

“REGIONAIRE”

Volume 4, Issue 1

November 2007

From the DRC*Dan C. Pettway, Region III Director and Regional Chairman ('06-'09)*(757) 468-8800; dcpettway@cox.net

For some reason my second year as your DRC seems to be very busy and also passing rapidly. The time passing issue is probably an age thing my friend Gary Debes would readily remind me of. Our year in Region III kicked off in August with a great CRC held in Hampton Roads. Nancy Mitchell Veeck and her committee of Hampton Roads Chapter volunteers hosted a flawless event. The food and event planning was very well done, the only exception was a cooling tower that was less than 100% on line causing cooling issues during the entire conference. I cannot believe the irony of it, poor air conditioning during an ASHRAE conference. Everyone I spoke with had positive comments about CRC especially about the Cruise Welcome Party, Terry Townsend's Award Luncheon Talk, the added Caucus Mixer, and the Dale Carnegie soft skills sessions we added this year. All chapters were represented at the Caucus and Business Sessions. Nominating Member, Tom Sobieski commented that the preparation for the Caucus was the best he had seen in some time. This is good to hear as we have been trying to stress chapters being prepared for CRC at our recent President Elect Workshops. (This news is almost as good as hearing my son now repeat verbatim, some of the many things I told him as he was growing up. He actually was listening!!!) The Business Session contained some of the liveliest and pertinent discussions we have had in the Region during my membership. Our next CRC is to be held August 14th thru 16th in Harrisburg, PA with the Central Pennsylvania Chapter hosting the event. You can check out the Regional Website for details and also reserve your room now.

I would like to thank Johnstown and Philadelphia Chapters

for their warm hospitality during my visits in the last two months. I would especially like to congratulate the members of the Johnstown Chapter on the 50th anniversary of the chapter. My visit there was to recognize the event and to present them with a certificate from Society. The regional officers are planning many chapter visits during the year. I ask that chapter officers help them with suggestions for their travel arrangements on these trips and give them the same hospitality I see when I visit. They are representatives of the Region, as I cannot see every chapter during the year. They are there to help you with their knowledge and to report back to me on the health and activity of the chapters they visit. Please give them the courtesy and recognition they deserve as they work very hard to help all of us further ASHRAE's mission.

December 15th is coming quickly. A number of you may ask the significance of the date. It is the deadline for chapters and the region to attain the Full Circle Award for Research Promotion. To attain the award, all officers of the chapter need to have made personal Honor Role level contribution to research. All chapters and the region attained this honor this past year. I encourage you to repeat this honor again this year. These funds allow us to continue to research the necessary technology we will need in the near future to affect the built environments' sustainable design, energy consumption, carbon emissions, and global warming. We will need these tools to insure our children's future on this planet. One hundred dollars is the cost of one good meal which is here today and quickly forgotten. That same one hundred dollars linked with the contributions of others in our Society could fund an important research project, such as the one just granted to Drexel University in Philadelphia on VAV Terminals. New technology thru research is a must!!! ASHRAE has been mandated by Congress to provide the tools to accomplish Net Zero Energy Buildings by 2020. If we do not meet our challenge, the government is prepared to step in and legislate what is necessary to meet this goal. Research and Technology for HVAC/R is what we are all about and we need the research dollars to accomplish the task. Won't you please join us in support of this work? Regional Full Circle is the goal!

In closing, I would like to remind everyone in Region III, that you have an excellent opportunity to discover what ASHRAE is really all about. ASHRAE's Winter Meeting will be held January 19th thru the 23rd in New York City in conjunction with the 2008 AHR Expo. I understand Anthracite Chapter is looking into a bus trip for their
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members to the event. This is an opportunity to attend the many forums, seminars, and symposiums of the technical session – “Reaching New Heights in Net Zero Buildings”. The details of these sessions can be reviewed in the October “Insights”. If you want to be ahead of your competition by knowing the latest in HVAC/R technology, New York is a must. You can also attend any of the Society Committee Meetings during your visit, as they are open to the membership, including the Board Meetings on Sunday and Wednesday. Oh yes, and if you have the time you can also visit the Expo, right?

Yours in ASHRAE,
Dan

Membership Promotion

*Roger Jones, Region III Vice Chairman
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Members, Members, Members

November 30 marks the midpoint of our year so let's take a moment between turkey leftovers and Christmas shopping to review our performance in Membership Promotion as a Region. We had 7 out of 12 Membership Promotion Chapter Chairs at the CRC in Hampton Roads. My thanks to each of you for taking the time out of your busy schedule to attend the Membership Promotion Workshop. I received 8 out of 12 MBO's prior to the 10/01/07 deadline. While this Top Gun deadline has passed, I believe that MBO is a very useful tool and I will be contacting the remaining chapter chairs to encourage them to prepare & submit. Please take a look at the sample MBO that I sent in September as a guide. PAOE reporting on the ASHRAE website appears to be working well as I show 9 of 12 chapters reporting thus far. 7 chapters have reported MP night so far.

By the way, have you noticed that you must enter a valid email address in order to logon to the ashrae.org website? (Used to be your membership number and PIN) No accident: The current email addresses are forwarded to society, maintained in a database, and sent back to the MP chairs to reduce email bounce back. Your humble Society folks working for you!

Region III Membership Promotion Goals are:

New Member Growth: Greater than or equal to 2% (Get 'em in)

Cancellation Rate: Less than or equal 10% (Keep 'em in)

Member Advancements: Greater than or equal to 3% (Advance 'em)

During the remaining months of 2007, it is important that we **continue promoting membership**, and the benefits ASHRAE has to offer. I challenge each Membership Promotion Chairman to personally secure at least 4 new chapter members, and 2 new advancements before December 31st. Enlist the help of your Chapter Presidents, board members and your membership promotion committee members to ensure that your chapter will be strong long after your term as Membership Promotion Chairman has expired. A healthy sustainable Chapter requires new members, and the only way to obtain new members is to spread the word about the tremendous benefits ASHRAE has to offer. In addition, it is vitally important to retain current members by implementing a phone campaign to contact all members that haven't paid their dues.

Remember: *Prior Planning Prevents Poor Performance.*
So plan for the future of your Chapters, and promote ASHRAE Membership!

Roger ❖

From the Regional Electronic Communication Chair

Gary Debes, Region III ECC Chair ('06-'07)
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Please join us for an evening of fellowship, fun, and good food.

Region I, III, & V Winter Meeting Dinner
Sunday January 20, 2008
Bond 45 in Times Square
154 West 45th Street
New York, New York 10036

For Reservations and additional information on location, menu and cost, log on to the Region III Website at www.region3.ashraeregions.org

Gary ❖

**Have you made your
Annual Contribution
to ASHRAE Research
Promotion?**

Solar Decathlon

*Gary C. Debes, Region III Nominating Committee
Alternate Member ('05-'08)*
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An Enlightening Experience in October

I spent a truly enjoyable and educational week in Washington D.C. the week of October 9, 2007. The week before 20 Universities or groups of Universities swarmed upon the National Mall with their solar powered houses to compete in the third Solar Decathlon. ASHRAE is a title sponsor of the decathlon and had a reception during the 2005 event. I had volunteered to help with that reception and after walking thru the "Village" in 2005 I was hopelessly infected. I volunteered to help out this year at the reception in 2005.

There were as I said 20 entries in the Decathlon this year. For the first time entries from outside of North America were allowed. Darmstadt, Germany and Madrid, Spain had houses in competition. Darmstadt won first place overall, Maryland came in second place, and Santa Clara came in third. Santa Clara performed a minor miracle in assembling their house on time. On the way from Southern California, one flatbed trailer collapsed in route somewhere in Nebraska. They arrived three days late and still were able to complete the reassembly in time for the grand opening. The opening ceremony was something out of the Olympics. The Secretary of the Department of Energy was the keynote speaker; Dr. Donald Colliver and representatives from AIA, IES and BP Solar also spoke. The best was the student rally cheers and the procession of the students to their houses.

Just like the well-known Olympic decathlon, the Solar Decathlon consists of ten contests. But the Solar Decathlon centers on all of the ways in which we use energy in our daily lives—at work, at home, and at play.

To compete, the teams must design and build energy-efficient homes that are powered exclusively by the sun. The homes must be attractive and easy to live in. They must maintain a comfortable temperature, provide attractive and adequate lighting, power household appliances for cooking and cleaning, power home electronics, and provide hot water. These houses must also power an electric vehicle to meet household transportation needs.

Some contests are scored by measuring performance, such as meeting certain temperature requirements. Others require the successful completion of tasks. Some contests are scored by jurors who are experts in architecture, engineering, and other appropriate fields. The jurors evaluate things that measurements cannot, such as aesthetics and comfort. Some contests are scored by a combination of these methods.

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We encourage you to distribute the Regionaire to your local chapter members, so that all may learn of our regional activities.

Keep your chapter Website updated. It is your members up to the minute link with what is going on in your local chapter.

Can't Make the Annual or Winter Meeting Technical Sessions? The latest HVAC&R Technical Data from the ASHRAE Meeting Seminars now available Online or by DVD. Check it out at www.ASHRAE.org and go to the online Bookstore. ❖

CALENDAR OF EVENTS

ASHRAE WINTER MEETING

NEW YORK, NEW YORK JANUARY 19-23, 2008

PRESIDENT ELECT WORKSHOP

BALTIMORE, MARYLAND APRIL 19, 2008

REGION III CHAPTERS REGIONAL CONFERENCE (CRC)

HARRISBURG, PA AUGUST 14-16, 2008

(From Solar, page 3)

Below are the ten Solar Decathlon Contests:

Architecture – 200 points

Teams are required to design and build attractive, high-performance houses that integrate solar and energy efficiency technologies seamlessly into home design. Scoring well in Architecture is crucial; teams can earn up to 200 points — more points than any other contest. A jury of esteemed architects tour the team homes to judge the Architecture contest. They will evaluate three main factors:

- Firmness — the house's strength, suitability, and appropriateness of materials for the building
- Commodity — ease of entry into the house and circulation among the public and private zones; architectural strategy used to accommodate the technologies required to run the house; and generosity and sufficiency of space in the house
- Delight — surprises, unusual use of ordinary materials, or use of extraordinary materials in the house.

Engineering – 150 Points

The Engineering Contest awards 150 points, the second most points available. Clearly, the Solar Decathlon houses are marvels of modern engineering, and this contest "checks under the hood." The Engineering contest is evaluated on the following two categories:

- Engineering Design and Implementation — a jury of engineers evaluate each house's building envelope, indoor environmental control, mechanical, electrical, and plumbing systems
- Energy Analysis — A jury of building energy simulation experts evaluate the team Schematic Energy Analysis Report, Final Energy Analysis Report, and Simulation Input Form. The Energy Analysis Jury assesses the team use of simulation tools to inform design decisions and predict annual energy performance.

Market Viability – 150 points

The Market Viability contest evaluates whether the house has market appeal and is well suited for everyday living—and if it could be built easily and accommodate a variety of potential homeowners. The jury will consider livability, buildability, and flexibility. A key goal of the Solar Decathlon is to help reduce the cost of building-integrated PV systems. Teams build their houses for a target market of their choosing and are asked to demonstrate the potential of their houses to keep costs affordable within that market.

Communications - 100 points

The Communications contest challenges teams to communicate about the technical aspects of their homes as well as their experiences to a wide audience through Web sites and public tours. Points are awarded based on success in delivering clear and consistent messages and images that represent the vision, process, and results of each team's

project. To judge this contest, a jury of Web site development and public relations experts evaluate the team Web sites and experience student-led tours of each home. The jurors evaluate how informative and engaging the Web site content is, as well as how easy it is to find that information. The sites must also adhere to technical standards. Jurors also evaluate the house tour content and presentation by tour guides.

Comfort Zone — 100 points

The Solar Decathlon teams design their houses to remain a steady, uniform, comfortable temperature and humidity throughout. Full points for this contest are awarded for maintaining narrow temperature (72°F/22.2°C - 76°F/24.4°C) and relative humidity (40% - 55%) ranges inside the houses.

Appliances - 100 points

The Appliances contest is designed to reproduce appliance energy use in the average U.S. home. To earn points, student teams must maintain certain temperature ranges in their refrigerators (34°F/1.11°C to 40°F/4.44°C) and freezers (-20°F/-28.9°C to 5°F/-1.5°C). During the competition, they must wash and dry 12 towels for 2 days; cook and serve meals for 4 days; clean dishes using a dishwasher for 4 days; and operate a TV/video player for up to 6 hours and a computer for up to 8 hours for 5 days. Points are awarded for this contest through task completion.

Hot Water - 100 points

This contest demonstrates that solar hot water systems can supply all the hot water that households use daily for bathing, laundry, and dishwashing. Teams score points in the Hot Water contest by successfully completing "shower tests" over four days of the competition. They aim to deliver 15 gallons of hot water (110°F/43.3°C) in 10 minutes or less.

Lighting - 100 points

Teams earn points in this contest by designing functional, energy-efficient, and aesthetically pleasing lighting systems. The teams choose lighting not only for its energy efficiency and its style, but also based on how well it meets the needs of a particular space (e.g., task lighting or ambient lighting). Ideally, the lighting design incorporates ambient and task lighting, electric and natural "daylighting" for energy efficiency and occupant comfort.

The jurors will rely mostly on their experience to evaluate a team's lighting selections throughout the house. However, the Solar Decathlon organizers will assist the jurors by making objective illuminance measurements at several key locations. These objective measurements will help the jurors calibrate their subjective evaluations of illuminance at these and other locations throughout the house.

Energy Balance - 100 points

The Energy Balance contest requires teams to use only the energy generated by the solar electric systems (also called (See Solar, Page 5)

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photovoltaic or "PV" systems) on

their houses during the competition to provide all of the electricity for the contests. Teams earn full points if the energy supplied to the batteries is at least as much as the energy removed from the batteries during the competition.

Getting Around - 100 points

In the Getting Around contest, student teams use electricity generated by their solar electric systems on their houses to charge their street-legal, commercially available electric vehicles. Points are awarded based on how many miles each team completes.

The teams all had fully functional solar powered houses that would be the envy of any SMALL family. The teams built the houses on their respective campus. They then were required to split the houses in transportable sections and deliver them to the Mall. They were given one week to reassemble their creations and have them ready for the public on Friday October 13, 2007 after the Grand Opening ceremony. Region III had two entries from The university of Maryland (2nd Place), Penn State (4th Place) and Carnegie Mellon (14th Place) congratulations to the teams. The final results of the competition are as listed below:

Team	Points	Rank
Darmstadt	1024.85	1
Maryland	999.807	2
Santa Clara	979.959	3
Penn State	975.432	4
Madrid	946.298	5
Georgia Tech	945.183	6
Colorado	943.369	7
Montreal	906.835	8
Illinois	886.956	9
Texas, Austin	877.503	10
Missouri-Rolla	869.179	11
NYIT	852.775	12
MIT	833.302	13
Carnegie Mellon	832.506	14

Puerto Rico	819.502	16
Texas A&M	808.765	17
Kansas	807.049	18
Cornell	780.440	19
Lawrence Tech	691.350	20

As you can see Penn State missed third place by only 4 points. I would encourage each of you to hold the mid week of October 2009 for the next Solar Decathlon and plan to volunteer some time to work with the kids either at the contest of in the design stages.

Student Activities

Paul E. Petrilli, Region III Vice Chairman
Student Activities ('05 - '08)
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Greetings everyone as Thanksgiving fast approaches us (or has past by the time you read this). It is time to get down to the business of serving our student members, and even more important, introducing students in grades K-12 to our industry.

Please take time to review the online PAOE listing as to what you, your committee, and your chapter needs to focus on! The electronic PAOE reporting system has been up and running for several months now. Most of you have not yet reported anything, which greatly concerns me, as this is one of the only tools that I have to assist you. If you don't have your chapter username and password, please contact me and I'll give it to you!

As of this writing, only Johnstown, National Capital, Philadelphia, and Richmond have reported any points. (That surprises me because I thought for sure that Pittsburgh was reporting!)

National Engineers Week

You should start planning your National Engineers Week Activities now. National Engineers Week is February 17-23, 2008. Visit www.eweek.org for specific ideas. Engineers Week is a great time for your committee and chapter members to schedule their visits to K-12 schools. You can combine an EWeek activity with a school visit and achieve PAOE points in two categories.

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Student Activities Achievement Award

The Student Activities Achievement Award is given to a Chapter Student Activities Chair for service related to the goals and growth of student activities at all levels. **I need to submit nominations by January 4, 2007.** The award is voted on at the Society Winter Meeting in New York.

The following criteria are for the Student Activities Achievement Award.

1. The Student Activities Achievement Award shall be presented annually but may be omitted if a suitable candidate is not identified.
2. The Student Activities Achievement Award will consist of an 8" x 11" plaque which will state: "In recognition of service to the goals and growth of Student Activities at all levels and in appreciation of this dedication the Student Activities Achievement Award is given." Fiscal impact will be about \$25 per award to be budgeted by the Student Activities Committee.
3. A candidate will be nominated to the Honors and Awards Committee by the Student Activities Committee. The nomination shall include a one page (100 words) explanation of the nominee's qualifications along with documentation of the computed award points as outlined in Item 4. The Honors and Awards Committee shall consider the points and the explanation in its deliberations. This award will be given at the Plenary Session's Honors and Awards Ceremony.
4. Award points shall be cumulative as follows:
 - a) Chapter Student Activities Chair or Education Chair - 1 pt/year
 - b) Establishing a student branch - 2 pts/branch
 - c) Reactivating a Student Branch (Must have been inactive more than 2 years) - 2 pts/branch
 - d) Application to Undergraduate Senior Project Grant to chapter supported school - 2 pts/branch
 - e) Entry to Student Design Project Competition to chapter supported school - 2 pts/branch
 - f) Student Branch Advisor - 1 pt/year
 - g) Speaker for Post High School - 1 pt
 - h) Speaker for K-12 - 1 pt
5. A minimum of 10 points is necessary for eligibility.
6. The purpose of the Student Activities Achievement Award is to recognize excellence in volunteer service. It serves to heighten general membership awareness of, and interest in, student activities.

Chapter Student Activities Chair or Education Chair	1 pt/year	2 pts	
Establishing a Student Branch	2 pts/branch	4 pts	
Reactivating a Student Branch*	2 pts/branch	4 pts	
Undergraduate Sr. Project Grant	2 pts/branch	4 pts	
Student Design Project Comp.	2 pts/branch	4 pts	
Student Branch Advisor	1 pt/year	2 pts	
Speaker for Post High	1 pt	2 pts	
Speaker for K-12	1 pt	2 pts	
Total Points		24 pts	

* Must have been inactive more than 2 years

Paul ♦

From the Regional Electronic Communication Chair

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Visit the Region III Web site at

<http://www.region3.ashraeregions.org> and look through the information contained there. The list of current Region III Officers, Chapters, Student Branches, Membership Promotion updates, The Regionaire current and archived issues, and a link to the CRC page can be found there. This information is updated on a regular basis and any suggestions you might have for additional information is welcome.

Gary ♦



UPCOMING Society Meetings

Winter 2008	January 19-23	New York, New York
Annual 2008	June 21-25	Salt Lake City, Utah
Winter 2009	January 24-28	Chicago, Illinois
Annual 2009	June 20-24	Louisville, Kentucky
Winter 2010	January 23-27	Orlando, Florida
Annual 2010	TBD	TBD
Winter 2011	Jan 29-Feb 2	Las Vegas, Nevada

Region III Chapters Regional Conference (CRC) Schedule

- 2008 Central Pennsylvania Chapter
August 14-16
- 2009 National Capital Chapter
August 13-15

Regional Historian

Carl Courtney

Regional Historian 2007-2008

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"I believe I have done two or three little things, but nothing to make a fuss about" – James Prescott Joule

This is, perhaps, the understatement of the 19th century. In case you don't have your college thermodynamics book at hand, let me remind you of just one thing Joule did. His research established the relationship between heat and work. Thus we have Joule's constant, J (778.172 ft-lb/Btu). Without this equivalent relationship, we would still be in the "Dark Ages" of thermodynamics. The direct result of this research was that the modern-day kinetic theory of heat came to being. Exit the old caloric theory. He did an enormous amount of experimentation to establish the fact that work, heat and electricity were manifestations of the same phenomenon: energy.

Even a man as brilliant as Joule had no idea where his theory would lead us 150 years (or so) later. Nevertheless, without his work our 21st century science would be unsupported. One message can be taken from this. The basic research may not seem like much at the time it is done, but it may lead us to a totally unexpected destination. The future-time benefits are not predictable by mere mortals.

Thus it is with our historical records and articles. We don't know what benefit these things hold for future generations of HVAC people, but there they are for them to review, to criticize or to glean for information that can be used in new applications. As Chapter Historians, it is not our job to evaluate the information we are collecting and writing about. We may be taping it on videotape or recording it on cassettes or dictating to a secretary but, in any case, we are making a record of some person, place or thing that has occurred in our era. We are the nearest thing to eye-witnesses that our ASHRAE Society has. The records tell the future generations what we were and what we tried to do. The archives of each chapter speak to the future generations to say this is what we stood for.

In conclusion, let me pass on some advice from Samuel Elliot Morrison (1876-1976). "A few hints as to literary craftsmanship may be useful to budding historians. First and foremost, GET WRITING!"

Carl ❖