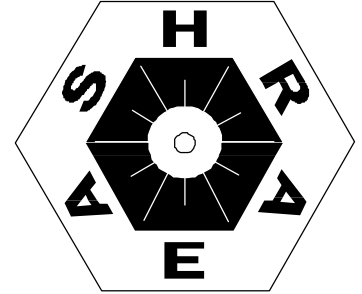
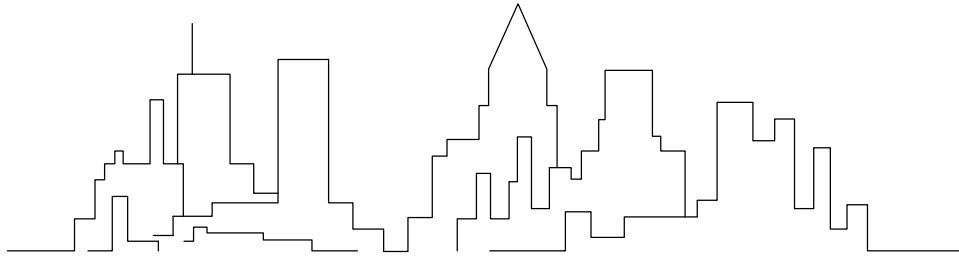


The EXCHANGER



Minnesota Chapter

www.mnashrae.org

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

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VOLUME 17 NO. 3

PUBLISHED 8 TIMES ANNUALLY

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Presidents Corner

President's Corner Submitted by Curt Ratajczak

Happy Holidays!!

Our November meeting, the Sustainability Seminar, was held at the Double Tree Park Place Hotel and was a great success with an attendance of about 70 people. This was our first seminar focusing on sustainability with topics ranging from Extreme Architecture to Constructing Sustainability. Thanks to Betti Iwanski and the MASDeC Committee for putting on a great seminar.

The December meeting will be a lunch meeting on Tuesday the 12th, also at the Double Tree. The meeting will have several speakers updating us on various committees at the Society level. See the insert for more information.

I would like to take some time to point out useful information on our website www.mnashrae.org. If you are looking for information on upcoming meetings please click on the meeting event calendar. You can usually find a flyer posted on the date of the event, a month or more before receiving a paper copy in the mail. Another great tool found on our website is online registration. Please use our website for a tool for following our Chapter's most recent upcoming events.

I would like to end this article by letting you know of an upcoming event for our President Elect, Brian Shablow, who is recovering from a motorcycle accident and working hard at his rehabilitation tasks. There will be a silent auction and raffle for Brian. The Brian Shablow Benefit will take place as follows:

Date: January 27, 2007
Time: 7:00 p.m. – 11:00 p.m.
Place: Green Mill Restaurant
1000 Gramise Road
Shoreview, MN

We will be sending out more information on this benefit in the weeks to come, but for now please refer to Brian's Caring Bridge website www.caringbridge.org/visit/brianshablow for more information.

Again I would like to wish everyone a safe and wonderful Holiday Season and hopefully we will see you at one of our upcoming events.

Chapter Information

MASDeC Activities Update

Submitted by Betti Iwanski
MASDeC Co-Chair

MASDeC Sponsors Successful Sustainability Seminar

MASDeC sponsored the first Sustainability Seminar for the Minnesota Chapter, November 8th at the Park Place Doubletree hotel. The seminar title “Building Sustainability from the Foundation Up” reflects the breadth of topics presented by the four guest speakers. Although the topic of sustainability was not new for them, they shared some new ideas.

Stephan Tanner, AIA introduced us to the *2000 Watt Society* and “building gas mileage” or the energy consumption needed to cap global CO₂ emissions—for Minnesota it is 16 kBtu/sf O yr (about half the energy use for a building certified to LEED Gold). Stephan designed Biohaus, a student dorm at a Concordia Language Village in Bemidji to meet the Passive House Standard, with even more strict performance requirements. Biohaus gets the best “gas mileage” at 14,250 kBtu/sf O yr. Some of the strategies to achieve the low energy use include: strict attention to minimal thermal breaks, construction resulting in R-50 to R-100, true day lighting, and compact building design. The range of cost for a quality built Passive House is \$200 - \$300 per square foot.

Gary Nelson gave a 50-minute course in measuring air tightness with a blower door. Although energy codes require all joints to be sealed, most do not say to what level. Normalized for air flow over the building envelope, here’s a few numbers: ASHRAE 90.1-2004 proposed addendum z, 0.31 cfm@50Pa/ft²; DOE Building America program, 0.25 cfm@50Pa/ft²; and Passive House Standard, 0.055 cfm@50Pa/ft² (Biohaus is tighter than this). Achieving low airflow is the proverbial devil in the details—connections between walls and floors, and ceilings and walls. In his work, Gary has found many buildings with “thermal breaks” at these connection points that add up to a big hole for air infiltration.

Thomas Hartman, PE explained the concepts of “Equal Marginal Performance” and relational control of mechanical systems. Using the example of multiple chillers, Thomas discussed why variable speed devices with traditional PID controls actually do not help us save energy. By treating the chillers and components that are usually controlled separately as a “network,” the designer develops system controls for the actual operating conditions. Resulting energy use by controlling for part load for the system can be as much as one-fourth that achieved with traditional PID control with variable speed drives. Thomas estimated that if all commercial buildings in the US changed to relational controls, we would not need to build any new power plants.

David Winkelman showed us examples of building construction methods and material and equipment choices that can add up to a sustainable building. He stressed the need to use much higher insulation levels than code and full slab insulation as a common sense start to energy savings. David and his crew have installed many wind turbines, solar hot water, and solar photovoltaic systems in Minnesota. His construction company always favors hot water radiant heating systems and David has designed many geothermal heating and cooling systems for clients. He also supports water conservation and installed a gray water recovery system for watering all the indoor plants in his company headquarters.

All presenters are passionate about the need for change from business as usual and stressed that technological options are available now within market costs. The challenge from all the presenters is to learn more about why we need sustainable buildings and to have a vision, a measurable goal for building performance. Strategies include: stop being afraid to change the way we design buildings and building systems, appreciate the value of other professional disciplines and building trades, and communicate and coordinate at every step for real progress in reaching our goals.

The lunch meeting presenter, Rick Hermans, provided an overview of ASHRAE Society "2006 Sustainability Roadmap" that included the Sustainability Statement, Strategic Plan, and High Performance Building Standard. ASHRAE is committed using its position as a leader in HVAC&R to promote sustainability through dissemination of information. Included are ASHRAE standards, guidelines, handbook chapters, research projects, and the Learning Institute. ASHRAE also is greening the organization internally—two efforts are the renovation of the headquarters building and GAME, Greening ASHRAE Meetings and Expositions. The 2007 ASHRAE Winter Meeting in Dallas is loaded with sustainability seminars and planning is underway to meet the GAME criteria.

MASDeC as well tried to incorporate GAME criteria into the planning of the Sustainability Seminar. Doubletree was able to provide organic fruit, vegetables, chicken, and salmon for the breakfast and lunch offerings. The hotel also has an established program for distributing non-perishable leftovers to local food shelves, and other leftovers go to hog farms. MASDeC was able to print the agenda on recycled content paper, and forgo printing the PowerPoint presentations in favor of electronic distribution. We also tried to encourage car pooling and purchase of green energy to offset emissions from holding the seminar, but were not able to implement these measures. MASDeC experienced some of the challenges discussed at the Seminar—early planning, closer coordination and clearer communication between all involved parties as critical to success. We are learning and will continue to share our stumbles and successes.

To that end, look for the electronic copies of the seminar presentations and information on upcoming MASDeC meetings and past activities on the MN ASHRAE website: www.mnashrae.org. Look under Committee Activity / MASDeC. We welcome participation and are looking for those who attend the ASHRAE Winter Meeting to report on sustainable seminars. Contact Betti Iwanski at biwanski@comcast.net.

Membership Committee Update
Submitted by
Glenda Cooper – Membership Chair

I would like to give a special Thank You to Chuck Taft for investing in the future of his students and bringing them to our meetings and seminars. Our future designs and the tradition of ASHRAE will be carried on by these young students and professionals.

As we all strive to carry on the tradition of ASHRAE, I am looking for a few good men and women to be membership recruiters.

I would like once more to kick off the year with a friendly membership contest. This is open to members and associate members. Any member signing up the highest number of new members will win \$100.00 cash prize. Gary Fischbach was the winner of our last membership contest, much appreciation Gary for a job well done. Deadline for new member applications will be April 30th, 2007. The winner will be announced at the May meeting. Please make sure that I get a copy of the application that is sent into society.

Also, as mentioned at the meeting on November 8th, I am looking for a co-chair to assist me with membership opportunities. Please contact me at 763-753-9814 if you are interested in being more involved in growing our presence throughout the community.

Things are changing at WWW.ASHRAE.ORG?

Effective November 15, ASHRAE will launch the first phase of its new membership database. As part of this change, your login for the Web-site will become your e-mail address and a password of your choice instead of your membership number and personal identification number (PIN). Key features of the new membership database include the ability for you to update your bio and manage your membership online. When logging on to ASHRAE.org on or after November 15 please use your e-mail address and password instead of your membership number and PIN. When you log into the ASHRAE website, you will be prompted to enter your email address, then password. At this point, your password will be your ASHRAE PIN, after entering your PIN, the system should prompt you to enter a password of your choice. Your password should contain 6-14 characters, a capital letter and a number. You may wish to pass this information on to your ASHRAE colleagues and members in your chapters. If you have any questions, please feel free to send an email to loginquestions@ashrae.org or contact ASHRAE Customer Service at 1-800-5-ASHRAE. Thank you for your continued support of ASHRAE activities. If you experience problems, please contact us at

Upcoming Events

Minnesota Chapter Meeting & Event Calendar

- ü ~~October 10, 2006 Dinner~~
Meeting Topic: Tour—Minneapolis Public Library—
- ü ~~November 8, 2006 Seminar/Lunch~~
Seminar
- ü December 12, 2006 (Tuesday) Lunch
Meeting Topic: TEGA
- ü January 9, 2007 (Tuesday) Lunch
Meeting Topic: AHRAE Standards Update
Rick Hermans
- ü February 13, 2007 (Tuesday)
Seminar/Lunch
Refrigeration Seminar
- ü March 13, 2007 (Tuesday) Dinner
Meeting Topic: Research Promotion and
Support Appreciation
- ü April 10, 2007 (Wed.) Seminar/Lunch
Meeting Topic: Education Seminar
- ü May 8, 2007 (Tuesday)
Seminar/Lunch
Meeting Sub-topic: Installation of
Officers/Past Presidents Day/History -
Utility Night
- ü June, 2007
Golf Outing

Northern Lights Chapter

February 14, 2007

Meeting: Fargo - Refrigeration Topics
Presentation and 1/2 Day Seminar

April 11, 2007

Meeting: Fargo - HVAC Controls & Integration
Talk

June 13, 2007

Social: Annual Golf Outing @ Hawley, MN CC

Rochester Section Schedule

December 19, 2006 - Mr. Park (3-D Airflow
Simulation)

January 16, 2007 - Ryan Company
(Condensing and Non-Condensing Boiler
Application)

February 20, 2007 - Rick Hermans (ASHRAE
Sustainability Road Map)

March 20, 2007 - Ruskin (Sound Control
Products and Application)

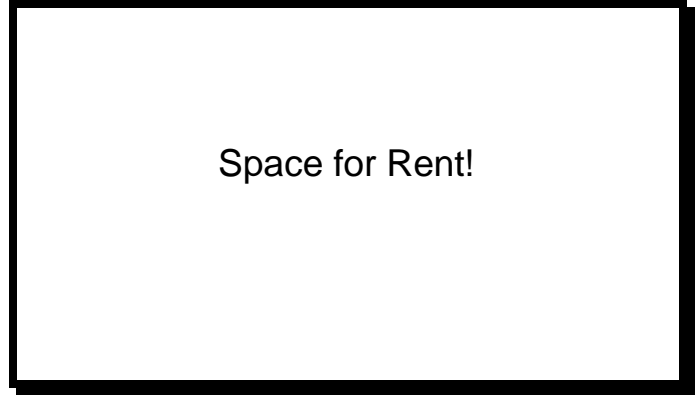
April 17, 2007 - Mankato State Trip

April 26, 2007 - ASHRAE/SMMPA (Rochester
Spring Seminar)

May 15, 2007 - Wirsbo (Chilled Floor Systems)

August 2, 2007 - 12th Annual ASHRAE Golf
Outing

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**Publication Deadline for the
Next Exchanger; December 15th, 2006**
**All submissions must be in electronic format and should be emailed to the
Editor: Daniel Chudecke – Dchudecke@mulcahyco.com**

ñ ñ Society and/or Chapter dues Paid?

First **Yes/No** on Mailing Label = Society Dues

Second **Yes/No** on Mailing Label = Chapter Dues

**INSIDE: Insert: December Meeting Notice
January Meeting Notice
February Seminar Notice**