

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS INC.

London, Canada Chapter No.116 (www.execulink.com/~tpollard/ashrae.html)

Volume 1, Issue 1

SEPTEMBER 2001

Board of Governors & Committee Chairs

President
Daryl Somers
Ph (519) 652-1977
daryl@somersap.com

Vice President & Program Chair
Tom Pollard
Ph (519) 685-2570
tpollard@execulink.com

Secretary
Derek Vakaras
Ph (519) 679-8660
derek.vakaras@chorley.com

Treasurer
Ed Lainsbury
Ph (519) 451-5100

Student Affairs
Brenda Stonehouse
Ph (519) 661-2111
bstoneho@julian.uwo.ca

Membership
Joe Claessens
Ph (519) 672-8511
Joe@smylecrow.com

TEGA
Derek Vakaras
Ph (519) 679-8660
derek.vakaras@chorley.com

Scott Turner
Ph (519) 652-1977
scott@somersap.com

Research
Dennis Dawe
Ph (519) 670-8660
dennis.dawe@chorley.com

Historian
Peter Golem
Ph (519) 679-8660
peter.golem@chorley.com

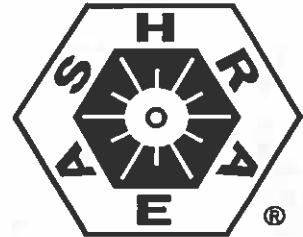
Reception
Paul Martin
Ph (519) 641-4300
kilmersw@home.com

Newsletter
Jason Vandenbergh
Ph (905) 545-5479
Jasonv@aquatech.ws

Golf Tournament
Hugh Palsler
Ph (519) 471-9382
palsereh@primus.ca

Topic: New Developments in Water Filtration on HVAC and Boiler Applications

Speaker: Alain Blais, President, Sonitec inc.



Mr. Blais is Partner and Founder of Sonitec Inc. He obtained his engineering degree in 1986 and MBA in 1987. Sonitec develops systems for reducing water and energy consumption for heating and cooling systems including reverse osmosis and filtration systems while improving their environmental performance.

The presentation will cover the following topics:

How to reduce boiler fuel cost by changing water pretreatment technology.
Legionella - Does it really matter to me? Reverse Osmosis vs Dealkalizer pretreatment technology and which is best. How can I increase my cycles in my cooling tower from 3-4 cycles up to 7-9 cycles?

What is the real cost of operating a dirty cooling tower?

Filtration solutions to free cooling systems.

Filtration technologies used in closed and open loop cooling systems -

Which ones really work and why.

Technical talk: Reverse Osmosis— What it is and How Does it Work

New Location: The Lamplighter Inn **591 Wellington Rd., S.**

BUFFET MENU

Green, Caesar, Potato & Pasta Primavera Salad,
Oven Roasted Atlantic Salmon Fillet With a Char-
donnay Sauce, and Chicken Stirfry, & Sweet Table

Meal Cost \$32.00, Or Meal Plan \$150.00

Students \$15.00

Monday SEPTEMBER-24-2001

Social—5:15 pm

Dinner—6:00

Program—7:15 (Approx.)

President's Message

Welcome back for another season of ASHRAE in London, I trust each of you had a relaxing and enjoyable summer, although it seemed to pass too quickly for me.

Once again have another good year in the works at the chapter level, the executive has met a couple of times during the summer to prepare what we feel will be a fun and informative season for you.

Tom Pollard our program chairman has been busy since last spring arranging topics and speakers for us, and has three excellent speakers arranged for our Sept, Oct & Nov meetings, including an ASHRAE "distinguished speaker" for our Nov 26th meeting.

Tom still has openings for a couple of topics and speakers later in the chapter year, and I'm sure he would love to hear from you with your suggestions.

Eight chapter members were in Halifax for the CRC meetings in August. The work shops were found to be very informative and helpful. Society President Bill Coad was in attendance and brought some additional insight as to the direction the society is taking as well as some of the struggles they are working through as a organization of 50,000 + members, who are in the information exchange business.

We have a couple of new faces working at the executive level, and of course are always looking for others to get involved. To be honest, one really does not get the full benefit of their ASHRAE membership until they have become active at the chapter or society executive levels. Rumor has it they even have some fun at some of these conferences.

I look forward to seeing each of you at our meetings this year, and if I can make a suggestion to each of you, bring out a guest and introduce them to ASHRAE. What many of us take for granted could mean the world of difference to one of our colleagues.

See you on the 24TH

Daryl Somers

248 HAMILTON CRESCENT PHONE: (519) 268-3166
 DORCHESTER, ONT. N0L 1G1 (519) 268-3167
 FAX: (519) 268-3165

- COMPUTERIZED PLASMA CUTTING
- INDUSTRIAL
- COMMERCIAL

ERIE SHEET METAL INC.

- HEATING
- VENTILATING
- CUSTOM FABRICATING

JOE LEGUIE
President

EngA ENGINEERED AIR

80 AEG DRIVE, UNIT #1
 LONDON, ONTARIO
 N6E 3T6

CRAIG MORASCH
 DIVISION MANAGER
 SOUTH WESTERN ONTARIO

BUS: (519) 648-1780
 RES: (519) 853-9930
 FAX: (519) 648-1787

SOMERS ENVIRONMENTAL PRODUCTS INC.

Daryl Somers, C.E.T.

3044 West Graham Place
 London, Ontario N6P 1G3

Tel: (519) 852-1977
 Fax: (519) 852-3323
 Mobile: (519) 870-7720

Manufacturer's Agent

SIEMENS

Siemens Building Technologies, Ltd.
 Lamin Division

341 Carleton Court
 London Ontario N6E 2S8

Tel: (519) 660-2180
 Fax: (519) 660-2410
 In Vicinity: (519) 361-0188
 www.siemensbuildingtechnologies.com

D. Scott Barker
 Systems Supervisor

JOHNSON CONTROLS

John Johnson Controls Ltd.
 Controls Group
 50 Bessborough Road
 London, Ontario N6E 1H1

TEL: 519/881-1221
 FAX: 519/881-3322
 Internet: john.john@jci.com

TRANE

Norm Clarke, P. Eng.
 (Daryl's Manager)

7410 Canada
 #1000 Carleton Court
 London, Ont. N6P 1L2

Tel: 519-433-3010
 Fax: 519-433-3024

Wholesale Tel: 519-256-7322
 Toronto Tel: 519-337-0740

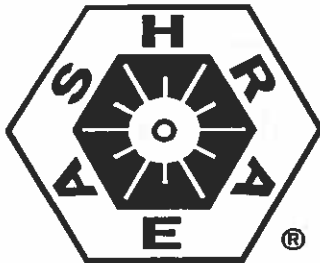
Future Meetings

Oct 29 - Innovative Laboratory Design (Mr. Roland Charneau - TEGA award winner)

Nov 26 - HVAC Design and Its Relationship to Fire Litigation (Mr. William Black - ASHRAE Distinguished Lecturer)

2002 Meetings

Jan 28 Feb 25 Mar 25 Apr 29 May 27



TEGA:

See Following Two Attached Sheets

BUILDING AUTOMATION SYSTEMS Distributor for
Delta CONTROLS
DURELL CONTROL SYSTEMS INC.
 D.D.C. Energy Management
 HVAC Controls - Directric & Automatic
 Bob Clark
 Manager
 Phone (519) 652-5502 • Fax: (519) 652-0285
 3392 Wonderland Rd. S. Bldg 7, Unit 1, London, Ontario N6L 1A8

EFI IRONROSS
J. W. (Jim) IRONSIDE, P. Eng.
 Kitchener Sarnia
 Tel: 519-742-0171 Tel: 519-344-1940
 Fax: 519-742-0543 Fax: 519-344-0980
 Twin City Fan / Aerovent • Alphair • BVA • FARR
 • Durham-Bush • Racan Air Handling • AeroIn
 Quiet-Aire Gas Fired Equipment • MK Plastics

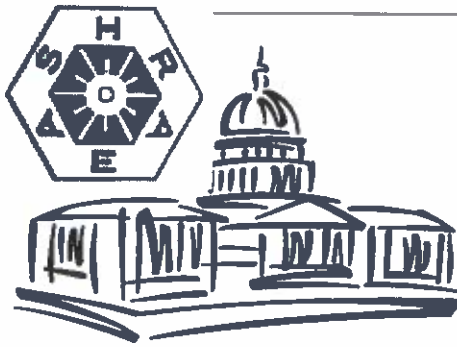
Mech-Mart
 a div. of W.B. Gingerich Sales Ltd.
 107 Hamilton Road
 New Hamburg, Ontario
 N0B 2 G0
 Tel: (519)662-2460
 Wayne Gingerich Fax: (519)662-2491

Carrier
PEYE EDMISTON
 Territory Manager
 CARRIER CANADA LIMITED
 254 Neptune Crescent, London, Ontario N6M 1A1
 Tel: (519) 456-7000 Fax: (519) 456-7725
 Wire: 1-800-265-4277
 peye.edmiston@carrier.ca

PALSER ENTERPRISES LTD.
 MECHANICAL AND ARCHITECTURAL
 MARKETING AGENCY
Hugh Palser
 1885 Blue Heron Drive BUS: (519) 471-9382
 Box 26, London FAX: (519) 471-1048
 Ontario N5H 5M9

RAY-TEC 99 Chisel Cree.
 London, ON N6K 3C5
 (519) 657-1010
 Fax: (519) 657-4398
Kirk Flowers
 HERVACHEY - humbler
 VULCAN - gas motor
 DESERT AIRE - automatic
 VENT MASTER - hot air vent
 RAYNO VENT - low extraction
 LOBIN COOK - fan
 SUPERIOR RADIANT - infrared heater
 AAF - Airion products that reduce
 NOISE - based on heat
 METAL AIRE - split, systems,
 efficient or turned units

**NORTHERN INDUSTRIAL
 FANS & BLOWERS**
MARTIN HALLIWELL, P.Eng.
 Tel: (519) 886-8091
 Fax: (519) 886-0160
 Web Site: www.nisco.net
 Toll Free: 1-888-FAN-COIL
 Address: 539 Paradise Ct., Waterloo, ON N2T 2N7



ASHRAE ISSUES

GOVERNMENT AFFAIRS NEWSLETTER

AN UPDATE OF LEGISLATIVE, REGULATORY AND LEGAL ISSUES AND PUBLIC POLICY TRENDS

Serving the ASHRAE Member Worldwide Since 1989 • Version: 13.05; Date: 2001.07

The ASHRAE Mission

To advance the arts and sciences of heating, ventilation, air conditioning, refrigeration and related human factors to serve the evolving needs of the public and ASHRAE members.

The ASHRAE Vision

In the new millennium, ASHRAE will be the global leader in the arts and sciences of heating, ventilation, air conditioning, and refrigeration; the foremost authoritative, timely and responsive source of technical and educational information, standards and guidelines; and the primary provider of opportunity for professional growth, recognizing and adapting to changing demographics and embracing diversity.

ASHRAE Goals

Provide comprehensive educational programs that enhance opportunity for professional growth; respond to current and emerging HVAC&R issues; ensure timely transfer of information; and provide for diverse global growth.

About ASHRAE Issues

The Society's government affairs office provides timely and concise summaries of important developments in governmental activities of relevance to the worldwide ASHRAE community, as well as respond to and participate in the public policy process.

To receive an email notice of future editions of this publication, please contact Chuck Miro.

ASHRAE Government Affairs
1828 L Street, N.W., Ste. 906
Washington, DC 20036 USA
V: +1 (202) 833-1830
F: +1 (202) 833-0118
E: cmiro@ashrae.org
mweiland@ashrae.org
pryan@ashrae.org

DOE Studies Energy Consumption of Chillers, Compressors and Heating Systems

The U. S. Department of Energy (DOE) is assessing the energy consumption characteristics of HVAC systems in commercial buildings. The objective is to characterize energy-related performance of HVAC systems and components and to calculate a baseline energy use. These types of studies assist DOE in planning and prioritizing its own research and development programs. No known prior estimates of national energy consumption in buildings exist at this detailed level.

The effort is a large, three-element study. This report is the second element of the DOE study assessing the energy consumption patterns of chillers, compressors and heating systems. The first element of the study, completed in 1999, reported on the energy characteristics of the thermal distribution systems in commercial buildings (see *ASHRAE Journal*, Dec 1999, pp. 24-25 and Feb 2001, p.58). The energy consumed by auxiliary equipment (fans, pumps and blowers) was examined. Equipment was targeted that distributes heating and cooling, rejects heat to the environment and moves air for ventilation purposes in commercial buildings. The reports are available under the "technical reports" heading on the Department's web site (www.eren.doe.gov/buildings/documents/).

The last element of the study, when completed, will identify energy savings opportunities in commercial buildings systems.

Equipment, Space Use and Climates

Energy consumption and relative energy-use intensities (energy consumed per unit floor area) vary with equipment type, building use and geographical location. Nine categories of commercial facilities are included in the study: education, food sales, food service, health care, lodging, mercantile and service, office, public buildings and

warehouse and storage. Each was studied in 5 differing climate locations in the U.S. (New York City, Chicago, Ft. Worth, Albuquerque and San Francisco).

The building categories with the highest cooling energy-use intensity are food service, food sales and health care – in that order. From the floor space aspect, food service represents only 3 percent (2.5 percent conditioned) of the total in U.S. commercial buildings, food sales only 1.5 percent (one percent conditioned) and health care 5 percent. The building category with the highest heating energy-use intensity again is also the food service sector (which is about 3 times greater than the next building categories).

From the climate perspective, the trends are predictable. The South is the most important region for cooling with 61 percent of the nation's total cooling energy, while the Midwest and the Northeast regions have the higher portion of the nation's heating energy consumption (at 38 percent and 25 percent of the total, respectively). However, the South is also important from the heating aspect (at 22 percent) because of the large amount of floor space that is conditioned in that region.

Since the report is considering conditioned space, the impact on the nation's energy consumption patterns varies by climatic zones. For example, the total floor space that is cooled is estimated at 36-billion square feet, whereas the total floor space that is heated is 48-billion square feet.

An interesting side aspect of these types of comprehensive assessments is the information gained on the overall buildings industry. An overview is provided on market penetration of various types of equipment/

(over, please)

DOE Studies Energy Consumption

(continued from previous page)

systems as well as a snapshot of the nation's buildings inventory.

From the energy-use aspect, the most important categories are public, office and mercantile and service. These three categories represent almost 60 percent of the heated and/or cooled floor area in commercial buildings and also consume more than 60 percent of the energy used in commercial buildings.

Public buildings consume 19 percent of the energy in both heating and cooling seasons. But, energy consumption in the office category and the mercantile and service category "switch" between the two seasons. In the cooling mode, offices use 28 percent and mercantile and service use 16 percent of commercial building energy; In the heating mode, offices use 14 percent and mercantile and service use 23 percent.

The Use of Equipment Options in U.S. Commercial Buildings

The energy consumed by chillers and compressors for cooling commercial buildings in the U.S. is estimated at a total of 1.4 Quads, while the energy for heating systems



is estimated at a total of 2.7 Quads – for a total of 3.1 Quads. When the impact of other system components (pumps, fans and blowers) is added, the total U.S. annual energy consumption in commercial building systems increases to 4.5 Quads.

The third element of the DOE study will identify those candidate areas for possible achieving additional energy savings.



The Senate Energy and Natural Resources Committee recently held hearings on portions of the President Bush National Energy Policy dealing with energy efficiency.

A number of issues were addressed, including the federal standards program. The Bush National Energy Plan then recommends that the Secretary of Energy: (1) "support [the] appliance standards program for covered products, setting higher standards where technologically feasible and economically justified;" and (2) "expand the scope of the appliance standard program, setting standards for additional appliances where technologically feasible and economically justified."

Among those testifying, the American Refrigeration Institute (ARI) commented that a 20 percent increase in the minimum efficiency standard for central air conditioning and heat pumps was "the best, fairest approach to increasing energy efficiency and attaining the greatest energy conservation.

ARI testified that a proposed 30 percent increase in the Seasonal Energy Efficiency Ratio (SEER) from the current 10 SEER standard "is economically dangerous to consumers and industry alike, and runs counter to our mutual goal of energy conservation. And, there could be significant increased health risks to senior citizens and lower income families who rely on affordable air conditioning today – not just for their comfort, but for their health and safety."

The issue was that "75 percent of consumers purchasing a 13 SEER will incur a net cost. In other words, at the end of the lifetime of the product, the savings in operating cost will not be sufficient to offset the incremental first cost of the product. The situa-

tion is even worse for low-income consumers - 83 percent will not benefit from a 13 SEER standard."

Citing figures from the National Low Income Housing Coalition, ARI noted that 13.2 million homeowners live on incomes below \$21,920. Another 9.8 million households have incomes below \$35,072. Further, many of the nine million manufactured homes, which are often considered "starter" homes and are occupied by households on limited income, will require expensive retrofits because of the larger indoor heat exchange coils used with SEER 13 units, according to ARI.

The central air conditioning industry produces a range of high efficiency units above 12 SEER especially for use in southern tier states specifically in Florida, Texas, Arizona and Southern California. They cost more to make and are largely purchased by those who believe they will recoup the added cost through energy savings, ARI testified.

ARI cited support for a 12 SEER by the Small Business Administration and the Air Conditioning Contractors of America (ACCA) which was said represents "top air conditioning and refrigeration contractors in the country, who understand the dynamics of the marketplace best of all, believe the 12 SEER represents the best, fairest approach to increasing energy efficiency and attaining the greatest energy conservation."

The Department of Energy is expected soon to issue a proposal to set 12 SEER minimum efficiency standard for central air conditioners and heat pumps to go into effect in 2006.



