

# ASHRAE Ottawa Valley Chapter

## Chapter Meeting #4 – Jan. 17<sup>th</sup>, 2012 (17:30 pm)



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Meeting Date:	Jan. 17 <sup>th</sup> , 2012
Location:	Travelodge Ottawa, 1376 Carling Avenue
Attendance:	Total: 63
Theme:	ASHRAE Research
Tech Session:	<b>Psychrometrics II</b> by Steve Moons
Table Top:	NRC, CaGBC
Program:	<b>Humidity Control – ERV Technology</b>
Speaker:	<b>Boualem Ouazia, Ph.D.</b>

Prepared by: Secretary Steve Moons

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### ***Tech Session*** (16:30-17:25)

Secretary Steve Moons presented a session on psychrometry, which was attended by approximately 20 people.

### ***Social*** (17:30 – 18:41)

### ***Business Session*** (18:42 –18:50)

- President Stephen Lynch welcomed members, and introduced the Board of Governors and the Executive.
- Membership Chair Adam Moons welcomes new members Glen Clarke and Lee Keeley.
- Associate Member Pat Albert introduces guests.
- President Stephen Lynch reminds the membership of the upcoming curling bonspiel, and tells them to contact Chris Healey or Rod Potter for more details and registration information.
- Past President Christine Kemp speaks to ASHRAE Research, and discusses ASHRAE research goals. She calls up last year's donors to accept their coin and certificate.
- President Stephen Lynch thanks Christine Kemp for her work in replacing the name badges for the members, and reminds people to ensure they leave them behind when they go. He then introduces the table tops for the evening, from NRC and CaGBC.
- President Stephen Lynch speaks about the ASHRAE Winter Meeting to be held in Chicago, and discusses the Region II dinner to be held there. He thanks Steve Moons for presenting the technical session, and encourages participation from members and guests.
- President Stephen Lynch requests that members fill out the speaker evaluation forms at the end of the evening session.
- Governor Georges Maamari speaks to the Feb. 22<sup>nd</sup> seminar on Chiller Plant Design. The seminar will consist of three courses, and will be one full day. The space is limited to 25 registrants, so he encourages early confirmation of attendance.
- Dinner begins at 8:50, and past president Christine Kemp circles the room raffling off Senators tickets for ASHRAE Research

### ***Dinner*** (18:50 – 19:40)

- President Stephen Lynch introduces the evening's speaker.

- Past President Christine Kemp draws one sets of tickets for Senators games. The winner is Joe, our faithful server from Travelodge.

**Evening Program** (19:45 – 20:25)

- Boualem Ouazia, Ph.D., presents on Humidity Control with ERV Technology
- The goal of the experiments was to determine the suitability of ERV's to maintain relative humidity (RH) in residential spaces, and investigate the energy savings thereof.
- Concerns were that bathroom exhaust through the ERV would over humidify the house, and in certain seasons the difference in RH between indoors and outdoors would be troublesome.
- The goal was to maintain occupant comfort, improve IAQ and improve building durability.
- ASHRAE, OSHA and Health Canada have different humidity recommendations, the limits of which are 30% in winter, 70% in summer, with most being between 35%-65%.
- Maintaining humidity levels above 35% generally lead to improved occupant comfort and productivity.
- There are many indoor and outdoor moisture sources, contributing to overall RH in the space.
- Daily moisture loads in a space can vary, but are between 7.5 L/day and 23 L/day.
- Main sources are bathroom, kitchen, people and "other" loads. The bathroom load is generally fairly small, alleviating earlier concerns of over-humidification using bathroom exhaust on ERV.
- Studies were conducted on several homes in various areas comparing pure ventilation with heat recovery ventilators (HRV) and energy recovery ventilators (ERV). In all cases, occurrences of high humidity were slightly less using ERV technology.
- The results of the test showed a reduction in air conditioning electricity consumption for the ERV house.
- The performance is strongly dependant on outdoor conditions, and are most effective in high humidity climates
- Bathroom exhaust did not negatively impact the humidity control performance.
- Studies in colder climates show use of an ERV has a favourable impact on RH control.
- Use of ERV helps prevent drying the indoor environment further
- ERV with bathroom pickup could have favourable impact on indoor RH control
- Overall, ERV technology is beneficial to maintain comfortable RH and provides energy savings.
- President Stephen Lynch thanked Boualem for his presentation and gave him a small gift.
- Meeting adjourned 20:30

Distribution:

**All Board of Governors, Webmaster**