasants Inc.  
Santee Cooper  
The Chapman Company  
Ron Runyon

Silver Level Donors (\$300)

Randy Jones  
Dennis Knight  
Del Laquiere

Bronze Level Donors (\$150)

Wall of Honor—Individual Donations of \$100 or more

Bo Nutting, Steve Marek, Chris Constantine, Megan Rooney, Victor Fallon, Larry Elkin, Chris Wigginton



## CTT Corner— Review of Feb. Presentation by Chris Edmundson

For more information about this presentation, contact Gene Brown, CTTC.

Our February presentation was “Modern Pump Selection for System Efficiency”. I was not able to attend but I understand that Chris Edmundson gave an outstanding performance with an occasional check to see if everyone was on their toes. I think they were.

In February we also had a joint meeting with the Charleston Engineers Joint Council (CEJC). Christer Wikstrom, the senior director of manufacturing of Volvo USA gave an excellent presentation. Seventy thousand Volvo’s are being sold in the USA each year and 514,000 are sold worldwide. Mr. Wikstrom started working on the line in 1989. In 1926 Volvo began testing its first prototype vehicle. In 1959 Volvo introduced a seatbelt design which has saved millions of lives. All electric power used by Volvo in Sweden is produced by hydro. The new Volvo can detect pedestrians and objects in the dark.

An investment of \$770 million will be made to set up the plant in Ridgeville, SC. The goal for 2017 is to produce an autonomous drive vehicle. The model S-60 will be produced here. Initially 65,000 will be produced per year with an eventual increase to 120,000. Seventy percent will be sold in the US with the others being exported. Eighty to 100 engineers may be employed at the plant with a total workforce of 2000 to 2500. The plant will incorporate a lot of robotics but will use manual assembly where this makes a difference. The vehicles will be transported by rail to the Charleston Harbor.

In January we attended a hockey game (Stingrays 4, Gladiators 1) and had an interesting tour of the Coliseum ice making and mechanical systems. The ice-making equipment includes three 70 ton Cimco reciprocating compressors. A glycol solution, treated for corrosion, is pumped through one-inch PVC pipes, 3 inches on centers. The pipes are routed 3 inches below the surface of an 8-inch concrete slab. The solution is supplied at 9° F and returns at 10° F. The ice is ¾ to 1 inch thick. The ice is made 2 weeks before the first event. The cost to make the ice is \$750 to \$1,000 per day. There are 4 air handlers for the arena. No outdoor air is supplied. Each AHU handles 400,000 CFM. The AHU’s are served by 3 chillers of 400T, 600T and 800T capacities.

If you have been involved in the design of a project you should submit an entry for a technology award. This will bring recognition to you and your company. The ASHRAE Region IV Chapter Regional Conference (CRC), held in August, is always an outstanding experience. We should all plan to attend.

All members are encouraged to make presentations to government and professional groups.. Members are encouraged to join technical committees (TC’s). To join a technical committee log in to ASHRAE, type Technical Committee, select “What is a Technical Committee”, select “Applying for membership on a technical committee”.

## Presidential Corner— March 2016

For starters, we are looking for a couple of people to help guide our Chapter thru the next few years, please contact myself or one of our officers' if you would like to Volunteer.

We had a good showing at this year's Charleston Joint Engineer's Council Banquet on February 16<sup>th</sup>. Thanks for attending this event; it was a very informative evening.

Megan has set up two great meetings with a DL for the upcoming meeting on March 8<sup>th</sup>, with a Lunch meeting at our regular location and a dinner meeting in N. Myrtle Beach with the Wilmington Chapter of Triangle. I hope many can attend both events, both will be great programs.

Please remember our upcoming events; Chris Constantine will be putting together one outstanding Spring Golf outing so contact him about team and sponsorship information. And I think Philip is working on a YEA event at the Riverdogs, private box, a lot of fun.

Continuing my Membership duties here with a welcome to this year's new members, John G Gottlieb, PE, Lawrence (Tripp) Paul Livingston, Richard S. Combes, Charles Brunson, Cole Cameron, John Housley, Tim Monahan, Kurt William Andrzejczyk, Ronald K Gardner and Michael Frey.

And welcome our newest member Michael Thomas. Hope you can come out and say hello at our next meeting.

Thanks everyone and see you soon,

Steve Marek

President ASHRAE Charleston Chapter

<https://charlestonashraechapter.wildapricot.org/>

## MYRTLE BEACH SECTION of CHARLESTON CHAPTER American Society of Heating, Refrigerating, and Air Conditioning Engineers

The Myrtle Beach Section of our Chapter was Chartered April 8, 1997. The Charter and Section Banner was presented at a luncheon held in Myrtle Beach at a restaurant near the now closed Wacamaw Pottery Mall. The first Section Head was most likely a member with Horry County School District. For the first few years, meetings were held twice a year in the spring and fall. Attendance was quite impressive. The second Section Head was Doug Law, an engineer with Rast and Associates of Myrtle Beach. Doug continued the practice of the two meetings a year until his location to a firm in Florida. Today in 2016 there is continued interest within the ASHRAE community in the Myrtle Beach area. A joint meeting will be held on March 8, 2016, in North Myrtle Beach South Carolina, at a joint evening meeting with the Wilmington North Carolina Section. Today the Myrtle Beach Section needs a member to step up and volunteer in ASHRAE tradition to act as Section Head. Might that be you? In the meantime here is a short resume of Section members:

George Rast - Charter Member of Charleston Chapter, Past President of of Charleston Chapter 1976-1978 (prior to Myrtle Beach Section), head of George Rast & Associates of Myrtle Beach, deceased 2014.

ASHRAE members in the Myrtle Beach area from Society membership data as of 2015 -

John Allan, President of EMC Consulting, N Myrtle Beach  
Paul Borodin, of Little River

Leonard Damiano, VP of Marketing Information Sales, member of ASHRAE Technical Committee Energy Efficiency, ASHRAE sub-committee chair of Technical Committee on Controls, member of two Standards Committees, and Corresponding Member of three other committees

James Perron, of N Myrtle Beach, consulting engineer

Ken Rheault, of Little River

John Scorzello, of Murrells Inlet

Danny Stevens, of Loris

Nancy Yannuzzi, of Loris

Submitted by Dave Tomayko, 2015-16 Chapter Historian. Corrections, additions, comments to this article welcomed for Chapter archives, to [djtomayko@gmail.com](mailto:djtomayko@gmail.com).



# March Meeting Technical Presentation

**Retro Commissioning for Energy Savings — Mr. Hoy Bohanon, Jr.,**

## **Presentation Summary:**

ASHRAE has implemented a comprehensive building energy labeling program called Building Energy Quotient (bEQ). The objective of this labeling effort is to provide motivation for reducing energy use in commercial buildings by expressing the energy performance of buildings in a tangible way. The underlying belief is that public display and disclosure of the energy efficiency attributes of a building and its energy use intensity (EUI) will lead building owners to strongly consider cost effective energy efficiency improvements at the time of design and construction and in any subsequent renovations. Public display and disclosure of energy efficiency attributes and EUI should be a relevant factor in the real estate transaction marketplace for commercial buildings.

bEQ incorporates both an operational rating, based upon actual energy billing, and an asset rating that normalizes for operational variables. The two rating systems will thus be able to communicate both the performance of the building as operated and the potential performance of the fixed assets of the building.

This session will present the major ideas behind the development of the labeling program and the process for implementation.

- #1 How can building energy labels influence the energy efficiency of the overall building stock?
- #2 How the new ASHRAE bEQ is different from other labeling systems?
- #3 What metrics are most important for conveying the energy efficiency of a building?
- #4 What you need to do to get a bEQ label for your building

## **Chapter Officers**

### **PRESIDENT—Steve Marek**

Phone: 534-6264  
stevemarek.pe@gmail.com

### **VICE PRESIDENT—Megan Rooney**

Phone: 849-1141  
mrooney@dwginc.com

### **SECRETARY—Chris Wigginton**

Phone: 580-3769  
chris@technika-design.com

### **TREASURER—Victor Fallon**

Phone: 971-9639  
vfallon19@gmail.com

BOG— Austin Jones, Chris Constantine, Randy Jones

## Chapter Meetings

September— Tuesday 9/8  
 October—Tuesday 10/13  
 November—Tuesday 11/10  
 December—Tuesday 12/8  
 January—Tuesday 1/12  
 February—Tuesday 2/9  
 March—Tuesday 3/8  
 April—Tuesday 4/12  
 May—Tuesday 5/10  
 June—Tuesday 6/14

Membership  
 YEA!  
 Donor Recognition  
 Annual Oyster Roast  
 Research Promotion  
 History Appreciation  
 CTTC  
 Student Activities  
 GGAC  
 Annual Summer Social and Induction of Officers





# Retro-commissioning for Energy Savings

Presented by Hoy R. Bohanon, Jr., P.E.

ASHRAE's Mission is to advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world.



## Speaker

## Summary:

Hoy Bohanon, PE, LEED AP, BEAP is principal in Hoy Bohanon Engineering, PLLC, a firm

that focuses on improving the performance of existing mission critical buildings. Mr. Bohanon began his engineering career as a research and design engineer, and then gained experience as a project engineer, facilities engineer, facilities manager, indoor air quality research engineer, environmental engineer, and business owner.

Contact Megan Rooney  
913-709-6958  
mrooney@dwginc.com  
with any questions.

## Join Us!

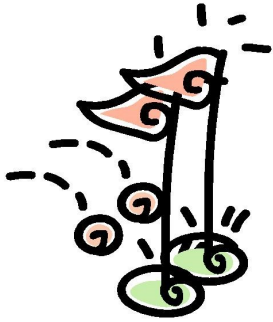
ASHRAE Chapter 113 is hosting the first annual meeting for the Myrtle Beach/Wilmington area. Come socialize with other local experts in our industry and see a great presentation.

- Where:** The Grill House  
228 2nd. Ave. North  
North Myrtle Beach, SC 29582
- When:** Tuesday, March 8th, 2016  
5:30 PM—7:30 PM  
Presentation will start promptly at 6:00 PM
- Cost:** \$20 for dinner/presentation, cash bar  
Please RSVP on the website for an accurate headcount.  
<https://charlestonashraechapter.wildapricot.org/>  
You may pay by card on the website. Cash and checks will also be accepted at the door.

## Presentation Summary:

What is retro commissioning? Is it required by LEED? How can a process save energy? What are some of the aspects of an energy saving retro-commissioning application? What guidance is available from ASHRAE guidelines? What are the types of savings from the process and what are the critical components to assure that savings are realized?

Presentation is GBCI Approved, 1 CE hour, AIA Approved, 1 LU/HSW.



# **ASHRAE GOLF**

## **CHARLESTON CHAPTER'S "SPRING 2016 RESOURCE PROMOTION"**

### **CAPTAIN'S CHOICE GOLF TOURNAMENT**

**FRIDAY, May 6th, 2016**

**12:00 PM LUNCH SERVED**

**1:00 PM SHOTGUN START**

**CHARLESTON MUNICIPAL GOLF COURSE**

**2110 Maybank Highway, Charleston, SC 29412**

**(843) 795-6517**

**\$75.00 includes GOLF, CART, FOOD, BEVERAGES, and PRIZES!!!!**

**Bring your own team or we can assign you to one.**

**Player:**

**Handicap :**

**Player:**

**Handicap :**

**Player:**

**Handicap :**

**Player:**

**Handicap :**

**If you do not list your handicap you will be listed as a Scratch Golfer!**

**Contact: Chris Constantine: 843-518-0319**

**cconstantine@constantineengineering.com**

# SPONSORSHIP LEVEL DESCRIPTION

## PLATINUM SPONSOR

Same as GOLD except the one Company which donates the most to the Charleston Chapter Campaign will receive recognition as a Platinum Sponsor for this year's Campaign.

## GOLD LEVEL

- Company name will be prominently displayed at ALL Chapter activities, i.e. Chapter Meetings, Golf Outing (as a hole sponsor), Technical Seminars.
- (2) Spots at all Research Promotion activities including the fall and spring golf tournaments
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Hole Sponsor in the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 800 Contribution)
- Sponsor of Engineering Week Activities

## SILVER LEVEL

- Hole Sponsor for the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 500 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Sponsor of Engineering Week Activities

## BRONZE LEVEL

- Hole Sponsor in the Chapter Research Promotion Golf Tournaments
- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 300 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.

## HONOR ROLL LEVEL

- Honor Roll Research Donor recognition in Chapter Newsletter (\$ 150 Contribution)
- Special recognition in publications including the *ASHRAE Insights and Monthly acknowledgement in The Charleston "Gee Chee" Chapter Newsletter*.
- Chapter Meeting sponsors are also available recognition on front page of Chapter Newsletter and recognition at the meeting (ADD \$150)

ASHRAE CHAPTER SPONSORSHIP  
REGION IV

CHARLESTON CHAPTER  
*2015 - 2016 FISCAL YEAR*

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SPONSORSHIP LEVELS:	GOLD	\$1,000	_____
(PLEASE CHECK ONE)	SILVER	\$ 500	_____
	BRONZE	\$ 300	_____
	HONOR	\$ 150	_____

CHAPTER MEETING SPONSOR      ADD \$150

PLEASE EMAIL COMPLETED FORM TO:  
CHRIS CONSTANTINE  
[cconstantine@constantineengineering.com](mailto:cconstantine@constantineengineering.com)