



**Volume 40, No. 6**  
**February 2005**

# Quaker City CLIMATE

JOURNAL OF THE PHILADELPHIA CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS, INC.

## PHILADELPHIA CHAPTER

### Pre-Dinner Presentation

**"A Special  
SMCA Guest Appearance"**

### After-Dinner Presentation

**"Thermal Energy Storage and LEED"**

#### *Presented by*

MARK M. MacCRACKEN, P.E., Pte.  
CALMAC Manufacturing Corporation

### **JOINT MEETING WITH SMCA**

### **STUDENT NIGHT**

**Students are FREE for this meeting.**

**Thursday, February 10, 2005**

**5:00 to 5:45pm**

**Pre-Dinner Presentation**

**5:45pm - 6:15pm**

**Cocktails and Hors D'oeuvres**

**6:15pm to 7:00pm**

**Dinner**

**7:00pm to 7:45pm**

**After-Dinner Presentation**

**7:45pm to 8:00pm**

**Conclusion**

### **STRENGTHEN OUR MEMBERSHIP!**

\*\*\*\*\*

Ask for a Membership Application at  
our Events' Reception Table

Pass it along to a Friend  
or Colleague!

### **LOCATION**

Colleen's on the Parkway  
Parktowne Place Apartments  
South Building  
22nd & Ben Franklin Parkway  
Philadelphia, PA

Self-parking is available in the  
underground garage for only \$5.

### **FOR RESERVATIONS**

Call (610) 971-2169

Or Email

[hope@multiservicemgmt.com](mailto:hope@multiservicemgmt.com)

### **RESERVATION NOTICE**

Reservations must be made by  
no later than 12:00 Noon  
2 days prior to the meeting date.

### **COSTS**

Local Chapter Members Reservation  
\$30

Late Registrations & Walk-ups  
\$45

Non-local Dues Paying Members  
\$35

Members 30 years & under Discount  
\$10

Student Members  
FREE this meeting only

Reservations not cancelled by 12:00 noon  
2 days prior to the meeting date will be  
billed the full amount.

The Chapter will no longer  
bear the cost of "no-show" meals.

## President's Message

The Sheet Metal Contactors of America, SMCA, and ASHRAE have had a close association for decades. Each year at our February meeting we invite all local student members and honor the best students from our student branches at Drexel, Temple and Widener Universities. This year we note a special honor for our new student branch at Delaware County Community College. The Philadelphia Chapter of ASHRAE appreciates the support that SMCA has given for the student branches of ASHRAE.

New membership is the lifeblood of ASHRAE. We had a very active promotion for membership with Senior Governor and Past President, Jay Halsey, over the last year. And our Membership Promotion Committee Chair for this year, Reynold Pratt, has worked to sustain the activities that Jay started. Student branch membership is a vital part of our overall promotion. John Pardekooper has done a superb job as Student Activities Chair over the past several months. He spearheaded the establishment of the Student Branch at Delaware Co Community College.

Success for the student branches depends on several people. The Faculty Advisor is important in introducing prospective students to ASHRAE and encouraging their application. The Drexel advisor is Dr. Agami Reddy, for Widener we have Dr. Anastas Lazaridis, and I am the advisor for Temple. The presidents of the student branches are to be commended for their contribution of precious time to run the branch. They are Scott Vida at Drexel, Zachary Prater at Temple, and Lee Zambino at Widener. Another vital part of student participation is the Chairperson of Student Activities for the host chapter and that would be John Pardekooper as mentioned above. But the last one involved in this equation for success is YOU. Come out to the meeting on February 10. Meet the students and tell them about your "Adventures in HVAC & R".

Our dinner speaker is an ASHRAE Distinguished Lecturer, Mark MacCracken, who talk about Thermal Energy Storage (TES) and Leadership in Energy Efficient Design (LEED). You should expect a lively and informative evening. See you on February 10.

Steve Ridenour, PE  
Faculty Advisor  
Temple University  
[steven.ridenour@temple.edu](mailto:steven.ridenour@temple.edu)  
215.204.8825

## Speaker and Presentation Info

### MARK M. MacCRACKEN, P.E., Pte.

Mark M. MacCracken is the CEO of CALMAC Manufacturing Corporation, whose main products are used for off-peak cooling of buildings using Thermal Energy Storage. He was the principal investigator on research projects with Oak Ridge National Labs, NASA and National Renewable Energy Research Lab. He has three U. S. patents, is a licensed Professional Engineer in the state of New Jersey and has written numerous technical articles. He is the former Chair of ASHRAE's Thermal Storage Technical Committee, the current Chair of ARI's Thermal Energy Storage Section, a Board Member of the New York Chapter of the U.S. Green Building Council, and an active member of the International District Energy Association and the Alliance to Save Energy.

### Thermal Energy Storage and LEED

Thermal Energy Storage used for Off-Peak Cooling of buildings, has a long history around the world with over 6,000 commercial installations in 35 countries. By storing cooling at night, in the form of ice or chilled water, and using it during the day to cool the buildings, major reductions in on-peak electric demand and energy costs are realized. This talk will demonstrate the basic types of TES systems, how they save energy and reduce costs and how this relates to the U.S. Green Building Council's LEED rating system.

## PHILADELPHIA CHAPTER ASHRAE 2004 - 2005 PROGRAMS

*For reservations and updates, check [www.ashrae-phila.org](http://www.ashrae-phila.org).*

Date	Location	Pre-Dinner Topic	Dinner Topic	Theme
Feb. 10 Thursday	Colleen's	SMCA TBD	ASHRAE Distinguished Speaker	Joint Meeting with SMCA / Student Night
March 10 Thursday	Colleen's	90.1 Controls	Panel Discussion	Research / Joint Meeting with GPBPA
April 14 Thursday	Colleen's	Table Top Show	Control Logic	Past Presidents Night / Controls
May	Citizen's Bank Ballpark	Tour	Phillies Outing	Joint Meeting with GPBPA
June	Temple University		Planning Meeting	2005-2006

### Tell a Friend about [www.gpbpa.org](http://www.gpbpa.org)!

Please inform your associates at work and your technical associates outside of work about the new [www.gpbpa.org](http://www.gpbpa.org) web site. It is free and was developed for all technical people in the Philadelphia area so that we can better communicate and share seminars and training programs via this web site. A left click on the calendar will give the reader the events/seminars/training programs for the month. You can even check events in future months by clicking on the arrow above the calendar.

Don't forget to sign up for an automatic monthly distribution once on the home page.

### Welcome Aboard!

The Philadelphia Chapter recognizes the following new member for the month of January 2005:

Brett Jenner  
Honeywell, Building Solutions  
Fort Washington, PA  
Cell: 610-304-7663

## !! NEW !! AFFILIATE MEMBERSHIP GRADE

For an Annual Dues of \$40, Applicants under Age 30 can Join ASHRAE at this introductory membership level. Membership tenure in this grade is limited to three (3) years.

Affiliate Members Benefits Affiliate Members receive monthly issues of the ASHRAE Journal and Insights Newsletter. The annual handbook is not a benefit of this grade.

### Qualifications

An Affiliate Member shall have the same qualifications as an Associate Member. They are:

1. Experience in technical matters or in design, operation, or maintenance in heating, refrigerating, air conditioning, or ventilating fields.
2. An interest in the in the advancement of the Society's aims.
3. Possess sufficient qualifications to cooperate with heating, refrigerating, air conditioning, or ventilating engineers in the advancement of relating to heating, refrigerating, air conditioning, or ventilating engineering and its application.

### Limitations

- You do not receive ASHRAE Handbook with membership. You do not receive *ASHRAE Insights*. You get a one-time discount (20% off) on all Handbook items.
- You can serve on Chapter committees, but cannot hold office or vote at Chapter, Regional or Society level.

### Contact For Receiving Application

Go to [www.ashrae.org](http://www.ashrae.org) and click on "Join" in the upper right corner. This will take you to a page describing each membership grade, its benefits and qualifications, and a link to membership application forms.

## MEMBERSHIP ADVANCEMENT!

Any Associate Member meeting the following requirement can apply for Advancement to the more entitling Member grade. By ASHRAE society definition:

*A member shall have the equivalent of twelve society-approved years of experience* composed of an approved combination of: (a) completed education beyond high school, (b) work experience, and (c) professional engineering or related registration or license issued by a legally authorized body.

All technical and scientific education shall be based on curricula approved by the Board of Directors.

Approved engineering curricula shall be equivalent to the accredited by the Accreditation Board of Engineering and Technology in the United States of America or the Canadian Engineering Accreditation Board. Scientific education in fields other than engineering shall be from a college or university course of study that has been accredited by an organization charged with monitoring standards of performance. *Society approved years of experience shall be credited as follows:*

One and one-half years of credit for each year of completed education for graduates of approved technical curricula. One year of credit for each year of education for non-graduates who have completed a least two years of approved technical curricula. One year of credit for each year of completed education for graduates of colleges or universities which do not have accreditations. Those holding associated degrees from technical institutions shall also be credited for one year for each year of education.

One year for each year of qualifying work experiences in the performance of duties in work related to ASHRAE fields of interest and shall have included research, teaching, design, contracting, engineering sales or engineering management.

Three years of credit for professional registration of license issued by a legally authorized body in engineering or related fields, the requirements of which as to education, examination, and active practice are satisfactory to the Board of Directors.

More information is available on the ASHRAE website ([www.ASHRAE.org](http://www.ASHRAE.org)) under menu items Membership Resources...Manage Your Membership, the above definition is extracted from such application information in PDF file format. The application can also be filled interactively online. ASHRAE sends members who upgrade a \$20 gift certificate usable at the ASHRAE bookstore or towards ASHRAE membership renewal.

## ASHRAE RESEARCH IS IN NEED OF YOUR HELP

Your Research Donation is Matched \$ 1 for \$ 1

Your donation to ASHRAE Research is matched \$ 1 for \$ 1 by the ASHRAE association. Please be as generous as you can by filling out the Donor Form on the next page and sending it to Atlanta per the instructions. If you want it to be directed to Drexel Research, then mark "For Drexel Research" on the top of your form.

Thank you for your help.

Sincerely yours,

Jay Halsey  
Research Promotion Chairman

## Employment Opportunities

Sales Engineer Major Mechanical: Washington, DC area. Must have mechanical contracting experience. Will call on developers and general contractors. Must be able to talk about a total mechanical package. HVAC, plumbing, possibly exotic piping for laboratories. Must be able to work up dollar numbers. Example what will be the cost for a 10-story building, 400,000 sq.ft, or a new school's plumbing system. Project Management experience is not necessary. Salary to 100k plus.

Construction Manager: Will manage the activities of the hardhats. Washington, DC area. Volume at 25-30 Mil. Salary to 100k plus.

Project Manager: Washington, DC and Richmond. VA areas. HVAC and plumbing and piping. Salary to 100k.

Contact: Arthur Haaker, Tel: (864) 836-2732, Fax: (864) 836-2731, email: [ahaaker@ahaakerconsultant.com](mailto:ahaaker@ahaakerconsultant.com).

## Corporate Sponsor Bios

### CUH2A

CUH2A is our people, our process, and our projects: an innovative full-service architecture, engineering, and planning firm headquartered in Princeton, New Jersey. We are the world's largest AEP firm dedicated to facilities solutions for the science and technology community. A recognized leader in the planning and design of highly complex facilities, we have dedicated our practice to serving pharmaceutical, government, institutional research, academic, corporate, and emerging technology clients for over forty years.

The name "CUH2A" is an acronym derived from the first initials of the last name of the original five partners: Philip S. Collins, Harrison J. Uhl, Jr., Richard W. Hoisington, Kurt M. Anderson, and Ahmed A. Azmy. Collins founded the firm in 1962 when he won the design competition for the 1964 New York World's Fair New Jersey Pavilion. Uhl and Hoisington joined him to assist with the pavilion's contract documents and field inspection. Anderson joined the firm in 1965. The firm adopted its present name in 1976 when Azmy joined, completing the "2A."

CUH2A is currently working with government clients such as the National Institutes of Health, the Centers for Disease Control, and the NJEDA. Other current clients in the private sector include AstraZeneca, Procter & Gamble, and Amersham Biosciences. Through an iterative design process that rigorously responds to the individual requirements of a specific project, CUH2A celebrates the power of vision that goes beyond our clients' expectations.

### EwingCole

EwingCole is a multidisciplinary design firm offering architecture, engineering, interior design and planning services for a variety of building types including research and development, clean room manufacturing, healthcare, government, corporate, and education institutions. EwingCole also designs special use facilities, most notably the Philadelphia Phillies Citizen's Bank Park. Formerly Ewing Cole Cherry Brott, EwingCole has over 40 years experience and is a nationally recognized firm with offices located in Philadelphia, Washington DC, Irvine, and Cleveland.

## ASHRAE RESEARCH - Donor Form Philadelphia Chapter 21 - Region 3

### **1) Type of Contribution;**

- ☐ Individual  
☐ Corporate  
☐ Memorial To: \_\_\_\_\_  
Please attach the details for the acknowledgement to,  
relationship to, and addresses.

### **2) Level of Contribution;**

- ☐ Golden Circle (\$10,000 and greater)  
☐ Research Partner (\$5,000-\$9,999)  
☐ Research Associate (\$2,500-\$4,999)  
☐ Research Major Donor (\$250-\$2,499)  
☐ Research Honor Roll Donor - Individual (\$100-\$249)  
☐ Research Honor Roll Donor – Corporate (\$150-\$249)  
☐ Research General Donor (Less then \$100 Individual/\$150 Corp.)

### **3) Method of Payment;**

- A) Attach Check (Payable to “ASHRAE Research”)

Please note on check “Phila- Chapter 21”

- B) Credit Card

☐ Visa      ☐ Master Card      ☐ AMEX

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Card #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

*Note: All contributions are fully deductible under section 170 of the IRS code.*

### **4) Donor Information:**

Name: \_\_\_\_\_

Member # (If ASHRAE member): \_\_\_\_\_

Corporation Name (If Corp. Donation): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone : Home: \_\_\_\_\_ Business: \_\_\_\_\_

E-Mail: \_\_\_\_\_

### **5) Send this completed form to:**

**ASHRAERESEARCH  
1791 Tullie Circle, NE  
Atlanta, GA 30329**



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**US Green Building Council - New Jersey Chapter  
Designing & Maintaining Top Energy Performing  
Buildings – ENERGY STAR Tools**

**Tuesday, March 8, 2005**

**8:00am - 12:00pm**

JCP&L – First Energy  
300 Madison Avenue  
Morristown, NJ 07962

**Guest Speakers:**

**Karen Butler, Project Manager for New Commercial Construction (ENERGY STAR) and Steve Jurovics, Senior Engineer (Cadmus Group)**

**Course Description**

This two-part presentation will demonstrate how (1) to design buildings for superior energy performance, and how (2) to determine the relative energy performance of existing buildings.

In the first part, the presentation will include how:

- 1- To set an annual energy use target (kBtu/sf/yr) for a building under design.
- 2- To increase the attention on building energy throughout the design process;
- 3- To obtain EPA recognition for A&E firms that design superior energy performance buildings; and,
- 4- To join as an ENERGY STAR® Partner and obtain a market advantage.

For section 1, attendees are encouraged to bring basic building parameters such as the planned gross square footage, operating hours per week, and number of occupants, and view the calculation of target energy values by the Web-based performance rating system.

The second part of the presentation will demonstrate a related energy performance rating system, one focused on helping owners maintain cost-effective energy performance. This system determines the energy performance of an existing building relative to similar facilities across the country. That is, if a building uses 45 kBtu/sf/yr, would that be considered superior energy performance, above average, or below average? Attendees are again encouraged to bring 12 months of recent utility data and basic building parameters such as gross square footage, estimated number of occupants, operating hours per week, and number of PCs. The Web-based rating system will calculate the relative energy performance of the building.

The presentation will also demonstrate how building owners may obtain recognition for operating superior energy performance buildings.

Who should attend:

Architects, engineers, building owners, energy consultants, property managers, energy managers, and organizational leaders interested in learning about reducing building operating expenses.

**AIA – 3.0 credits (Health/Safety/Welfare)**

**Non AIA – 0.3 CEUs**

**Registration:**

**Early Bird Registration by February 28, 2005**

**\$95/non-USGBC-NJ member, \$75/USGBC-NJ member**

**After February 28th –**

**\$125/non-USGBC-NJ member, \$100/USGBC-NJ member**

**Must pre-register by March 4th**

To register: <http://www.acteva.com/booking.cfm?bevaaid=80112>

Purchase/refund policy: Refunds will not be given within 48 hours of the event

**Sponsorship for USGBC-NJ**

To sponsor this event: <http://www.acteva.com/booking.cfm?bevaaid=80112>

**US Green Building Council - New Jersey Chapter  
Labs21 High-Performance Design Course**

**Thursday, April 7, 2005**

**8:00am - 4:00pm**

Janssen Pharmaceuticals

1125 Trenton-Harbourton Road

Titusville, NJ

**Guest Speakers:**

**Paul Mathew (Lawrence Berkeley National Labs) & Dan Amon (Environmental Protection Agency)**

**Course Description**

The Labs21 High Performance, Low-Energy Design Course is a full-day workshop that introduces strategies for designing and constructing sustainable laboratories in both new and existing facilities. While designed as an introductory course, those familiar with sustainable laboratory design are also welcome to attend and contribute to the discussion.

Course topics include:

- The Architecture of High Performance Labs
- The Energy Efficient Design Process
- Air Supply and Distribution Systems
- Laboratory Exhaust Systems
- Direct Digital Controls
- Commissioning
- Lighting
- Case Studies
- Resources and Tools

**AIA/CES Learning Units – 6.0 credits**

**6.0 PDH credits for Professional Engineers**

**Registration:**

**Early Bird Registration March 25, 2005**

**\$195/non-USGBC-NJ member**

**\$175/USGBC-NJ member**

**After March 25<sup>th</sup>**

**\$225/non-USGBC-NJ member**

**\$200/USGBC-NJ member**

**To register: <http://www.acteva.com/booking.cfm?bevaaid=80110>**

**Must pre-register by April 4, 2005** All reservations are made through Acteva.

**Purchase/refund policy:** Refunds will not be given within 48 hours of the event

To sponsor this event go to: <http://www.acteva.com/booking.cfm?bevaaid=80110>



ASHRAE members are invited to join the DVGBC for other upcoming events:

- **LEED-CI:** (Feb. 10) This will be a panel discussion focusing on a LEED Commercial Interiors project. The event will be held at the offices of Wallace, Roberts & Todd which participated in the LEED-CI Pilot.
- **Renewable ON-Site Energy:** (Mar. 10), Presentation on financing and installation of on-site renewable energy systems such as photovoltaics.
- **Green Material — Cost & Benefits:** (Apr. 14), Panel discussion on green materials.

See <http://www.dvgbc.org/> for more details.





# The Greater Philadelphia Chapter of The Association of Energy Engineers

## APPLICATION FOR FEBRUARY 24, 2005 TRADE SHOW/STUDENT JOB OPPORTUNITY NIGHT BEING HELD AT THOMAS JEFFERSON UNIVERSITY

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_ Case Sensitive? Y / N \_\_\_\_\_

Would you be willing to speak with students about potential future employment? Y / N \_\_\_\_\_

Would your company have an HR person at the show to discuss job opportunities? Y / N \_\_\_\_\_

### Trade Show Details:

- Vendor Table Fee: \$100 per table
- Trade show table location is on a first-come, first-select basis
- Anticipated number of attendees: 175 -225
- Anticipated number of vendors: 20 - 25
- Venue: Thomas Jefferson University – Alumni Hall (1020 Locust Street), Philadelphia PA
- Date: Thursday, February 24, 2005
- Time: 3:30 pm to 8:00 pm
- Beverages: Keg of Beer, Boxes of Wine, Soda, Coffee
- Food: Cold platters

Make Checks Payable to “Greater Philadelphia AEE” and remit to:

Mr. John Zuk  
c/o Philadelphia Gas Works  
800 W. Montgomery Avenue  
Philadelphia, PA 19122

Not for Vender Application's use:

AEE Board Member Forwarding the Application: Jim Clark (610) 325-9229 ja11clark@aol.com



# Trade Show & Job Fair

Sponsored by the Greater Philadelphia Chapter  
Association of Energy Engineers

*Door Prizes  
Hot and Cold Buffet  
Hot Hors d'Oeuvres  
Beer, Wine, and Soda*

*Relaxed  
Networking Event*

*Pursue New Career  
Opportunities*

*Energy and Technology  
Updates*

*Equipment and Vendor  
Displays*

**February 24, 2005  
3:30 p.m. to 8:00 p.m.**

**Thomas Jefferson University  
Jefferson Alumni Hall  
1020 Locust Street  
Philadelphia, Pennsylvania**

**Special Sessions from  
4:30 p.m. to 7:30 p.m.**

Resume Development  
Job Market Update  
Employment Specialists Available  
Energy Utilities Updates



## Trade Show & Job Fair

Reserve Your Ticket

**Send in Registration Today ! Reserve Your Ticket ! Send in Registration Today ! Reserve Your Ticket !**

Please register me for the Trade Show and Job Fair.

☐ Students \$5.00 ☐ All Others \$10.00

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone #: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Make Check Payable to "Greater Philadelphia AEE" and send with registration form to:  
Philadelphia Gas Works - Major Accounts Department - 800 W. Montgomery Avenue - Philadelphia, PA 19122 - or fax to (866) 372-8950  
For more information please call (215) 684-6671 and leave a message or e-mail us @ [majoraccounts@pgworks.com](mailto:majoraccounts@pgworks.com)

## Member Services

Members who would like stay on top of the latest news from ASHRAE may join the News Release List Serve at <http://www.ashrae.org/template/AboutLinkLanding/category/1584>.

If you or your company are hiring, please take a moment to review the resumé of chapter members and students which have been posted on the chapter website at [www.ashrae-phila.org/resumes.html](http://www.ashrae-phila.org/resumes.html).

Any member who wishes to have their resumé posted on our website, or who would like to update it, can email our webmaster, Seth Weiss, at [sweiss@comcast.net](mailto:sweiss@comcast.net). The file must be in pdf format and will be posted for 3 months.

For Video Resume And Job Opportunities, visit online portal: [www.LookFirst.net](http://www.LookFirst.net)

Check the Calendar at

[www.gpbpa.org](http://www.gpbpa.org)

for further information

on events for

DVGBC, ASPE, SMCA,

and other organizations!

Check

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

for further information

on the

Philadelphia Chapter!

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[ashrae-phila.org](http://ashrae-phila.org)

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The Chapter does not speak or act for the Society.  
Any member with material to submit for inclusion  
in the *Climate* can send the information to:



Reynold Pratt  
23 A Riverhill  
New Hope, PA 18938  
or email: [rpratt@comcast.net](mailto:rpratt@comcast.net)  
or call: 215-862-5304  
or fax: 215-862-5304

Material can include letters to the editor,  
member news, upcoming events,  
comments on chapter programs or issues, etc.

**This is your newsletter.**

**We welcome your input and comments.**