

THE HERRING CHOKER ASHRAE NB/PEI CHAPTER

October 2023

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Chapter Announcements

1. Lucy's Engineering Adventure (Fundraiser)

As first announced in the May newsletter, the ASHRAE NB/PEI Chapter is proposing to provide a copy of *Lucy's Engineering Adventure* to every Anglophone K-5 school in New Brunswick and Prince Edward Island; the territories that we serve.

Our goal is to raise **\$2,500** to be able to purchase the books. Donations can be sent by e-transfer to <u>treasurerashraenbpei@gmail.com</u>, or by mail to the following address:

ASHRAE NB/PEI CHAPTER

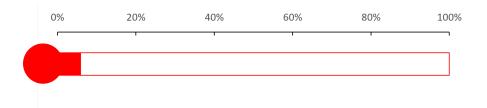
P.O. Box 1629 Moncton New Brunswick E1C9X4

*Please note on the envelope "Lucy's Engineering Adventure" somewhere on the mailed donation.

Any donation large or small will help to get us to this goal. We appreciate your support!

*September 8th, 2023 Update: We have raised \$150 / \$2,500

Let's work together to fill up the progress bar below!!



2. Student Activities Newsletter

Student activities will be focused this year on K-12 and Post-graduation. Have a look at the <u>newsletter here</u>.

Student activities includes bursaries, tours, technical presentations, design competitions, networking, and student branches.

There are several key items we're working on at the moment.

K-12

Arrange classroom visits by chapter members to do a fun STEM activity. There is a world of science out there. The more we expose children to it the better for them and society as a whole.

We have volunteers available, now we need to find the classes. Do you have kids in school that you would like to get the stimulation of a design - build exercise?

At the senior grades there is a 3D Modeling competition! Imagine if there was a modeling competition when we were in high school.

Post High School

Arrange for student branches at Community Colleges and Universities that teach HVAC subjects.

This will require some help from Faculty Advisors and/or Student Branch Advisors. I will be contacting faculty to see who would be able to fulfil that roll.

In post high activities there is a lot more technical involvement and volunteers would be greatly appreciated.

Check out the following links for other student news:

<u>2023 ASHRAE Student Design Competition Winners Display Energy-Efficient Building Innovations</u>

2023 Student Branch Advisor of the Year Award Winner

2023-24 Undergraduate Program Equipment Grants

John Willden, Student Activities Chair, 2023-2024 JohnWillden@gmail.com

3. Request for Assistance: Heat Pump Technology (HPT) Research Study through Annex 60

National Resources Canada are involved with Annex 60, a collaborative program with the IEA, which studies retrofit heat pump systems in non-residential buildings. The outcome of Annex 60 will be to provide high-level guidance for building owners and decision makers to implement heat pump technologies in their own buildings based on the successes and feedback of the industry.

This phase of research is titled "Task 2 - Case Studies of Existing Projects" and is looking for volunteers to simply fill out a high-level case study log on any buildings that meet the criteria. The submissions will be reviewed and those that are identified by Annex 60 as suitable projects will be contacted for more details.

More information can be found at the following links:

Annex 60 website
Research Summary (pdf)
Case Study Log (excel sheet)

If you are interested in participating or have other questions please reach out to frederic.genest@NRCan-RNCan.gc.ca

4. Did you know we're on social media?!

Follow us on LinkedIn and Facebook to find out about events when they're announced (click the icons below or at the bottom of the newsletter).







BOG Meeting & Presentation

October 17th, 5:00PM - 8:00PM AST

**IMPORTANT NOTICE: Our Venue Has Changed This Year.

See Below for Details**

TOPIC: VRF Design and the Transition to Slightly Flammable Refrigerants

This presentation will provide a detailed overview on designing VRF systems and its benefits compared to traditional HVAC systems. During this presentation

we will also learn about the transition to next generation low-GWP refrigerants, specifically R-410A which is used in VRF systems that is due for phase out in 2024.

Recommended audience: Engineers, contractors, facility managers, building owners, educators, students, sustainability coordinators

About the Presenter: Shawn Slaunwhite, Regional Rep Director (Daikin)

Shawn has spent the last 16 years in the HVAC industry. He's been on both sides of the wholesale counter, first starting on the tools as a sheet metal apprentice, then counter sales, and eventually account manager.

Over the last eight years he's been developing the VRV/VRF market in Atlantic Canada for Daikin through stakeholder education and strategic partnerships. "Gemba walks" are a favorite part of his job. Getting out into the field 'the real place where the value is created' to interact with those specifying and installing Daikin products.

As we start to phase down R410a and begin the adoption of A2L refrigerants it's going to be critical that consulting engineers, contractors, and regulators are prepared for the changes to application of VRV/VRF systems and new leak detection/mitigation measures. Shawn looks forward to this new phase for VRV/VRF technology and is excited to discuss how things are changing for the better.



Event Details:

When: October 17th, 2023

Location:

Meeting Room D (Moncton Coliseum Arena Complex) - 377 Killam Dr, Moncton, NB

Agenda:

5:00pm - 6:00pm: Social Hour

6:00pm - 7:00pm: Presentation

7:00pm: Dinner is Served

Pricing:

ASHRAE Members - \$30 Non-Members - \$55 Students & Retirees - \$20 Presentation Only (No Meal) - \$0

Meal:

The meal will be Chef's Choice Buffet.

*Please indicate any dietary restrictions when registering

Note registration is closed for this event, but we hope to see you at November's event!

Click Here to Register





Research Promotion

Knowledge is Power

Nothing to see here... Stay tuned!

Recap of Past Events

<u>September Meeting (Radon Presentation)</u>

On Tuesday, September 12th, we had Jeff Leblanc join us from Radon Repair to discuss the topic of radon itself. What is it? How harmful is it? And most importantly how do we mitigate it? Most of us have likely heard of Radon before and associate it as harmful to our health, but for most of us our knowedge on radon stops there. Let's tackle these questions in order.

So what is Radon? Let's put on our chemistry goggles and lab coats for just a minute. Ready? Radon is an element and product of uranium undergoing radioactive decay. As uranium decays it emits alpha, beta and gamma radiation, and transforms into stepped down elements following what's called the "uranium decay chain". At one stage of this decay chain, and after releasing so many alpha, beta, and gamma particles, the product becomes radon. The radon element continues to break down releasing its own alpha, beta and gamma particles eventually becoming the elements polonium and bismuth, which in turn release their radioactive particles. The elements at the top of the decay chain, starting with uranium, have a much slower rate of decay and thus slower release of alpha, beta, and gamma emissions. As you make your way to elements down the chain the decay happens much quicker and these emissions become more frequent. Putting it in perspective the half-life of uranium-238 is 4.5 billion years, radon-222 is 3.8 days, bismuth-214 is 19.7 minutes, and polonium-214 is 0.15 milliseconds. We'll revisit the relevancy of polonium and bismuth and the significance of these alpha and beta particles shortly.

The geology of Canada, and especially New Brunswick, is rich with uranium deposits deep underground in the earth's crust. Most of these deposits are unknown at the time when homes and neighbourhoods are built. So unless you specifically survey deep below where you are building a house you won't know if you're building on a high radon potential area or not.

Now getting to the harmful effects of radon. Continuing from above with the decay chain, the harm to humans occurs when we breathe in radioactive elements with high frequency of alpha, beta, and gamma particle emissions. Once these elements are in our lungs they are ultra fine particles that we cannot remove. These begin emitting their alpha, beta, and gamma particles straight through our lung tissue causing continuous long term damage (with alpha and beta being the most hazardous). This makes polonium and bismuth much more dangerous than radon itself because of their higher emission frequency. However, since these are a direct product of radon and follow radon wherever it goes, and because we can test for radon much easier we simply refer to these elements as a whole under the radon umbrella. So what are the effects of prolonged lung tissue abuse from radioactive decay you may be asking? It's lung cancer.

According to Health Canada radon is the second leading cause of lung cancer in Canada contributing to 15% of cases. If you are a smoker you have a 1 in 20

chance of getting lung cancer after long term use. Adding sustained radon exposure into the mix your chances become 1 in 3.

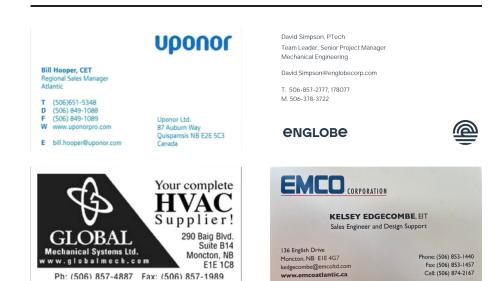
What can we do to mitigate radon? The first step is have radon testing done in your home. Radon gas rises up through the soil and will build up below a home's foundation. As long as your foundation is sealed then you may be safe from any radon entering your home. However, many homes over the years will form cracks in the foundation and even a 1 cubic centimeter opening will allow enough radon to enter that will be problematic. Things becomes significantly worse in the winter months when we incorporate stack effect in our homes (the act of hot air rising creating a negative pressure vaccum in your bsement pulling air from beneath your foundation through any cracks). By measuring your radon levels long term (anywhere from 3 months to 1 year) you'll get an accurate understanding of how much radon is in your home. Health Canada recommends radon levels no more than 200 Bg / cu.m (the equivalent of 30 chest x-rays in a year, by the way). Once a radon professional determines whether you need mitigation or not they may install a radon exhaust system to capture the radon build up below the foundation and exhaust it out of your house. Because all homes are built different it can be a challenge to locate the source areas in your foundation where the radon is penetrating and designing a ventilation system that will collect from these areas to purge it outdoors. This makes it critically important to work with a professional in the trade to create a custom radon exhaust system for your home to rid you of your radon infiltation.

The topic of radon is both a fascinating one and terrifying. It's a seemingly little thing that if left unchecked for too long can have detrimental consequences. November is radon awareness month and with the incoming cold weather and stack effect on the rise (pun intended) it might be worth testing your home to ensure you have the right guards in place to defend against this invisible intruder.

Brandon Cosman, Communications Chair, 2023-2024 Brandon.Cosman@PMCEnergy.ca



Outgoing president (Kevin Clannon) and current president (Mike Boudreau)



Upcoming Events

The Future is Bright

NB Power Sponsored Training Opportunities

NB Power is hosting a number of upcoming webinars and training events with the goal of arming our industry with the knowledge they need to become energy experts! Have a look at the list below for some upcoming sessions.

<u>Industrial Energy Efficiency Webinars:</u> Looking to maximize energy savings and optimize the efficiency of your business?

Your search ends here! Join our efficiency webinar series featuring industry

leader Stephen Dixon*. He will deliver three insightful sessions aimed at equipping you with the knowledge and strategies to improve your business's energy consumption and sustainability. With over 35 years of experience, Stephen is a recognized leader in energy management training in Canada.

<u>Upcoming Webinars:</u>

- 1. Controlling HVAC Systems for Optimal Efficiency
 - Tuesday, October 24th from 10am-11:30am
- 2. Opportunities for Heating Systems, Boilers and Heat Recovery
 - Tuesday, November 21st from 10am-11:30am

Click Here to Register

<u>Certified Energy Manager (CEM) Training:</u> November 6th-10th, 2023: 8:30am - 4:00pm

The Certified Energy Manager (CEM®) certification is the most recognized designation in energy management and provides a wide range of benefits to help you thrive in both your role and in the energy efficiency industry. More than 16,000 professionals from over 40 countries are now CEM® certified, including more than 4,500 in Canada. The program is also ideal for professionals who require CEM® certification as recognition of their industry expertise or as a required designation for a given position or project. The comprehensive five-day CEM training is ideal for professionals who seek a thorough program that covers the technical, economic, and regulatory aspects of effective energy management. The CEM also provides a comprehensive forum with problem-solving activities for those who want to gain a broader understanding of the latest energy cost reduction techniques and strategies. Additionally, the course has recently been improved to include:

- Overview of RETScreen Expert Clean Energy Management software's features to apply lessons learned as well as a free 90-day subscription to RETScreen Expert.
- A number of case studies and peer exercises covering topics such as M&V solutions, heat recovery, distributed energy resources (DERs), and more.
- An extra Q&A session at the conclusion of each day of the CEM course, whereby our instructors are available to answer any questions you may have on the study materials or on any aspect of the day's modules.

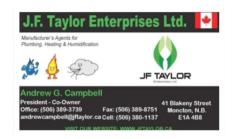
Click Here to Register

Other Offerings by NB Power:

For a full list of NB Power offerings and to keep current on their upcoming events please visit the following link:

NB Power Events and Training





Awards & Scholarships

Step Right Up, Win a Prize!

1. ASHRAE Technology Awards - Chapter Competition

This year, the ASHRAE NB/PEI Chapter will host a Technology Awards Program to recognize innovative projects by Chapter Members.

The ASHRAE Technology Awards recognize members at the Chapter, Regional and Society levels for outstanding design and innovations for effective energy utilization.

The format of competition, deadlines, and judging are determined by the Chapter and will be announced shortly. The short application form (Link: Chapter/Regional Application -- Short Form) may be used for the Chapter competition and the regional competition for projects that move on to the Regional Competition.

Entries can be submitted for each of the following 7 categories:

- Commercial Buildings New, Existing and Existing Building Commissioning (EBCx)
- · Institutional Buildings
 - Educational Facilities New, Existing and EBCx
 - Other Institutional New, Existing and EBCx
- Health Care Facilities New, Existing and EBCx
- Industrial Facilities or Processes New, Existing and EBCx
- Public Assembly Facilities- New, Existing and EBCx
- Residential Buildings New, Existing and EBCx

The ASHRAE NB/PEI Chapter's first and only Technology Award was awarded to Stephen Tweedie in 1999 for outstanding achievement in energy-efficient building design for the Nova Institution, a Federal women's correctional facility located in Truro, Nova Scotia in the Institutional Buildings category.

ASHRAE Region II, of which the ASHRAE NB/PEI Chapter is a member has a history of winning many Society level awards, and we hope to submit winning

projects of our own.

The ASHRAE NB/PEI Chapter will submit one entry for each of the 7 categories listed above to the Regional Competition. See <u>Technology Awards Program (ashrae.org)</u> for more information, or reach out to your Chapter Technology Transfer Committee (CTTC) Chair, yves.savoie@englobecorp.com.



ASHRAE Job Board Jobs, jobs, jobs!

The ASHRAE Job Board offers the following benefits for job-seekers:

- Search and apply for relevant jobs quickly and effectively.
- Set up job alerts for immediate notification of job postings matching skills and interests.
- · Anonymous profiles and resume uploads.
- · Useful tips and tools for improving job searching effectiveness.
- Single sign-in for ASHRAE members.

Employers can:

- Put their positions in front of ASHRAE's unique audience of engineering experts.
- Manage jobs and applicant activity on the Job Board site.
- · Search the ASHRAE Job Board's candidate database.
- · Limit applicants to only those qualified.
- · Quickly find the right professionals for their positions.

The Job Board can be found at www.ashrae.org/jobs. The Job Board is designed to assist members and other industry professionals along with ASHRAE's student program, Young Engineers in ASHRAE, education and certification programs.



Volunteering Many Hands Make Light Work!

Are you looking for ways to get involved in your HVAC community? Well look no further! Reach out to any of our BOG members or our Membership Promotion chair and find out how you can get started today! Or better yet come sit in on one of our monthly meetings to get a feel for things and see if it's right for you.

Our Chapter is always looking for volunteers to take on Chair or Co-Chair positions, collaborate on committees, and share feedback and ideas on how we can strive to be better than we were yesterday. Whether you're a consulting engineer, contractor, equipment supplier, property manager, or student we welcome all. By volunteering with ASHRAE you'll get the satisfaction of contributing to a global organization by making local impacts, you'll get to network with a wide range of fellow members of the community, you'll gain the experience of working with a Board of Governors structured organization, and much more!

Reach out to any member from the BOG or to our Membership Promotion Chair: Matthew Peachman [mpeachman@cbcl.ca] to get started!



2022-2023 Chapter Schedule
Can't make this one? Plan for the next meeting!

2023-2024 ASHRAE NB/PEI PROGRAM

<u>Date</u>	Topic	Presenter	<u>Theme</u>	Venue
September 12, 2023	Radon 101	Jeff Leblanc	Government Affairs/ Student Night	Legends Moncton Coliseum
October 17, 2023	ТВА	ТВА	ТВА	Legends Moncton Coliseum
November 21, 2023	ТВА	ТВА	ТВА	Legends Moncton Coliseum
December 12, 2023	ТВА	TBA	ТВА	Legends Moncton Coliseum
January 9, 2024	ТВА	TBA	ТВА	Legends Moncton Coliseum
February 13, 2024	ТВА	ТВА	ТВА	Legends Moncton Coliseum
March 12, 2024	ТВА	ТВА	ТВА	Legends Moncton Coliseum
April 9, 2024	ТВА	TBA	ТВА	Legends Moncton Coliseum
May 1st and 2nd	MEET SHOW	-	-	Moncton Coliseum
June 11, 2024	ТВА	ТВА	Membership/Tour	TBA

*On the scheduled dates above, the BOG meeting will typically begin at 4:00pm and the presentation at 6:00pm. Any changes to these times will be communicated in an email and on the website prior to the date.







DESIGN, BUILD, INSTALLED RIGHT. 948 Royal Road, Memramcook, NB E4K 1Y8 www.bsmservicesltd.ca Mike Boudreau, P.Tech, GSC Director of Construction T: 506-862-0810 Ext.112 C: 506-233-4260



2022-2023 Board of Governors The Knights of the Roundtable

Role	2023 - 2024 Executive/BOG	
President	Mike Boudreau	Executive
President Elect	TBD	Executive
Vice President	TBD	Executive
Research Promotion Chair	Kevin Clannon	Executive
Treasurer	Dan Boudreau	Executive
Secretary	Kelsey Edgecomb	Executive
Membership Promotion Chair	Matthew Peachman	BOG
Student Activities Chair	John Willden	BOG
Historian	Ryan Gosson	BOG
Chapter Technology Transfer Chair	Yves Savoie	BOG
Newsletter Editor	Brandon Cosman	BOG
Communications Chair	Brandon Cosman	BOG
Grassroots Government Affairs	Roch Couturier	BOG
YEA Chairs	Zach Thorne	BOG
Refrigeration	Vacant	BOG
Golf Tournament Chair	Ken Martin	BOG
Webmaster	Brandon Cosman	BOG
MEET Liason	Ken Martin, Devin Harinarine	BOG
BOG	Kristine Girard	BOG
BOG	Kevin Leger	BOG

Questions, comments, good HVAC jokes?

ASHRAE NB PEI - Contact Us







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