

Viewpoint

Focus on Energy Management

Monday, November 2, 1987 is our Energy Management Seminar followed by our regular dinner meeting (see announcement).

There are many new techniques being employed in Energy Management and this seminar will address some of them in depth with excellent speakers.

Consider these topics as the expertise in energy management continues to expand:

1. Gas deregulation where large Ontario users can purchase natural gas direct from Alberta, pay transportation and distribution charges and save on final cost.
2. Ontario Hydro is considering time-of-use metering for large users which will provide cheaper off-peak power and lead to more hot and cold storage, for HVAC in buildings.
3. New window retrofit by better leakage testing and more sophisticated leakage calculation.
4. Different heat recovery systems with better return on capital investment.
5. Hybrid use of fuels elec/oil/gas such as heat pumps; air to air, ground source, and ice making.
6. Dissemination of air quality solutions by defining what the A/C system can provide. Then analyze other considerations such as noise, glare, outgassing, allergies, etc.
7. Instantaneous heaters versus heat storage on specific domestic hot water storage systems.
8. Low emissivity ceilings for ice arenas to reflect the roof sun load.
9. Low emissivity glass that allows the sun rays to penetrate and reflect the heat rays trying to escape.
10. Better insulation and construction techniques such as in the R2000 homes.

ASHRAE and especially the Toronto Chapter provide up-to-date information through speakers and seminars. Energy conservation is prominent now and will be increasingly important with our new free-trade agreement on energy as most of the energy sources are non-renewable and will become scarce eventually.

See you at the
Energy Management Seminar!

Bill Bingham

Interest in Cool Storage Heats up at October Meeting



Bob Tamblin generously turned over his \$70 share of the 50-50 draw prize to the Research Promotion Fund.

In a very informative and entertaining presentation, Bob Tamblin, P. Eng of Engineering Interface enlightened those attending the first dinner meeting on October 5th regarding the history, promise and problems associated with seasonal cool storage.

Bob noted that early studies of seasonal storage systems concluded that a typical installation would require an ice cube the size of the building it was meant to service. Additionally, this ice cube would have to be housed in a large building of its own to slow down the thawing process.

Ed Francis at the Illinois State University was one of the first to suggest the solution of putting the ice field, enclosed in a coated fabric bag with 30 percent void sandfill, under the building it serviced.

While this line of attack was certainly an improvement over the use of a separate ice storage building, Bob noted that it still involved the use of valuable space beneath a building.

Carrier Toolkit is November Table Top

The Table Top Display at the November 2nd meeting will feature the carrier E2000 Toolkit.

The Toolkit is a complete library of Architectural-Engineering Computer-Aided drafting symbols and Macrus designed to run on Versacad or Autocad. This library will be of particular interest to CAD system users and companies considering purchasing a CAD system.

Find out how fast and easy it can be to create complex design drawings by visiting the carrier booth during the cocktail hour.

Consequently, the latest thinking is along the lines of placing the ice field beneath an external parking lot. Our October speaker stated that this would require a field approximately 20-feet deep by about one-third the area of a typical office building parking lot.

Rock is being considered as fill for the fabric bag because of its better 50 percent void space. A glycol solution would be distributed through the ice field in polyethylene pipes. Plenty of excess capacity would have to be designed into such a system, Bob asserted, to look after any circuit failures.

Preliminary cost studies, primarily from academic sources which Bob hinted are somewhat optimistic, have predicted a five-year payback for a typical Toronto installation.

Major savings would occur in the size of chillers required (60 tons down from 160 tons on a typical installation). Overall cooling costs would drop from 2 KWH/ft² to virtually nothing (the costs of running fans and glycol pumps), while those for heating would drop from about 11 KWH/ft² to 2 KWH/ft².

There are, however, major questions to be answered before ice storage systems become the wave of the future. Among these are:

- What effects will the freezing and thawing of the water have on the parking lot surface?
- What is the optimum spacing for the glycol piping?
- What is the best material for filling the fabric bag? Will rounded river rocks have to be used to minimize the chances of puncturing the fabric bag?

Bob warned that current low energy costs and discord among the Arab states are related, but not necessarily permanent. In addition, he cautioned that most published energy reserve figures are optimistic and urged aggressive development of conservation systems such as seasonal cool storage as the best way to stretch these reserves well into the future.

John Bachmann



Bert Lang, Lynn Dudley, Bill Bingham (Board Of Governors),



Bob Tamblin, Jim Ovens (Chapter President), Ron Anderson (Board of Governors).



Howard Wheatley (President-Elect), Gavin Barret, Kelly Masterson (Board of Governors), Tom West (Vice-Chairman, Membership Promotion).

Nov. 4th Next Gazette Deadline

Members of the Board of Governors, Committee chairman and members and any other Chapter members wishing to submit material for the December Gazette are reminded that the deadline for the next issue is 4 p.m. Wednesday November 4th. Please forward your submissions to Frank Lenarduzzi (Telephone: 231-4111; ext. 6506; FAX: 231-9679) or John Bachmann (Telephone: 624-7457; FAX: 624-0617).

CAN YOU HELP?

Sandry Mutheardy received a Lynn Dudley Bursary Award at the October meeting of the Toronto Chapter for his paper on Heat Pumps. Sandry is now looking for full time employment in the HVAC industry now that he has received his own degree from the University of Toronto.

Call Sandry at 831-8005 or 839-7145 he will be pleased to come for an interview and start his career in our industry.

U of T Student Chapter Seeks Measurement Equipment

The U of T Student Chapter of ASHRAE, and their faculty advisor, are interested in borrowing some equipment, to measure the comfort level in one of their lecture rooms.

A glance at Chapter 8 of the 1985 Fundamentals Volume reveals that comfort is a function of dry bulb temperature, relative humidity, air velocity, radiant surface temperature, and clothing level.

If you have some equipment to measure any of the above, and are willing to lend it to some carefully supervised U of T engineering students for several days, please contact any member of the Education Committee.

HRAI Issues Position Statement on Free Trade

The Heating, Refrigerating and Air Conditioning Institute of Canada (HRAI) issued an industry position statement one month prior to the announced free trade deal.

HRAI Chairman Pierre Blanchard, in making the announcement, noted that free trade has been a difficult issue for the association to address given the diversity of interests within his membership.

The association believes that free trade will be beneficial to HRAI and Canadians in the long term, but recognizes that it may be fatal for many Canadian businesses, particularly medium and small-sized firms, unless they are given an adequate opportunity to adjust to the changed conditions. Based on this, HRAI contends that the industry will need up to eight years to make adjustments.

Given the agreed upon free trade deal has a 10 year phase-in period it appears HRAI got what it wanted. An official response was not available at the time of publication. Stay tuned, we're not singing the stars and stripes just yet.

October Guests

The first meeting of ASHRAE Toronto Chapter was held October 5th, 1987 at the Park Plaza Hotel. Guests attending the meeting were Todd Trinder, H.E. Rieckelmann (Canada) Inc., George Cross, Avtec Engineering, John Matheson, Leslie Bros. Ltd., Chris Emberson, Enpoco, Richard Priestly, Dunham Bush Canada Ltd., Brian Denvir, E.J. Walsh and Co. Ltd., and John Cheeseman, Ontario Hydro. Also in attendance were D. Maybank, C. Poyton, D. Watson, N. Baumgartner and R.M. Pope. The evening was attended by Howard Buckler, President of Region 2 for ASHRAE.

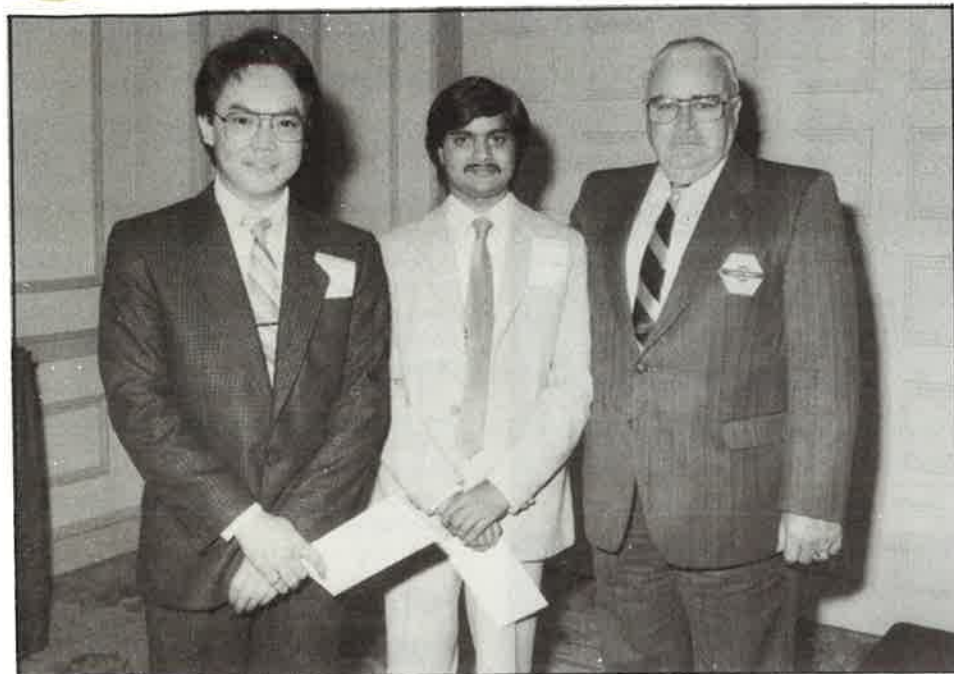
Gazette

Toronto ASHRAE Gazette is published monthly by the Toronto Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers in the interest of its members.

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Dudley-Raypak Bursary winners Sandry Mutheardy and Jagdev Puri with Lynn Dudley.

We Need New Members

Help us Make Toronto Chapter Strong

- be part of the HVACR industry
- be part of the action
- be eligible for the ASHRAE Journal
- be advised of the latest technology
- be part of new and important standards
- be entitled to receive the ASHRAE reference book
- be part of the social and peer contact
- be able to enjoy the fun, reward and applause

For More Information Contact

Joe English
Unilux Mfg. Co. 416-851-3981

Tom West
Scotiabank 416-866-6732

ASHRAE

Curling Bonspiel

FRIDAY, NOVEMBER 27, 1987
12:00 - 6:00 P.M.
AT BAYVIEW COUNTRY CLUB

2 EIGHT END GAMES
DRAWS AT NOON AND 3:30 P.M.

DINNER AT 7:00 P.M.

For Information or Entry
Contact Randy Chew at 291-9648

(Bayview Country Club requires appropriate attire)



Past-President Cliff Thompson accepts congratulations on a fine year at the helm of the Chapter from Howard Buckler, Region II Chairman.

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Toronto Chapter Gazette

Vol. 33, No.2

65th Year

November 1987



The \$338 million SkyDome is scheduled to open in April 1989.

November Meeting to Lift Lid on SkyDome HVAC System

The innovative SkyDome is generating a lot of excitement as construction proceeds towards an April 1989 completion date. A better indication of its ultimate shape and size will be provided to passers-by in early November when the fixed portion of the retractable roof is expected to be put into position.

The SkyDome figures prominently in the plans of the Blue Jays and, speculatively, in bids for the 1996 Summer Olympics and an NFL franchise. This unique structure, and specifically its mechanical systems, will

be the topic of our November after-dinner presentation. Our speakers will be Peter Willings, Chief Engineer at H.H. Angus and Associates Ltd. and Joe Carr, Principal of Carr and Donald Associates. Don't miss it.

NOVEMBER MEETING

Monday, November 2, 1987

Park Plaza Hotel

Hospitality: 5:30 p.m.

Dinner Meeting: 6:30 p.m.

Old ASHRAE Handbooks for Student Members

How many old ASHRAE Handbooks do you have?

Chances are, if you have been a member for 10 years, you now own 10 Handbooks, of which 5 are completely up to date. The other 5 you probably don't need anymore.

The Education Committee would like to collect surplus old Handbooks from Toronto Chapter members, and donate these used Handbooks to new student members, at the 4 campuses in our area which have student chapters.

A student member who receives a slightly used Handbook will have a valuable reference book for his or her studies. Even a 10 year old Handbook is still about 90% up to date.

At the November chapter meeting, a table will be marked for donation of used ASHRAE Handbooks by chapter members. Remember to bring your old Handbooks for donation!

Tom Markowitz

DECEMBERFEST, DEC. 7th

Circle December 7th on your entertainment calendar for the social event of the festive season: the Toronto Chapter Decemberfest. Details will be available in the next issue of Gazette.

ENERGY MANAGEMENT SEMINAR

AN UPDATE ON CRITICAL ENERGY MANAGEMENT STRATEGIES

Monday, November 2, 1987

Registration: 1:00 p.m.

Seminar: 1:30 - 4:30 p.m.

Plaza Room,

Park Plaza Hotel, Toronto

1. Canadian and International Energy Storage Activities
Stewart Angus, Proctor and Redfern Ltd.
2. Deregulation of Natural Gas Supplies
Juri Otsason, Consumers' Gas Co.
3. Latest Advances in Software, Direct Digital and Incremental Controls
Robert Moulton, Johnson Controls Ltd.

The moderator for the afternoon will be Bill Bartlett, Chairman of the Chapter's Energy Management Committee.

FEES:

Members:	\$35.00
Non-members:	\$40.00
Students:	\$10.00

Copies of the Speaker's presentations will be made available free of charge to all Seminar attendees.

Seminar registrants are also invited to attend the evening reception at 5:30 p.m. and dinner at 6:30 p.m.

EVENING FEE:

Members:	\$25.00
Non-members:	\$30.00
Student:	\$10.00