



	Dinner Meeting and Guest Speaker Wednesday, October 15, 2003	
	Topic:	"Tour of Mechanical Equipment at CanAgro that uses the new Co-Gen from the Delta Landfill Methane Gases"
	Location:	Town and Country Inn in Delta 6005 Highway 17 at Highway 99 Delta, BC Phone: (604) 946-4404
	Time:	5:30 PM: Social Hour 6:30 PM: Dinner
	Cost:	\$30 - Chapter Members \$33 - Society Members & Guests of Members \$27 - Life Members \$10 - Students
	To register contact Charlie Sabean at Tel: (604) 588-1030, Fax (604) 588-1012 or e-mail: csabean@modern-systems.com	

PRESIDENT'S MESSAGE

Norm Grusnick, P.Eng



We welcomed prospective new members at our September Membership Night. I would like to thank David Blythe, Bob MacKie, Don McConaghy and Burhan Bagran for bringing new prospective members. In order for ASHRAE to maintain itself we should all try to encourage others in our industry to join.

The September meeting was well attended and our Panel discussion on "Is there a decent ROI on green buildings brought forth many interesting points. In Green buildings ecological and social values are equal to financial concerns. We would like to thank the panel of Freda Pagani, UBC; Andy Kesteloo, Thornley BKG Consultants; Brian Miltimore, Green Buildings BC; Rod Yeoh, Omicron Consulting. The panel format allowed for good participation by the audience and concluded there are many factors to evaluating a true ROI - Finances versus social and ecological factors all came into the package.

For next Dinner meeting October 15 the people from Ballard Power had to cancel but Bob Mackie has arranged an interesting tour of a Co-Generation facility CanAgro in Ladner. This innovative project shows how we can take creative steps to reduce global warming and pursue energy conservation. Success of projects like this help with the objective of meeting Kyoto Protocol targets. The award-winning project allows methane gas collected from the Vancouver Landfill in Delta to be used to generate heat and electricity for sale to greenhouse operators and others.

[ASHRAE BC HOME PAGE](http://www.ashrae.bc.ca)

www.ashrae.bc.ca



2003 ASHRAE B.C. CHAPTER TECHNOLOGY AWARD WINNER

J.M. BEAN & CO. LTD.

HERITAGE MOUNTAIN SECONDARY SCHOOL PROJECT

Congratulations to **Bob Overland** and **Mladen Markovic** from **J.M. Bean & Co. Ltd.** who received a 2003 ASHRAE B.C. Chapter Technology Award for the Heritage Mountain Secondary School project.

As a LEED registered building, the school incorporates many innovative and unique features that reduce energy consumption and cost, while minimizing indoor and global environmental impacts. This 127,000 square foot facility in Port Moody was tendered in March 2003, and is expected to be open for occupancy in September 2004.

An independent energy performance workshop indicated that 45% energy cost savings will be achieved compared to a LEED base building design. Energy saving features include the following:

- Heat Recovery Ventilators, with over 50% of the heating required for ventilation air passing through three HRV's.
- Demand Controlled Ventilation, with supply ducts to all classrooms and assembly areas equipped with motorized dampers which close when motion detectors indicate the room is unoccupied. The systems serving the Gym and theatre are equipped with CO2 sensor and variable speed fans.
- Ground Source Heat Pumps (GSHP), with the heating for the building provided by either a 100 Ton GSHP, high efficiency condensing boilers, or a combination of the two.

Other innovative features of the design include an Atrium which acts as a passive solar collector and provides an additional source of warm air that can be exhausted through the HRV. The natural ventilation created by the stack effect in the Atrium will increase the outdoor air flow through the perimeter classrooms to above the minimum ASHRAE ventilation requirements, and will provide adequate cooling without the need for mechanical cooling in the perimeter rooms. Smoke removal fans that are installed in the Atrium as a fire code requirement can also be used to supplement the natural stack effect.

Each year, the ASHRAE Technology awards recognize outstanding achievements by members who have successfully applied innovative building design in the areas of occupant comfort, indoor air quality and energy conservation.

To enter the Chapter and Regional Competitions, a short form submission must be prepared and sent via our local TEGA chair to the Regional Chairman. The deadline for submission for the 2004 Chapter and Regional Competition is April 16th, 2004. Winners in each ASHRAE region may then choose to prepare an additional submission for the Society competition

To find out more about the ASHRAE Technology awards, visit the ASHRAE website at www.ashrae.org and use the search term "Technology Awards" in the search engine on the home page, or contact Chris Collett (TEGA Chair, B.C. Chapter) at (604) 535-4215 or chris@collett.net

"The major difference between a thing that might go wrong and a thing that cannot possibly go wrong is that when a thing that cannot possibly go wrong goes wrong, it usually turns out to be impossible to get at and repair."

*- Douglas Adams, **Mostly Harmless***



“BEAN COUNTER” is his middle name...

Your chapter treasurer, **Ed Chessor**, is catching on to the job...

“Having Kim LaBreche and her accounting firm on side makes it easy, all I have to do is deposit the money that comes in, and pay the bills. Once a month I send Kim a copy of the bank statement, check stubs and deposit details. Oh, and I need to put a budget together.

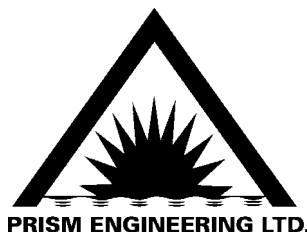
“I am really busy at UBC, I took on two courses, and I'm teaching six hours most weeks. I get involved with a lab for one or both, too. The good news is I have a couple of TA's to mark the assignments and help with the labs.

“December will be good, lectures and labs all done, just exams to mark.”

Prism Engineering Ltd. is a Vancouver-based consulting firm that has specialized in energy management since 1990. We are currently seeking resumes for the following full-time positions:

- **Energy Management Engineer**
- **Senior Mechanical Engineer**

For more details, including responsibilities and qualifications, please our website at www.prismengineering.com/employment/



WELCOME OUR NEW MEMBERS!

Inducted in September

Name	Company	Status
Mr. Greg W Lee	Quadra Pacific Consultants	Elected as Member
Mr. Lester J Pereira	Engineered Air	Advancement to Member
Mary C On	Keen Engineering	Elected as an Associate Member



MEETING NOTIFICATION & MEMBERSHIP INFORMATION

Not getting your notice of ASHRAE meetings? Feeling neglected? Out of touch?

Maybe it's because your email address has changed, and you neglected to advise anybody about it. When we sent out the September meeting notices, over 60 of them were returned as incorrect addresses or otherwise undeliverable.

We do not fax notices any more, so email is the only way that we use to communicate meeting notices and other important messages to our members.

If you change your address, etc. by notifying ASHRAE at the Society level, it may take a couple of months before those changes are filtered down to us in the Chapter level, so please be sure to advise the local Chapter as well.

Therefore, if you are not getting any (as in ASHRAE notices) or you know of someone who isn't getting notified, please send an email to **Gary Way**, the meeting notices guy, at wayhouse@shaw.ca or to **Jason White**, Chapter Membership Chairman at jason.white@olympicinternational.com

Submitted by Gary Way

The "formula" for controlling humidity and indoor air quality in school facilities is simple.

Combining the proper ratio of outdoor air ventilation + the correct levels of space humidity = a comfortable classroom environment that can contribute to learning.

With a U.S. government study showing 20 percent of schools suffer from poor indoor air quality (IAQ) and 36 percent considered to have "less than adequate" HVAC systems, adherence to such a formula is needed, according to John Fischer.

"School facilities, managers and their staff need to understand the importance of IAQ, humidity control, and the operation and the energy savings potential of their HVAC systems so that routine maintenance and proper system design and operation are given the appropriate priority," he said.

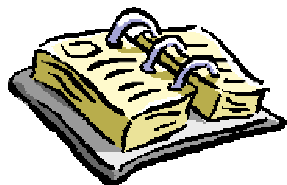
Fischer, a technology consultant with SEMCO Inc. of Columbia, Mo., and co-author Charlene Bayer Ph.D., a researcher with Georgia Tech Research Institute in Atlanta, examine the need for humidity control in schools in the May issue of ASHRAE Journal. The special theme issue contains articles featuring technologies and practices to improve the learning environment.

The U.S. Department of Energy studied the impact of humidity control and ventilation in 10 Georgia schools. The research revealed some schools had relative humidity levels exceeding 70 percent at least some of the time, ventilation rates as low as 5 cfm per student, and inadequate dehumidification in all of the schools using conventional cooling systems.

While all of the participating schools were reported to be designed in accordance with ASHRAE Standard 62, none of them designed with conventional systems were operated to provide the outdoor air quantities required by the standard.

The report concluded that "most IAQ problems in school facilities can be avoided by providing adequate outdoor air ventilation on a continuous basis (15 cfm/student), controlling the indoor relative humidity between 30 and 60 percent and providing effective particulate filtration of the outdoor air."

The hypothesis echoes recommendations in ANSI/ASHRAE Standard 62 -- 2001, *Ventilation for Acceptable Indoor Air Quality*. The standard recommends 15 cfm/person of outdoor air for school classrooms and that indoor "spaces preferably should be maintained between 30 and 60 percent relative humidity," according to Fischer.



ASHRAE-B.C. Chapter and Industry Events - 2003/2004
Dates and events are subject to change and will be updated as required.

Generally, chapter meetings are the second Wednesday - after the first Monday of the month - at the Italian Cultural Centre at 5:30 pm. Exceptions are there are no meetings in the summer June through August, and no meeting in December

"I have put forward a list of what I hope are timely, pertinent topics that our membership will be interested in while still incorporating our usual theme nights such as Students, Past Presidents, etc."
 Bob MacKie

Date	Event / Topic
September 10, 2003	Meeting 1 - "Is there a decent ROI on green buildings?" - Forum: Vancouver Real Estate Board, BOMA, LEED Rep. - Membership Promotion Night
October 15, 2003	Meeting 2 – We will tour the mechanical equipment at CanAgro that uses the new Co-Gen from the Delta landfill methane gases to provide heat and electricity for their tomato greenhouse operations. http://www.city.vancouver.bc.ca/ctyclerk/newsreleases2003/NRlandfillaward.htm The CanAgro tour is in Ladner, so we will eat the Town and Country Inn in Delta. Menu is <i>The Baron Buffet</i> www.deltainn.com
November 12, 2003	Meeting 3 - "Open Protocols - LON, BACNet, & others"
December	No Meeting
January 14, 2004	Meeting 4 - "What has the HVAC and R industry done for me?" - Forum: Past ASHRAE Presidents - Past President's Night and Student Night
February 11, 2004	Meeting 5 - "Ethics, Legality, Codes and Specifications" - Forum: Lawyer, Project Manager, Mechanical, Controls, Plumbing, Owner
March 10, 2004	Meeting 6 - "Hospital Air Issues to deal with Highly Communicable Diseases" - Joint Meeting with CHES
April 15, 2004	Meeting 7 – Refrigeration Tour
May 12, 2004	Meeting 8 - "Residential Multi Family High Rise Energy Efficiency - ASHRAE Standards" - Research Night
May 2004	ASHRAE Annual Golf Tournament at Morgan Creek Golf Club See website 2004 ASHRAE Annual Golf Tournament
June	No meeting
July	No meeting

"He ... insists that no mathematical formula, however exact it may appear to be, can be of greater accuracy than the assumptions on which it is based, and he draws the conclusion that experience still remains the great teacher and final judge. "

- James Kip Finch - *Engineering Classics, commenting on Sejourne's Grandes Voutes*