

Capital Communiqué

2006 - 2007

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March 2007

EVENING PROGRAM

DATE: Tuesday **March 20, 2007.** Social: 17:30 Dinner: 18:30 Program: 20:00
La Contessa, 156 Cleopatra Dr., Nepean, Ont., (613) 224-8700

TECH SESSION **No Tour or Tech Session this month**

THEME: **Research**

PROGRAM: **Tendering and Liens**

SPEAKER: **Mr. Dan J. Leduc**
Ogilvy Renault - Partner Lawyer

OVERVIEW: Mr. Leduc will give a brief outline of the construction lien act and an overview of our legal responsibilities as Designers, Project Managers, Owners and Engineers in the tender process. He will highlight some of the legal pitfalls of the tender process and show simple ways to protect oneself professionally and legally. The construction lien act is sometimes our last resort in recovering unpaid dues. Find out how the process works as it applies to the Engineering Professional.

SPEAKER BIO: Mr. Leduc practices primarily in construction law and commercial litigation. In the area of construction law, he is frequently called upon to advise and represent owners, engineers, subcontractors, suppliers and builders in such front-end services as contract review, tender issues and general construction matters, as well as in litigation and arbitration.



Recent representative matters in which Mr. Leduc has acted include the following:
Comstock Canada Ltd. v Fabricating Engineers, Inc. (2006) O.J. No. 4376 (Ontario Court of Appeal);
Carleton University v. Mercier (2006) 151 A.C.W.S. (3d) 765;
Blenkhorn Sayers Structural Steel Corp v. Webb (2005) 54 C.L.R. (3d) 223;
1351150 Ontario Inc. (c.o.b. Arnco Construction and Excavation) v. Construction Vergo Inc. (2005) 47 C.R.L. (3d) 83;
H.H. Angus & Associates Ltd. v. Salter Farrow Pilon Architects Inc. (2005) 42 C.L.R. (3d) 305.

Approximate Menu

Soup du jour - Caesar Salad - Greek Salad - Vegetable & Dip Platter - Deli Meats & Cheese Tray;
Carved Roast of Beef Au Jus - Chicken Saute Chasseur with Mushroom Gravy - Baked Penne Pasta with Old Cheddar, Spinach and Sun Dried Tomatoes - Seasonal Vegetables - Oven Roasted Potatoes - Rice Pilaf;

Fresh Seasonal Fruit Platter - Vanilla Cheesecake with assorted fruit coulis' - Chocolate Cake
Apple pie - Assortment of cookies, squares and mini pastries

Chapter Members: \$25.00 Guests: \$30.00

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President &
CRC Delegate



President's Message

By Glenn MacLean

At this time of year our thoughts usually begin to wander towards spring and the hopes of new beginnings, fresh starts and a release from winter's frosty clutches. It is with regret, therefore that I must report on the passing of one of our former chapter Presidents, **David Minshall**. Dave was our President in the 1970-1971 ASHRAE season, and was an almost guaranteed attendee at our year end 'Past Presidents' meetings. He will be missed.

Looking forward, March is here and the theme is **Research Promotion**. I know Jay has an article addressed to the members included, but I would like to add my support to this cause. ASHRAE Research is funded by the donations that individuals and companies graciously contribute. For those of you who have already contributed, we thank-you. As mentioned before, every dollar that is received through ASHRAE Research Canada not only stays in Canada, but is supplemented by ASHRAE society, so that almost 4 dollars for every dollar contributed is granted to Canadian Research activities. This is a great benefit to many of our local institutions, including Carleton University, NRC, and NRCan to name a few. If you haven't already made your contribution, expect a friendly reminder in the next few weeks or so. The research of today drives the future of our now fast changing world; that includes sustainability as a goal to be striven for.

Our program this month is one that will be beneficial to all our Chapter Members. Whether you are an Engineer, Contractor, Manufacturer or Supplier, you are affected by the Construction Lien Act, and should be informed of its process and pitfalls. If you have business acquaintances who you think would benefit from this talk, please invite them out for this meeting. Perhaps they'll learn something about Construction Law, and perhaps they'll learn they've been missing out on a great opportunity to interact with a large sampling of our industry.

I look forward to seeing you all at this month's meeting.

In your service,
Glenn MacLean
President 2006-2007
Ottawa Valley Chapter ASHRAE
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John Lowery, P.Eng.
Senior Territory Manager



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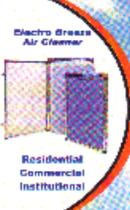
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Past President



Theme Research Promotion

by Jay Doshi P.Eng.
Chapter President 2005-2006

This is it folks! This is the time of the year again when ASHRAE volunteers and I will be calling on you for your contribution to ASHRAE Research.

The theme for our March meeting is **ASHRAE Research** and with that our desire to deliver on our goal for Research donations. By and large, our industry is experiencing great times and I would hope that our donations to ASHRAE research would reflect this. Last year, we raised \$15,460 compared with our goal of \$16,000.00, a 96.6% result. Our objective this year is still \$16,000.

This is a good cause as you all know; it's our livelihood. We've all benefited in some way from research: for example, increased energy efficiency designs, higher indoor air quality standards. **Research today means opportunities tomorrow and increased business.**

Research contributions by individuals of \$100 CDN or more and corporate contributions of \$150 CDN or more will qualify the donor to receive a commemorative coin to be presented at the Chapter meeting in the fall of 2007 and to have your name listed in the 2006-2007 ASHRAE Research Investors Honour Roll. These names will be posted in the ASHRAE Journal magazine, on the Ottawa Valley Chapter website and on table cards at the chapter meetings. In addition all donor names will be listed on the Chapter website for the current year.

This year, in order to better recognize our donors and to keep you updated on our current status, we have enhanced our web site with more detailed information on Research. Among the refinements include target to total contributions received to date, publishing the names of contributors as they come in and information on the research. Please take a moment and check out the web site.

We sincerely hope that that you and your company will once again renew, or even increase, your much needed investment in *ASHRAE Research Canada* and the future of the HVAC&R profession and industry. Not only does your generous contribution ensure the future of our industry; it also influences the health and well being of everyone today and for future generations to come.

Your investment in *ASHRAE Research Canada* is doubly important for the following reasons:

- All funds raised in Canada go towards ASHRAE Research Canada;
- ASHRAE has a policy of matching contributions dollar for dollar with the revenues generated from the Winter AHR Expo
- Canadian companies/institutions receive more funds per Society member than our American counterparts;
- Canadian companies/institutions are recognized as leaders in research.
- Every dollar being contributed in Canada, about four (4) U.S. dollars are being reinvested back into Canadian HVAC&R research projects

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With our 2006-2007 campaign underway, the Resource Promotion committee will be contacting the membership looking for your generous support of ASHRAE Research. We are also looking for our membership to contribute raffle tickets (shows, hockey tickets etc.) for our March meeting so that we can raise some value contributions from our membership while making it an exciting benefit to the winning members.

Your investment is needed today; next year's research budget is based on contributions received this year by June 30th! Please consider renewing your support as soon as possible so we can put your investment to work as well as recognize your contributions on our website immediately.

Thank you for your support.

In your service,
Jay Doshi
E-mail: jay.doshi@siemens.com
Research promotion Chair 2006-2007
Chapter President 2005-2006

Past President



David Minshall R.I.P.

Chapter President 1970-1971
Courtesy of The Ottawa Citizen

MINSHALL, David H. Born in Montreal, Que. Moved his family to Ottawa in 1960. Suddenly and peacefully passed away in the hospital on February 27, 2007 at 79 years of age. Dave leaves his loving wife Barbara (nee Grace) of 55 years. He will be very much missed by his daughter Maureen (Stuart), their children Allison and Michael; his son David/Brooks of South Korea (Jaromey), their sons Kybor and Jud; his son Neil (Donna), their children Ben and Rachel; his daughter Louise of Kingston, her sons Wil and Kris; his non-biological son Denis Lepine; his brother-in-law Brien Grace and sister-in-law Carolyn Grace.

Dave was an enthusiastic member of the Kiwanis Club of Sage and a former member of the Ottawa Hunt & Golf Club for many years. Visitation will be held at the Garden Chapel of Tubman Funeral Homes, 3440 Richmond Road (between Baseline Rd. and Bayshore Dr.) on Thursday, March 1, 2007 from 6 to 8 p.m. Funeral Service will be held in the Chapel on Friday, March 2, 2007 at 3 p.m. For those wishing to make a donation in Dave's memory, please consider Serenity Renewal for Families, 2810 Baycrest Drive, Ottawa, ON, K1V 7P7 or the Canadian Cancer Society, 1745 Woodward Drive, Ottawa, ON, K2C 0P9. Condolences, donations or tributes may be made at www.tubmanfuneralhomes.com



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Secretary



What You Missed

February 20th, 2007 Chapter Meeting
by Francois Belair
Chapter Secretary 2006-2007

For the February meeting, Mr. **Paul Latreille** of **Zenix Engineering** presented what may have been the most informative program to date. My impression of fire and life safety design seemed simplistic; place a sprinkler dot in the middle of your drawing and one every 15 feet North, South, East and West until you cover the floor plate. Regarding distribution, draw a pump in the basement and let the sprinkler guys do the rest. *I could not have been more ignorant!*

Paul presented “*Code conforming fire pump installations – Players and pitfalls*”. This action packed 70 minute fire protection frenzy painted a very bleak view of design, maintenance and testing for commercial fire protection systems, especially in the private sector. The presentation began with an overview of the codes and bodies that regulate fire pump and fire protection systems followed by his top 10 installation/conformance issues, preventative maintenance, systems tests and the importance of proper commissioning.

These often overlooked systems are exceptionally more complex and regulated than I had initially conceived and with good reason. With many loved ones working in multi story buildings, fire pumps, hose bibs, squirt guns and sprinkler systems are the only line of defence in the event of a fire. Without review, installation and testing and maintenance we are not only risking major insurance and legal issues, but possibly the needless loss of human life.

We were all very impressed with Paul’s presentation, which proved to be one of the highest quality sessions of recent years. I will be getting in touch with Paul so we can post his PowerPoint deck on our website for all to see [ed].

Committee
Chair



Membership - It is Pay Your Dues Time

by Christine Kemp
2006-2007 OVC Committee Chair

Thanks very much to all of you who have paid your Society Dues and Chapter Dues. Most of you have, but if you haven’t, **please make it a priority.**

If you haven’t paid your Chapter Dues direct to Society, please bring a cheque for \$50 CAN to the next meeting and give it to Imtee Baksh.

Thank you.
Christine Kemp
ASHRAE Ottawa Valley
Membership Chair Person

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President & CRC Delegate



Student Sponsorship (Adopt a Student Program)

By Glenn MacLean

This year, as with most years, we are encouraging students from Carleton, University of Ottawa, Algonquin, CEGEP de L'Outaouais, and La Cite Collegiale to join us at our monthly meetings. We typically have two student nights per year in October and January, but encourage students to attend whenever their schedule permits. On student nights we invite the students to attend our meetings and we pick up the cost of their meals. This is a program we have been offering for some time, and wish to continue to offer in the future. However, as the program becomes more successful it also creates a greater draw on our Chapter funds and resources. We would also like to extend this offer to students attending on other nights as well. Currently, students are charged \$15 per meal when they attend on their own. Meals actually cost more than this, but any contribution members are able to make is appreciated.

If your company or you personally are interested in sponsoring a student for January's meeting or future meetings, please contact our Treasurer, Imtee Baksh imteeb@lonhill.ca, or see him at the check-in table at our monthly meetings. As a way of recognizing our members for their contributions we will give you a receipt for your investment in Student Activities, publish your name or your company's name on our website, and include you in our list of previous donors in the Capital Communiqué.

Thank you for your support,
Glenn MacLean

Treasurer



Student Sponsors February 20th, 2007 Meeting

By Imtee Baksh

The student sponsors for the ASHRAE Ottawa Valley Chapter February 2007 meeting are as follows:

Frank Vaculik
Gemma Kerr
Jay Jayarman
Paul Baker

Your student sponsorship is much appreciated by the ASHRAE Ottawa Valley Chapter. Your contribution to help compensate student meals allows the chapter to provide meals to the students at no cost to them. A lot of the students that attend these meetings will one day become ASHRAE members and your contributions help to grow our membership which is the heart of the Ottawa Valley Chapter.

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The Energy Conservation People

President-Elect &
CRC Alternate



News Update

By Robert Lefebvre

Technical News:

ASHRAE Technology Awards Highlight Outstanding Building Projects

January 27, 2007, ATLANTA

A range of innovative technologies, including natural ventilation, use of grey water and incorporation of phase change materials, are highlighted in the winning ASHRAE Technology Award projects. The awards recognize members' exceptional achievements that incorporate elements of innovative building design in the areas of occupant comfort, indoor air quality (IAQ) and energy conservation. Winners have applied ASHRAE standards for effective energy management and IAQ. The awards were presented at ASHRAE's 2007 Winter Meeting being held this week in Dallas.

Matt Younger, P.E., principal of Stantec Consulting, Seattle, Wash., received first place in the new health care facilities category for his design for the Washington Department of Veterans Affairs, Retsil, Wash. The fully naturally ventilated building features large, independently operated windows that aid with a passive cooling system. The system's design is predicted to save 45 percent over Standard 90.1 requirements, even without taking into account the deletion of comfort cooling requirements because the building is naturally ventilated. Younger used intensive thermal modeling as a critical design tool on this project. Through testing of different design parameters, a whole-building integrated design solution was developed.

Receiving first place in the new industrial facilities or processes category are Pierre Roussel, P.E., vice president of the mechanical division, and Jacques Lagace, P.E., vice president of innovation and major projects, at Bouthillette Parizeau & Associates for their design of the thermal plant at the Pierre-Elliott Trudeau Airport in Montreal, Quebec, Canada. One of the challenges they faced was the proximity of the air traffic control tower and the possibility of the smoke plume from boiler combustion gases interfering with traffic control activities. The team designed a system to avoid this scenario, incorporating measures such as running the boilers' flue gases through a direct contact economizer to cool them using grey water. This also allows the system to reclaim the heat and creates efficiency of up to 99 percent.

Daniel Pare, project manager for IBM in Bromont, Quebec, Canada, received first place in the existing industrial facilities or processes category for his design for an IBM semiconductor packaging facility in his hometown. His use of a thermal energy system with phase change materials combined with free cooling, a variable frequency drive chiller and predictive algorithm control is a first in North America. Phase change materials are substances that can accumulate and release energy during phase change. In this case, a change from liquid to solid. His design will produce energy savings of six percent annually in part by using artificial phase change materials in the chiller with different melting points between 28°F and 40°F. The system also uses a natural cooling exchanger, which runs from September to May to take advantage of Mother Nature's natural cooling season.

(cont...)

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Honourable mention winners are as follows:

Ronald Gagnon, president, Concept-R Inc., Sorel-Tracy, Quebec, Canada, new commercial buildings category, Comptoir Richelieu Botanix, Sorel-Tracy, Quebec, Canada.

George Karidis, P.E., vice president and director of mechanical engineering, SmithGroup Inc., Detroit, new commercial buildings category, Visteon Village's corporate headquarters in Van Buren Township, Michigan.

Ronald Henning, P.E., principal, SmithGroup Inc., Detroit, new institutional buildings category, University of Michigan's Life Sciences Institute, Ann Arbor, Michigan.

Norman J. Brown, P.E., principal, CDi Engineers, Lynwood, Wash., public assembly category, Seattle Center Marion Oliver McCaw Hall Renovation, Seattle, Wash.

Sustainability News:

Ontario Considering Banning Old Light Bulbs to Cut Greenhouse Gases

February 22, 2007, TORONTO

Ontario is considering becoming the first province in Canada to follow Australia's lead in banning old-fashioned, energy-sucking light bulbs, Environment Minister Laurel Broten said Wednesday as the province draws up a plan to cut its greenhouse gas emissions. Opposition parties and environmental groups are urging the government to ban incandescent bulbs in favour of energy-efficient ones, saying it's the push people need to save electricity and a move that would eliminate much of the province's dependence on coal-fired power plants.

“There are a lot of great ideas out there and that's one of them,” Broten said. “Everything is on the table.”

No one in Ontario should underestimate the importance of replacing standard bulbs with more energy-efficient ones, Broten added. By Premier Dalton McGuinty's estimate, replacing every old-fashioned bulb with an energy-efficient one would allow the province to shut down one coal-fired power plant.

“It is so important that Ontarians change those light bulbs,” Broten said. “We're looking at other jurisdictions and the success that they're having.”

Australia is banning the bulbs and says it will cut the country's emissions by four million tonnes by 2012. The move will also cut household power bills by up to 66 per cent, the country estimates. California, which is widely considered to be on the leading edge of energy policy in North America, is debating a similar ban. Ontario would be breaking ground in Canada if it started phasing out incandescent bulbs. The province has to do something to reduce harmful emissions, McGuinty said.

“We'll take a look at a host of options that might be available to us to help Ontarians better understand that we're entering into a new era”, McGuinty said.

But Conservative Leader John Tory said the Liberals should stop mulling over options and act now. Ontarians want to be part of a solution to climate change, Tory said, and banning incandescent light bulbs is a good place to start.

“They need some leadership from the government,” he said. “The question we should focus on is, when can we do this, and the answer should be as soon as possible. They should get on with it.”

While the province has been pushing people to voluntarily switch to energy-efficient bulbs, environmentalists say people will always go for the cheaper, inefficient bulbs as long as they are on the shelves.

“This technology is outdated, it's antiquated and it needs to go,” said Chris Winter, executive director of the Conservation Council of Ontario.

(cont...)

(...cont.)

Julia McNally, manager with Ontario's Conservation Bureau, said many provinces are trying to educate people about switching to energy-efficient bulbs. That's a good start, she said, but it doesn't change people's behaviour permanently.

"You need a ban," she said.

NDP Leader Howard Hampton said he would support a ban if it provides support for low-income residents. Some people should get a government-subsidized discount on their first few energy-efficient bulbs before the old-fashioned ones are phased out, he said.

"People want to do the right thing but they need some financial help and some regulatory help to get there," Hampton said. "The government hasn't done that."

But Julia Langer, director of the global threats program at the World Wildlife Fund, said banning cheap bulbs is only part of the solution. Ontario has to adopt energy efficiency at every level, from building codes to fuel-efficient vehicles, she said. The province simply must be more aggressive in its fight against climate change, Langer added.

"We have a climate crisis," she said. "We're running out of time. We have probably 10 years in which to do a yeoman's work to reduce greenhouse gases. The planet really can't take it anymore."

Others want to see the provincial Liberals go beyond light bulbs and look at protecting Ontario's boreal forest as part of its plan to reduce greenhouse gas emissions.

A group of 11 Canadian artists including author Yann Martel, actor Cathy Jones, singer Sarah Harmer and artist Robert Bateman have written a letter to McGuinty, urging him to protect swaths of the forest to counteract global warming.

"By protecting a few million hectares of intact forest, Ontario could safeguard vast quantities of carbon and be a leader in addressing climate change," states the open letter to McGuinty, to be released Thursday.

"A golden opportunity has landed in your lap. We urge you to take advantage of this unprecedented opportunity."

This article is based on a news release from the Canadian Press

Committee
Chair



2007 ASHRAE Curling Bonspiel

by Chris Healey
2006-2007 OVC Committee Chair



When: March 23rd, 2007

Where: The Nepean Sportsplex

We are sold out, all spots are filled.

If anyone is interested, all are welcome to drop by during the day to see the participants in action, or to enjoy a beverage with yours truly during the afternoon.



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Committee Chair



NCR NIRAJ CHANDRA REPORT
OUR GUY ON SITE

Incentives Would Boost Change

Courtesy The Ottawa Citizen
Published: Thursday, February 15, 2007

IMPORTANT NOTE

My articles represent my own personal views, opinions, and knowledge. They should not be construed in any way as representing the viewpoint of the organization I work for, or ASHRAE Society, or the Ottawa Valley Chapter.

Niraj Chandra, P.Eng

E-mail: niraj_chandra@hotmail.com

Governments have tried a number of methods to curb global warming, with limited success. Greenhouse-gas emission targets have been set but rarely attained, incentives for energy efficiency have been introduced but in limited ways, energy taxes on gasoline and diesel fuel have been imposed and punitive measures for controlling pollution often aren't enforced.

I suggest a new incentive for individuals and businesses: annual tax deductions for making environmentally friendly choices.

Many provinces give lump-sum rebates on the retail tax for motorists who purchase energy-efficient vehicles such as hybrids. In addition, I believe the government should offer annual income-tax credits for operating energy-efficient vehicles. Tax credits for using public transit should be enhanced.

Tax rebates on a recurring basis should also be offered for improving the energy efficiency of homes and businesses. Property taxes should also be linked to the asset's energy efficiency, not just to property values.

Like most Canadians, I hate taxes, and I'm sure availability of such deductions and rebates will help us make "green" choices in our daily lives. This may have a larger impact on the environment than many of the big-ticket items that often are proposed but rarely implemented.

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ASHRAE Learning Institute:

- Website: <http://www.ashrae.org/education/page/554>
- [Fundamentals of Standard 90.1 for Energy Efficiency in New Buildings](#)
 - [Fundamentals of HVAC Systems SI edition](#)
 - [Fundamentals of Steam System Design](#)
 - [Fundamentals of Air System Design](#)
 - [Fundamentals of Electrical Systems and Building Electrical Energy Use](#)
 - [Fundamentals of Heating and Cooling Loads](#)
 - [Fundamentals of Heating Systems](#)
 - [Fundamentals of Refrigeration](#)
 - [Fundamentals of Thermodynamics](#)
 - [Fundamentals of Thermodynamics and Psychrometrics](#)
 - [Fundamentals of Water System Design](#)

BACnet:

- Website: <http://www.bacnet.org/Training/index.html>
- An Introduction to BACnet.
 - Understanding and Specifying BACnet Systems.
 - Association of Energy Engineers

- Website: <http://www.aeecenter.org/seminars/>
- DDC Open Systems: A Consumer's Guide to BACnet, LonWorks & Networking Standards.

- [Optimizing Boiler Efficiency: Slashing Boiler Fuel Costs](#)
- [Sustainable Green Buildings: Introduction to LEED®](#)
- [Specifying Interoperable DDC Systems](#)

More course offerings will be found at the individual web-sites, along with registration details.

Enjoy!

Guy H.J. Bourbonnière P.Eng.
District Manager



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VENTILATION & FILTRATION PRODUCTS

Swell Guy



Energy Saving Ideas

By John Hammond, P.E.

IMPORTANT NOTE

My articles represent my own personal views, opinions, and knowledge. They should not be construed in any way as representing the viewpoint ASHRAE Society, or the Ottawa Valley Chapter.

John Hammond P.E.

E-mail: triplebundle@cox.net

[2007.03.11 - This article has been updated from that originally published – ed.]

I carried out a number of UK government assisted “**short & extended Energy Surveys**”. I considered doing the same in the US but have cut back now that I am 65 and earn my living as a forensic expert. As energy and energy savings have become a bigger world problem I consider I should share some of the concepts I used for these energy surveys and hope you and ASHRAE will find value in some of these to reduce North America energy usage. The following are some simple, cheap and effective ways I proposed to clients that saved money on their energy costs:

1) Clean Buildings early in the Morning rather than Evening and Shift Energy Usage to save approx. 10% on Electrical Operating & Heating Costs.

This energy saving concept involves no capital outlay but merely a policy change. It produces energy saving by moving the lighting electrical load used when cleaning a building from evening high costs (7.00pm to 12.00pm) to non-peak generating times (3.00am to 7.00am) when the Power Companies use more efficient generators. For the consumer (State/Country) it puts the substantial electrical lighting (building cleaning) load into a cheaper electrical generating schedule. Plus, during the winter (cooler periods) the lighting load (energy/heat) also assists in reducing heating loads by helping to preheat the building. I believe this can make savings of 10% electrical cost.

Calculation **Electrical saving:**

- = assume 12 hr operation 7am to 7pm.
- = Moving 3 hour cleaning period will save approx. 10% Electrical
- = 3 hours x approx. 50% reduction in cost divided by 15 hours (12+3)
- = 10% saving (Electrical cost based on 50% off peak cost saving)

Winter heating cost saving over assumed 4 months with lighting at 0.5 W/sq. foot

- = 3 hours x 0.5 W/sq/ft x 3.412 x 4 months x 4.3 wks/month x 5 days
- = 444.146 divided by heat lost over 4 months
- 4 Btu/sq foot x 15 hrs x 4 months x 4.3 x 5 days x 0.75 boiler/heat efficiency

= 11.35% just structural heat loss savings. Does not include ventilation heat because there is none during heat up period.

(cont...)

(...cont.)

2) Use Building Thermal Mass to Store and Shift Energy Usage during Summer, Spring & Winter to save another approx. 10% single floor to 20% multi-storey.

Ice storage systems use off-peak electrical energy to reduce electrical peak demand and move the electrical consumption to a cheaper off-peak period. However, the building and its contents have a considerable mass and thermal storage capacity. This concept uses that mass/storage and with the Computer Building Management systems available today only involves reprogramming slightly to utilize this building mass storage. The principle involves allowing the building to swing temperatures within set limits: for example (73F to 77.5F) have a set point summer temperature of 75F at 2.00pm. Then allow the building temperature to increase by 0.5F per hour until 7.00pm (77.5F). Either switch off plant or hold that temperature until 3.30am and then reduce the room/building temperatures by 1degF per hour for the next 4.5 hours (7.00am) to 73F. Hold this temperature until 11.00am then start to increase the rooms/Building temperature by 0.5degF per hour until 7.00pm. This keeps temperatures within acceptable human comfort levels, but moves some of the considerable chiller loads to the Nation's more efficient power generators, and for the consumer, it moves some of his higher electrical costs to the cheaper rates.

Assume 6" thick concrete (3" per floor/ceiling) and assumes 0.21 specific heat concrete and 150 pounds/cubic foot and 4.5oF temp swing. Add another 20% for external/internal walls, false ceiling, and office equipment. Assume savings over 4 months and average heating load 225Btu/SF cooling load (lights 1.7 Btu/SF, Equip 3.4 Btu/SF, people 3.5 Btu/SF, Conductance/Solar 10 Btu/SF x 12 hours (7am to 7pm) = 223.4 Btu/SF)

Heat stored per SF = 150 x (6"/12") x 1.25 (25% extra storage) x 4.5oF x 0.21
Energy Saving = 88.6 Btu at 50% (off peak electrical cost) divided by 225 Btu/SF
= 19.7%.

3) Lighting LED (Light Emitting Diode) saves 30% on lighting operating costs.

LED's are becoming more efficient and are being considered by New York for street lighting. LED efficiencies are doubling approx. every 1.5 years. This same thinking needs applying to offices, commercial buildings and exterior building lighting of car parks as well as street lighting. Cree Inc. of Durham, NC (June 20, 2006) claim 131 lumen/W: web site; www.cree.com, or specifically to 131 lumen/W site www.cree.com/press/press_detail.asp?i=1150834953712. They claim their EZBright white light product operating at 20 ma was tested and is certified by National Institute of Standards & Technology in Gaithersberg, Maryland. The closest fluorescent I know can only produce approx. 101 lumen/W. This new LED produces white lighting electrical savings of at least approx. 30% over current white lighting. However, it also reduces the air conditioning lighting load operating cost by approx. 35% (of the 30%) and reduces the size of the A/C equipment & electrical installation, the saving cost of which can be off-set against the LED's initial high cost. LED's also considerably reduce lighting maintenance which factors into the equation and I believe makes these LED proposals viable. Perimeter daylight saving and other proposals can also be introduced. LED's do not have the mercury content of some other light fixtures. These lighting fixtures cost a lot more and therefore need to be discussed with any clients before installation, pointing out the other cost savings. The new LED's (not the fixture) can be replaced in approx. 10 or 20 years with even more efficient LED's fairly cheaply.

John Hammond PE
(CA M29640, NV ME 14188, C. Eng (UK) 475934)



Special Notice Date Change for May Meeting

By Glenn MacLean

Mark your calendars, send yourself a meeting reminder, synchronize your Blackberry's!

The May meeting will be held on **May 29th**, the **last Tuesday of the month**. Meeting location has not changed.

Terry Townsend, President, ASHRAE Society will be our guest speaker for the evening and will speak on his concerns about Climate Change and his vision of Sustainability. This is a rare opportunity for us at the chapter level, however, due to Mr. Townsend's busy schedule we were asked to change our meeting date to be able to accommodate his visit.

We will continue to remind all our members in the meetings and newsletters to follow, and have updated the meeting date on the website. *Please pass the word - this is not a meeting we want you to miss.*

Regards,

Glenn MacLean
President 2006-2007
Ottawa Valley Chapter ASHRAE
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Past President



Table Top Display

by Frank "Johnny Cash" Bann
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Business Card Ads

by Rod Lancefield

You can support your chapter and promote your business by placing your business card in the Capital Communiqué. It will appear in the electronic and printed version as well as on the Chapter website.

Cost is \$225.00 for the year; contact Rod Lancefield, rod@htseng.com, (613) 728-7400.

Indoor Environmental Design:
Practical Solutions to Everyday Problems
SATELLITE BROADCAST/WEBCAST

Wednesday, April 18, 2007
1:00 p.m. – 4:00 p.m. Eastern Daylight Time

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About the Presenters

(Visit www.ashrae.org/iedbroadcast for complete details)

- Hoy R. Bohanon, Jr.
- Willian J. Coad
- Lew Harriman
- Daniel In-Hout
- Christopher O. Muller

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To Register or For More Information

Online registration for Site Coordinators and Webcast viewers will begin March 1, 2007, at <http://www.ashrae.org/iedbroadcast>. Satellite broadcast participant registration will begin March 15, 2007. **There is no fee for registration.**

If you have any questions, call us at 678-539-1139 or email us at ashrae-satellitebroadcast@ashrae.org.





The Milk Crates are History

by Rod Potter
Editor, Governor, Gopher and Webmaster

Recently I have shown an interest in getting some of the **History of our Chapter** posted on the web. So being pretty up close and personal with the webmaster, I have made a start by asking all sorts of rude questions like:

- Where is all the stuff stored;
- How much of it is there;
- Who the heck has it;
- How can I make it more available to members?

It turns out that much of it has been stored for years in plastic milk crates, taking the form of multiple ring-binders full of old photographs of Past Presidents wearing tutus, Chapter Minutes yellowing with age, and even a hard-bound ledger-size book containing hand-written BOG Minutes from 1952 to about 1964. I was astonished when I first saw this book because it is obviously of great value to the Chapter (hand-written scribe, varying from year to year as the executives changed, mainly with fountain pen). Quite frankly it is gorgeous, and if we were to turn up at an Antiques Roadshow with this book, its authenticity would most certainly be confirmed.

Many of you may have seen some of this stuff on a table at our first meeting of the year, which was held at the Prescott Hotel. I can remember my first perusal of the binder containing the BOG photos from across the years. The first one is from 1952 when Bunny Stotesbury banged the gavel. These photos are excellent. Unfortunately there is a large gap from 1953 until about 1965 – we do not seem to have a BOG photo for all of these years. If anyone knows where I can get copies of these, **please let me know**. I expect some of our more senior members have copies of these squirreled away somewhere! After 1965 we are in fairly good shape with only a few years missing.

Having spent some time perusing these pictures, it made it doubly sad to hear about the passing of **David Minshall**. Too often in this life we let good intentions go unfulfilled, and I am so disappointed that I did not take the time to visit with David before it was too late. I was speaking with one of his good friends and colleagues **Don McKeen** yesterday, and I am hoping that Don will be able to write a Eulogy for David, which I will include in the April Communiqué.

Back to our History documents – there are loads to look through, and I am sure that most of the membership is unaware of their depth, and how entertaining they can be to look at. That big goof Joel Primeau was messing around with photos of past-presidents yesterday and playing the look-alike game with **Bob McKee**. I think Bob looks a lot like Gretzky – I will let Joel tell you what he thinks. And Chris Frauley looks like he was only about sixteen when he first became involved with ASHRAE!

Anyway as you may have guessed, I intend to start getting this stuff scanned and posted, first so that everyone can see what our Chapter History has to offer, and secondly to safeguard the memories of so many of our colleagues. This effort will take many months to accomplish, but I am sure it will be worthwhile. I will be taking over as Chapter Historian from Joel at the beginning of next season, as he moves on to RVC duties. I look forward to the task! In the meantime, the documents will continue to languish in milk crates, but now they are in **my** basement instead of **Frank Bann's**.

*** end of Communiqué ***



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