

ASSOCIATION OF ENERGY ENGINEERS - NEW ENGLAND CHAPTER



NEW ENGLAND ENERGY

April 2007 Newsletter

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Visit our website
www.aeenewengland.org

HVAC System Energy Savings with Low Payback

Wednesday, April 4th

HVAC systems are the largest source of energy consumption in most buildings. This presentation will focus on modifications to HVAC systems that are either inexpensive to implement and/or have a good return on investment. The discussion will be applicable to both new design and retrofit projects. We will examine:

- Chilled Water Systems and the applications of VFDs and control strategies
- Pumping Systems & the effect VFDs & temperature/pressure reset strategies
- Converting from 3-way terminal control valves to 2-way valves
- Fan Systems and the affect of VFDs and temperature/pressure reset strategies
- Inexpensive alternative for converting Constant Volume Systems to VAV
- Inexpensive alternative for converting Perimeter Induction Systems to VAV
- 100% Outside Air Systems – Conversion to Mixed Air
- Using lowest cost fuel for Morning Warm-up and Night Heating
- Optimum Start Control Strategies
- CO2 Monitoring and Demand Ventilation
- Enthalpy vs. Dry Bulb Air Economizer
- Low-Cost Heat Recovery
- Retro-Commissioning of Controls

Time permitting, we will also briefly examine Greenhouse Gas aspects of different chiller technologies and Electric vs. Fossil Fuel Heat.

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Continued from page 1

Our featured speaker, **Edward M. Quinlan**, is a principal of **ENGINEERED SOLUTIONS INC.**, and one of its senior HVAC project engineers and Energy Conservation specialist. Since co-founding ESI in 1988, Mr. Quinlan has been responsible for project management, engineering, field surveys and analysis for many of ESI's diverse projects in hospitals, office buildings, and private industry. For projects where ESI has been the lead firm (projects not involving an architectural firm), Mr. Quinlan has performed the work of the Project Manager responsible for Engineering, Design, Bid Solicitation, Management of weekly construction meeting, Inspections and Acceptance Testing, and Final Sign-off at the completion of the construction.

Mr. Quinlan has been the Lead Engineer on numerous Energy Studies, many of which received funding by the local utility companies. Once these studies were completed and projects were approved, ESI provided the stamped engineering documents required to construct the work. Some of the recent Projects where ESI has acted as the Prime consultant and which Mr. Quinlan has been the Project Manager and Lead HVAC Engineer include:

- **One Boston Place, Boston** – Chiller Plant Project (2004) - Replacement of 3,000 Ton Steam Absorption Chiller Plant with a High Efficiency Electric Chiller Plant
- **MGH, Boston** - Wellman Research Building (2005) – Consolidation of 80 fume hood fans into a single Lab Exhaust air handling unit with heat recovery
- **Bayer Pharmaceuticals, Walpole** – BAS Upgrade (2006) – Replacement of a 3,000 point automation system serving pharmaceutical R&D labs and Production facilities

Mr. Quinlan received a Master of Science degree from the Building Technologies program at MIT in 1980. While completing his graduate thesis, Mr. Quinlan investigated the use of ice for an off-peak cooling system and evaluated the performance of the MIT Solar 5 building for the Department of Energy. Mr. Quinlan is a member of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), the American Solar Energy Society (ASES), and the Northeast Sustainable Energy Association (NESEA).
B.S., Rutgers University (1977)
M.S., Massachusetts Institute of Technology (1980)

Meeting Manager: Dinesh Patel, DP Energy Solutions , dpatel707@msn.com

**Call the reservation Line today - 781-446-0125 or
Email Reservation To: arthur1771@aol.com**

SEE PAGE 7 FOR MEETING DETAILS

Disclaimer:

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Jim Donnelly
Chapter President

Like many of the active members of our group, I am often asked what are some of the benefits of being a Chapter Sponsor. They ask “why should I become a Chapter Sponsor when I can attend the meetings any time I want for the same price?”.

My answer usually includes a recitation of the many benefits of Chapter Sponsorship and ending with the statement “it’s short money”.

Benefits of AEE New England Chapter Sponsorship include:

- Recognition in our monthly newsletter distributed to 800 energy professionals
- Optional annual company profiles in the Newsletter at no cost
- Employment notices in the Newsletter
- A table top booth and a brief talk at our November Sponsor’s Night meeting
- Access to our AEE New England Chapter mailing list

Then this month the Board of Directors decided to add another extremely generous benefit for all our Chapter Sponsors. Each Sponsor will be allowed a \$100 discount for each employee they send to our April CEM course. This course will be held at National Grid’s Northborough location. Look inside for further information.

On to Connecticut, we’ve seen a tremendous amount of activity and interest from our membership there. With Energy Summits and CEM training taking place in March, along with discussions with AEE National about a CT Chapter, our Board supports all this activity and will continue to assist in any way possible. We’ve got some great allies and Sponsors in Connecticut and are very optimistic that a CT Chapter will prove successful. Stay tuned, you’re sure to hear more in the months ahead.

In April, we are honored to have Dinesh Patel as our monthly meeting manager. Dinesh is a long time AEE member and an active member of our Board and has tremendous experience in our industry. We appreciate his many years of service to our organization and are happy to count him as a friend. On April 4th, he’ll be hosting our meeting and will highlight “**Low Cost Energy Efficiency End Use Behavioral Changes**”. We’re looking forward to an informative evening.

Energy Conservation = Cash Flow

Visit our Website www.aeenewengland.org for up-to-date information!

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Boston Area CEM Certification



Certified Energy Manager Training Courses Offered

AEE is offering to its membership and the public, the Certified Energy Manager (CEM) training course and certification examination. The CEM course is an intensive two and a half day seminar designed as a preparatory vehicle for the CEM examination. The course offers a thorough review of the basics of efficiency improvement as it relates to electrical, utility, building and combustion systems. It is the ideal refresher course for energy managers who want to “brush up on the basics” as well as for those seeking an additional method of preparation for the examination.

AEE New England CEM Course - Massachusetts

The CEM course will be held April 25th – 27th followed by the exam on April 27th. The cost of the course and examination is \$695.00 which includes breakfast and lunch for the three days as well as a comprehensive workbook. The course will be held at the National Grid facility in Northborough and the instructor is Dr. Scott Dunning. Please note that the seminar is priced well below the traditional AEE sponsored programs so act quickly as space is limited.

Please visit our website at www.aeenewengland.org for a brochure, application form and course outline. For more information contact Brian Crafts of FMC Technologies at (978) 649-0145 or email bcrafts@fmc-technologies.com.



New England Chapter Sponsored Events

(Subject to Change)

Date	AEE Chapter Meetings	Meeting Managers
April 4	Low Cost Energy Efficient End User Behavioral Changes	D. Patel
May 2	Premium Energy Projects: A sampling of Double-Dipping, Cream	
June 20	7 th Annual AEE New England Chapter Invitational Golf Tournament	

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Contact Arthur -
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Is it Spring, yet ?

Energy prices and greenhouse gas emissions are bonding American culture like a herd of piñatas at a fraternity party. But you are more deliberate and better informed. Share your insights, challenge the so-called experts and educate yourself by volunteering or attending an AEE event. Here's a few examples:



GLOBALCON 2007

April 4-5th GLOBALCON 2007, Atlantic City, NJ is a great place to walk the Boardwalk

while it is above sea level or pick up that next AEE Certificate. Rub elbows with world class energy experts. Not far, great hotels & fun ! Register at www.aeecenter.org.

Northeast Buildings & Facilities Management Show & Conference



AEE NE is co-Sponsor of the

(NEBFM07) , April 4 & 5, 2007 at the

Bayside Expo Center, Boston. *Show* features

130 booths, 35 free seminars, social hour, etc. Organized by 5 Boston-based trade associations the parking is discounted and the beer is free...or is it the other way around ? I forget. Info at

www.proexpos.com. For Conference Topics and Speakers, click on "Attendee Info". For directions, click on "[Show Facts](#)". AEE Members are entitled to a VIP pass (on AEE NE website) for free admission, lunch and discounted parking (\$5 off \$12 rate). Stop by the AEE NE booth or attend our presentation at 1:00 pm on April 4th. Volunteers needed to attend the booth on the 5th. Please contact Kathy Stanley at energyadvocates@comcast.net.

May 7th Regular Meeting

This meeting showcases projects with eye-popping financials. For example, Whitman-Hansen HS fulfills its academic mission and tapped into five revenue sources totaling nearly \$2M. Submit your pet energy project that leveraged two or more funding streams. Send summary to Joe Hall for this cream-of-the-crop presentation.

The 7th Annual AEE NE Golf Outing



Your therapist called. Mix business with pleasure. Position your Company in the marketplace by becoming a Hole Sponsor or Outing Sponsor at this class event. For recreational golfers, it's a strong field. Non-golfers join us for dinner. The 7th Annual AEE NE Golf Outing will be held as usual at New England Country Club on Wednesday, June 20th. Announcement & reservation form is on the website.

JOB ADVERTISEMENT

B2Q Associates is seeking an **Energy Engineer** to support its growing engineering consulting business. The Energy Engineer would be responsible for individually performing or supporting senior staff in the following activities:

- Technical studies and economic analysis of energy efficiency and energy conservation opportunities in commercial and industrial facilities
- Preparing written analysis of findings and presenting recommendations for improvement in energy efficiency and operations to clients.
- HVAC design
- Building commissioning
- Energy modeling of buildings
- Data logging of building equipment

The following are required of potential candidates:

- A MS in mechanical engineering, or BS and 2+ years experience in energy engineering
- Experience with energy audits and modeling of building energy use
- Excellent written and verbal communication
- Excellence in Excel, Word, Powerpoint, Access, AutoCAD, and building energy modeling software such as Trace 700 and eQuest
- Knowledge of a wide variety of HVAC systems and control strategies

The following credentials are considered favorable:

- Professional Engineering License
- Design experience
- Construction administration experience
- Familiarity with LEED, DDC systems, retrocommissioning, and demand response strategies a plus
- Email resumes in Word format to: resumesb2q@comcast.net

Celtic Energy, Inc. – A growing, dynamic energy consulting firm with locations in the greater Hartford, Boston, Charlotte, and Las Vegas areas is hiring **entry level engineers in Connecticut**. Our diverse array of services include Performance Contract consulting, LEED consulting, energy modeling, energy audits, and commissioning services. For more information see our website at www.celticenergy.com. The candidate will be a highly motivated, entry level Mechanical/Architectural engineer(s) with 0-2+ years of relevant experience. The ideal candidate will have some knowledge of energy-efficiency technologies, heating, ventilation, and cooling, (HVAC), building envelope, Green Buildings, and computer modeling experience (DOE-2, TRACE, or E-Quest). CEI is an EOE providing excellent complementary benefits (S-IRA, etc.) while offering motivated individuals the resources and tools to a rewarding career in a growing industry. Please send resumes to Chris Halpin, President at chris@celticenergy.com.

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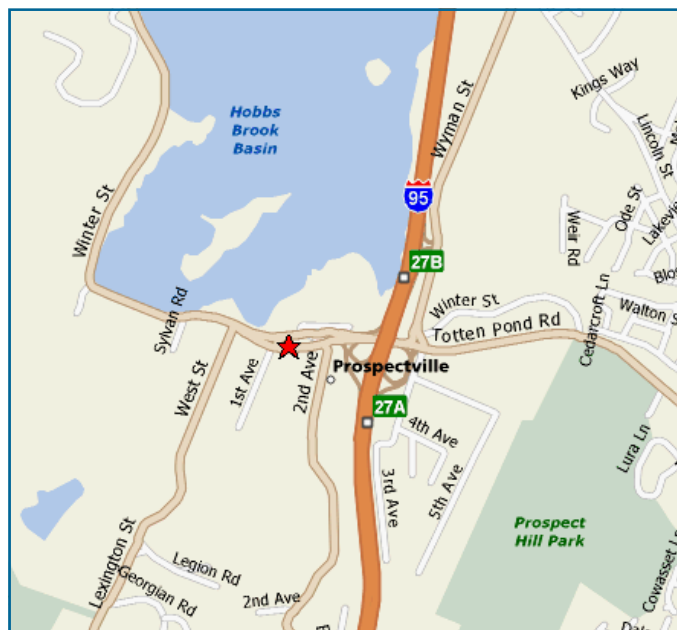
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Meeting Announcement

Wednesday - April 4, 2007

**550 Winter Street - Exit 27B off Route 128 (I-95)
Waltham, MA**

4:30 PM – 5:30 PM Board Meeting
5:30 PM – 6:30 PM Registration & Social Hour
6:30 PM – 7:00 PM Dinner
7:00 PM – 8:40 PM Presentation
8:40 PM – 9:00 PM Q&A & Adjournment
Space is Limited - Reservations Required

**Call the Reservation Line Today - 781-446-0125 or
Email Reservation To - arthur1771@aol.com**

\$40 per person ~ \$15 per student with ID

Unemployed?

Members of the AEE New England Chapter who are displaced in their career may submit "Positions Wanted" advertisements at no charge in this newsletter. Send requests to the Newsletter Editor

Upcoming Events From Outside Organizations

Date	Event	Reservations and More Information
April 4th & 5th	North East Buildings & Facilities management Show & Conference Boston, MA Bay Side Expo	www.proexplos.com Rich Ruberts – 510-888-1181
March 24th 9:00 am – 2:00 pm	Ipswich Energy Summit Ipswich, MA	www.maeep.org/events.cfm?recID=82 Dr. Wm Moomaw and Barbra Batshalom
March 27th 7:30 – 4:00 pm	Massachusetts Energy Efficiency Partnership (MEEP) Motor Assessment End Use Training Northboro, MA Location: National Grid Headquarters	www.maeep.org/events.cfm?recID=81
March 29th 5:30 pm – 8:30 pm	AFE Chapter #74 Tour: Worcester Envelop Company Presentation: Filter Selection & Maintenance Worcester, MA	RSVP snicholas@airinds.com
March 29th 5:30 pm – 8:30 pm	AFE Chapter #33 Topic: NSTAR & KeySpan Presentations Cambridge, MA Location: MIT Faculty Club	RSVP by <u>March 23rd</u> to (800) 848-9305 or mewing@Filtersales.com
April 3rd 7:30 am – 3:45 pm	Massachusetts Energy Efficiency Partnership (MEEP) Fan System Efficiency Westwood, MA Location: NSTAR Headquarters	www.maeep.org/events.cfm?recID=82
April 10 th	ASHRAE Boston Chapter Topic: Air to Air Heat Exchangers, heat pipes, plate & frame heat exchangers Waltham, MA	www.ashraeboston.org/events_calendar.cfm
	USGBC LEED Trainings Scheduled for the Boston area	www.greenroundtable.org
	Various ISO New England Courses & Workshops Various Towns www.iso-ne.com/support/training/sched/index.html www.iso-ne.com/calendar/view.do www.iso-ne.com/calendar/view.do?task=monthcal&date=20070301&cat=&type=&link=yes&filter=off	