

December 5th, 2005

Meeting Notice

Tuesday December 13th, 2005

@ The Willows Golf & Country Club

Speaker: **Lee Burgett – President of ASHRAE**

Topic: **Past Presidents Social**

5:30 - 6:00	Cash Bar
6:00 - 6:45	Supper
6:45 - 7:15	Chapter Meeting
7:30 - 8:30	Dinner Speaker

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS



ASHRAE
SASKATOON

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Jack Scott
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**Chapter Technology
Transfer**
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President's Message

I would like to take this opportunity to wish you and yours a Merry Christmas and a safe and Happy New Year.

I hope everyone can find the time during this busy season to attend our past presidents social. This event always well attended and a great opportunity to talk to members who do not attend the regular meetings.

This year's social will be attended by ASHRAE's president Lee Burgett. Mr. Burgett will be addressing us at the social; opportunities like this are rare so please plan to attend.

The Saskatoon chapter's history archives have been dusted off for this social to coincide with our chapter's 40th anniversary in March. Come see the pictures from the past.

Hope to see you there.

Reg Hofmann



I ask everyone to mark on their calendars the local ASHRAE funspiel which will be held February 18 (Saturday) at the Granite curling club with a supper and trophy presentation to follow.

Regards,

Jack Scott

Energy Answers

Rob Dumont

What is the Factor 9 Home Project?

The Factor 9 Home is a new residence to be built in Regina, Saskatchewan in 2006 that will use 90% less purchased energy than a conventional 1970 home. In addition, the home will use 50% less purchased water than a conventional home.

Where does the term Factor 9 come from?

The Factor 9 comes from a projected 9 fold decrease in purchased energy consumption compared with a conventional average home in Regina.

Why are you going to this level of performance?

As anyone who has read the book **Collapse** by Jared Diamond will know, the earth has an unfortunately large number of past communities that collapsed mostly by overusing their natural resources. Easter Island in Polynesia, the Norse Community of Greenland, and the Mayan Civilization of Mexico are but a few of the civilizations that have collapsed. If current trends continue, most of the world will end up in a similar state of collapse. To cite one example, world oil consumption has increased by a Factor of 10 since the end of WWII. This enormous growth rate is not sustainable in a finite world. Even very modest growth rates over time can have very large consequences. Here's an example: Take one penny in the year A.D. 0 and invest it at the modest compound interest rate of 2% per year. By the year 1900, that penny is worth 2.2×10^{14} dollars or 220 Trillion dollars, more wealth than the current Gross National Product of all nations in the entire world! A finite world cannot sustain exponential growth in resource consumption very long. Even a rate of 2% growth, or, for that matter, 0.2% growth over a long enough period of time, results in unacceptably high consequences.

The Factor of 9 comes from the following:

World population is expected to grow by a factor of 1.5 before it stabilizes. The consumption level per average person in the world is expected to grow by a factor of 3 before stabilizing, and the climate scientists are telling us that we must reduce our current greenhouse gas production by a factor of 2. Multiply these three factors and the number 9 results.

Factor 9 thinking is needed for all of our energy using devices—buildings, industrial processes, transport vehicles, etc.

What will the Factor 9 Home look like?

The design is not yet finalized, but the house will be a bungalow. On the space heating side, the house will feature a very well insulated and sealed envelope, coupled with strong use of passive and active solar heating technologies. The budget does not allow for a photovoltaic system, but a south facing roof slope is being used that can later accommodate PV panels as the cost of these devices fall. (We even plan to put a conduit in place to allow for a simple future addition of the PV panels.)

From Solplan Review Magazine, Box
86627, North Vancouver, BC, V7L 4L2?
An annual subscription to the
publication is \$48.15 including GST.

Appliances will be Energy Star or better, and most of the lighting will be compact fluorescent.

A rendering of the north side of the house is shown in Figure 1.

We anticipate that construction will start in March of 2006.

For more information on the project, have a look at www.factor9.ca

Acknowledgments: The Factor 9 Home Project is indebted to many sponsors including the following: The Communities of Tomorrow (www.ctinfo.ca), the Office of Energy Conservation of the Government of Saskatchewan, the Saskatchewan Research Council, Natural Resources Canada, Canada Mortgage and Housing Corporation, Panbrick Incorporated, Emercor Ltd., and the future owners of the Home, Rolf and Shannon Holzkaemper. Partners in the project include the City of Regina and the University of Regina. Additional sponsors are being sought.



Figure 1. North view of Factor 9 Home: A New Prairie Approach

Membership News

Previous Meeting Attendance: Many thanks to those who attended the October 2005 local chapter meeting and listen to the presentation by Jason Praski from Sask-Energy and his presentation on Gas Efficiencies & Gas Distribution. Those in attendance were,

Ryan MacGillivray	Jeff Frie	Michael Chataway	Kevin Haab	Norm Hain
Greg Scrivener	Jack Scott	Reg Hofmann	Lloyd Labas	Chris Conley
Dean Bilodeau	Bernie Kaminsky	Grant Jones	Myles Bantle	Jason Praski
Grant Roming	Kirk Campbell	Bruce Waldbillig	Rostam Akhtour	Jonathan Bushman
			Khaauaim	
Bill Dean	Doug Freeman	Trent Washkosky	Keith Morson	Paul Khanna
Dean Buckholz				

New Members: I would like to congratulate and welcome 1 new ASHRAE members, Kyle Acott who has been sponsored by Carey Simonson thru the Members Get-A-Member Program.

Multi Years Dues: At the fall Members Council meeting, a motion was passed that will allow for multiple year payment of ASHRAE dues. The incentive for this is 10% in years 2 and 3. So when it is time to sign up new members or for existing member to renew, they will have the option of renewing for 1, 2, or 3 years. This action was in response to CRC motions received from all over the world. It will have the greatest benefit to the overseas members who have to send wire transfers and pay a substantial fee for that service

It should be a positive benefit in member retention and make the Membership Promotion Chairs job a little easier if their are fewer delinquents to chase.

Traci Hanegan, Chair of MPC from the Inland Empire Chapter and the rest of the Membership Promotion Committee including Kevin Marple, worked very hard to get this motion before the Council and it passed unanimously at the committee and council levels. Great work.

Rosters: Updated rosters have been sent to the printers and should be available for distribution at the December ASHRAER Meeting.

Web Site: Check our web page for all the latest news on our local chapter.

<http://www.saskatoon.ashraechapters.org>

Jeff A. Frie A.Sc.T.

Membership Promotion Chairperson



TECHNOLOGY COUNCIL

MEMBERS FIRST!

2005-06, Volume 2

TECH COUNCIL NEWS *ASHRAE Technology is for ASHRAE Members. Members come first.*

This is the second of Tech Council's quarterly briefings. You will find information from all the committees that report to ASHRAE's Technology Council. Our goal is to make the work of the technical side of ASHRAE open to all ASHRAE members. Page 2 of this newsletter lists the questions we received from our first newsletter and our responses. *We ask that you look this over and give us feedback. Please direct any questions on any topic or feedback on this newsletter to Hugh McMillan, Vice-Chair, Tech Council at hugh_mc@mail.ashrae.org.*

STANDARDS NEWS

How can you tell what is the latest version of any of Code-Intended continuous maintenance standards? Under the new policy of the Standards Committee, you will always know when these documents are updated. Since July 1, the code-intended standards under continuous maintenance have been on a three year re-publication schedule. The next fully published version of Standards 15, 34, 52.2, 62.1, 62.2, 90.1, 90.2 and 140 will occur in 2007. Next March, a supplement of all addenda approved since the 2004 versions were released will be published. These addenda will become effective with the supplement date of approval by the ASHRAE BOD and ANSI. This means you can expect something to be coming out on these standards every 18 months. We are striving to make the business of keeping up with code-intended standards more predictable and less costly for our Members and the public.

TECHNICAL ACTIVITIES NEWS

TAC is considering a proposal to form a new Task Group (TG) that is concerned with all exergetic aspects of energy and power consumption of building comfort and service systems and equipment, assessment of their impact on the environment, and development of analysis techniques, methodologies and solutions for environmentally safer low-exergy buildings. Exergy is defined by ASHRAE as an expression for the loss of available energy due to the creation of entropy in irreversible systems or processes. The energy loss in a system or component is determined by multiplying the absolute temperature of the surroundings by the entropy increase. This TG will help pave a road for a more comprehensive set of scientific and technical actions in order to further develop a more environmentally safe building technology and new HVAC systems while the commitment of ASHRAE towards sustainability is facilitated.

RESEARCH ADMINISTRATION NEWS

A color brochure summarizing ASHRAE's 2005-2010 Research Strategic Plan is now posted on the "Research" page of ashrae.org. The brochure details all five Opportunity themes, 28 goals associated with the five themes and a partial listing of potential project topics that may help address these goals. The strategic plan is primarily intended to help guide the 98 TCs within ASHRAE towards achieving broad and ambitious goals set by the Society as a whole for research. How well a particular topic supports the strategic plan will count towards forty-five percent of the review criteria used to evaluate all research topics proposed by the TCs. Find the Research Strategic Plan at: http://www.ashrae.org/content/ASHRAE/ASHRAE/ArticleAltFormat/2005928112649_347.pdf

ENVIRONMENTAL HEALTH NEWS

Planning for the Ventilation Workshop to review research that has been or is being conducted on the effect of ventilation rates on health in multiple types of indoor environments, including offices, schools, residences and day care is well underway. The purpose of the project will be to determine the current state of knowledge to develop priorities for additional research that may be needed.

REFRIGERATION NEWS

REF has posted two documents to our website: "Tips on Hosting a Successful Refrigeration Focused ASHRAE Chapter Meeting" and "Training in Refrigeration". The first was written to provide chapter level people help on setting up a refrigeration focused chapter meeting that would draw more than 3 people by giving contacts at other organizations and a list of timely topics. The latter document is a continuously updated list of all North American based training programs on industrial (ammonia) refrigeration. REF intends to keep both up-to-date and promote their use at regional and local levels.

MEMBERS FIRST! FEEDBACK

QUESTION 1

CTTC has liaison assigned to each TC Section. Liaisons attend section breakfasts but are not respected. The purpose of CTTC is to strengthen the ties between the grassroots and technology side of ASHRAE.

RESPONSE

The Technical Activities Committee (TAC) will work with TCs to insure that liaison relationship is respected. While time is limited at the section breakfasts, the TCs understand the importance of this liaison. In the interest of time, it would be helpful if the CTTC liaison could bring any information they wish to share in written form to distribute to the TC chairs.

QUESTION 2

A significant proportion of ASHRAE members do not know how to join a TC.

RESPONSE

There is a good discussion on how to join a technical committee on [ashrae.org](http://www.ashrae.org). It can be accessed at:

<http://www.ashrae.org/template/AssetDetail/assetid/23231>

QUESTION 3

Research Promotion RVCs do not understand the process by which a research proposal becomes a project and how the results of the research are implemented. The result of this lack of knowledge is lack of focus in the Research Promotion campaign.

RESPONSE

Certainly we want all members to understand how the ASHRAE research process works. An overview is reported here, but we strongly recommend that RVCs and other interested parties visit the www.ashrae.org website. Choose the "Standards and Technology" link on the home page and scroll to "Research." *Within the research section, you will find the "Research Digest" along with several interesting references to all the research activities - past, present, and future. The Digest contains a complete flow chart that will elaborate on what we are reporting with this note.*

ASHRAE *Technical Committees (TC) play the lead role in all research projects*, whether generated within the TC, an Unsolicited Research Project (URP), or requested from an individual through his local Chapter and Region. If the research request comes from outside TC membership, and it falls within the Strategic Research Plan (also on the website), one or more TCs are asked to champion the work. There are 98 TCs organized into 10 Sections.

Key documents requiring RAC, Tech Council, and, in some cases, ASHRAE Board of Director approval are (1) the Research Topic Acceptance Request (RTAR); (2) the Work Statement prepared as a result of the approved RTAR in the Implementation Plan; (3) the Tentative Research Proposal (TRP) which leads to obtaining bids from contractors; and (4) the recommendation of contractor from a Project Evaluation Subcommittee (PES) appointed by the TC. Once the project is initiated with an entity, the TC has a Project Monitoring Subcommittee (PMS) that ensures the work remains on course toward the objectives, timely, and within the contracted costs. *Technology Transfer is achieved through publication in ASHRAE Handbooks, ASHRAE Standards, special publications, ASHRAE transactions and/or Research Bulletins.*

Very recently, our society has prepared and published a Strategic Research Plan that was prepared with input from the broad membership. This plan will be updated every five (5) years. A big factor in evaluating the merits of proposed research will be its fit in the Strategic Research Plan. The plan is organized into five (5) research opportunity themes: (1) Energy and Resources, (2) Indoor Environmental Quality, (3) Tools and Applications, (4) Equipment, Components and Materials, and (5) Education and Outreach. To understand some of the specific goals within these themes, we urge you to visit the research link at the www.ashrae.org.

You will find much more detailed information on how research projects are chosen and how they are implemented and used in the vastly improved research website. We urge all interested parties to take a look.



TECHNOLOGY COUNCIL

MEMBERS FIRST!

2005-06, Volume 1

TECH COUNCIL NEWS *ASHRAE Technology is for ASHRAE Members. Members come first.*

This is the first of Tech Council's quarterly briefings. You will find information from all the committees that report to ASHRAE's Technology Council. Our goal is to make the work of the technical side of ASHRAE open to all ASHRAE members. *We ask that you look this over and give us feedback. Please direct any questions on any topic or feedback on this newsletter to Hugh McMillan, Vice-Chair, Tech Council at hugh_mc@mail.ashrae.org.*

STANDARDS NEWS

ASHRAE and ACCA have agreed to publish a load calculation standard for non-residential applications. Both ASHRAE and ACCA had independently been working on such a standard and had filed notice with ANSI of their intent to do so. The intent of the standard is not to set exact load calculation procedures but to provide criteria for the evaluation of load calculation procedures for various applications. StdC is working to develop a ventilation code proposal for use by the various code bodies. This proposal would be designed to be referenced in codes in lieu of Std 62.1 in its entirety.

TECHNICAL ACTIVITIES NEWS

A Handbook Content and Structure Improvement Workshop was conducted with a focus on improving the review and revision process of all handbook volumes so that all handbook volumes become increasingly clear, more engaging and more useful. 58 of 98 Technical Committees (TCs), Task Groups (TGs) and Technical Resource Groups (TRGs) maintain active websites accessible through ashrae.org to communicate with ASHRAE members. Our goal is that all 98 will be up in July, 2006. Look at the frequently asked question (FAQ) database on ashrae.org for answers to 87 questions, 60 of which are new. On the average, 15 technical inquiries are received daily.

RESEARCH ADMINISTRATION NEWS

The ASHRAE Strategic Plan for Research for the next 5 years was approved. The plan is based on five broad, far reaching Research Opportunity Themes: Energy and Resources, Indoor Environmental Quality, Tools and Applications, Equipment, Components and Materials, and Education and Outreach. A research project was approved for Oklahoma State University to develop "Application Manual for Non-Residential Load Calculations". TC5.12 reported they do not plan to conduct research on the effectiveness of 7.5 cfm/student in lieu of 15 cfm/student in light of current research indicating that 15 cfm/person may be too low. However, the appropriate ventilation rate for schools is to be addressed by a workshop that examines the research status and needs regarding the health and other effects of ventilation rates.

ENVIRONMENTAL HEALTH NEWS

The Environmental Health Committee is developing a project work statement to request an ASHRAE Special Project. The proposed project is related to a critical interdisciplinary scientific review of research that has been or is being conducted on the effect of ventilation rates on health in multiple types of indoor environments, including offices, schools, residences and day care. The purpose of the project will be to determine the current state of knowledge to develop priorities for additional research that may be needed. A position document on Environmental Tobacco Smoke (ETS) has been approved by the Board of Directors. Look for this on ashrae.org.

REFRIGERATION NEWS

The Refrigeration Committee is working with TC10.3 to include information on CO₂ as a refrigerant in an existing chapter of the 2006 Refrigeration Handbook Volume. The committee has conducted an initial review of the Ammonia as a Refrigerant Position Document. It has also conducted an initial review of the Ozone Depleting Substances Position Document. Some of the current recommendations are outdated and require revision.

ASHRAE Saskatoon Chapter

General Meeting Minutes

November 8th, 2005

I. Call to order

Reg Hofmann called to order the regular meeting of the ASHRAE Saskatoon General Meeting at 7:10 p.m on November 8th, 2005 At the Willows Golf & Country Club.

II. Reading of minutes from last meeting

- The meeting minutes from the October meeting were read by Bruce Waldbillig. Lloyd Labas made a motion to accept the minutes as read which was seconded by Jeff Frie.
- There were no changes or omissions
- A vote to accept the minutes as read or amended was passed unanimously

III. Reports

Treasurer – Ryan MacGillivray

- Account balances were as follows:
- | | |
|-------------------|---------------------|
| Chequing account | \$ 9,436.00 |
| Money Market Fund | \$ 9,802.06 |
| Balanced Fund | <u>\$ 11,191.48</u> |
| Total balance | \$ 30,429.54 |

Programs - Kirk Campbell

- Welcome Jason Praski from SaskEnergy.
- The December meeting will be in the eagle view room at the Willows
- The president of ASHRAE Lee Burgett will be attending our December Meeting, which will feature the Christmas Social and Past Presidents night.
- The January meeting speaker will be Robert Renaud from Sanuvox. His topic will be Ultra Violet Air Purification.

CTTC – Chris Conley

- (13) people took part in the Fundamentals of HVAC Design course on October 26th /27th.
- Looking for volunteers to Instruct a course for next year.
- ASHRAE library is up and running at SIAST

Student Activities – Paul Khanna

- NTR

History – Jack Scott

- Will look into the Archives to find history information for our December meeting
- Looking for suggestions to display the pictures, documents etc.
- Local Curling funspiel will be February 18th at the Granite Curling Club. This bonspiel helps fund our representation in the annual John Ross Bonspiel to be held in Edmonton.

Membership – Jeff Frie

- Would like to welcome (2) new members: Trent Washkosky from the City of Saskatoon and Philip Leduc from PAMI
- Welcome to all new prospective members attending our meeting tonight.
- 2005/2006 Membership Rosters are still a work in progress, only 75% of the consent forms have been received. If we don't hear back from the other members soon, we may not proceed with publishing a roster for this year.

Research Promotion – Mike Osborn

- Not present

IV. Unfinished Business from the Previous Meeting

- None

V. New business

- The BOG wants to make a yearly purchase of a new book(s) for our ASHRAE Library. We are asking for a reasonable amount per year to budget for these books.
- Chris Conley made a motion to have a maximum amount of \$300.00 set forward per year for our local ASHRAE library. Jack Scott seconded the motion. This motion was discussed amongst the local members.
- Brad Chisan made a motion to amend the amount to be raised to a maximum of \$500.00 per year. Norm Hain seconded this amended motion.
- A vote to accept the amended motion was passed unanimously.
- The Chapter Presidents plaque will be updated by Ryan MacGillivray for the December meeting.

VI. Adjournment

- Chris Conley made a motion to adjourn the meeting, which was seconded by Bernie Kaminski. Meeting adjourned at 7:30 p.m.

Minutes submitted by: Bruce Waldbillig