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# ASHRAE LONDON CANADA CHAPTER #116

## TOUR

## **BOSTWICK COMMUNITY CENTRE 501 Southdale Rd W, London**

tour will start at 5:30 and we will have 2 or 3 mini groups

**Dinner:** 7:00pm at Palasad South  
141 Pine Valley Blvd, London

## MONDAY OCT 29/2018

5:30PM – TOUR START

7:00PM – DINNER – Palasad South

### MEETING LOCATION

## **BOSTWICK COMMUNITY CENTRE 501 Southdale Rd W, London**

PLEASE USE PALPAL – ADVANCED PAYMENT BEFORE MEETING

<http://londoncanada.ashraechapters.org/PayPalPage.html>

\$60 for Preregistered

\$75 at the door

FREE = STUDENT NIGHT

Consider Sponsoring a Student Meal

USE PAYPAL on the Chapter Web Site

**Please register on the web site if you will be attending.**



## **Chapter President's Message**

Dear ASHRAE London Membership

I would like to thank everyone who joined us at our meeting in September on Wastewater Heat Exchange. A special thanks goes out to Rick Lawlor who made a special trip in from the east coast to educate our chapter on this innovative concept.

This month we will be having a tour of the Bostwick YMCA on Southdale Road to explore this very intriguing building. The tour will involve an overview of some of the architectural features as well as an in depth look of some of the mechanical aspects that make this community center tick. This month's meeting is student night as well and we will be privileged to have about 40 students join us as they see some theory come to life. We would like to thank the YMCA, City of London, Smith and Anderson and CIMCO for your support of this event. After the tour we will have our dinner at the Palasad South and fun and games will ensure for all that wish to partake.

Please stay tuned for our next meeting topic in November which we will be having at the Marienbad.

See you next Monday!

**John Freeman**  
**ASHRAE London Canada Chapter**  
**Chapter President 2018/2019**

## **ASHRAE Membership**

With all your constant and continuous support, we are working towards membership goals for this 2018-2019 year.

We welcome two new members joined our chapter this month.

**Mr Zachary S Wilson**  
**Ms Agnieszka Maria Bugiel**

**Rajan Deenath**  
**ASHRAE London Canada Chapter**  
**Chapter Membership Promotion Chair 2018/2019**

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## **Student Sponsors**

Consider Sponsoring a Student Meal - just \$50  
USE PAYPAL on the Chapter Web Site



## **TOPIC**

# **BUILDING TOUR BOSTWICK COMMUNITY CENTRE**

With a multi-purpose community space, indoor pool and gymnasium, double pad arena, YMCA fitness facility, and Library branch, the Bostwick Community Centre will have something for every ability, age, and life stage

### City of London

A community space offering a variety of exciting Spectrum programs and opportunities for all ages and abilities. With a Service London Customer Service desk, community meeting space, and variety of programming, this new centre will be a premier destination for recreation and leisure. Stop by for a walk, a skate, a swim, to eat and connect!

### London Public Library

Your new London Public Library Branch will offer popular programs and beautiful spaces to support creativity, collaboration, technology and literacy at every age, along with all the great books and other materials you love to borrow. This conveniently located neighbourhood library branch is open to all in our community.

### YMCA of Western Ontario

Modern workout facilities, pools and aquatics classes, gym time, group fitness, and kids programming - one place, one price! And that's just the beginning. At the Y, we connect people to each other and to opportunities to grow in spirit, mind and body. It's a place to truly belong and reach your full potential.

<https://bostwick2018.ca/>

## **Society Scholarships**

34 Scholarships Total \$169,000, Help Students Earn HVAC&R Industry-Related Degrees

This year, 34 Society scholarships totaling \$169,000 are helping future building professionals receive their college degrees. ASHRAE's scholarship program seeks to motivate students to pursue an engineering or technology career in the HVAC&R field. Scholarships range in monetary value, and all grant the students more flexibility to focus on their studies.

Over the past 30 years, ASHRAE has awarded more than \$2 million to more than 430 students. Learn more about this year's recipients and ASHRAE's Society Scholarship program.

## **SOCIETY SCHOLARSHIP RECIPIENTS**

<https://www.ashrae.org/news/esociety/society-scholarship-recipient>

## **ASHRAE SCHOLARSHIPS AND SELECTION PROCESS**

<https://www.ashrae.org/communities/student-zone/scholarships-and-grants/scholarship-program>

**Applications due NOVEMBER 15, 2018**

## Chapter Upcoming Meetings

Mon Nov 26/2018 – ASHRAE 90.1

Chris Mathis, ASHRAE Distinguished Lecturer

Dec 2018 – Social

Mon Jan 28/2019 - Health as a Building Performance Metric

Stephanie Taylor, ASHRAE Distinguished Lecturer

Mon Feb 25/2019 - ASHRAE Legacy Night

Mon Mar 25/2019 - Transforming an Existing Building  
into a High Performing Facility

Jim Newman, ASHRAE Distinguished Lecturer

April 2019 – webcast: THE FUTURE OF REFRIGERANTS  
UNITARY AND VRF SYSTEMS

Mon June 3/2019 – Annual Golf Tournament

\*\*\* be sure to check web site for latest information \*\*\*

<http://LondonCanada.AshraeChapters.org>

## ASHRAE LONDON YEA SOCIAL EVENT



### HEIGHTS AND PINTS – ASHRAE YEA SOCIAL EVENT

The London YEA has roped off the next social event for the chapter. It's a double header starting at Junction Climbing Centre (1030 Elias St, London) with an hour of rock climbing followed by a much deserved flight of beer at the Anderson Craft Ale House next door. Sign up to participate or just to come hang out – whatever works!

Date: **Sat November 17 @ 6pm**

Cost: **\$25/person** (incl. 1 hr rock climbing, 4x175ml beer flight from Anderson)

There is no restriction on group size (with sufficient notice) so the event is completely open invitation to anyone you want to bring (close friends, significant others, etc.). This could be a great opportunity to show them what ASHRAE is.

Please RSVP by emailing [jeff.armstrong@trane.com](mailto:jeff.armstrong@trane.com)

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## **Chapter Meeting Table Top Displays**

Are you a sales rep? Does your company have information that you wish to display and present at a ASHRAE London chapter meeting? The chapter can arrange for a table top display at a chapter meeting. Just \$200 per meeting and includes one dinner.

Contact Matt Moore

226-808-4678

[matthewjmoore36@gmail.com](mailto:matthewjmoore36@gmail.com)

## **Professional Development**

Need hours for your professional development requirements?

Professional Engineers Ontario requires members to have yearly professional development training recorded through the Practice Evaluation and Knowledge (PEAK) program. Other groups also require continuing education.

Attend a chapter meeting to claim 1 hour towards your training.

## **ASHRAE HVAC COURSES**

<https://www.ashrae.org/professional-development>

Learning Portal, ASHRAE Certification, Job Board, Educator Resources

### **LOCAL TRAINING**

#### **HVAC Design: Level I - ESSENTIALS**

**MAY 20-22, 2019 – TORONTO, ONT**

Essentials provides intensive, practical training ideal for recent technical or engineering school graduates, engineers new to the HVAC field, those who need a refresher in new technologies, and facility managers, sales representatives and others who want to gain a better understanding of HVAC fundamentals, equipment and systems.

#### **HVAC Design: Level II- APPLICATIONS**

**MAY 23-24, 2019 – TORONTO, ONT**

Applications provides instruction in HVAC system design for experienced HVAC engineers and those who have completed the HVAC Design: Level I – Essentials. The training covers the technical aspects of design and allows participants an opportunity to expand their exposure to HVAC systems applications to increase energy savings and improve indoor environmental quality.

Also see: [www.ashrae.org/onlinecourses](http://www.ashrae.org/onlinecourses)



[www.somersep.com](http://www.somersep.com)

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# 2019 ASHRAE Winter Conference Jan 12-16, 2019 and AHR EXPO Jan 14-19, 2019

## Atlanta, GA

See: <https://www.ashrae.org/conferences/winter-conference>  
and <https://ahrexpo.com/>



**2019 ASHRAE WINTER CONFERENCE**  
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### JOB POSTINGS

See web site for more information: <http://londoncanada.ashraechapters.org>

## New refrigerants: the next transition has begun

Whether it is turning off lights when leaving an empty room or driving electric cars, we are becoming more and more aware of the impact we have on the environment. For years, the HVAC industry has increased the pressure to reduce the use of refrigerants with high global warming potential. Now is the time to act. The following article aims to explain how to achieve this.

The Montreal Protocol is an agreement to protect the ozone layer that has been ratified by most countries around the world since 1987. It proposed the replacement of CFCs by HCFCs and HFCs in order to address the ozone depletion potential (ODP) of these refrigerants. Over the years, this has reduced the damage we have done to the ozone layer. However, this agreement did not focus at all on global warming potential (GWP). It is now time to slow global warming by using refrigerants with a GWP that is minimized while still satisfying a low ODP.

The 2017 Kigali Agreement is an amendment to the 1987 Montreal Protocol. The latter proposes to reduce the use of HFCs in the coming years. To achieve this, the solution would be to switch to refrigerants with a lower global warming potential than HCFCs and HFCs. Figure 1 below shows the refrigerants that are considered to be "new generation" to replace the transition refrigerants that are currently in use.

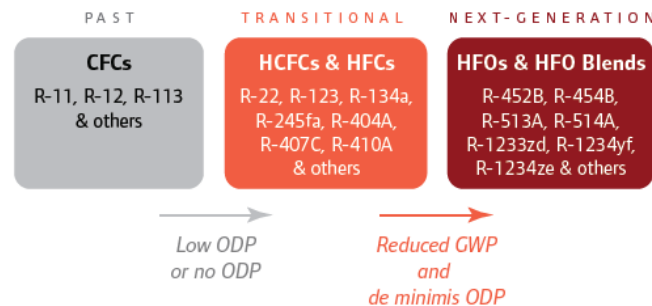


Figure 1: Evolution of refrigerants<sup>1</sup>

Twenty countries have now ratified the Kigali amendment, which will allow it to formally enter into force. Canada<sup>2</sup> has signed this amendment which will come into effect on January 1, 2019. Canada's position according to an October 2017 article<sup>3</sup> in the Canada Gazette is as follows: "The Department has maintained the ban's effective date of January 1, 2025, with a GWP (Global Warming Potential) limit of 750 (relative to the emissions of 1 ton of carbon dioxide CO<sub>2</sub>) for all chillers to permit the use of a range of alternatives in various types of chillers. "

Figure 1 above illustrates that R-134a chillers will require a new generation refrigerant such as R-513A and R-123 chillers will require a new generation refrigerant such as R-514A.

Things are more complicated when it comes to replacing the R-410A. For this refrigerant, the next generation refrigerant options are (as of right now) "slightly flammable" (ASHRAE Class 2L). The industry is currently trying to find solutions to a certain degree of flammability, even if it is slight. For Class 2L refrigerants to be installed indoors, a major update of ASHRAE 15 is required. As the standards are updated over a three-year cycle, this update will be completed in 2019. The challenge is to promote a refrigerant by maximizing its efficiency, minimizing its flammability and eliminating toxic refrigerants.

Therefore, there are not yet any recommended options to replace the R-410A. It will be necessary to wait until 2019 to know the recommended alternative refrigerants for packaged units on the roof, VRF, heat pumps, and other equipment using R-410A.

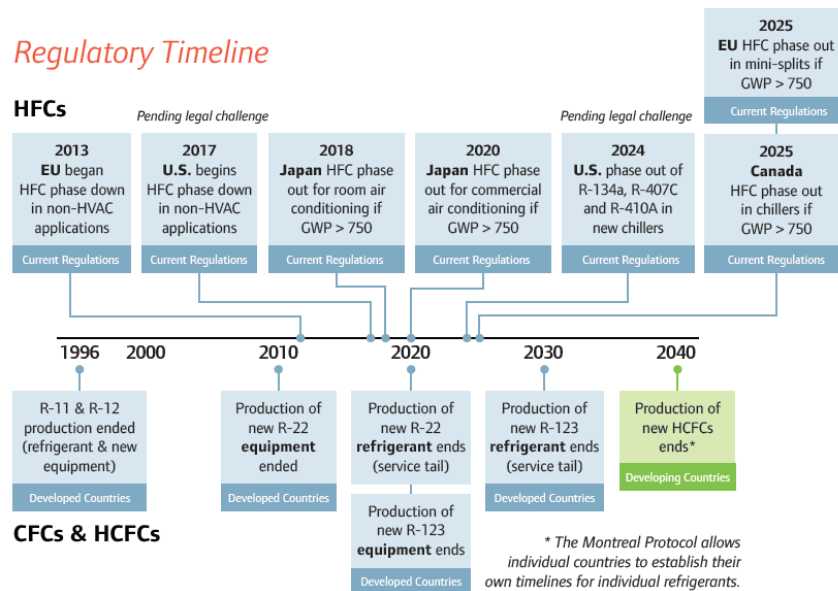


Figure 2: Regulations on refrigerants<sup>1</sup>

Figure 2 above highlights that it will soon be prohibited to sell chillers operating with a refrigerant with a global warming potential greater than 750, such as R-134a or R-410a. In Canada, that's only seven years away. Fortunately, several chiller manufacturers are already able to manufacture equipment incorporating new-generation refrigerants. Refrigerant will still be available to purchase after the equipment phase out dates so it is an important conversation to have with the end-user while considering the original purchase price, life time maintenance costs, and the value placed on the environment.

In short, we must be ready for these changes in the industry by 2025. However, we are able to make a difference for the environment today. Encouraging a customer to opt for a new generation refrigerant has much more impact than taking out the recycling bin and can potentially take less time. We can all do our part; why not promote a greater impact?

*Philippe Dolbec, B.ing  
Account Manager at Trane Montreal*

*Jeff Armstrong, BESC  
Account Manager at Trane London*

Sources:

<sup>1</sup><http://www.trane.com/content/dam/Trane/Commercial/global/newsroom/blogs/Documents%202018/HVAC%20Industry%20Update.pdf>

<sup>2</sup><http://ozone.unep.org/profile/CAN>

<sup>3</sup><http://www.gazette.gc.ca/rp-pr/p2/2017/2017-10-18/html/sor-dors216-eng.html>