

The Herring Choker

ASHRAE NB PEI CHAPTER

2013-2014 Executive

President:

Camille Chevarie (506) 857-8708

President Elect:

Mike Boudreau (506) 384-3425

Vice-President:

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Treasurer:

Fréderick Bernard (506) 857-8880

Secretary:

Sharlene Innes (506) 857-8788

Membership:

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Research Promotion:

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Jennifer Chapman (506) 857-8788

YEA Coordinator:

Kevin Leger (506) 859-7616

Grassroots Government

Activities:

Luc Dugas (506)857-8880

Refrigeration:

Frederic Desjardins (506)858-5688

Board of Governors:

Pierre Comeau, Eric LeBlanc, Ken Martin, Robert McEwen, David Samuel, Christopher Sanderson, Yves Savoie Chris Thompson, John Willden The next Chapter meeting is scheduled for **November 12th** at Maverick's Steakhouse & Grille (40 Lady Ada Blvd., Moncton)

This month's meeting will feature a presentation by Lonnie Minarich. Lonnie's presentation will include:

- Hybrid System Combining conventional boiler/tower elements with geothermal
- One pipe and primary / secondary systems
- Control and technology developments

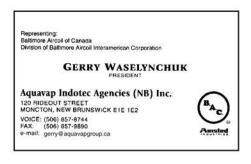
A social hour will begin at 5:00 PM with a cash bar, followed by the presentation at 6:00 PM, and dinner at 7:00 PM.

Executive Meeting Notice

A reminder to the Executive, Board of Governors, and the Committee Chairpersons that the Executive meeting will start at 3:30 PM at Maverick's Steakhouse & Grille.



Lonnie Minarich is currently the Regional Manager for Climatemaster Water Source Heat Pumps. Previous positions include Marketing Manager, Product Manager and Product Engineer. Prior to that Lonnie was the Product Manager at Enercon (water source heat pumps) and was also the Product Manager for American Air Filter. Lonnie has a BSME from Rose Hulman College and a MSBA from Indiana University.







Summary of October 8th Meeting:

October meeting was a presentation by Rick Lawlor P.Eng. LEED AP of International Wastewater System on Sewage-Wastewater a Renewable Energy Source.

The presentation highlighted the various factors that contribute to the research and implementation of new and sustainable energy sources. In recent years this research had discovered that society injects billions of BTUs /Joules /KW-HRS into water that is ultimately discarded.

The newest player on the alternate energy landscape comes from buildings, beneath sidewalks, beneath roadways and it is sewage.

- Reliable source People
- Essentially 95% + liquid, with some solids
- Is a Low Carbon Energy Source
- Temperatures support energy exploitation;
 - Summer 12 C 25 C (54 F 77 F)
 - Winter 10 C 16 C (50 F 61 F)

Typically Energy exchange (demand) takes place near source (supply) ENERGY = Flow (m) x Cp (constant) x T (temperature change)

"350 Billion Kw-Hrs worth of hot water are discarded annually through drains in North America". Reference: US Department of energy.

Typical Sources:

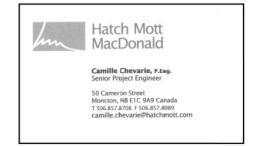
Laundry, Dishwasher, shower/Bath, Cooking and Process

Let's put 350 Billion Kw-Hrs energy in Context:

Point Lepreau Generating Station

 635 MW Capacity via 1 CANDU reactor which delivers 4 billion Kw-Hrs annually and it will take 88 Point Lepreaus to produce 350 Billion Kw-Hrs.













Value of energy in sewage water

- o USDOE 350,000,000,000 Kw-Hrs Annually
- o Equals ~ 12,000,000,000 Therms
- o @ \$ 1.35 / Therm ~ \$ 16,200,000,000
- o @ \$ 0.10 / Kw-Hr ~ \$ 35,000,000,000

Facts about Waste Water:

- Waste water has an average temperature of over 21°C (or 70°F) when exiting buildings.
- The average person in North America uses ~ 375 liters (or ~ 100 gallons) of water daily.
- o 40-50% of a buildings energy requirements go out via the sewer everyday.

In-line Gravity Sewer HX

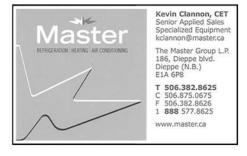
- o Requires energy upgrade (Heat-Pump)
- o Minimum sewer diameters required
- o Higher frequency Maintenance / cleaning
- New construction/replacement optimal

Applications of In-line Gravity Sewer HX

- District Energy Systems
- o Condominiums & Apartments
- o Public / Government Facilities
- Geothermal
- Aquatic Centers
- o Commercial & Retail Buildings
- Industrial Complexes
- Hospitals & Long-term Care
- Universities & Colleges
- Schools & Sport Facilities

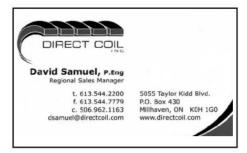
SUMMARY:

- 1. Sewage is a reliable and ever-increasing "free" energy resource.
- 2. Sewage energy-exchange technology is available to leverage the energy opportunity offered with sewage-wastewater.
- 3. Sewage energy-exchange technology can provide a cost-effective and environmentally-friendly means to augment building heating, cooling, and domestic hot water systems.













The Chapter would like to recognize the following **NEW** Members:

Martin Alphonese Phinney Daniel Goulet

NEW STUDENT

Imed Ben Amor Benoit Fournier Rickey Noel Allain Theriault François Cormier Shelby Gallant Julien Poirier Nicholas Boudreault Brandon Bradley Leah Collett **David Garland** Jamie Mahaney Aaron Quartermain Joshua Sutton Nathan Wood Aaron Blakely Alex Chouinard Ryan Freeze Matt Jones Travis McCarthy Stewart McNeil Isaac Nice Aric Pitre **Ashley Sommers** Ryan Thomas Kyle Uhlig Shaobo Zhuang Chhabilal Thapa

Michel Bourgoin Mohamed Hichri Younes Rassif Dominique Allard Mitchell Cormier Adam Geikie Stephen Abbot Spencer Corkum Teddy Gere Kara Nicholson Nicholas Ryan Steven Urmos Bede Akuwueze Alexandra Boyle Nathan Evans Allen Graves Addison Kennedy Stewart McNeil Jeremy Moore Laura Marie Nurse James Pinfold **Devin Stevens** Ashton Thomson Jaye Walsh **Brendan Forbes** Colin Murphy

Jean-Richard Cormier Justin LeBlanc Philippe Richard Yanik Belliveau Craig Ellis Corey Girouard Tyson Adams Marie-Eve Chiasson Courtney Duke William Gourley Jeff Pauley Nathan Scott Andrea Vetter Alexa Bailey Ben Breen Kenton Folkins Maranda Guitard Elizabeth Landry Courtenay MacDonald Kyle Moore Victor Okocha Jonathan Richard **Kyle Stevens Dustin Thorne-Curtis** Shunchao Wang

Mohammadreza Soleymani

Felix Dupuis Chris Morrison Jonathan Robichaud Ian Blundell Dylan McWhirter Peter Hall Pat Blakely Jonathan Clarke Thomas Fanjoy Brandon Goodfellow Kendra Perley Min-Seop Song Colin Watts Justin Bernard Josh Brown Mark Forestell Cody Hanley Kyle Maber Amy MacVicar-Peters Stephanie Nash Cody Palmer **Daniel Riley** Eric Theriault Henrik Tonning Anna West Courtney Kohoe







NB/PEI ASHRAE Chapter Meeting Schedule 2013/2014

November 12, 2013

Topic: New Generation of Water Source Heat Pumps

December 10, 2013 Topic: Real Estate

January 14, 2014

Topic: Building a Smart Building for a Low Construction Cost

February 11, 2014

Topic: Low Temperature Heating / LEED

March 11, 2014

Topic: Dehumidification for natatoriums and Ice Rinks

April 8, 2014

Topic: Distinguished Lecturer – To be Announced

May 7-8, 2014MEET Show

June 10, 2014

Topic: To Be Announced

Social Events



ASHRAE NB/PEI CHAPTER AFTERNOON OUT WITH THE MONCTON MIRACLES

Date and Time: Sunday November 17th, 2013 at 2:00 PM

Information & Registration: www.ashraenbpei.com







