



Northeast Chapter

Thermal Briefs

OCTOBER 2015

OCTOBER MEETING Tuesday, October 20, 2015

Introduction to Properly Sized Advanced HELE (High-Efficiency, Low-Emission) wood-pellet based Biomass Boiler Heating Systems and the Renewable Heat New York (RHNY) Governor's Initiative

By Khaled A. Yousef

1 PDH credit PENDING APPROVAL

12:00pm – Lunch and Presentation

Italian American Community Center, Washington Ave Ext

Members - \$30 (\$40 with PDH)

Non-Members - \$35 (\$45 with PDH)

Students - \$15

RSVP to Tim Houle no later than Thursday, October 15th

Thoule@advancedcomfortsys.com or 518-884-8444 x3439

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Seminar Description:

This seminar offers an introduction to properly sized advanced (or modern) two-stage gasification HELE (High-Efficiency, Low-Emission) wood-pellet based biomass boiler heating systems. It shares illustrations of major system components from several manufacturers and introductory examples from local NYS projects. It also shares important design, sizing, commissioning and Measurement and Verification (M&V) concepts.

Presenter:

Khaled A. Yousef, P.E., CEM, CDSM, LEEDTM AP, GBE

Message from the President

It's my pleasure to announce that the 2015 ASHRAE Northeast Chapter Golf Outing was a success! Held on a gorgeous Friday, September 18th at Airway Meadows Golf Course in Gansevoort, we had a great turnout of 106 golfers. Thank you to all of those who joined us for golf and/or dinner. I know I had a great time and hope that you did too. If you weren't able to attend this year, please consider joining us next year.

I thank and commend Dave Houle (President Elect), Kendra Potasiewicz (Treasurer), Chris Schmidt (Research Promotion Chair), Tim Houle (Registration Chair), and Erik Olson (Webmaster) on all the hard work they put in that lead up to this successful event. We are a volunteer organization, and the officers and chairpersons we have in our chapter go above and beyond the call of duty and do a fantastic job. Please thank them for volunteering their time the next time you see them; our upcoming October meeting would be a great time to do this!

We had a record of 44 tee flag sponsorships this year! We appreciate each and every tee flag sponsorship, every penny of which goes to ASHRAE Research Promotion. Special thanks to Northeast HVAC Solutions for sponsoring 5 tee flags and also to Trojan Energy Systems for setting up the hole-in-one prize from DePaula Chevrolet.

You're welcome to view some photos from the 2015 ASHRAE Northeast Chapter Golf Outing at the following Dropbox link: <https://www.dropbox.com/sh/m1pzzvpv34h1r0y/AAA7aug5KLzspCeBe7pkZ2T9a?dl=0>

Please join us for our October meeting; refer to the first page of this newsletter for the topic and additional information for this event. If you have any feedback or comments on the golf outing, monthly chapter programs, or anything else at all please let us know.

Dan Williams

2015-2016 Northeast Chapter President

Message from the Newsletter Editor

Greetings! There has been a somewhat recent change in our payment structure, in case you're not aware: Paypal is now a feature on our website! <http://northeast.ashraechapters.org/>

Essentially, you can now pay ahead for our monthly lunch meetings. No more fiddling with credit cards, checks, or cash; unless that's what you want to do, in which case, we'll still happily accept those forms of payment. Registration for our annual golf outing can also be paid via Paypal.

If you have any questions pertaining to this, please let us know. If you have any suggestions regarding the newsletter, please shoot me an email at adam.feather@trane.com. Thanks!

Current PAOE Chapter Summary

| Membership Promotion | Student Activities | Research Promotion | Historical | Chapter Operations | Chapter Technology Transfer | Chapter Grassroots Government Activities | Chapter PAOE Point Totals |
|----------------------|--------------------|--------------------|------------|--------------------|-----------------------------|--|---------------------------|
| 425 | - | - | - | 275 | - | - | - |

PAOE stands for the Presidential Award of Excellence and is a point system used within ASHRAE to **evaluate the success of each chapter**. Officers and grassroots chairs have the opportunity to earn PAOE points based on achievements and accomplishments designated by the ASHRAE Society President. Example activities for earning PAOE points include starting a new student chapter, holding at least eight regular chapter meetings in a year, and educating non-members about ASHRAE technologies and goals.

Honors and Awards

The Capital District's Celebration of National Engineers Week February 25 & 26, 2016 – At the Albany Marriott, 189 Wolf Rd., Albany

Basic information about the event:

5 PDHs each day; seminars are from 8:00am-4:00pm

70 seminars offered in the two day event covering all disciplines

Exhibitors & Lunches each day

High School Bridge Competition

Future City display

Capital District Robotics Team

Order of the Engineer - <http://www.order-of-the-engineer.org/>

Over 800 in attendance

We are currently calling for seminars for this event!

One hour Seminar presentations are being sought for all engineering disciplines including: Bridges, Buildings, Chemical, Civil, Education, Energy, Ethics, Geotechnical, Sustainability, Nanotech, Electrical, Environmental, Mechanical, Structural and Transportation. Topics of general interest to the profession will also be considered.

Seminars MUST be technical not a sales pitch!

Deadline for Seminar form: **November 4, 2015** (Send as a Word Document NOT a PDF)

Deadline for Seminar Materials (power point, assessment of learning and speaker bio or resume):

December 2, 2015

Please see the word document form attached.

Exhibitor space will be available on both days, but limited booth space is available. It will Sell Out so get your form in early.

Review **exhibitor form** and information that is attached.

You also have the opportunity to advertise in our **Program Book** – View the details on the website: www.CapitalDistrictEweek.org

We also have **Sponsorship Opportunities** available, this is an excellent opportunity for branding and exposure. View the details on the website: www.CapitalDistrictEweek.org

Your involvement is important to us and a valuable way for your organization to reach the engineering community.

Visit our website for more information: www.CapitalDistrictEweek.org Feel free to spread the word! If you have any questions please let me know!

This event is supported by The Foundation for Engineering Education, Inc. (FEE) and by volunteers in associations in the Capital District.

Northeast Chapter Officers and Board of Governors 2015-16

| | |
|-------------------------------------|----------------------|
| Chapter President: | Dan Williams |
| President Elect/CTTC/Program Chair: | David Houle |
| Vice President/ Newsletter Editor: | Adam Feather |
| Treasurer: | Kendra Potasiewicz |
| Secretary: | Trevor Gensch |
| Board of Governors | Russ Danforth |
| Board of Governors: | Gregory Kirkpatrick |
| Board of Governors: | Todd Turcotte |
| Board of Governors: | John Thomas |
| Board of Governors: | Tim Houle |
| Board of Governors: | Douglas Belokopitsky |
| Honors & Awards Chair: | Kristin Gustafson |
| Membership Chair: | Liesl Hammer |
| Student Activities Chair: | Dave Ricci |
| Research Promotion Chair: | Chris Schmidt |
| Refrigeration Chair | Ray Hickey |
| Historian: | Stanley Westhoff |

Please consider volunteering for a regional or society level position or let us know if you think of anybody who would be good for any of the positions listed at the following link:

<https://www.ashrae.org/society-groups/committees/>

If you have a professional relationship with any local government officials, please let us know!

The ASHRAE Northeast Chapter would like to reach out to them to promote sustainability topics. Government officials might include school board, state or provincial legislative committee, state or provincial agency, city council, county board, etc.

Message from Membership Promotion

OCTOBER IS MEMBERSHIP PROMOTION MONTH!

Have you ever mentioned ASHRAE to a client or colleague who asked: "What's ASHRAE?" Or if they knew about ASHRAE already from the building codes and standards, did you ever think they might enjoy attending a meeting with you sometime? Well, here's your opportunity to strengthen those business relationships!

Bring a non-member friend to the ASHRAE Meeting on October 20 to introduce them to our Chapter and you both get in for half price.

That's two for one, on both the meal and PDH hours!

Can't make this meeting? Another month has a meeting more relevant to your area of interest? No worries! **Buy One Get One Free** Coupons for Future Meetings will also be distributed to all Members in attendance. So if your friend can't make the October meeting, bring them next time!

Did you Know...

- You don't have to be an engineer to be a member of ASHRAE?
- ASHRAE is completely Members-driven?
 - * It's primary agenda is to serve it's membership and better our Industry.
 - * Has 54,000 Members, 179 Chapters Worldwide?
 - * Members working on standards, technical committees, handbooks, and in local chapters are **ALL Volunteers?** Even on the National Society level?
- **PDH credits in many states are given for volunteering in ASHRAE?**
- Many of our best volunteers are YEA Members?

Our Northeast Chapter will only be as good as WE make it. So if you are dissatisfied or wish we could do things differently, or have better ideas than what you see now, **COME JOIN THE LEADERSHIP TEAM!** Tell us what you're interested in, and we'll connect you where needed or your talents lie.

HELP WANTED:

Government Grassroots Activities Chair
 Membership Promotion Subcommittee Position
 Chapter Roster Committee Position

Meet Our Members

Welcome back!

Returning:

Mr. Joseph Kazukenus

Thermal Environment Sales, Inc.

Make sure you give a warm

Welcome to our New Members when you meet them!

Mr. Chris Huston

Huston Engineering

Mr. Neil Curwen

Active Solar Development

Mr. Robert Haley

ArmadilloNV

Mr. Taylor Bastow

EME Group

Mr. Stuart Aldridge

M+W U.S., Inc.

Questions? Contact Membership Promotion at Liesl.Hammer@gmail.com

Refrigeration Article

Cascade refrigeration is a slice of refrigeration usually saved for medical and chemical industries and are typically small systems. These “cabinets” are used to store samples/experiments. Everyone is familiar with air conditioning, some with medium temperature and low temperature food storage, but cascade systems take the 7C (45F), -4C (25F), and -25C (-15F) above applications down to -90C (-130F). These are really two refrigeration systems that share the high temperature evaporator and the low temperature condenser. Each side of the unit has a different high temperature and low temperature refrigerant.

Back before the Montreal Protocol (1987), the high side was R-502 or R-22. The low side was R-13B1 or R-503. Since 1990 it has been predominately R-404A for the high side and R-508B for the low side. Today people are experimenting with R-290 (Propane) and R-170 (Ethane). Yeah, these are not the normal non-toxic/non-flammable refrigerants we know and love.... but in small “refrigerant “ charged units they seem safe. If you get some spare time, look at ASHRAE Fundamentals 2013, Chapter 29 and look at forty-four compounds that are currently classified as useful refrigerants.

Recently, Embraco and Thermo Fisher Scientific have partnered to build the first cascade unit with Propane and Ethane. Theoretically, this product will provide a 17% savings in power consumption just with the change in refrigerants. So the two companies have tested the new product and added a variable speed drive to provide a couple of advantages of an on/off operation of the compressor. The measured energy savings ended up being 50%, because the VFD could over-speed the compressor and provide greater capacity during periods of pull-down or when the cabinet/chest door is open to place or remove samples.

Think of it this way. They could use a smaller compressor than previously and only pay the electrical penalty when they needed the additional capacity. You will find that many manufacturers are doing this with both fan and compressors, since it is a rare application when you would require maximum output due to a fluctuating load.

The EPA SNAP Program is all over the use of these flammable refrigerants and have limited their use to small units with a “refrigerant” charge of 2 ounces in household refrigerators and 5.2 ounces in vending machines. I guess we’ll have to wait until one unit has an incident and see how the litigation goes.

Message from the Chapter Historian

Northeast Chapter History

The year was 1991 and the Northeast Chapter officers and chairs attended the Chapters Regional Conference (CRC) in Warwick, Rhode Island on August 15-17, 1991. The CRC was the first for newly elected Director and Regional Chairman Stan Westhoff of the Northeast Chapter. New Society President Don Rich of the Central New York Chapter attended as the Society representative. A watch with Brown University Logo was given to the President who graduated from Brown.

The Annual Steak Roast was held September 16, 1991 at the Western Turnpike Golf Club with 165 golfers who teed-off at 8:30 AM. It would be about 90 degrees that day with high humidity for those who would chase the golf ball around the 18 hole course. The top golfer for the day would be Ken Brown of RPI.

A volleyball tournament was held with eight corporate teams participating. Johnson Controls would defeat Thermo-Environment in the final match with a score of 15-10 to take the trophy from the defending champ A.J. Eckert.

200 more members joined the golfers at the Pavilion for steak or Lobster, etc. Many door prizes were given out with the Grand Prize going to retired salesman Dave Gregory of Honeywell. The prize was for the use of a limousine from Airport Limousine and a meal for four persons at the Desmond Americana.

The Research Promotion Committee raised \$1904 from the 50/50 raffle and \$952.00 went to absentee winner Lori Fisk of Hudson Falls.

A \$1200 scholarship award was given to Leonard Ramo from HVCC. Life Membership was awarded to the: Loran V. Appleby, John P. Hawn, John Lapinski, Richard C. Welter and Ben M. Zomkowski.

And that is the way it was in 1991.

Northeast Chapter Historian

Stan Westhoff

Sample of 2015 Golf Outing Pictures





Shaping Tomorrow's
Built Environment Today

Dear ASHRAE Member,

ASHRAE respectfully requests your help and voice to protect the development, adoption, and implementation of ANSI/ASHRAE/IES 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings, and the International Energy Conservation Code (IECC) from the potentially harmful effects of proposed Federal legislation.

Take action by clicking [here](#) or visiting <https://account.votility.com/enterprise/ASHRAE/ec/142>

The Energy and Commerce Committee of the US House of Representatives is in the process of marking up the North American Energy Security and Infrastructure Act of 2015 (H.R.8), an energy bill that could include language from the Energy Savings and Building Efficiency Act (H.R.1273, commonly known as "Blackburn-Schrader"). Such language would likely limit the technical assistance that the US Department of Energy (DOE) currently provides, upon request, to ASHRAE, the International Code Council, States, and Indian tribes for the development, adoption, and implementation of Standard 90.1 and the IECC.

Taken together, the possible provisions in this legislation threaten to reduce understanding of the potential full impacts of the consensus-based model building energy codes.

ASHRAE's leadership believes that more information on the impacts of building energy efficiency is needed, not less. As a result, I strongly encourage you to contact your US House Representative and urge them to protect model building energy codes by opposing the inclusion of language from H.R.1273 in the North American Energy Security and Infrastructure Act of 2015 (H.R.8) or any bill in the US House of Representatives.

For your convenience, ASHRAE has provided a suggested letter to send to your US Representative. Please take action by clicking [here](#) or visiting <https://account.votility.com/enterprise/ASHRAE/ec/142>

Thank you in advance for your time and efforts to protect the development, adoption, and implementation of

Sincerely,

A handwritten signature in black ink, appearing to read "David Underwood".

David Underwood

ASHRAE President 2015–16

Employment Opportunities

We are currently accepting employment opportunity advertisements for this year's newsletters. We have revised our cost for these postings. Rather than a set 'price' there is no cost, but we do highly encourage and appreciate any and all donations to RP, to aid in reaching our RP fundraising goal. Again, the newsletter is distributed to OVER 200 RECIPIENTS each month!

Interested in placing an ad? Please contact me at adam.feather@trane.com.

Business Card Ads

The ASHRAE Northeast Chapter would like to thank the following sponsors for choosing to help us by making a donation to ASHRAE Research Promotion:

We are currently accepting business card advertisements for this year's newsletters. The cost of a business card ad is \$10.00 per month (this money goes directly to Research Promotion; it is not income for our chapter operations).

If you list an ad for the remainder of the year you will receive 1 month free and your ad will circulate to **OVER 200 RECIPIENTS** each month!

Interested in placing an ad?

Please contact me at adam.feather@trane.com.

ASHRAE, founded in 1894, is a building technology society with more than 50,000 members worldwide. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.

