THE HERRING CHOKER

ASHRAE

NB PEI CHAPTER

May 2017 Issue

2016-2017 Executive

President:
Sharlene Innes (506) 853-1444

President Elect:
Robert Hoadley (506) 459-3940

Vice-President:
Eric LeBlanc (506) 855-3365

Treasurer:
Camille Chevarie (506) 855-2394

Secretary:
Yves Savoie (506) 858-1300

Membership Promotion Chair:
Ryan Gosson (506) 977-1418

Research Promotion Chair:
Eric LeBlanc (506) 855-3365

Student Activities Chair:
John Willden (506) 856-2215

Historian:
Kevin Clannon (506) 382-8625

CTTC Chair (Programs):
Matthew Peachman (506)633-6650

Newsletter Editor:
Mark McGinnis (506) 854-2496

Electronic Communication:
Mike Boudreau (506) 384-3425

YEA Coordinator:
Daniel El-Khoury (506) 389-6904

CRC 2016 General Chair:
Dan Boudreau (506) 857-8880

Grassroots Government Activities Chair:
Terry Thibodeau (506) 850-0287

Golf Tounament:
Gerry Waselynchuk (506)857-8744

Board of Governors:
Jennifer Chapman, Pierre Comeau, David Samuel, Devin Harinarine, Shelby Gallant

Next Meeting
Tuesday May 9th, 2017

Location: **Alma City Club**
114 Alma St, Moncton

Executive Meeting Notice

All members of the Board of Governors, Committee Chairpersons and the Executive are reminded that the executive meeting begins at 4:00 PM Tuesday May 9th, 2017 at the Alma City Club.

Meeting Agenda

5:00 pm – Attitude Adjustment Hour

6:00 pm - "The Essential role of Indoor Air Quality in Patient Outcomes. New Tools and New Understanding."

7:00 pm – Supper is a choice of (RSVP is Required):

A) Herb Marinated Pork Loin and Wild Mushroom Cream Sauce with Garlic Mashed Potatoes and Todays Fresh Vegetables.

Or

B) Fresh Atlantic Salmon, Dijon and Maple Glaze with Three Onion and Parmesan Risotto and Buttered Fresh Vegetables.

Dessert: Strawberry and Vanilla Custard Triffle

Members: $20.00 / Non-Members: $30.00 / Students: $10.00

New Members/Students receive a complimentary first meal with ASHRAE NB/PEI.

STEELE ENGINEERING LIMITED
Air & Water Balancing
Jarrett G. Steele, PEng
Test & Balance Engineer
Fredericton, NB
tel (506) 206-1511
fax (506) 206-1213
jsteele@steeleengineering.ca

EMCO CORPORATION
SHARLENE INNES, P.TECH
Commercial Quotations
1180 St. George Blvd
Moncton, NB E1E 4K7
Email: sinnes@emcoltd.com
Phone: (506)853-1444 x422
Fax: (506) 853-1457
Cell: (506) 871-6235

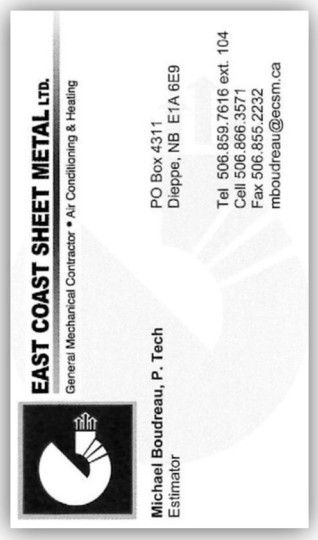
MCW
Maricor
A Division of MCW Consultants Ltd.
77 Vaughan Harvey Blvd., Suite 200
Moncton, New Brunswick, E1C 0K2
Robert McEwen, P. Eng.
Mechanical Design Engineer
Associate
Telephone: (506) 857-8880
Cell: (506) 874-6042
Facsimile: (506) 859-8393
E-mail: rmcewen@mcw.com
Internet: www.mcw.com
Moncton Saint John Halifax Charlottetown Truro Toronto Winnipeg Vancouver

Introduction to Our Speaker

Taylor Healthcare Commissioning, Inc.
Physician-Led Consulting

Dr. Stephanie Taylor received her MD from Harvard Medical School, Boston, Massachusetts in 1984. For the next several decades, she practiced clinical medicine and did academic research in cellular growth mechanisms. During this time, she became increasingly concerned about the patients who were harmed by medical errors and new infections during their in-patient treatment. Determined to gain a better understanding of the impact of the built environment on patient wellbeing, she returned to school and obtained her Master's Degree in Architecture And Engineering from Norwich University in Northfield, Vermont.

After working for several years in an architecture firm which focused on hospital design, she founded Taylor Healthcare Commissioning, Inc., a consulting company that specializes in designing, building and maintaining hospitals and other commercial buildings for optimal occupant safety. She finds that her physician insights help beyond understanding how spaces are used in healthcare facilities. Her knowledge of the human body helps her envision the ideal building infrastructure. For example, ventilation is needed for the respiratory system while information technology is a kind of neural network that provides sensory data about the hospital's internal environment, with all systems working together to support patient healing.



Introduction to Our Speaker Continued...

Dr. Taylor is currently working on projects that overlay engineering schematics on data about patient outcomes to identify building characteristics —especially management of indoor air quality—associated with changes in the rates of healthcare-associated infections or other adverse outcomes. She has recently expanded her focus to include occupant wellbeing in all commercial and residential buildings. Dr. Taylor is passionate about the construction industry understanding the tremendous impact of the built environment on occupant health. To communicate the importance of buildings on health, she writes a monthly column and bi-annual feature articles for Engineered Systems Magazine and other healthcare-related blogs.

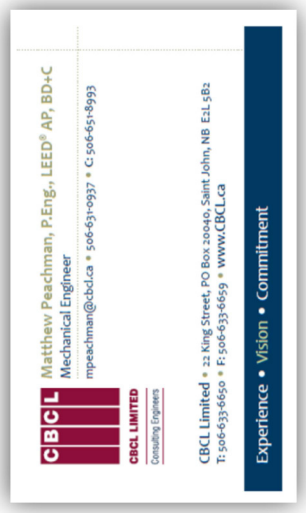
Dr. Taylor has designed hospitals globally, from the United States to Papua New Guinea to Vietnam. In addition to her Taylor Healthcare Commissioning work, she is a member of the Harvard Medical School Incite Health Fellowship, a program that brings together multidisciplinary teams from across the US, trains them in design thinking and entrepreneurship, and gives them the tools and resources to invent the future of primary care.

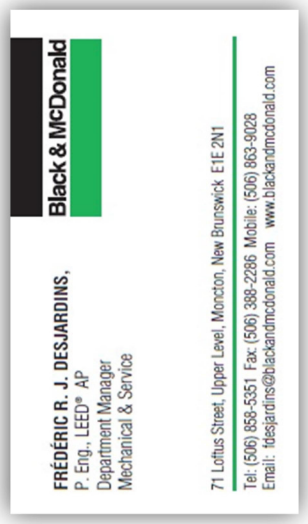
Dr. Taylor lives in rural Stowe, Vermont with her husband and six dogs. In her spare time, she plays just about all sports. Skydiving, which she does with her son who is in both medical and business graduate school, is a favorite activity.

Logan Hammond of the Heating Ventilation and Air Conditioning Technology program at Holland College in Prince Edward Island is the recipient of the NB/PEI Chapter of ASHRAE Award. Congratulations Logan!

ASHRAE

Shaping Tomorrow's Built Environment Today





"The Essential role of Indoor Air Quality in Patient Outcomes.

New Tools and New Understanding."

Presentation Abstract

Engineers put much thought and work into designing and managing building HVAC systems with the goals of preserving building materials, conserving energy consumption and keeping occupants comfortable.

The primary function of most buildings, however, should be to protect the health and safety of people. Paradoxically, the intersection of Indoor Air Quality (IAQ) and occupant health or disease is one of the least understood subjects in the field of public health! This is not from deliberate neglect of engineers, but from lack of medical research on IAQ and health.

Two significant trends are occurring in this century: people spend more and more time indoors, and the incidence of chronic disease is higher than ever before. Are these two factors related? If so, how can indoor air management support occupant health and not promote chronic illnesses?

In this presentation, we will accomplish the following:

1 - Understand the current Indoor Air Quality environment

2 - Present New Research findings on the relationship between indoor air management and patient infections in hospitals. Micro-biome Study will be presented with new data. (in press 2017)

3 - Review existing studies on IAQ and occupant health

4 - Review solutions to improve IAQ and maximize Patient outcomes in Healthcare facilities.

This Presentation sponsored by Nortec

TWEEDIE & ASSOCIATES
CONSULTING ENGINEERS LTD.
Stephen Tweedie
P.Eng., LEED AP, CBCP
33 Pine Glen Road
Riverview, NB E1B 1V3
Tel. (506) 383-8223
Fax. (506) 382-8223
Cell. (506) 852-1570
e-mail. stweedie@tace.ca

Daniel El-Khoury, P.Eng./ing.
Project Engineer/ingénieur de projets
T: (506) 857-2777
D: (506) 389-6904
F: (506) 857-2753
dje@crandallengineering.ca
crandallengineering.ca

Master
AIR CONDITIONING | REFRIGERATION
VENTILATION | HEATING
Kevin Clannon, CET
Senior Applied Sales
Specialized Equipment
kclannon@master.ca
T 506-382-8625
C 506-875-0675
F 506-382-8626
1 888 577-8625
The Master Group L.P.
186, Dieppe Blvd.
Dieppe (NB) E1A 6P8
MASTER.CA

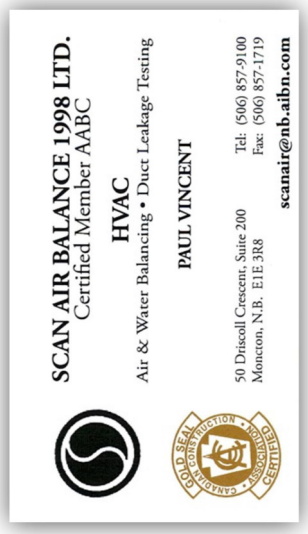
YEA Technical Weekend Summary

Ben Roundell, EIT
Argyll Associates Limited

In February 2017 an opportunity was presented to the YEAs of the NB/PEI chapter to apply for a chance to attend the first YEA Technical Weekend at the ASHRAE Headquarters in Atlanta, Georgia. As luck would have it I won the coin toss and would be representing the NB/PEI chapter, as well as making my first international trip in March.

The course was attended by ten YEAs, mostly from the southern states, a couple of Californian's, and three other Canadian members. Being a small group it was quite easy getting acquainted with everyone over dinner that first evening.

The professional development course was two mornings in class, and two afternoons of technical tours. The course “Energy Management in New and Existing Buildings,” taught by Richard Pearson, P.E., (ASHRAE Fellow and Distinguished Lecturer) was informative, and relevant to the work I see here in New Brunswick. Mr. Pearson was able to effectively communicate and get through his 300+ slides and examples in the two mornings we had together, delivering a wealth of information in that time tying together subjects as broad as comfort, monetary budgeting, performance analysis, energy management (Energy Star & LEED), testing, and commissioning.



YEA Technical Weekend Summary Continued...

The first scheduled technical tour had fallen through, but a last minute tour was arranged thanks to a connection through an ASHRAE member of the Atlanta chapter who has been working on this building for a number of years doing energy management and upgrades. Our co-host on the tour was the head of mechanical operations of the building. Because this was an unofficial tour they asked we keep the building anonymous. It was arranged for us to meet at a building in downtown Atlanta with these two to show us around this 52 storey building. We were given a twenty minute run through of what the goals of the design and performance were. A summary of the mechanical equipment and some design & operations philosophy was shared. All this information was presented before we even got to see the building, then it was revealed that the building had achieved a LEED score in the high 80s, working towards a +90 score – almost tripling its original score based on the design from 30+ years ago. After this we went to view the cooling towers, then the boiler room, then up to the penthouse comparing new and old equipment and energy management protocols.

Our next tour took us to the Sweetwaters Brewery, less technical information relevant to YEA's was presented, but the tour guide was enthusiastic and taught us a lot about the history of the company and how beer gets made in *their* special way.

The last tour we took was through ASHRAE headquarters after lunch. It was self-guided, but the group did the tour together, each equipped with an info package to guide us around the building that summarized the different energy management systems around the building. Each station gave us an opportunity to figure out where and how these systems were being used, and the type of equipment in place. We were then able to discuss possible applications in each of our particular climates.

Overall it was a very enriching experience. Although it was a small group I got to grow my network of peers, and enhance my knowledge of the specifics of energy management that I will be applying in the future.

MacLeod and Grant Limited
Commercial - Industrial Heating Systems
www.macleodandgrant.com
D.J. (Jim) Morris
P.O. Box 121, Moncton, NB, E1C 8T1
451 Paul St., #213
Dieppe, NB E1A 6W8
Tel. (506) 383-3151
Fax. (506) 388-1927
E-mail: jmorris@macleodandgrant.com

xylem
Let's Solve Water
Joey Parent
Eastern Territory Manager
Xylem Applied Water Systems,
a Division of Xylem Canada Company
331 Elmwood Drive, Unit 4, Suite 166, Moncton, NB E1A 7Y1 Canada
Cell 1 506 962 5387
Toll Free 1 888 488 4033
joey.parent@xyleminc.com
www.xylemappliedwater.com

J.F. Taylor Enterprises Ltd.
Manufacturer's Agents for
Plumbing, Heating & Humidification
JF TAYLOR
Andrew G. Campbell
President - Co-Owner
Office: (506) 389-3739
Fax: (506) 389-8751
andrewcampbell@jftaylor.ca Cell: (506) 380-1137
41 Blakeny Street
Moncton, N.B.
E1A 4B8
VISIT OUR WEBSITE: WWW.JFTAYLOR.CA

ASHRAE Distinguished Lecturer – April Meeting

Patricia T. Graef, P.E., ASHRAE Fellow

Patricia Graef, P.E., Fellow ASHRAE, LEED GA, is senior Engineer, Munters Corp., Fort Myers, Florida.

Patricia Graef has spent the past 44 years focusing on engineering and developing products that control temperature and moisture in building air as well as the water associated with the processes.

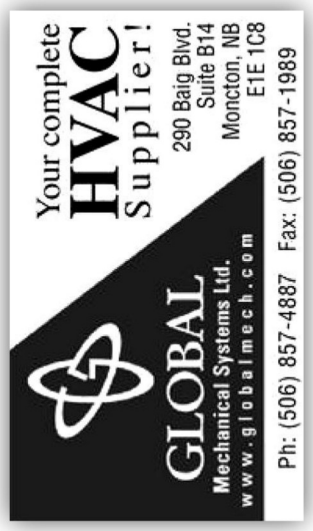
Graef received her bachelor of science in mechanical engineering from the University of Florida. In the time Graef has worked for Munters, she has served as a Scientist in the cooling tower division, was the Director of Core Technology for Humidification and Engineering and Development Manager for the HumiCool division. Today she is senior engineer for the Air Treatment division and has more than a dozen international patents in her name.

Graef is a 42-year member of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE). In ASHRAE she has been a voting member of Guideline 12 Managing the Risk of Legionellosis Associated With Building Water Systems since 1995 and Standard 188 Legionellosis: Risk Management for Building Water Systems since 2004. She has contributed to four ASHRAE handbook chapters including Water Treatment, Humidification, Evaporative Cooling , and Gas Turbine Inlet Cooling. Graef has shared with the HVAC industry her knowledge by contributing to ASHRAE Handbooks, standards writing, monitoring research projects, and program presentations.

Graef has made numerous technical presentations at ASHRAE, ASME, Power Gen, and the Electric Utility Chemistry Workshop. Her presentations include design, commissioning and maintenance of heat and mass transfer equipment including the chemistry of the service water that is utilized by the equipment. She developed water quality and water usage programs to predict water usage, scaling rates and water blending capabilities. This is used to predict water usage and water blow-down of sprayed tube heat exchangers, evaporative air coolers and humidifiers. Graef developed a program to predict the annual benefit of adding evaporative cooling to the inlet of a combustion turbine generator. The program uses ASHRAE Bin weather data. It checks every hour of the year and calculates the power out-put of the combustion turbine with and without evaporative precooling.

Graef is Vice President and a member of the Board of Directors of ASHRAE . She also serves on the Board of Governers of her local ASHRAE Chapter.

As ASHRAE vice president, Graef is a member of the Board of Directors and the Executive Committee and serves as chair of Technology Council. Her other recent service includes a member of the Advanced Energy Design Guide Steering Committee, member of Finance Committee,



Patricia T. Graef, P.E., ASHRAE Fellow Continued…

…. Standards Committee, Technical Committees (TC) 3.6, Water Treatment, 5.7 Evaporative Cooling and 5.11 Humidification. She has also held leadership positions on five other ASHRAE standards.

Graef started her career in new product development over 40 years ago as an application engineer for Munters Corporation. She helped transform the inventions of Carl Munters from his Swedish laboratory to the US and other global markets. These products include cooling towers, mist elimination, evaporative cooling, humidification and dehumidification. Graef further contributed to these innovations with her own patents.

Graef's comprehensive design and operational portfolio covers manufacturing, testing and application of heat and mass transfer media, application of humidity control in commercial and industrial spaces, adiabatic cooling for agriculture, residential, commercial and industrial spaces.

Significant projects in which Graef was involved include Mammoth Pacific Geothermal Facility, Mammoth Lakes, CA, Southern Company, Savannah Electric-McIntosh Plant. Rinken, GA, Union Carbide Company, Taft, Louisiana, General Motors Validation Center, Pontiac, Michigan, Ford Assembly Plant, Norfolk Virginia, University of Georgia, Davis Farm, Athens, Georgia.

Graef is a recipient of a Distinguished Service Award.

The New Legionella Standard: ANSI/ASHRAE 188-2015 'Legionellosis: Risk Management for Building Water Systems'

ASHRAE has been actively involved in providing information on Legionella since 1979 in response to the first Legionnaire's disease outbreak in 1976 and the subsequent discovery by the CDC of the causative bacteria – Legionella. While Legionnaire's disease has been known for many years, recent outbreaks have increased awareness of the disease, its causes and prevention strategies. The CDC estimates 8-18 thousand cases per year, of which more than 10% are fatal.

ANSI/ASHRAE 188 first published in June 2015 establishes minimum Legionellosis risk management requirements for building water systems. It applies to human-occupied commercial, institutional, multi-unit residential, and industrial buildings, excluding single-family residential buildings. It is intended for use by owners & managers of human-occupied buildings, excluding single-family residential buildings and also for those involved in design, construction, installation, commissioning, operation, maintenance & service of centralized building water systems and components

This session provides an overview of Legionella bacteria, its source, how it is amplified, how it is transmitted and who is susceptible. There will be a detailed look at the standard, the background on its development and what is required for its application and adoption. Specific topics include the framework for legionella bacteria control measures, health care facility requirements, requirements for adopting a Water Management Program for specific devices such as cooling towers, ornamental fountains, spas, etc., elements of a Water Management Program, and designer requirements.

Technical Program

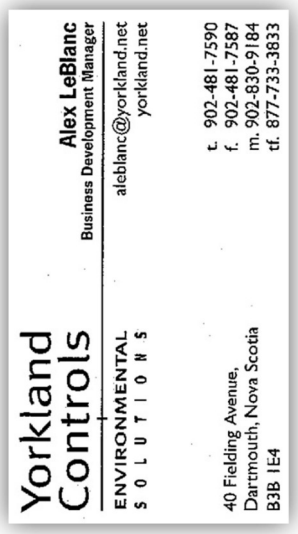
Sunday, June 25 – Wednesday, June 28

Recently the building industry has seen a push in net zero energy (NZE) and California is on the forefront as Title 24 will require all new residential construction to be NZE by 2020 and all commercial buildings to be NZE by 2030," Ann Peratt, Conference Chair said. The conference includes tracks that demonstrate the benefits of net zero energy and ways to achieve that goal in the design and operation of buildings.

The fifth annual Research Summit brings together distinguished researchers to present the latest research results on building science and renewable energy and its impact as we move towards NZE buildings.

The conference Technical Program features new tracks that focus on resources to design, build, control, commission and operate these high efficiency facilities:

- Building Life Safety Systems **NEW**
- Commissioning: Optimizing New and Existing Buildings and their Operation
- Controls **NEW**
- Fundamentals and Applications
- HVAC&R Systems and Equipment
- Net Zero Energy Buildings: The International Race to 2030 **NEW**
- Refrigeration
- Residential Buildings: Standards Guidelines and Codes **NEW**



Advertise Your Company Here!

For more information contact the Herring Choker editor at:

editorashraenbpei@gmail.co

The 2017 ASHRAE Annual Conference

The 2017 ASHRAE Annual Conference will be held in sunny Long Beach, California! The Technical Program along with Registration, the Bookstore and Speakers Lounge will be at the Long Beach Convention and Entertainment Center.

Committee meetings will be held at the Headquarter Hotel, the Hyatt Regency Long Beach, as well as at the Renaissance Long Beach and the Long Beach Convention and Entertainment Center.

Registration Information

Early Bird registration fees from March 1 st through May 1st

- $530, member/$740, non-member
- $505, first-time member attendee/$715, first-time non-member attendee
- $135, Life Member

Advance registration fees from May 2nd through June 12th

- $555, member/$765, non-member
- $530, first-time member attendee/$740, first-time non-member attendee
- $145, Life Member

Full registration fees from June 13th through June 28th

- $690, member/$900, non-member
- $655, first-time member attendee/$875 first-time non-member attendee
- $155, Life Member
- $270, member one-day fee/$320, non-member one-day fee

Registration fees for speakers, student branch advisors and students

- $135, speaker
- $25, student branch advisor
- $25, student member/$55, full-time student non-member

ASHRAE Learning Institute

2017 Online Course Series

2 WAYS TO REGISTER

Internet: www.ashrae.org/onlinecourses
Phone: Call 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

One-part course (3 hours) **$284** (**$219** ASHRAE Member) – – – Two-part course (6 hours) **$484** (**$359** ASHRAE Member)

NEW! Complying with Standard 90.1-2016: Envelope/Lighting
Wednesday, April 5, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016: HVAC/Mechanical
Tuesday, April 11, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016: Appendix G
Tuesday, April 18, 2017 – 1:00 p.m. to 4:00 p.m.

Air-to-Air Energy Recovery Fundamentals
Wednesday, May 3, 2017 – 1:00 p.m. to 4:00 p.m.

Air-to-Air Energy Recovery Applications: Best Practices
Tuesday, May 9, 2017 – 1:00 p.m. to 4:00 p.m.

Humidity Control: Basic Principles, Loads and Equipment
Tuesday, June 13, 2017 – 1:00 p.m. to 4:00 p.m.

Humidity Control: Applications, Control Levels and Mold Avoidance
Tuesday, June 20, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! New ASHRAE-Classified Refrigerants to Meet Society's Changing Needs
Tuesday, July 11, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Variable Refrigerant Flow System: Design & Application
Tuesday, July 18, 2017 – 1:00 p.m. to 4:00 p.m.

Advanced High-Performance Building Design
Wednesday, August 9, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Fundamental Requirements of Standard 62.1-2016
Wednesday, September 6, 2017 – 1:00 p.m. to 4:00 p.m.

Laboratory Design: The Basics and Beyond
Tuesday, October 10, 2017 – 1:00 p.m. to 4:00 p.m.

Introduction to Ultraviolet Germicidal Irradiation (UVGI) Systems
Monday, October 16, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Complying with Standard 90.1-2016
Part I: Wednesday, November 1, 2017 – 1:00 p.m. to 4:00 p.m.
Part II: Tuesday, November 7, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! Variable Refrigerant Flow System: Design & Application
Wednesday, November 29, 2017 – 1:00 p.m. to 4:00 p.m.

NEW! New ASHRAE-Classified Refrigerants to Meet Society's Changing Needs
Tuesday, December 5, 2017 – 1:00 p.m. to 4:00 p.m.

ASHRAE HVAC Design & Operation Training

3 Courses, 7 Days of Intense Instruction

Atlanta • Chicago • Denver • Hartford • Seattle • Toronto

Improving Existing Building Operation - Registration is $599 ($499 ASHRAE Member)

Identify ways to improve existing HVAC system efficiencies and reduce utility expenses while maximizing performance of the building systems. This training details proper system operation and maintenance and introduces methods for evaluating potential system improvements.

HVAC Design: Level I – Essentials - Registration is $1,264 ($1,009 ASHRAE Member)

Gain practical skills and knowledge in designing and maintaining HVAC systems that can be put to immediate use. The training provides real-world examples of HVAC systems, including calculations of heating and cooling loads, ventilation and diffuser selection using the newly renovated ASHRAE Headquarters building as a living lab.

HVAC Design: Level II – Applications - Registration is $854 ($699 ASHRAE Member)

HVAC Design: Level II — Applications provides instruction on HVAC system design for experienced HVAC designers and those who complete the HVAC Design: Level I – Essentials training. The training provides information that allows practicing engineers and designers an opportunity to expand their exposure to HVAC systems design procedures for a better understanding of system options to save energy.

Visit www.ashrae.org/hvactraining to register and learn how your Chapter can earn PAOE points.

Contact Karen Murray (kmurray@ashrae.org) to discuss scheduling ASHRAE HVAC Training in your Chapter area.