



Dinner Meeting and Guest Speaker Wednesday, November 12, 2003	
Topic:	<p>OPEN PROTOCOLS - LON, BACNET, OTHERS? We will have two after dinner speakers: Avi Baidya has been in the commercial building controls industry for nearly 16 years. Avi will overview controls protocols. Paul Herrick is Integrator Development Manager at Circon Systems Corporation in Richmond BC. Paul's talk will cover "10 Things You Need to Specify an Open System". There will be a question and answer session at the end of the presentations.</p> <p>PRE-DINNER WORKSHOP Topic: <u>Pressure Independent Valves in HVAC System Design</u> Cost: \$10.00 for Members and Guests. Free for Students Speaker: Bob MacKie - Belimo</p>
Location:	<p>Italian Cultural Centre 3075 Slocan Street (at Grandview Highway) Vancouver</p>
Time:	<p>4:30 PM: Pre-Dinner Workshop 5:30 PM: Social Hour 6:30 PM: Dinner</p>
Cost:	<p>\$30 - Chapter Members \$33 - Society Members & Guests of Members \$27 - Life Members \$10 - Students</p>
<p>To register contact Charlie Sabean at Tel: (604) 588-1030, Fax (604) 588-1012 or e-mail: csabean@modern-systems.com</p>	

PRESIDENT'S MESSAGE

Norm Grusnick, P.Eng



thank **Bob MacKie** for finding a substitute tour on such short notice since the people at Ballard Power had to cancel. The Vancouver Landfill Project utilizes methane gases from the landfill and pumps them via pipeline to the facility that we toured. The plant is attached to Canagro greenhouses – they utilize the waste heat for their tomatoes. The owner/operator of the co-generation facility is Maxim Power Corp. **Brian Hanson**, their Director of Operations, gave us an overview of the facility at the dinner meeting, which was followed by a great tour.

We had a very good attendance with approximately 50 people attending. I would like to thank **John Makepeace** of Jade West Engineering who brought along 4 of his employees which is half the company. Such great support of meetings when they are south of the Fraser River is greatly appreciated. This month our dinner meeting is back at our usual meeting location. It falls right after Remembrance Day so please confirm early. Open protocols-LON,BACNet, Others will be addressed by **Avi Baidya** of Trane Systems Integration and **Paul Merrick** of Circon Systems. There is also a workshop slated ahead of the meeting, look for the notice.

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



Who Is Doing the LEEDing?

By Douglas Spratt, MBA, M.Sc., P.Eng.

I was interested in the Totem Newsletter's synopsis about the chapter's September meeting on green buildings. Since I missed the event, I am not in a position to comment on the discussions that took place. Yet, from other panel discussions I have participated in, I sense the building industry is progressively getting stuck presenting a mantra developed by others rather than digging into the crucial questions of the day.

In my opinion, it is time to stop discussing about what LEED says and start asking more important questions. For example, we should be identifying the philosophies behind the sustainable building movement. We should also be asking if there is any documented rationalization of the LEED point system.

A prime example of a seldom discussed but central issue in the sustainable movement is social equity. The code words are "triple bottom line" and "inclusion of social values in addition to financial considerations". This might sound as good as "environmentally friendly products" but what are the social leaders really trying to get at? A little research would suggest that the philosophy of egalitarianism is being promoted.

You may be thinking that I am making this up. After all, there are no LEED points (yet) for instituting minority quotas in green buildings. This may be so, yet when a prominent green building leader was recently asked what sustainability was about, he said "Equity – social, environmental and financial"!

So what is social and financial equity? I think it's about envy, and indirectly it's about mediocrity. If you work hard and earn more money than the average person, you are penalized through the progressive tax system. Equality of outcome is achieved, rather than equality of opportunity. "The essence of the moral idea of socialism," historian Martin Malia wrote, "is that human equality is the supreme value in life."¹

What has equity got to do with green buildings? I hope nothing, yet many prominent green leaders want to introduce social issues – in the form of *socialism*. Such

primary vehicle for innovation – the free market – as a threat to environmentalism. In a similar vein, government regulation is viewed as the ultimate solution to sustainability (as evidenced by the initiation of certain west coast municipalities mandating LEED certification for city buildings), yet regulation is an innovation impediment.

The equity issue is just one of many sustainable topics the building industry should be having serious dialogue about. Another area where discourse should be taking place is the ever-increasing inclusion of "sustainable" issues. No doubt the 1970's environmental focus on diminishing resources was

myopic. Yet today we are trying to include indoor air quality, ergonomics, transportation issues, building products, energy conservation, recycling opportunities, hazardous materials, and more. At the same time, there is little research, if any, quantifying the relative benefits of suggested measures. Amazingly, economic performance isn't even on the list.

I'll admit there is certain attractiveness in being able to fill out a checklist. Sure, we need to know what is involved in a program. Most of us use the Standard 62 cfm/ft² table gladly rather than going back to first principles. We just need more open discussion about what principles should be applied to green buildings and make sure the resulting methodologies can be substantiated – not from an emotional, social agenda viewpoint, but from a logical, rationalistic vantage.

Dialoguing about the issues of green buildings should not dampen our resolve to be good stewards of the world. In fact, unearthing some of the non-environmental agendas and unresolved issues will ensure the industry's approach truly ends up making things better for us all. Right environmentalism should be sincere yet determined to be grounded on reason, focused on the environment, and based on research. ASHRAE has followed a similar approach in developing its standards.

With many of us now understanding the issue of sustainability, it is time to open the circle of dialogue.

*Submitted by Douglas Spratt, MBA, M.Sc., P.Eng.
Douglas Spratt & Associates Ltd. © 2003*

"Engineering is the art of organizing and directing men and controlling the forces and materials of nature for the benefit of the human race."

Henry G. Stott, 1907

¹ Martin Malia, "A Fatal Logic," *The National Interest*, Spring 1993, p. 80



2003 ASHRAE B.C. CHAPTER & REGION XI TECHNOLOGY AWARD WINNER:

OMICRON CONSULTING GROUP CITY OF VANCOUVER NATIONAL WORKS YARD & ENGINEERING OPERATIONS CENTRE

Congratulations to **Rod Yeoh** from **Omicron Consulting Group** who received 2003 ASHRAE B.C. Chapter and Region XI Technology Awards for the City of Vancouver Works Yard project.

The City of Vancouver Works Yard occupies approximately 5 hectares in the False Creek flats industrial zone, and includes six main structures. Omicron's submission for the ASHRAE Technology Awards focused on two buildings, which share a common mechanical system: Administration (3,324 square metres) and Parking Operations (406 square metres). The project has been registered for LEED 2.0 certification, and at this time with 45 rating points, should attain Gold Status.

Some of the innovative features of the project include:

- A Ground Source Heat Pump system, served by a closed ground loop, utilizing vertical bore holes. The ground loop is sized to handle 45% of the peak heating load, with the remaining 55% of the load met by a peak heating boiler. An hourly load analysis indicated that this boiler will run for about 10% of the year.
- Four water to water heat pumps consisting on two 15 ton and two 10 ton units for heating and cooling. The system water pumps circulate heated or chilled water through the buildings to provide heating or cooling through a changeover two pipe radiant panel system. The system is sized for design heating load with the ability to provide limited cooling. First stage cooling can be provided by the ventilation systems. Additional cooling is available by switching the two pipe system from heating to cooling.
- A displacement ventilation system served by six water to air heat pumps, with additional hydronic heating coils to temper the air before entering the heat pumps. Ventilation air will be supplied at a low level to occupied spaces at slightly below room temperature. As the supply air picks up heat from occupants and equipment, it will rise and be exhausted at high level from the spaces.
- The mechanical systems are designed to maximize energy efficiency, ease of use and flexibility, and to minimize O & M costs. The targeted energy use is 40% lower than ASHRAE Standard 90.1.
- Sustainable design components including landscaping with local plant materials; vegetated roofs to reduce storm water run-off; low VOC content materials; plumbing fixtures to reduce water consumption by 30%; operable windows; building materials with high recycled content; and exterior sunshades to reduce solar gain.

Continued on page 4

MEMBERSHIP MATTERS

Jason White - Chapter Membership Chairman

can answer *any* of your questions related to membership...

Tel: (604) 986-1400 or e-mail: jason.white@olympicinternational.com



WIN – WIN DEAL!

At the last ASHRAE dinner meeting the 50/50 Research Draw ticket sales generated \$105.00. The draw was won by **Jim Fryeskul** of Olympic International Agencies who generously donated his winnings back to ASHRAE Research Canada. *Thank-you Jim!*

submitted by Robert Flipse, P. Eng.

“It takes an engineer to undertake the training of an engineer and not, as often happens, a theoretical engineer who is clever on a blackboard with mathematical formulae but useless as far as production is concerned.” *EB Evans*

2003 ASHRAE B.C. CHAPTER & REGION XI TECHNOLOGY AWARDS

- 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

“If it can't be expressed in figures, it is not science; it is opinion.”
Robert Anson Heinlein, 1973 - from *Time Enough for Love*

Engineer with Effervescence & Energy is Eager for Employment

Thanks to the member who met **Sonja Lotimer** and invited her to our October dinner meeting. Sonja is a 2002 first class honours graduate from the mechanical engineering program at Queens, in Kingston, Ontario. Like many other Ontario engineers, she decided during her first visit to Vancouver that this is where she wants to live. Sonja's work experience thus far has been mainly in outdoor recreation, but she is eager to put her engineering knowledge to work. Her courses included Thermal Systems Design, Applied Combustion, and Air Quality Management.

If your firm can use the skills of a bright young engineer, you can find her most days at A.J. Brooks Outdoor Outfitters, on West Broadway. Her phone number is 604-253-7609, or you can send an e-mail to: Sonja_lotimer@hotmail.com

Submitted by Ed Chessor

“A creative man is motivated by the desire to achieve, not by the desire to beat others.” Ayn Rand



Ron Thompson presents TEGA Award to **Paul Zanni** of J.M. Bean & Co. at the October Dinner Meeting.

Suppliers & Reps

You can set up a display at monthly ASHRAE meetings!

When conducting a product show at a regular monthly meeting, the following guidelines shall be followed:

- ✓ A maximum of three displays per meeting, with a 4' x 8' table for display.
- ✓ There are no restrictions on the number of products.
- ✓ The display and/or presentation cannot interfere with the technical or business session.
- ✓ No time shall be provided on the program for product discussion.
- ✓ A disclaimer will be posted adjacent to the display area and listed in any published announcements.

“Scientists discover the world that exists; engineers create the world that never was.”
Theodore Von Karman

WELCOME OUR NEW MEMBERS!		
Inducted in October		
Name	Company	Status
Mr. Alexander Duncan	Energrated Systems	Associate Member



ASHRAE Members Touring Can-Agro well attended

“The engineer has been, and is, a maker of history.”
James Kip Finch 1960



October's Dinner Meeting was



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	Tour of 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. The CanAgro tour is in Ladner, so we will eat the Town and Country Inn in Delta. Menu is <i>The Baron Buffet</i>
November 12, 2003	Meeting 3 - "Open Protocols - LON, BACNet, & others" We will have two after dinner speakers: Avi Baidya has been in the commercial building controls industry for nearly 16 years. Avi will overview controls protocols. Paul Herrick is Integrator Development Manager at Circon Systems Corporation in Richmond BC. Paul's talk will cover "10 Things You Need to Specify an Open System". There will be a question and answer session at the end of the presentations. <u>PRE-DINNER WORKSHOP (Time: 4:30 p.m. – 5:30 p.m.)</u> COST: \$10.00 for Members and Guests. Free for Students TOPIC: <u>Pressure Independent Valves in HVAC System Design</u> SPEAKER: Bob MacKie – Belimo. The advent of variable frequency drives on pumps has caused a switch to two way valves in many HVAC systems. This can have a negative effect on valve authority and system control. One solution is pressure independent valves which can mitigate these negative system effects. The presentation will cover typical plumbing system design of control and balancing valves and pumps, valve authority calculations and the effect on control, pressure independant valves and how they function.
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