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ASHRAE LONDON CANADA CHAPTER #116

TOPIC:

Current Issues Addressing Efficiency Decarb and New Refrigerants in the Market

Presenter:

**Mark W Fly, P.E.
Distinguished Lecturer – ASHRAE**

Tuesday May 7th, 2024

5:00pm to 6:00pm = Social; 6:00pm to 7:00pm = Dinner; 7:00pm = Presentation

Eleven Sixty Bar

1160 Wellington Rd, London

Registration Link:

<https://forms.gle/oPEYYJAnqBF4pnhk7>

\$85 – Members | \$25 - Students

Golf Tournament – Monday June 3rd, 2024

FireRock Golf Club

10:00 AM Scramble Start

Registration Link:

<https://forms.gle/8HasrTW8Xu4dz7S36>



FireRock
GOLF CLUB

10345 Oxbow Dr, Komoka

April Topic

Current Issues Addressing Efficiency Decarb and New Refrigerants in the Market

Regulations and their associated compliance metrics are developed to drive the desired results. However, as it is only practical to simplify these metrics, they often result in manifesting unintended consequences. As we raise the bar on energy efficiency, in order to lower building energy and carbon consumption, the means of measurement and regulation must necessarily become more complex. As the end goal is to reduce the Whole Building Energy and Carbon Use, more sophisticated modeling of equipment energy consumption will be required. This also necessarily include the modeling both equipment and building sequence of controls and operations. Future metrics will have to rely more on whole building energy modeling combined with continuous commissioning to ensure continued efficient building operation. This requires the future development of performance maps all types of equipment as well as better incorporation of control and operation sequences into modeling software. This presentation will discuss where we are and what needs to be done to change how we evaluate system efficiency by:

- Understanding the difference between equipment and system efficacy
- Reviewing where we have been and what happened when we reach “Max Tech” in equipment efficiency
- Evaluating where equipment is rated vs. where it operates
- Discovering what tools need to be developed to change how we evaluate building energy performance

April Presenter

Mark W Fly, P.E.

Distinguished Lecturer – ASHRAE

Mr. Fly has over 40 years of experience as a Researcher, Consulting Engineer, Contractor, and Manufacturer in the HVAC Industry. He is currently the Executive Director of the NAIC Laboratory at AAON, Inc. in Tulsa, Oklahoma having served as Director of Engineering of AAON for 12 years prior to taking that position. He holds a Bachelor of Science in Engineering Physics from Missouri State University and is a Licensed Professional Engineer in two states.



In ASHRAE, Mr. Fly holds the grade of Fellow and has been honored with both the Distinguished Service and Exceptional Service Awards. He has been and is currently active on numerous Technical Committees, Standing Committees and Councils, and is currently serving on the Nominating Committee and as a Trustee on the ASHRAE Foundation Board. He served as a Director at Large on the ASHRAE Board of Directors from 2014-2017. He has also been active in the HVAC Industry Trade Association, AHRI, where he served on their Board of Directors from 2012-2016 and as Section Chair for Unitary Large Equipment, and Air-to-Air Energy Recovery. He has also participated on the Technical on Sound, Unitary Sector Leadership Council and is currently serving on the Systems Steering Committee and Applied Sector Leadership Council.



2023-2024 Chapter President's Message

To our membership,

As we approach the end of another "ASHRAE year", I wanted to thank everyone for their participation this year. Everyone's commitment to the involvement of the chapter was amazing and we made some huge progress in continuing to develop our presence as an industry group.

To celebrate the end of the year we have announced the golf tournament is going to be held at FireRock golf club – a fantastic course in our area. It's going to be a great time with some beautiful greens, friendly competition, and plenty of laughs. It's all in support of ASHRAE research Canada and our chapter operations for the years to come.

So mark your calendars, register your teams, and get ready to tee off with everyone on Monday June 3rd!

If any members are interested to volunteer for the chapter for the upcoming year, please contact me at jeff.armstrong@trane.com or anyone listed on the board.

Jeff Armstrong, P.Eng.



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Professional Development

Need hours for your professional development requirements? Be sure to attend a chapter meeting. Professional Engineers Ontario requires members to have yearly professional development training recorded through the Practice Evaluation and Knowledge (PEAK) program. Other groups may also require continuing education.

Chapter Upcoming Meetings

Tuesday May 7th – Chapter Technical Meeting
Topic: The Future of HVAC Energy Efficiency - Pushing the Boundaries of HVAC Efficiency
Speaker: Mark W Fly. P.E, Distinguished Lecturer

Monday June 3rd – Chapter Golf Tournament

Monday June 22-26 – ASHRAE Annual Conference
www.ashrae.org/2024Annual

***** be sure to check web site for latest information *****
<http://LondonCanada.AshraeChapters.org>

ASHRAE Society Engineering Job Board

The ASHRAE society Engineering job is a publicly accessible job board where all companies can create job postings for HVACR related jobs. The resource is available at <https://jobs.ashrae.org/>



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ASHRAE RESEARCH

Hello ASHRAE London Members,

My name is Glenn Kernaghan and I am the Chapter Research Promotion Chair for this year. Our Research Promotion goal for this year is \$10,000 and look forward to reaching this goal through your continued support.

This year we will be recognizing donors at a RP Donor Recognition meeting by displaying individual and company donors prior to one of the technical presentations. Donors will also be recognized in the monthly newsletter and on the London Chapter website. To donate online please visit: <http://www.ashrae.com/donate>

Current Donors:

Glenn Kernaghan, Aaron Hampel, Tom Deslippe, Richard Hammond

Current Honour Roll Individual Donors:

Jeff Armstrong, Tom Pollard, Christopher Zettler

Current Honour Roll Corporate Donors:

Trane, O'Dell, V&R Consulting Engineers, Chorley & Bisset Consulting Engineers, Masters Group, Art Blake Refrigeration, Callidus

<u>Contribution Levels</u>	<u>Individual</u>	<u>Company</u>
Honour Roll	\$150 +	\$500 +
Major Donor (Bronze)	\$250 - \$999	\$500 - \$999
Major Donor (Silver)	\$1000 - \$2,499	\$1000 - \$2,499

If any questions, please contact:

Glenn Kernaghan

glennkernaghan@gmail.com





Technical Program Released For ASHRAE 2024 Conference for Integrated Design, Construction & Operations

ATLANTA (April 17, 2024) – ASHRAE has released a comprehensive technical program for its 2024 Conference for Integrated Design, Construction & Operations (CIDCO), taking place June 24-26, 2024 in Indianapolis, IN. Early bird registration is available through April 30.

Rebranded from the former Building Performance Analysis Conference, CIDCO provides an in-depth look at existing tools and applied knowledge, as well as the study and introduction of new technologies including machine learning, artificial intelligence, and virtual reality to design, construct and operate buildings.

“This conference will present a holistic approach to building sustainability, merging design, construction, and operations to maximize efficiency and minimize environmental impact,” said conference chair John Bynum. “Conference attendees will learn how leveraging integrated analysis and digital practice management to make informed decisions throughout the building lifecycle, from conceptualization to operation.”

The two day conference will include keynotes, seminars, panel discussions and debates from more than 60 presenters.

Keynote sessions will feature presentations from ASHRAE Presidential Fellow Kent Peterson, P.E. and Vice President of P2S Inc. on Technology's Evolving Role in Advancing Decarbonization in Building Design, Construction and Operation and ASHRAE Member and President of Setty & Associates International Rajnish B. Setty on Data Driven Future for Integrated Design, Construction and Operations.

CIDCO will be held in conjunction with the 2024 ASHRAE Annual Conference, June 23-26 in Indianapolis. All Annual Conference registrants have access to CIDCO conference sessions.

For more information about CIDCO, including the full technical program and registration, visit ashrae.org/cidco24.

2024 ASHRAE Annual Conference To Convene In Indianapolis

ATLANTA (March 14, 2024) – Registration is now open for the 2024 ASHRAE Annual Conference taking place June 22-26, at the Marriott Indy Place in Indianapolis, Ind. Early bird registration ends April 29.

“The 2024 ASHRAE Annual Conference promises to be an exceptional event, providing valuable insights and networking opportunities for professionals in the field,” said 2023-24 ASHRAE President Ginger Scoggins, P.E., Fellow ASHRAE. “The conference offers a great opportunity to forge meaningful connections and stay at the forefront of industry trends, while enjoying the vibrant city of Indianapolis.”

The conference will include activities such as tours, social events, award recognitions and a comprehensive technical program featuring more than 80 sessions. Attendees will have the opportunity to explore industry-related topics related on the following eight technical tracks:

- HVAC&R Systems and Equipment
- Fundamentals and Applications
- Workforce Development
- Research Summit
- Artificial Intelligence and the Built Environment
- Building Life Cycle Assessment
- Legislation, Standards, Codes and Guidelines



Electrification: Possibilities and Pitfalls

The preliminary technical program will be available in the coming weeks.

The plenary session will feature a keynote presentation from Julia Landauer, two-time champion NASCAR driver and advocate for STEM Education and women's empowerment.

During the President's Luncheon, on Monday, June 24, incoming 2024-25 ASHRAE President Dennis Knight, P.E., BEMP, Fellow ASHRAE, will present his inaugural address and the 2024-25 officers and directors will also be installed.

The 2024 ASHRAE Conference For Integrated Design, Construction & Operations, will be held in conjunction with the ASHRAE Annual Conference, June 24-26, also in Indianapolis, Ind. Formerly known as the Building Performance Analysis Conference, this conference provides a comprehensive look at existing tools and applied knowledge, along with the examination and integration of new technologies such as machine learning, artificial intelligence, virtual reality and robotics. Early bird registration ends April 30. For more information, visit ashrae.org/cidco24.

For complete information and registration for the 2024 ASHRAE Annual Conference, visit ashrae.org/2024Annual.

ASHRAE Releases Guide on the Role of Grid Interactivity in Decarbonization

ATLANTA (November 2, 2023) – ASHRAE has released a new guide focusing on the critical role of grid interactivity in the decarbonization process.

The [Grid-Interactive Buildings for Decarbonization: Design and Operation Resource Guide](#) is the second in a series of guides developed by the [ASHRAE Task Force For Building Decarbonization \(TFBD\)](#) and provides information on maximizing carbon reduction through buildings' interaction with the electric power grid.

"Grid-interactive buildings actively engage with the energy grid. They utilize smart technologies, renewable energy sources, and energy storage systems to optimize energy consumption and generation. This allows them to respond in real-time to grid signals, thereby reducing overall demand and GHG emissions," said ASHRAE TFBD chair Kent Peterson P.E., Presidential Fellow. "Integrating buildings with the electrical grid is a critical component in the decarbonization process. It's an emerging focus for building professionals, and ASHRAE is thrilled to provide new guidance as we collectively work towards a more sustainable, resilient, and energy-efficient built environment."

Decarbonizing the electric grid necessitates a fundamental shift towards a dynamic, two-way relationship between buildings and the grid. This approach enables buildings to respond flexibly to grid conditions, including time-varying carbon emissions rates. In recent years, the significance of this two-way communication has grown, driven by the integration of renewable energy sources, grid reliability concerns and the impact of extreme weather conditions. These factors have prompted utilities, grid operators and the building community to reassess the role buildings can play in supporting grid reliability and decarbonization by reshaping their energy consumption patterns.

The guide offers best practices, design considerations and operational guidelines to target the three primary value streams of grid integration:

1. **Reduced Carbon Emissions:** Learn how to make significant contributions to reducing carbon emissions through smart building-grid interaction.
2. **Cost Savings:** Discover strategies to optimize energy usage and save on operational costs.
3. **Resiliency:** Enhance your building's ability to withstand and adapt to changing grid conditions, ensuring uninterrupted operations.

While the guide primarily focuses on commercial and multifamily buildings, it also includes relevant aspects for the



residential and industrial sectors. In addition to design guidance, the resource guide provides operational recommendations for both new and existing buildings, empowering them to optimize their available demand flexibility.

The Grid-Interactive Buildings for Decarbonization: Design and Operation Resource Guide can be purchased from the [ASHRAE Bookstore](#) or by contacting ASHRAE Customer Service by phone at 1-800-527-4723 (United States and Canada), 404-636-8400 (worldwide) or fax 678-539-2129.

The [ASHRAE Task Force For Building Decarbonization \(TFBD\) webpage](#) includes technical resources, information, videos and publications to expedite the adoption of climate change mitigation policies and reaffirms the Society's goals stated in the ASHRAE Vision 2020 report, approved by ASHRAE's board of directors, as well as the [ASHRAE Position Document on Building Decarbonization](#), to achieve net zero GHG emissions in operation for all new buildings by 2030.

ASHRAE will host the seminar "*Grid-Interactive Buildings for a Decarbonized World*" where the guide, as well as project case studies that helped in the guide's development, will be presented. The seminar will take place at the [2024 ASHRAE Winter Conference](#), January 20-24, 2024 in Chicago. Conference registration is open now.

ASHRAE Pocket Guide 10th Edition

Now available in the ASHRAE Bookstore! The ASHRAE Pocket Guide 10th edition serves as a user-friendly, offline reference for engineers without easy access to complete ASHRAE Handbook volumes. This latest edition has been revised to include updates from the four current volumes of the ASHRAE Handbook series, from the 2019 editions of ASHRAE Standards 15, 34, 62.1, 62.2, and 90.1, and the 2020 edition of Standard 55. Learn more about what is included in the 10th edition and purchase your copy today.

<https://www.ashrae.org/technical-resources/bookstore/ashrae-pocket-guide-for-air-conditioning-heating-ventilation-refrigeration-10th-ed>

New ASHRAE Certification Study Guide

Now available in the ASHRAE Bookstore

The **NEW Certification Study Guide: Building Commissioning Professional (BCxP)** joins the growing suite of ASHRAE Certification tools to help you reach your professional goals.

Looking for something else? Also available are the **Certification Study Guides for Certified HVAC Designer (CHD)** and **Building Energy Modeling Professional (BEMP)**.

Tune-in to the ASHRAE Journal Podcast

Tune into conversations between leading ASHRAE experts as they discuss what HVAC engineers need to know to design better systems and grow the HVAC&R industry. Available on all podcast platforms.

<https://www.ashrae.org/news/ashraejournal/ashrae-journal-podcast>