



QUAKER CITY CLIMATE

INSIDE THIS ISSUE:

<i>Green For Green's Sake</i>	2
<i>2009 CRC</i>	3
<i>CTTC Awards 2010</i>	3
<i>YEA Announcement</i>	3
<i>Future Cities Flyer</i>	4
<i>Board Members List</i>	5
<i>Basic Course Flyer</i>	6
<i>Chapter Programs</i>	7
<i>Technical Article Notice</i>	7
<i>Greater Phila. Expo</i>	8
<i>BOG Notice</i>	9
<i>Membership Notice</i>	9

DAVE AND BUSTER'S

325 N Columbus Blvd,
Philadelphia, PA 19106
Phone: (215) 413-1951

September Dinner Meeting
Directions: [Click Here](#)

Parking is **\$12**. (\$5 coupon good
towards food or drink)

Dinner Fees:

- Philadelphia Chapter Members with online reservation and prepayment: **\$30**
- ASHRAE Members and Non-Members who have not paid Philadelphia Chapter dues with online reservation and prepayment: **\$40**
- Young Engineers (35 and under) with online reservation and prepayment: **\$25**
- Students with online reservation: **\$10**
- Phone reservations to 610-971-2169 without online registration: **\$45**
- Walk up fees (based on availability): **\$45**

ENGINEERING OOPS! AND ADVANCED WATER TREATMENT

IT'S MEMBERSHIP PROMOTION NIGHT. IF YOU BRING A NEW MEMBER YOU CAN EARN YOURSELF A FREE DINNER TO AN UPCOMING MEETING.

Our next dinner meeting is scheduled for September 10, 2009 at Dave and Buster's. The event schedule is as follows:

- Social Hour: 5-6:00 pm (Cash Bar)
- Dinner: 6-6:30 pm
- Advanced Water Treatment : 6:30-7pm
- Engineering OOPS!: 7-7:45pm
- YEA Social immediately following dinner meeting

Dinner meeting is being sponsored by Clapp Associates, Inc. We would like to thank them for their contribution.

Engineering OOPS! "Oops Redux"

Another visit to new steam and Hydronic situations that make you scratch your head and keep up at night. How a minor oversight can turn into a real pain in the neck and just ruin your day. Hopefully at least these will never become a concern for anyone in attendance."

Presenters:

Larry Snyder

Dann Clapp

Both From Clapp Associates, Inc.

Advanced Technologies in Cooling Tower Water Treatment

- includes highlights of ASHRAE funded research at Drexel University

Presented by Mr. Andrew R. Dougherty of Advanced Water Treatment

Past Speaking engagements:

GreenNet - local consortium of service providers to the Green Building Community - Villanova PA Dec 2008

National Association of Power Engineers (NAPE) - Havertown PA Dec 2007

PRESIDENTS MESSAGE:

I would like to welcome all of you to the 2009/2010 program season. This year is a continuation of what we think is another informative year of programs to meet the needs of our members. We have selected locations that we hope is convenient to the members.

Due to this economic time we are all facing, we have instituted a discount for this year to members that are unemployed to reduce their costs so they can attend our meetings. Members will receive a \$10 discount on their dinner cost when they have their resume posted on our chapter website.

I encourage any member who has become unemployed to send their resume to Gary Debes at

gary.debes@mail.ashrae.org

for posting on our chapter website. I also encourage our consulting engineering firms to review this website for potential employees and to post

any employment opportunities. This is

the time for all of us to work together to get thru these times to keep our profession, chapter and society strong and functioning.

We encourage the Consulting Engineering Firms to inform their employees to join ASHRAE, especially during these times, to be part of the society to advance themselves and network among other members.

Our chapter will be participating at the Greater Philadelphia Facilities Expo on September 23-24 where Larry Spielvogel will be a guest lecturer. Please see the announcement contain within this newsletter. Free tickets will be available at our September meeting and available on the expo website.

Our basic design school will be starting up soon and we have a new school coordinator and location. This year our school coordinator will be James Lill and the location

will be at Drexel University. We will also be offering an advanced school and will keep you posted on its status. We will again be providing Young Engineers in ASHRAE (YEA) events this year and we will keep you posted on those activities. There will be planned gatherings after some of our regular meetings such as in September for socialization.

Our chapter needs volunteers to assist our board members and committee chairs. Please see any board member if you are interested. This will help it broadening our chapter and allowing volunteers to move into board positions. Specific needs are in our YEA, membership and student activities comities but all comities are open to volunteers.

I hope to see all of you at our meetings and we hope these economic times will be short.

Bill Hart

chick300@aol.com
609-238-2585

Relevant regulations and resources:

A number of resources are available for companies that want to increase the energy efficiency of their laboratories. For example, the Labs 21 Web site features an online Energy Benchmarking tool, as well as Laboratory Modeling Guidelines for all regulated systems serving laboratory areas, including HVAC, service hot water, interior lighting, and laboratory ventilation systems and exhaust devices. Any design for energy efficiency must remain in compliance with applicable regulations. References and resources for laboratory design include:

- ANSI/AIHA Z9.5, "Laboratory Ventilation"
- ASHRAE Technical Committee 9.10, "Laboratory Systems"
- ASHRAE Standard 110, Method of Testing Performance of Laboratory Fume Hoods
- CDC/NIH "Biosafety in Microbiological and Biomedical Laboratories"
- International Building Code
- International Mechanical Code
- NFPA 30
- NFPA 45
- NSF International 49-2002
- OSHA Laboratory Standard 29 CFR 1910.1450
- Scientific Equipment and Furniture Association (SEFA)
- Labs21 EPC 2.1
- Labs21 Toolkit (includes process manual, design intent tool, EPC, best practice guides and other resources)
- LEED NC 2.1
- www.labs21century.gov/index.htm

www.usgbc.org/LEED/

GREEN FOR GREEN'S SAKE: ENERGY-EFFICIENT DESIGN CAN HELP REDUCE LABORATORY OPERATING COSTS

Companies that want to incorporate sustainable design and energy efficiency into their buildings will find it harder to achieve in their laboratories than in their office spaces—but well-conceived, well-executed plan can result in rewards that make the additional effort worthwhile.

By Sam Colucci, P.E. and Patrick Boccio, P.E., IPS

From curbside recycling to Energy Star appliance ratings to hybrid automobiles, awareness of the need to improve environmental performance continues to gain momentum—and not just on the consumer front. Businesses are beginning to recognize that the benefits of a "greener" orientation can extend beyond better compliance with environmental regulations. Energy efficient facilities often cost less to operate, and some environmental initiatives can bring the company positive recognition. Unfortunately, laboratories face an uphill battle, primarily due to extensive airflow requirements, as well as lighting demands and, sometimes, water use. A close look, however, at laboratory design criteria and system design, and equipment system design, can often reveal ways to reduce energy consumption significantly.

In most laboratories, energy costs are four to six times higher than they are in an office building and two to three times higher than they are in a typical oral solid dosage manufacturing suite. One of the biggest cost drivers is the high volume of outside air that is cooled and/or heated and then vented back out to the environment in order to protect personnel against exposure to hazardous and/or highly potent chemical and biological agents. Often, 100 percent of the air in a lab passes through the facility only once. In contrast, up to 85 percent of the air in an office building is recirculated, so heating and air condition-

ing costs are lower. Considering that over the life of a lab, its operating costs (including both energy and maintenance) are three to four times higher than the capital cost of the facility, the financial incentive to reduce operating costs is high. With responsible, smart, sustainable design, companies can expect to reduce energy costs 30 percent to 50 percent. Utility company incentives are also often available. In addition to reducing energy consumption, companies may also be able to reduce air and water emissions at the same time.

Two programs of note address energy efficiency and sustainable design in laboratories. One is Labs21, a joint program of the Environmental Protection Agency (EPA) and the Department of Energy (DOE) to improve the environmental performance of laboratories in the United States. The other is the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification program, which recognizes companies for their efforts to conserve resources. The council is currently developing a LEED for Labs program using the Labs21 environmental performance criteria (EPC) as a starting point. These programs offer a good roadmap for investigating means to save energy on new and existing laboratories.

This article focuses on safely reducing airflow and on the corresponding supply and exhaust fan, heating, cooling, dehumidification, humidification energy savings that can be realized. The key is to re-

view each laboratory's operations and design methodically to determine what is truly needed. As a rule of thumb, some of these simple design criteria changes can result in savings in the ballpark of \$3–\$5/cubic feet per minute (cfm)/year, depending on geographic location, system and utility costs. Take, for example, a 1,000-square-foot laboratory designed for 2,000–2,500 cfm. Reducing the airflow by 30 percent (600–750 cfm) would generate savings of \$1,800 to \$3,750 annually. When these results are applied throughout a building or research site, the savings become significant—and do not require a large investment to achieve.

For the rest of the article

[Click Here](#)

Editor's note:

Article was originally published in the ISPE/DVC newsletter.

Click below for ASHRAE's new job listing website.



2009 CHAPTER REGIONAL CONFERENCE IN WASHINGTON, D.C.

PHILADELPHIA CHAPTER WINS MULTIPLE AWARDS

The Philadelphia Chapter was honored multiple awards at the last CRC event in Washington, DC. A description of each award can be found [HERE](#). The awards earned by the Philadelphia Chapter are as follows:

- Bob Finkboner received the Red Ribbon for Second Highest PAOE Points
- Mike Witkowski won the Lamp of Knowledge for Student Activities
- Jim Piscopo won a TEC Award for CTTC
- Jeff Gilbeaux won the ACE Award for leadership of the Philadelphia Chapter
- Gary Debes received multiple awards in the category for research promotion.
 - New High Five,
 - Pit Bull
 - Silver Ribbon plus a Full Circle Chevron for Board contributions of \$100 or more.
- The chapter also received Honor Roll with Special Citation and Star for PAOE points



2008-2009 PRESIDENTIAL AWARD OF EXCELLENCE POINT TOTALS FOR THE REGION

Chapter 08	Total 08-09	% compared to 07-08
Philadelphia	13,846	165.2
Central PA	6,435	115.5
Johnstown	5,100	101.4
Pittsburgh	5,815	110.3
Baltimore	12,883	190.4
National Capital	10,445	100.0
Hampton Roads	3,505	74.0
Richmond	5,595	84.7
Lehigh Valley	4,089	164.2
Delaware	1,065	244.8
Roanoke	5,040	82.7
Anthracite	2,930	96.1
Region III Total	76,748	118.3

CHAPTER TECHNOLOGY AWARD COMPETITION 2010

The Technology Award Program recognizes members for innovative designs, communicate that technology to other members, and highlight achievements to other professionals.

The Chapter Technology Transfer Committee will be accepting applications for the 2010 Chapter Level competition in March 2010 in the following categories:

- Commercial Buildings, New and Existing
- Institutional Buildings, New and Existing
- Health Care Facilities, New and Existing
- Industrial Facilities or Processes, New and Existing
- Public Assembly Facilities, New and Existing
- Residential Buildings, New and Existing (Single Family and Multi-Family)
- Alternative or Renewable Energy Use

Entries will be judged on energy efficiency, indoor air quality and thermal comfort, innovation, operation and maintenance, cost effectiveness, environmental impact and quality of presentation.

The process for the ASHRAE Technology Awards starts right here at the Chapter level. Chapter Competition winners will be judged in the Regional Technology Award Competition. Regional winners will then submit a long form application for the Society Technology Award Competition. Winners of the Society Competition will also be featured in the ASHRAE Journal.

For more information on the Technology Award Program, including application forms please visit the CTTC section of the [chapter website](#).

Mark M. Maguire, PE
Chapter Chair – Technology Transfer
mmaguire@klingstubbins.com

YOUNG ENGINEERS IN ASHRAE

The next YEA Social will be after the next ASHRAE meeting on September 10th at Dave and Busters. If you're 35 years or under, stay around after the meeting for time of hanging out and playing pool with other young engineers.

YEA Philadelphia has setup a Facebook group for you to join to keep you updated on all the latest information including YEA specific meetings and a forum for young engineers to discuss amongst one another.

The group is located [Here](#)





Helping out with the Future City Competition is a rewarding experience that will make you feel good about the profession that you have chosen. We need mentors for a number schools throughout the region. You can sign up now to help with the judging (essays and computer models) that will start in early January or to fill one of the many roles needed on the day of the competition.

If you need additional information you can contact Jennifer Wetzel via email at: volunteer2009 at futurecityphilly.org

FUTURE CITY PHILADELPHIA 2010

Delaware Valley Engineers Week annually hosts the Philadelphia Regional Future City Competition as part of the Engineers Week activities. The program is a 501.c.3 educational outreach program of National Engineers week. It is one of 40 Regional programs conducted throughout the country with the goal to introduce middle school students to the engineering profession. The Future City Program was recently added to the National Association of Secondary School Principals' National Advisory List of Student Contests and Activities.

Students in middle schools in the Delaware Valley form teams consisting of 7th and 8th grade students who work with a teacher and an engineer mentor from September to January to:

- * Design and lay out a city of the future using Sim4 computer software
- * Build a table-top model using recycled materials illustrating one section of the city
- * Write a 500 -700 word technical report which is researched with a bibliography of references.
- * Present the city model to teams of judges at an all day competition at the Philadelphia Sheet Metal Workers Facility on Delaware Avenue

Registration for each year's

program begins in March and ends in October. The cost to schools is \$25 Registration fee and a maximum of \$100 in materials to build the model. The Philadelphia Program has involved from 30 to 50 schools each year since its beginning in 1995. The program provides the schools with the computer software, handbook with Teacher's guide, video CD orientation, prior competition videos and assistance from the Regional School Coordinator. The culmination of the program is an all day judging competition in Philadelphia in January. The first place Philadelphia Regional team travels to Washington, DC during National Engineers Week in February where they compete with the 39 other regional teams from around the country for the national prizes. The Philadelphia teams have always placed well nationally and in 1999 took first place.

In addition to the first place regional awards, Future City also provides "Special Awards" in a number of areas related to engineering of cities. These awards provide the students the opportunity to present their cities to more than just the competition judges and provide them with a feeling of accomplishment even if they were not a finalist in the competition. Last year, there were over 40 special awards presented and every team went home

with at least one award. Additionally, all of the teams were provided with Future City tee shirts and various other items.

Future City is volunteer run and uses the support of the entire engineering community. Over 200 volunteer engineers work on the program each year as committee members, mentors, organizers and judges. The mentors have the most rewarding part in the competition since they have the opportunity to directly share their engineering expertise with the students, working with them to develop their cities and presentations.

Why not get involved in this exciting educational program? Contact us for additional information on the program or go to our web site:

www.futurecityphilly.org

c/o John E. Kampmeyer,
PE
150 Saxer Avenue ---
Springfield, PA 19064
Phone - 610-328-3020
coordinator@futurecityphilly.org FAX
- 610-328-2339

Editors note: schools that currently are in need of a sponsor can be found [here](#).

rev. 8/25/09

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PROMOTION COMMITTEE CHAIR

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REFRIGERATION COMMITTEE CHAIR

Matthew Trinsey (see Newsletter Editor)

CHAPTER HISTORIAN

Jared Johnson (see Governor)

YOUNG ENGINEERS IN ASHRAE (YEA)

Ashley Kenyon (see Secretary)

CRC DELEGATE

Jeffrey Gilbeaux (see Senior Governor)

CRC ALTERNATE

Bill Hart (see President)

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ASHRAE

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

BASIC HVAC SYSTEM DESIGN COURSE

This is a demanding one-year course that introduces students to the fundamentals of HVAC design. Classroom activities will include lectures and problem solving sessions, supplemented by home reading and study assignments.

2009-2010 Course Subjects Include:

Fundamentals and Psychometrics

Load and Heat Transfer Fundamentals

LOAD CALCULATIONS

Pumps, Piping & Piping Systems

Basic Steam & Boilers

Fans, Air Distribution & Duct Design

Refrigeration

Controls & Instrumentation

Equipment Selection

The class is a great way to further, or even begin, a career in HVAC.

Classes will meet Tuesdays and Thursdays from 6:15 PM to 8:30 PM beginning in mid October and continue until the end of March.

All classes will be held at Drexel University's Center for Automated Technology – located at 3101 Ludlow Street (near 31st and Market Streets).

The Basic Class tuition is \$1,100.00, which includes all reference materials. For registration forms [Click Here](#)

Class size is limited to 30 students. To enroll, complete and submit the application including a **non-refundable** deposit of \$200.00 payable to "Philadelphia Chapter ASHRAE". Balance due at first course session.

Please mail the application and deposit to the Basic Class Coordinator:

James K. Lill, PE
337 David Drive
Havertown, PA 19083
Phone: (610) 645-1956
E-mail: LILLJK@comcast.net

PHILADELPHIA CHAPTER PROGRAMS CALENDAR 2009-2010

Date	Location	Topic	Theme	Joint Meeting
9/10/2009	Dave & Busters	Engineering Oops & Advanced Water Treatment	YEA / Membership	
10/8/2009	The Rittenhouse	SMCA Engineers Night		SMCA
11/12/2009	Maggiano's Center City	Standard 52 & 62	Donor Recognition and Research Promotion	
12/10/2009	Union League	Std. 189.1 High Performance Buildings	Sustainability	
1/14/2010	Maggiano's Center City	Philly Sustainability / Clinton Climate Initiative / 90.1-2007	Sustainability	
2/11/2010	Dave & Busters	Energy Management in Existing Buildings	Student Night and Membership Promotion	SMCA
3/11/2010	Crown Plaza - King of Prussia	LEED Measurement & Verification	Tradeshow	
4/8/2010	Comcast tour	Comcast Tour / Scholarship Presentation / Research Presentation		
5/13/2010	Maggiano's Center City	BIM and CFD	Past Presidents	

TECHNICAL ARTICLES ARE NEEDED

Starting with this issue, the Philadelphia ASHRAE chapter newsletter will contain an article discussing a state-of-the-art technical issue. The kickoff article is by Sam Colucci and Patrick Bossio (both from IPS) identifying strategies to reduce energy costs in HVAC systems in laboratories.

Chapter members can help the chapter to present rich technical

content on timely topics like this by submitting technical articles for future newsletters. The articles can be 500 to 1000 words long, should relate to current HVAC engineering trends and can be previously published with the consent of the original publisher. Articles should be e-mailed to the Chapter Technology Transfer Committee Chair: mmaguire@klingsstubbins.com.

Consulting engineers should view this as an opportunity to highlight uniquely-crafted design work. Owners should view this as a way to benchmark state-of-the-art projects against peer companies.

Mark M. Maguire, PE
Chapter Chair – Technology Transfer
mmaguire@klingsstubbins.com



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ASHRAE
Philadelphia Website

Republication of material contained herein is expressly forbidden without official Chapter authorization. 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:

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Clive Samuels & Associates, Inc.
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Princeton, NJ 08540
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(F) 609-520-0974
Matthew.Trinsey@Emerson.com

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

BOARD OF GOVERNORS LIST OF UPCOMING MEETINGS

Your board of governors meet once a month to discuss and plan future events for the Chapter. These meetings take place usually at the Spaghetti warehouse. ([location](#))

The tentative schedule for those meetings is as follows:

August 25, 2009. budget review meeting
September 1, 2009
September 29, 2009
November 3, 2009
December 1, 2009
January 5, 2010
February 2, 2010
March 2, 2010
March 30, 2010
May 4, 2010

MEMBERSHIP PROMOTION

New Members June/July/August 08/24/09

Melinda Johnson – Associate
Mr Jason Trefz – Associate
Mr Jeffery Michael Strong – Associate
Mr Michael T Radio – Associate
Mr Peter Rekowski Sr – Associate
Mr Jeffrey M Staub Sr – Member
Mr Kevin M Collins – Member
Mr Angel Luis Placeres – Member
Mr Michael A Brown – Member
Mr Zachary Klixbull - Student

ASHRAE is no longer accepting applications for grade advancement. To advance from associate to member, a member must update their ASHRAE bio online, and notify membership@ashrae.org they have an updated bio and wish to be considered for grade advancement. Tips for updating bios:

- I. Go to www.ashrae.org
- II. Login
- III. In Member Central, Click “Update Your Bio”
- iv. Go through each of the small blue tabs to enter demographics, contact information, education, professional registration, etc. It’s very easy!

Bob Finkboner
Membership Promotion Chair