Chapter President's Message

Jonathan Bushman

Hello everyone and welcome back!

I am excited to be back in another year of ASHRAE Saskatoon. It looks like we have a good line-up of speakers. Our first speaker is Professor David Torvi of the U of S. (Okay, technically he is an assistant professor, but he is a good one.) I had the joy of being in his Introduction to Fire Protection Engineering class and I remember one abbreviation from around the first class: HFOG, for House Full Of Gas. David Torvi's career has included experimental research that must have been a blast (think HFOG) and he is an excellent speaker. I am honoured that we are kicking off our year with David Torvi's presentation on innovative fire protection.

(I apologize to Rob Dumont for not giving him a similar glowing written introduction last year, but I did not know he would be speaking. We had a speaker cancel and Rob valiantly stepped in to fill the gap. Rob has done a lot of excellent work and I cheer for him as a hero of building energy efficiency. We have a lot of good people, right here in Saskatoon, and we do not often get to hear about them. If you know of another hero of heating, ventilation, and the like, then please let me know.)

We have a website! Not only do we have a website, but I reckon it is pretty good and being updated fairly regularly. Thanks goes to Mike Nemeth for getting it off the ground and current. Check it out at www.ashraesaskatoon.ca.

There might be some of you that are getting this email because you are taking mechanical classes at the University of Saskatchewan or at SIAST's Kelsey campus and maybe you do not know much about ASHRAE Saskatoon. We exist to share HVAC&R (Heating, Ventilating, Air-Conditioning, and Refrigerating) knowledge. This is something you might want to get involved with as we usually have supper meetings on the second Tuesday of every month during the school year with a technical presentation on an HVAC&R topic, good food that is cheap for students, and a chance to meet potential employers and make contacts. ASHRAE is the American Society of Heating, Refrigerating, and Air-conditioning Engineers, with chapters all over the world, in Saskatoon, San Diego, Spain, Saudi Arabia, and Singapore, just to name a few. This is a big organization, with a great deal of expertise to draw on. ASHRAE has annual conferences to share that knowledge (and show off the latest HVAC&R products) and I have had the honour of attending two of our region's conferences. ASHRAE also has scholarships and research grants. The Saskatoon chapter of ASHRAE gives two scholarships every year, one to the U of S and one to SIAST. A grad student at the U of S just won a $10,000 grant-in-aid from ASHRAE this year. I hope this tells you a little more about who we are, but if you have any questions, then please feel free to ask me. It's looking like a great year ahead. Welcome aboard.

Jonathan Bushman
2010-11 ASHRAE Saskatoon Chapter President
(306) 651-6372 (work)
bushman@marchconsulting.com

Posted 19 hours ago by ASHRAE Saskatoon
### Evening Itinerary

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<tr>
<td>5:30 - 6:00</td>
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<td>6:00 - 7:00</td>
<td>Supper</td>
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<td>7:00 - 7:15</td>
<td>Meeting</td>
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<td>7:15 - 8:00</td>
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#### RSVP
Please reply no later than noon on the Friday before the meeting if you plan to attend.
vicepresident@ashraesaskatoon.ca

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### Recent Announcements

#### Lecture and Tour planned for U of S HVAC Design Students
As part of ASHRAE's objective to support students' studies in HVAC, the Saskatoon Chapter will be giving a lecture and tour to this fall's HVAC Design class at the U of S on November 29th. Mike Nemeth will deliver the lecture, tentatively, on "From design to build: the process for HVAC systems". Chris Conley has been assisting, but anyone else is encouraged to lend a hand or give ideas. Email Mike at studentactivities@ashraesaskatoon.ca.

The lecture and tour aims to provide practical insight from the HVAC and construction industry, giving the students a visual to go along with their theoretical studies. The tour building has yet to be chosen.

Posted 22 hours ago by ASHRAE Saskatoon

#### Golf Tournament 2010
The 2010 edition of the ASHRAE Saskatoon Chapter Golf Tournament goes down in history as another successful event. Bob Daniels continued his streak in providing a weather guarantee.

40 golfers teed off in 5 foursomes on two separate nines which provided a reasonable time for refreshment while waiting for the final groups prior to dinner. From all accounts I don't think anyone got excessive sun or eaten alive by mosquitoes.

Audun Klath of Victaulic won the low net with 79 which entitles him to have his name engraved on the trophy. Jeff Gerhardt of HVAC Sales won the low gross at 81. Long drive for the men was won by Chris Watt of HVAC Sales. Closest to the pin for women and men were won by Ada Lacoursiere of Venmar CES and Mike Nemeth of Daniels-Wingerak Engineering Ltd. respectively.

A big thank you from the committee and the golfers for all of the donated prizes and participation.

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### September Speaker's Bio:

David Torvi, a professor of Mechanical Engineering at the University of Saskatchewan, will be speaking at the September 14th ASHRAE meeting this coming Tuesday. Before his time at the U of S, where he teaches courses on thermal, fluids and design, as well as offering one of the few Fire Protection Engineering course in North America, Prof. Torvi began his career designing HVAC equipment, then went on to working as a Research Officer with the Fire Research Program at the National Research Council of Canada.

Read more on his bio page here.

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### Membership Promotion

**Ryan MacGillivray**
Hello! I hope everyone had an enjoyable summer.

We have been trying to come up with the benefits of ASHRAE membership. One of the key benefits is the people we met. Although the meetings are a good time to meet various people in the heating, ventilation, air conditioning, and refrigeration industry, sometimes you may forget where everyone is from. Therefore, I am planning on publishing a roster again this year. Please check on the ASHRAE website to ensure your contact information is up-to-date.

I would like to welcome the following people who have joined
Michael Nemeth

Student Nights:

As in previous years we will hold two Student Nights during our ASHRAE meetings this fall / spring. However, students are free to attend any meeting.

These meetings provide an ideal opportunity for students to learn about our industry and meet potential employers in a relaxed and informal setting.

Students will be charged a reduced dinner fee (only $5) to encourage their attendance.

For more information see the Info for Students and Young Engineers page.

Congratulations to Thomas Pacock for winning the ASHRAE Saskatoon SIAST Scholarship in June.

Congratulations to Mohammad Rasouli for winning the 2010-2011 Grant-In-Aid funding.

Energy Answers

Rob Dumont

Will site-generated photovoltaic energy ever be price competitive with grid electricity in Canada?

Answer.

The trend in pricing is encouraging, with declining prices for PV and increasing prices for grid based electricity, particularly in those provinces (Alberta, Saskatchewan, Ontario, and Nova Scotia) where a large part of the electricity is generated by fossil fuels, primarily coal.

In my province of Saskatchewan, the utility is predicting a doubling in the retail price of electricity over the next decade from the current price of about $0.11 per kilowatt hour.

The cost of photovoltaic generated energy, however, continues to decline. Prices are being tracked by a web site called Solarbuzz.com.

As of May 2010, the Solarbuzz web site says that in the United States, residential PV has a cost of $0.35 US per kWh and industrial PV has a price of $0.19 per kWh. Back in 2000, the residential price of PV was $0.40 per kWh. There are not many commodities that are cheaper now than 10 years ago. PV is an exception.

One of the encouraging trends with PV systems is a rule of thumb used in manufacturing. Every time that you double the volume of production of a product, you can reduce the unit cost by about 10%.

According to the Wikipedia web site, the worldwide volume of production of PV has been increasing by 48% a year since 2002. As of 2008, the worldwide cumulative installations of PV were 15,200 megawatts.

The current world use of all forms of electricity is 15 Terawatts, or 15,000,000 megawatts. With the current PV installations at about 15, 200 megawatts, PV still provides far less than 0.1% of the world’s electricity supply. The potential for growth is enormous.

Have you seen any recent Canadian installations of PV?

In May this year I visited a friend’s acreage near Ottawa. He had just connected up his 10 kilowatt peak system to the Ontario Grid. A picture of the installation is shown in Figure 1.

ASHRAE as new members: Whitney Cole, Kevin Blezy, Michael Dempsey, Tyson Smith, Kevin Lee, and David Tyremar. If you know these members, please invite them to come out to our meetings, and introduce them to everyone else. If you meet them, make them feel welcome at our meetings.

We also have a few people who are delinquent in paying their membership. I will be contacting these members to give a friendly reminder to renew. If you have received a membership renewal notice in the last few months, please check if you have paid. If you are planning on not renewing, please let me know the reason.

The role of Membership Promotion is to ensure you are getting your money’s worth of your membership in ASHRAE. ASHRAE is here because of you, and we are here for you. If there is anything with which you would like some help, or member benefits you would like to see, please let me know.

Thank you, and I hope to see you at the meeting.

Company Bios

ASHRAE is all about making contacts in the HVAC&R industry and getting to know the people and companies in your area. To further this, ASHRAE Saskatoon has decided that companies that sponsored the roster can submit brief write-ups on their companies to be published in the newsletter. This should allow readers to know a little of the history of the company and the role they play in ASHRAE and the HVAC&R field in Saskatoon. If your company has supported the ASHRAE Saskatoon roster and would like your company’s brief write-up published in our newsletter, then please contact us.

Victaulic

Victaulic invented the grooved pipe joining method more than 85 years ago as an alternative to welding, flanging or threading of pipes. Victaulic has been in Saskatchewan for over 40 years providing innovative and reliable pipe joining solutions. Victaulic products - couplings, valves, fittings - are widely used on HVAC and plumbing applications, including hot and chilled water distribution, potable water, equipment connections on pumps, water softeners, filters, and drain, waste and vent piping.

Use of Victaulic products contribute to sustainable, efficient and environmentally-friendly HVAC and mechanical systems. Victaulic products are made of 90 per cent recycled steel using lean, responsible manufacturing processes. Compared to other piping methods, Victaulic mechanical grooved piping systems reduce waste, emissions and noise pollution on the jobsite, providing a safer and healthier work environment. Grooved couplings, valves and fittings also provide easy and quick access to piping systems essential to the energy efficiency of a building.

With global offices and manufacturing, Victaulic works closely with owners, system engineers, and contractors to support the design and installation of mechanical piping systems that lower costs, improve productivity, compress construction schedules, reduce risk, and allow for future system expansion. For more information, please visit www.victaulic.com.

PAOE Points

PAOE stands for Presidential Awards of Excellence and PAOE points encourage chapters to work towards the goals of the society and to some degree the current society president. If you are involved in any of the following activities, please send an e-mail to vicepresident@ashraesaskatoon.ca with the details so they can be included in our PAOE reporting:
The system is ground mounted, as there was insufficient room on the roof or walls of his house. The system cost will be paid back in about 6 years assuming there are no equipment problems. In Ontario, the owner of a small system will receive a price of 80.5 cents per kilowatt hour that is generated. Ontario is offering these incentives as a means of kick-starting a PV industry.

The modules are facing due south at a tilt angle of 37 degrees. Ottawa is located at 45 degrees latitude. The 37 degree tilt angle was based on the optimum fixed angle for year round production according to the RETSCREEN computer program. In winter there will be times when the snow must be manually removed from the panels.

Have you seen any larger PV installations in Canada?

While in the Ottawa area, I visited the very large PV installation in Galetta, near Arnprior. This system, developed by EdF-EN has a peak production of 23,400 kilowatts located on a 200 acre farmsite. This is apparently the largest PV installation in Canada. The panels use thin film technology. On these larger systems, the owner gets a reduced price of 42 cents per kilowatt hour on a 20 year contract. A photo of some of the panels is shown in Figure 2.

What implications do these projects have for house design?

1. Solar PV will, over the life of most houses in Canada, become one of the least cost electricity sources.
2. All new residences should be designed to be solar ready with a south facing roof or wall surface that has unobstructed access to the sun for about 4 hours on either side of solar noon.
3. All new subdivisions should be laid out so that solar access is possible for all dwellings.
4. Solar rights legislation is needed to prevent neighbouring homeowners obstructing one's solar panels by growing trees or otherwise obstructing the access to the sun's rays. Japan has legislated solar rights.
5. Let's get on with it.

Meeting Details

The ASHRAE Saskatoon meetings are almost always held at the Park Town Hotel, on the second Tuesday of the month. The Park Town Hotel is located at 924 Spadina Crescent East, at the corner of Spadina and 25th Street, right by the University Bridge. There are bus stops at 25th Street and Spadina, with six bus routes stopping there (click “Directions” on the map and then select “by public transit”). Free parking is available in the hotel main lot and the first 2 levels of the parkade.

Park Town Hotel

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Current Board of Governors
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<tr>
<td>President</td>
<td>Jonathan Bushman</td>
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<tr>
<td>Vice President</td>
<td>Andrew Thomson</td>
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<td>306 667 2513</td>
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<td>Treasurer</td>
<td>Chris Watt</td>
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<td>Michael Nemeth</td>
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Saskatoon