

**NOVEMBER 2008
EDITION**



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ASHRAECHAPTERS.ORG](http://www.charleston.ashraechapters.org)
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“THE GEE CHEE”

THE OFFICIAL PUBLICATION OF THE REGION 4 CHARLESTON CHAPTER 113
AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING
ENGINEERS, INC.

THE DAWN OF A NEW ERA IN CHILLER TECHNOLOGY



MEETING SCHEDULE
LOCATION: NORTH
CHARLESTON RADISSON
HOTEL

B.O.G. – 5:00-5:30PM

“HAPPY HALF HOUR”
5:30-6:00PM

TECH PROGRAM
7:00-8:00PM

8:01PM.....SEE YOU NEXT
MONTH

\$20 PER PERSON + \$5 FOR THE
OPEN

COME AND JOIN US AS
JACKSON BALL OF
SMARTD, INC PRESENTS

SPECIAL EVENT THIS
MONTH:
STUDENT EMPHASIS
ACTIVITIES NIGHT

"The Gee Chee"

THIS MONTH'S ARTICLES:

- The Monthly Topic and Speaker
- The Presidential Message
- The CTT Corner
- Member News
- Chapter Research
- Awards and Honors
- The Wall of Honor
- Sponsorships and Investors
- October 2008 Meeting Minutes
- Announcements and Advertisements
- Chapter Involvement

INDIVIDUAL HIGHLIGHTS FOR OCTOBER:

The Participants of the Charleston Chapter ASHRAE Research Golf Outing – Thank you very much for your support. Special thanks to The Chapman Company, James M. Pleasants, Harris Integrated Solutions, Faulkner Haynes, Hoffman and Hoffman and Thermal Resource Sales

Written By: Chris Sturdivant, Charleston ASHRAE Chapter Secretary

This Month's Topic: New Chiller Technology Introducing: Jackson Ball

Jackson Ball leads the business development for Smardt, Inc. based in Montreal. Smardt makes the world's largest variety of water cooled and air cooled chillers engineered to optimize the remarkable oil-free, variable-speed centrifugal compressor. His focus is evangelizing the technology, examining total cost of ownership and advanced control and staging methods. His 26 year in heat transfer include owning Thermal Technologies in Florida, providing heat transfer components around the US. He is the President of BTU Source, a technology for monitoring and billing for the thermal effect of on-site equipment, effectively converting a product centric amortized purchase to a pure utility service. He is the builder of ChillerNET, a monitoring and threshold alerting system. "The future holds a window where this compressor technology will thrive. Perhaps later coupled by competitive DC fuel cells to reduce total energy and carbon footprint, reliable lowest total cost thermal effect plants are on the horizon."

A Message From The President

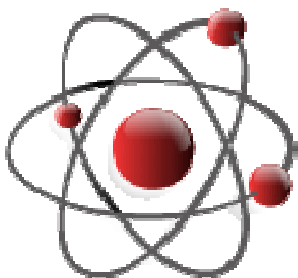
What a great meeting on power rates we had last time. I found it to be particularly interesting. As you can see, this months meeting will be on New Chiller Technology. That should be fantastic. And don't forget next month is the oyster roast. This will be extra fun because we are inviting members of the local USGBC and the BEC. In ASHRAE news, a Florida mechanical engineer has been named as a Washington Congressional Fellow hosted by ASHRAE and the U.S. Green Building Council (USGBC). Michael Erbesfeld, TLC Engineering for Architecture – Deerfield Beach Division, will serve a one-year fellowship in Washington, D.C., which allows him to work on Capitol Hill in a technical advisory role. That is really neat that we are influencing national policy. I am all for energy efficiency and energy independence. With ASHRAE being involved in Washington politics we could really help make a difference. For example, using less glass and tinting all the glass in commercial buildings would make a major impact on energy usage. ASHRAE people know these things and could really help in Washington. See you at the meeting on Tuesday.

Best Regards,

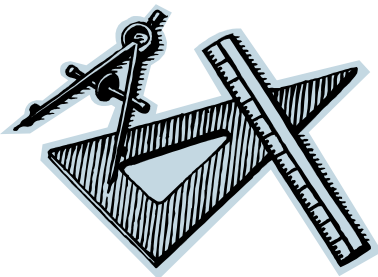


Rob Turner, P.E.
Charleston Chapter President

By: Gene Brown



"Nuclear power plant design is becoming standardized and using a cookie cutter approach to save money."



At the October meeting, Bill Eisele gave an outstanding presentation on Electric Utility Rates and Future Generation. The power company will discuss rates with commercial users and with engineers accomplishing energy studies. A proper rate schedule will be established before power is furnished to the customer. If the customer is on a demand rate, an energy study cannot use an average cost for power. A demand rate establishes an additional charge if the power consumption exceeds a certain level even for a short period of time. This helps cover the cost of larger transmission lines and generation capacity, which must be constructed to serve this load, no matter how brief. Fuel costs change every year. This affects energy cost but not demand cost. SCEG makes nothing on fuel used to generate power. Approximately 30% of operating cost is fuel. The cost of fuel increased at approximately 3.3% per year from 1996 to 2003 and 7.3% from 2004 to 2008. Recent adjusted fuel cost was \$200,000,000. It was necessary to adjust the cost of power in the middle of the year. A number of power producers increased power cost anywhere from 8% to 28%. More recently fuel costs have fallen. One power plant cannot burn all types of coal. Hardness, sulfur, BTU/# and other qualities must be considered. The power company can do forward contracts to buy gas at a pre-set cost.

Some natural gas is purchased as liquid (LNG) as a cost hedging measure. This keeps a spike in the main supply from raising the average cost too much. A ship leaves the South American shore with a load of LNG. While the ship is underway there are bids on an internet site similar to Ebay. When the high bid is received, the ship proceeds to the appropriate destination. California normally has rolling blackouts and brownouts. This past summer was the tightest season yet for SCEG. There are a number of ways to produce electric power. Solar is very expensive. Wind power is expensive. Nuclear power is \$75 per megawatt hour. Other sources are coal, landfill gas, biomass and poultry litter. Nuclear is the most promising. The proposed nuclear plants will reduce CO2 levels to the 2004 level. There is a coming carbon tax, which will not apply to nuclear power. France successfully produces a large amount of nuclear power. This has the potential to be very advantageous in our country. Approximately 20 to 25 new nuclear plants are proposed across the US. SCEG and Santee Cooper are partnering to build 2 nuclear plants. There is an 1117-megawatt plant being built for joint use by 6 or 7 companies. The SCEG share of this is 6.3 billion. Nuclear plant design is becoming standardized and using a cookie cutter approach is saving money.

Generators for new nuclear plants have been ordered. Large parts cannot be cast or forged in the US. These parts are being made in Japan. Utilities have paid into a fund for Yucca Mt Nevada site for 15 years and we are still up against the state of Nevada to have it completed. The cost per KWH at a high load factor is .0547 for SCEG and .1563 for Consolidated Edison in New York. CO2 can be stored underground but this may not be economical. Also, once the gas has been pumped underground it is not possible to predict where the gas will end up. SCEG has the capability to pump water uphill at night so that the hydropower will be available for use in the day when other generators are operating at 100% capacity. If this were not done, the reservoir would be depleted and there would be a requirement to build more generators, which use coal or other fuel at times of peak load. Lake Murray was designed to be raised and lowered based on power requirements. Now there are pressures based on recreation and homeowners preferences. A second dam was built for Lake Murray at a cost of \$300,000,000. The original dam was built to withstand a quake of 6 on the Richter scale. Revised analysis of the 1886 Charleston earthquake indicates that it was a 7.5 event. As an energy saving measure, using your own labor, reaccomplishing lighting will result in a payback of less than 3 years.

Sponsorships and Investors

2008-2009 ASHRAE RESEARCH INVESTORS

PLATINUM LEVEL DONOR: (\$2,500 +)

GOLD LEVEL DONOR: (\$1,500 +)

SILVER LEVEL DONOR: (\$1000 +)

BRONZE LEVEL DONOR: (\$250 +)

**PLEASE CONSIDER A CORPORATE
SPONSORSHIP TO HELP CONTRIBUTE TO
ASHRAE'S FURTHER GROWTH**



October 2008 Meeting Minutes

- + Dan Cartin announced that the Fall ASHRAE Golf Outing was a success and plans are in the works for a Spring ASHRAE Golf Outing.**
- + Bill Eisele, CEM of SCE&G, gave a great presentation of the New Generation of Utility Rates.**
- + A special toast was given to ASHRAE Secretary Chris Sturdivant due to his absence (reported by Pete Conroy, Chapter Vice President)**
- + All other chair reports: No New Chapter Business**
- + Nothing to report for Old Chapter Business**

Member News

WE HAVE SEEN MANY OF OUR LOCAL ENGINEERING FIRMS GROWING THEIR BUSINESSES AND BRINGING ALONG NEW FOLKS ON BOARD. IF YOU HAVE RECENTLY MOVED TO THE CHARLESTON AREA AND WISH TO TRANSFER YOUR MEMBERSHIP, PLEASE CONTACT OUR MEMBERSHIP CHAIR, CHARLES HIPPI, OR MAKE THE CHANGE ONLINE AT WWW.ASHRAE.ORG.

WELCOME TO CHARLESTON!!!!!!!!!!

“The Gee Chee”

Announcements and Advertisements



PARTY TIME!!!

**CHARLESTON ASHRAE CHAPTER
ANNUAL CELEBRATION
TUESDAY, DECEMBER 9, 2008
7:00 PM
DANIEL ISLAND, SC**

OYSTER ROAST!!!!!!

SEE YOU THERE!!!



**REMEMBER TO STAY
TUNED FOR UPCOMING
ASHRAE EVENTS!!!!**



A Brief Discussion on Chapter Research

ASHRAE Golf

Our Fall golf outing was held at Charleston National in Mt Pleasant on October 10th. We had 36 golfers turn out to play at this beautiful golf course and there was cash and great prizes given away to top golfers and the lucky raffle winners. We want to thank The Chapman Company, James M. Pleasants, Harris Integrated Solutions, Faulkner Haynes, Hoffman and Hoffman and Thermal Resource Sales for donating prizes. We are planning our Spring Golf outing now and we will be announcing details as soon as we can.

ASHRAE Research

The October ASHRAE JOURNAL has an article on 2007-2008 ASHRAE RESEARCH REPORT that list Research Projects. This shows us what our fundraising money provides. Take a moment and read this article and be ready to grab your check books. Donations and pledges are still coming in and we will be contacting those of you who have not contributed for your share in supporting our industry through ASHRAE RESEARCH.

Dan Cartin

And The Honor Goes To.....

ASHRAE's Honors and Awards program is designed to recognize and encourage outstanding participation in the organization. There are a great many awards ranging from the "Hall of Fame" to chapter participation. Here is a sampling of just a few and how they are awarded.

- The Chapter Service Award- recognizes activities and contributions of members at the Chapter level. This is earned by accumulating "Points" for serving on committees, serving the chapter as an Officer, or other participation in the chapter.
- Willis H. Carrier Award – Recognizes an individual for the best published paper at a society level meeting of a member who is 32 years of age or less.
- Milton Garland Award for Project Excellence – Recognizes a NON-COMFORT COOLING refrigeration application that highlights innovation and or new technologies.
- Technology Award / Award of Engineering Excellence. – recognizes innovative designs that utilize ASHRAE Standards for Energy Management, IAQ, and mechanical design management.
- William J Collins Jr, Research Promotion Award – Recognizes the Chapter Research Promotion Chair who excels in raising funds for ASHRAE Research in the course of a year.

We have been blessed with several chapter members over the years who have earned some of these distinguished awards. The Charleston Chapter is a very strong one in ASHRAE, partly due to these folks and everyone's participation in the operations of the chapter. ASHRAE has many other Honors and Awards, who knows, what you do every day may help you qualify for one of these yourself!! Contact one of your Chapter Chairs to find out!

The Charleston Chapter Wall of Honor For

Individual Donations of \$100 or more

MUCH OF ASHRAE RESEARCH FUNDING COMES IN THROUGH INDIVIDUAL DONATIONS, SO PLEASE GIVE. WE ARE SUPPORTING THE CHARLESTON CHAPTER WALL OF HONOR AGAIN THIS YEAR.



CAN WE PUT YOUR NAME HERE?

Please Support ASHRAE!!

READY TO GET INVOLVED?

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We're on the Web!

See us at:

www.charleston.ashraechapters.org

CONTACT ONE OF OUR COMMITTEE CHAIRS, OR A CHAPTER OFFICER TO SEE HOW YOU CAN MAKE A DIFFERENCE

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CHARLESTON CHAPTER ANNUAL PROGRAMS FOR THE 2008-2009 YEAR

DECEMBER

Tuesday, December 9, 2008
"PROGRAM TBD"

JANUARY

Tuesday, January 13, 2009
"PROGRAM TBD"

FEBRUARY

Tuesday, February 10, 2009

National Engineers Week Banquet at the Citadel Alumni Center

MARCH

Tuesday, March 10, 2009
"PROGRAM TBD"

Research Promotion Night

APRIL

Tuesday, April 14, 2009
"PROGRAM TBD"

Chapter History Night

MAY

Tuesday, May 12, 2008
"PROGRAM TBD"

Student Activities Emphasis Night

JUNE

DATE AND LOCATION OF CHAPTER SOCIAL TBD