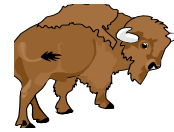




# BUFFALO TALES

Newsletter of the Manitoba Chapter

*The Manitoba Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers was chartered in September 1935. It is the second oldest ASHRAE Chapter in Canada. ASHRAE Manitoba is part of ASHRAE Region XI and covers ASHRAE members in Manitoba and Northwest Ontario.*



## ASHRAE Dinner Meeting April 10, 2008

### Power System Harmonics with VFD's Victoria Inn 1808 Wellington Avenue

5:00 pm – Social Hour  
6:00 pm – Dinner  
7:00 pm – Presentation

**Steve Seppanen “Understanding Power System Harmonics Associated with Variable Frequency Drives”** – a presentation and overview of potential problems arising from the use of Variable Frequency Drives in buildings including Power System Harmonics, and RFI. Steve will discuss system issues including basic guidelines set forth in IEEE-519, the causes and associated effects, as well as different mitigation techniques including cable type, filters and reactors.

**Steve Seppanen**, is the Business Development Director – HVAC Products for ABB Canada, where his primary responsibility is Channel Strategy and Support for ABB's full line of HVAC Variable Frequency Drives. A former US Naval Submarine Sonar Technician, Steve has extensive Electronics knowledge attained from his 6 years of active duty, followed by 20 years at ABB, in both Canada and Australia, where he has held various positions including Drives Service Representative, Technical Support Representative – Drives and Induction Furnaces, and Drives Regional Sales Manager.

President's Message – David Stones, P. Eng.

The role of the Chapter in technology transfer will continue this month with our dinner meeting on April 10, and also with our involvement with the Better Buildings 2008 Exhibition and Conference on April 15 and 16. I remind you also to tune in to the webcast presentation by ASHRAE on April 16. These presentations in the past have been worthwhile and this year's subject of Integrated Building Design will likely follow that pattern. Refer to the event's list for details.

The fiscal and operating year for the Chapter ends on June 30, 2008. The slate of Chapter Officers and Committee Chairs for the coming year will be:

#### Chapter Officers

President	Sergio Almeida
President-Elect	Daryl Friesen
Vice-President	Jesse Sandhu
Secretary	Stirling Walkes
Treasurer	Open
Governor	Dieter Bartel
Governor	Derek Bishop
Governor	Robert Bisson
Governor	Corey Nation
Governor	David McNeil

### **Committee Chairs**

Programs	Johann Baetsen
Membership	Jesse Sandhu
Student Activities	Peter Gryc
Chapter History	Open
CTT	Russell Lavitt
Research & Promotion	David Stones
Honours & Awards	Dieter Bartel
Refrigeration	Brad Laviolette

### **Other**

Roster	Open
Homepage Editor	Devin Evenson
Accommodations	Open
Special Events	Tom Beggs
Newsletter Editor	Bert Phillips / David Stones

Please contact me at [dstones@shaw.ca](mailto:dstones@shaw.ca) if you would like to fill, or assist in, one of the open positions, or if you would like to assist in one of the positions already filled.

There may be one more issue of Buffalo Tales, but in case there isn't, I will say that it has been a pleasure to serve as your President this year. I am truly grateful for the exceptional contributions of so many individuals for the program and administration of the Chapter. Many thanks also to those individuals and organizations that have contributed to ASHRAE Research.

Enjoy our wonderful spring and summer weather. We will soon announce the location for our windup event.

Best regards, David.

## Coming Events

**April 15 and 16 – Better Buildings Conference and Exhibition** at the Victoria Inn in Winnipeg. Learn the newest and most up to date information on: Sustainable/Green Buildings with a focus on Manitoba; how to incorporate innovative design, technology, and operational best practices in your building project; life cycle costing; and more. Keynote speakers are Justin Trudeau and Mike Harcourt. For details and to register, go to <http://www.bemm.ca/betterbuildings/default.aspx>

**April 16** – Noon - 3:00 P.M. – **Free** ASHRAE Satellite broadcast and webcast – “Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork”. For more information, visit [www.ashrae.org/IBDbroadcast](http://www.ashrae.org/IBDbroadcast)

**April 17-18**, ecoENERGY for Buildings Professional Development Seminar “Introduction To Building Energy Simulation Using EE4”, co-hosted by Manitoba Hydro and Natural Resources Canada at the Victoria Inn in Winnipeg. \$200. Details are attached to this newsletter.

**2008 CRC** will be May 7-10, 2008 at the Fantasyland Hotel in the West Edmonton Mall. Golf on May 7<sup>th</sup>; Technical Seminars on the morning of May 8<sup>th</sup>, in conjunction with our chapter’s bi-annual Tradeshow followed by an orientation session, the first Caucus and Welcome Party; May 9<sup>th</sup> is meetings, workshops, the President’s Luncheon and Dinner Banquet; May 10<sup>th</sup> is more meetings and workshops, the Awards Luncheon and a Wrap-Up Party. Companion tours include a guided shopping tour of some of Edmonton’s most unique and obscure shops, and tours of the local attractions. Registration and accommodation details will be presented as they become available.

**June 21 to 25 ASHRAE Annual Meeting** – Salt Lake City, Utah. ASHRAE’s Annual and Winter meetings are always an educational experience worth attending. This meeting doubly so because it is located in a geographically beautiful area and hotel costs are reasonable compared to most ASHRAE venues.

#### Notes from the 2008 ASHRAE Winter Meeting in New York City - Bert Phillips

In Seminar 5 “Regulations about Re-circulating Air from Air Cleaning Devices”, Burkhead noted that there has been a 50% reduction in particulate in outdoor air in USA since 1970. For some elements, OSHA requirements for industrial workplace IAQ are more stringent than EPA’s limit for outdoor air (1000 times in some cases). A single measurement capable for accurately measuring “typical” industrial process particulate concentrations does not exist because “typical” concentrations range from 10 to 10 million micrograms/cu.m., “typical” temperatures range from 0 to 300F, “typical” relative humidity ranges from 5 to 100%, “typical” airflow rates range from 100 to 10,000 cfm, ..... Instruments available just can’t measure over the “typical” range of conditions.

Lawton said welding fumes are mostly particulates. ALARA (as low as reasonably achievable) is a common industrial air cleaning requirement in some jurisdictions, where 90% removal is usually considered as reasonable. Filters do not remove vapours, other than those that condense in the filter.

Drop out chambers are needed to remove sparks before the filters.

Adam Hinge, a New Yorker on one of the committees I sit on, lead a group of us on a walking tour of construction projects and notable buildings near the conference hotel. Construction in Manhattan costs \$1400 to \$1700 per sq.ft.. We hiked past a \$1.5 B retrofit and a \$3 B new office tower. Adam said that a developer is considering construction of about 3 million sq. ft. of

commercial space over the tracks at Penn Station at a cost of \$40 to 50 billion. I'm thinking, the design fees for any of these projects are bigger than the whole cost of the biggest projects most of us have been involved in.

Boualem Ouazia, a researcher at NRCan spoke about the "Impact of Energy Recovery on Housing Performance". Experiments with ERVs were conducted in NRCan's twin houses in Ottawa. They found that ERVs significantly improved humidity control and provided modest energy savings during hot and humid weather. ERVs reduced both latent and sensible loads seen by AC equipment.

In Seminar 17, "Greening of Hydronic Systems", Stan Mumma noted that in North America ground up newspapers and mud are used to make tiles for dropped ceilings, and to the surprise of many, indoor air quality issues occur if these get damp. Stan, a proponent of dedicated outdoor air systems (DOAS), noted that with total energy recovery (ERVs) on DOAS, the benefit of demand control ventilation (DCV) is limited. He chided "There is no single solution that suites all applications, so quit trying to do that."

**Tim McGinn** outlined the three steps to green design. **First**, reduce loads by building design and configuration (primarily building envelope, but also lighting and other)(e.g., infiltration can be 1/3 of space heating design load. Seal building envelope to reduce mechanical system loads. **Second**, apply passive technologies and strategies and energy efficient systems. **Third**, look for synergies to reduce first costs, e.g., thermal slabs simplify mechanical system installations by eliminating a lot of ductwork which reduces ceiling space requirements.

The above was extracted from my notes on the first day of a four day conference. Given that there were six or more sessions running at any time, you can be certain that I missed much more than I saw, which is why I keep going back.

## Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork - April 16, Noon to 3:00 P.M.

Bill Williams, P.E., LEED-AP, ASHRAE CTTC, Communications Coordinator sent the following note about this year's **Free** ASHRAE Satellite broadcast and webcast – "Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork".

Just a quick note to keep you abreast of the developments of the broadcast. We just wrapped the pre-taping of the presentations and things went extremely well. Despite a series of health & travel SNAFUs (broken leg, hernia surgery, pneumonia, cancelled flights, delayed flights, lost taxis...), not to mention missed deadlines & compressed editing time, *the presentations are stellar!!!* The presenters came through not only in the content, but the delivery. I'm very pleased with the program.

Now we are concentrating on the live portion of the broadcast. There will be roundtable

discussions between the moderator and the presenters. The idea is to have opinions, free thoughts come out, like water-cooler, shop talk. As always, we will have substantial Q&A time.

Please get the message out about this program & spread the word to the grassroots membership. AIA is on board, so is BOMA & the USGBC. We have IFMA informed.

**This program is free and open to anyone**, not just ASHRAE members. Please tell anyone you know that may be interested in this program. For more information, visit [www.ashrae.org/IBDbroadcast](http://www.ashrae.org/IBDbroadcast)

Presidential Award of Excellence (PAOE) - Dieter Bartel, Honors and Awards Committee

It's time for the Chapter Committee Chairs to review or reflect on what PAOE point qualifying activities our members have been doing this year. Please submit any items to me so that I may update our PAOE data on the ASHRAE Society web site. Committee chairs may review the criteria particular to their discipline on the PAOE Web Page and let me know of activities which may fit the points structure. After logging on to the Members Site at ASHRAE, go to: <http://www.ashrae.org/members/page/772>

I'd like all members to ask themselves if this ASHRAE year they have:

- spoken to a school on anything resembling HVAC&R sciences, made a presentation to any groups on HVAC&R topics
- served as a member of a Building Code or Standard Committee, locally or internationally
- made any type of contribution to the province in any capacity related to the arts and sciences of HVAC&R

If so, please email details to me at [dbartel@hydro.mb.ca](mailto:dbartel@hydro.mb.ca) or call 477-7717. Let's show Region XI what we've been up to!

## Help Wanted

Your ASHRAE Board is always looking for new ideas to keep the Chapter relevant and more bodies to lighten the load of those that are currently managing Chapter affairs. This is a great opportunity for EITs to get some (or all) of the volunteer service they need for registrations with APEGM and volunteer service to a professional association looks great on any resume. On top of that, if you get active with ASHRAE Manitoba, you get to hang (and work) with a great group of individuals of HVAC professionals. If you have ideas and/or time to contribute, tell a Chapter officer.

## ASHRAE Manitoba Chapter Officers

President	David Stones	Wardrop Engineering	272-1331	<a href="mailto:dstones@shaw.ca">dstones@shaw.ca</a>
President-Elect	Sergio Almeida	The Trane Company	632-1543	<a href="mailto:salmeida@trane.com">salmeida@trane.com</a>
Vice-President				
Secretary	Daryl Friesen	Midwest Engineering	989-3636	<a href="mailto:daryl@midwesteng.com">daryl@midwesteng.com</a>
Governor	Dieter Bartel	Manitoba Hydro	477-7717	<a href="mailto:dbartel@hydro.mb.ca">dbartel@hydro.mb.ca</a>
Governor	Derek Bishop	Siemens Building Technologies	774.3411	<a href="mailto:derek.bishop@sbt.siemens.com">derek.bishop@sbt.siemens.com</a>
Governor	Robert Bisson	Public School Finance Board	945-8452	<a href="mailto:rbisson@gov.mb.ca">rbisson@gov.mb.ca</a>
Governor	Corey Nation	E.H. Price Ltd.	982-2222	<a href="mailto:coreyn@price-hvac.com">coreyn@price-hvac.com</a>

### Committee Chairs

Treasurer	George Marchildon	PSFB	945-0207	<a href="mailto:gmarchildo@gov.mb.ca">gmarchildo@gov.mb.ca</a>
Programs	Johann Baetsen	E.H. Price Ltd.	661-7829	<a href="mailto:johannb@price-hvac.com">johannb@price-hvac.com</a>
Membership	Jesse Sandhu	SMS Engineering	775-0291	<a href="mailto:jsandhu@smseng.com">jsandhu@smseng.com</a>
Student Activities	Peter Gryc	SMS Engineering	775-0291	<a href="mailto:pgryc@smseng.com">pgryc@smseng.com</a>
Chapter History	Robert McDowall		284-6678	<a href="mailto:robertmcdowall@mts.net">robertmcdowall@mts.net</a>
CTT	Russell Lavitt	SMS Engineering	775-0291	<a href="mailto:rlavitt@smseng.com">rlavitt@smseng.com</a>
Research & Promo	Stirling Walkes	SMS Engineering	775-0291	<a href="mailto:swalkes@smseng.com">swalkes@smseng.com</a>
Honours & Awards	Dieter Bartel	Manitoba Hydro	477-7717	<a href="mailto:dbartel@hydro.mb.ca">dbartel@hydro.mb.ca</a>
Refrigeration	Asitha Gajaweera	Smith Carter	477-1260	<a href="mailto:asithagajaweera@hotmail.com">asithagajaweera@hotmail.com</a>

### Other

Roster				
Homepage Editor	Russell Lavitt	SMS Engineering	775-0291	<a href="mailto:rlavitt@smseng.com">rlavitt@smseng.com</a>
Accommodations	David McNeil	Emco Ltd.	925-9630	<a href="mailto:DMcNeil@emcoltd.com">DMcNeil@emcoltd.com</a>
Special Events	Tom Beggs	Tom Beggs Agencies	953-1900	<a href="mailto:tombeggs@mts.net">tombeggs@mts.net</a>
Newsletter Editor	Bert Phillips	UNIES Ltd.	633-6363	<a href="mailto:phillips@unies.mb.ca">phillips@unies.mb.ca</a>

## ASHRAE Region XI Officers

Director & Regional Chair	Traci Hanegan	Coffman Engineers, Spokane	<a href="mailto:hanegan@coffman.com">hanegan@coffman.com</a>
Assistant Regional Chair	Bill Dean	NRC, Saskatoon	<a href="mailto:Bill.Dean@nrc.ca">Bill.Dean@nrc.ca</a>
Technology Transfer	Bert Phillips	UNIES Ltd.	<a href="mailto:phillips@unies.mb.ca">phillips@unies.mb.ca</a>
Membership Promotion	Russell Lavitt	SMS Engineering	<a href="mailto:rlavitt@smseng.com">rlavitt@smseng.com</a>
Student Activities	Bruce Dobbs	NW Natural Gas, Portland	<a href="mailto:bruce.dobbs@nwnatural.com">bruce.dobbs@nwnatural.com</a>
Resource Promotion	Norm Grusnick	ECCO	<a href="mailto:normang@shaw.ca">normang@shaw.ca</a>
Nominating Committee	Dale Carter	Dec Design, New Westminster	<a href="mailto:Dale@decdesign.ca">Dale@decdesign.ca</a>
Nominating Committee	Doug Dunford	Portland	<a href="mailto:Dwdunford@aol.com">Dwdunford@aol.com</a>
Regional Historian	Ivan Hall	ESC Automation, Edmonton	<a href="mailto:ihall@escautomation.com">ihall@escautomation.com</a>
Treasurer	Rob Craddock	Inland Metal Manufacturing, Regina	<a href="mailto:rob@inlandmetal.ca">rob@inlandmetal.ca</a>
Web Page Editor	Joseph Korus	Coffman Engineers	<a href="mailto:korus@coffman.com">korus@coffman.com</a>
CRC Chair, 2008	Shanon Warner	Cohos-Evamy, Edmonton	<a href="mailto:WarnerS@cohos-evamy.com">WarnerS@cohos-evamy.com</a>

ASHRAE, founded in 1894, is an international organization of 55,000 persons. Its sole objective is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve the evolving needs of the public.

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Visit ASHRAE Manitoba at [www.ashraemanitoba.ca](http://www.ashraemanitoba.ca).

Visit ASHRAE at [www.ashrae.org](http://www.ashrae.org).

**ecoENERGY for Buildings**  
**Professional Development Seminar**  
**Introduction To Building Energy Simulation Using EE4**  
**Co-hosted by Manitoba Hydro and Natural Resources Canada**  
**April 17-18, 2008**  
**Victoria Inn**  
**1808 Wellington Ave., Winnipeg, MB.**

Clients are demanding energy efficient buildings, and design teams are profiting, as proven by the widespread exposure and success of many high-performance buildings across Canada. Sustainable Buildings Canada and Natural Resources Canada are providing an opportunity to take part in a 2-day **EE4 Simulation Training Seminar** to provide sound knowledge to architects, engineers and other design professionals of how to add value and appeal to renovation and new construction clients.

Learn and understand the benefits of designing and building to ecoENERGY New Building Designs Validation levels by learning to use **the EE4 Simulation Software**.

The registration cost of \$200 **which includes GST** is a great investment in your professional future.

**April 17 – 18, 2008**  
**8:00 a.m to 5:00 pm , both days**  
**Victoria Inn**  
**1808 Wellington Ave. Winnipeg, MB**

**Breakfast and Lunch will be provided**

**Please bring a laptop**

Please fill out the attached registration and fax immediately to Manitoba Hydro at 480-5232 or via email at [jhunter@hydro.mb.ca](mailto:jhunter@hydro.mb.ca) Don't miss this opportunity to build your business and client base by becoming an industry expert in energy efficient design and construction.

**Space is limited. To reserve, complete the attached registration form and fax to Jeanette Hunter at 480-5232 or via email to [jhunter@hydro.mb.ca](mailto:jhunter@hydro.mb.ca).**

Jeanette Hunter at Manitoba Hydro  
Fax: 480-5232  
or via email: [jhunter@hydro.mb.ca](mailto:jhunter@hydro.mb.ca)

**For more information, contact**

Cory Young  
Manitoba Hydro  
Email: [cyoung@hydro.mb.ca](mailto:cyoung@hydro.mb.ca)  
Phone: 474-4774

***Introduction to Building Energy Simulation Using EE4***

***Co-hosted by Manitoba Hydro and NRCan***

**April 17-18, 2008, (8:00 – 5:00)  
Victoria Inn - 1808 Wellington Ave.**

**Registration Form—Fax back to 204 -480- 5232**

**Name:** \_\_\_\_\_

**Occupation:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Fax:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Payment of \$200 (includes GST) by cheque only. Cheques must be presented by April 4th.**

**Visa number:** \_\_\_\_\_ **Expiry date:** \_\_\_\_\_

**Make cheque payable to: Manitoba Hydro**

**Type of building types you are familiar with:**

Multi-residential  Office  Educational  Industrial  Other

**Experience in sustainable (“green”) building operation and design:**

None  Some

Always consider these issues in my practice

**Experience with energy or environmental retrofits, Energy Innovators or energy performance contracting:**

\_\_\_\_\_  
\_\_\_\_\_

**Experience with ecoENERGY New Building Designs Validation, EE4 or other modeling software:**

Please list here: \_\_\_\_\_

**My special expertise:** \_\_\_\_\_

**My expectations:** \_\_\_\_\_