



Energy Codes 2008

July 22 - 25, 2008

St. Paul, Minnesota



U.S. Department of Energy

Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable



Building Energy Codes

U.S. Department of Energy



Abbreviations and Acronyms

AIA	American Institute of Architects
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BCAP	Building Codes Assistance Project
BECP	Building Energy Codes Program
CEU	Continuing Education Unit
DOE	Department of Energy
EERE	Energy Efficiency and Renewable Energy
FSEC	Florida Solar Energy Center
IAQ	Indoor air quality
ICC	International Code Council
IECC	International Energy Conservation Code
IESNA	Illuminating Engineering Society of North America
LEED	Leadership in Energy and Environmental Design
LU	Learning Unit
MEEA	Midwest Energy Efficiency Alliance
NAHB	National Association of Home Builders
NBEC	Northwest Building Efficiency Center
NEEA	Northwest Energy Efficiency Alliance
NEEP	Northeast Energy Efficiency Partnerships
NETL	National Energy Technology Laboratory
NFPA	National Fire Protection Association
PNNL	Pacific Northwest National Laboratory
SEEA	Southeast Energy Efficiency Alliance
SEEC	Southern Energy Efficiency Center
SWEEP	Southwest Energy Efficiency Project
USGBC	U.S. Green Building Council

Energy Codes 2008

July 22 – 25, 2008 • St. Paul, MN

We wish to acknowledge those who have made this event possible
and have worked hard to make it a success:

Our Sponsors

U.S. DEPARTMENT OF ENERGY



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U.S. Department of Energy

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**U.S. DEPARTMENT OF ENERGY,
ENERGY EFFICIENCY AND RENEWABLE ENERGY BUILDING ENERGY CODES PROGRAM**



U.S. Department of Energy

Building Energy Codes

PAPERLESS EVENT

In our efforts to conserve resources, Energy Codes 2008 will not make copies of individual presentations available to attendees. Presentation CDs will be available after the event.

If you wish to receive the Energy Codes 2008 presentation CD, please sign up for a copy at the registration desk.

All presentations will be available at

<http://www.energycodes.gov/news/ecodes2008/presentation.stm> after the event.

Tuesday, July 22, 2008 Pre-Training

7:00 am – 7:00 pm	Registration – Lower Level Coat Check	
		Minnesota East Ballroom
8:00 am – 5:00 pm	Building Tours 10:00 am – 4:45 pm (Pre-loading on motor coach 9:45 am. Departure will be from hotel main lobby.) <i>Lunch and transportation provided with tour</i>	Pre-Energy Codes 2008 Training 2006 International Energy Code Chapter 1322, Minnesota’s Residential Energy Code 8:00 am – 3:00 pm <i>Lunch on your own</i>
		Code Compliance Software Training Overview of How to Use REScheck 3:30 pm – 5:00 pm
6:00 pm – 8:00 pm	Welcoming Reception – Windows on the River (22nd Floor)	

Day 1: Wednesday, July 23, 2008

7:00 am – 6:00 pm	Registration – Lower Level Coat Check	
7:00 am – 8:30 am	Continental Breakfast – Minnesota West & Capitol Ballrooms	
	Minnesota East Ballroom	
8:30 am – 8:35 am	Welcome/Agenda	
8:35 am – 8:45 am	Dignitaries	
8:45 am – 9:00 am	State Energy Office, Minnesota Department of Commerce	
9:00 am – 9:30 am	Jim Rannels, DOE-HQ	
9:30 am – 10:00 am	Jean Boulin, DOE-HQ	
10:00 am – 10:15 am	Break – Minnesota West & Capitol Ballrooms	
10:15 am – 11:15 am	Building Energy Code Enforcement – A Significant Challenge	
11:15 am – 11:30 am	Jeffrey A. Johnson Award Announcement	
11:30 am – 12:30 pm	Banquet Lunch – Keynote Speaker – Minnesota West & Capitol Ballrooms	
12:45 pm – 1:45 pm	Tools of the Future • SmartCodes • EnergyPlus and Google SketchUp	
1:45 pm – 2:00 pm	Break – Minnesota West & Capitol Ballrooms	
	RESIDENTIAL – Minnesota East Ballroom	COMMERCIAL – Governors I & V
2:00 pm – 3:00 pm	Energy Efficient Designs	2:00 pm – 2:30 pm Public-Private Partnerships
		2:30 pm – 3:00 pm Beyond 30%
3:00 pm – 4:00 pm	Societal Change Through Affordable Energy Efficient Homes	ASHRAE’s Path to Net Zero Energy Buildings
4:00 pm – 6:00 pm	Cracker Barrel (<i>Hors d’oeuvres and beverages will be provided</i>) Governors II-IV	
Evening Event:	On Your Own	



Day 2: Thursday, July 24, 2008

7:00 am – 6:00 pm	Registration – Lower Level Coat Check	
7:00 am – 8:00 am	Continental Breakfast - Minnesota West & Capitol Ballrooms	
	Track 1 30% Residential Initiative Minnesota East Ballroom	Track 2 30% Commercial Initiative Governors I & V
8:00 am – 10:00 am	8:00 am – 10:00 am Residential 30% Initiative	8:00 am – 9:00 am Bringing it Together: Envelope 9:00 am – 10:00 am The Evolution of ASHRAE 90.1: Mechanical
10:00 am – 10:15 am	Break – Minnesota West & Capitol Ballrooms	
10:15 am – 11:15 am	Residential 30% Initiative Discussions (continued) Panel Discussion – Q&A	Advancement in Lighting
11:30 am – 1:30 pm	Lunch – Minnesota West & Capitol Ballrooms States Rally	
1:30 pm – 2:30 pm	Beyond 30% Building America	Standard 189.1
2:30 pm – 2:45 pm	Break – Minnesota West & Capitol Ballrooms	
2:45 pm – 3:45 pm	Builders Making it Happen	Beyond 2030: Measuring Pay-Back on Green Building Technologies
3:45 pm – 5:00 pm	Are States Ready to Adopt and Implement More Stringent Building Energy Codes? – Minnesota East Ballroom	
5:30 pm	Dinner & Events <i>Two optional events available – Visit Registration for additional information.</i>	

Friday – July 25, 2008 Post-Training

7:00 am – 10:00 am	Registration – Lower Level Coat Check
7:00 am – 9:00 am	Continental Breakfast and Wrap-Up Feedback Session – Minnesota West & Capitol Ballrooms
	Minnesota East Ballroom
8:00 am – 4:00 pm	Post-Energy Codes 2008 Training Code Compliance Software Training COMcheck Commercial Code Compliance Training 8:00 am – 9:30 am ANSI/ASHRAE/IESNA Standard 90.1-2004 Chapter 1323, Minnesota’s Commercial Energy Code 9:45 am – 4:00 pm <i>Lunch on your own</i>



Energy Codes 2008

PRE-TRAINING/SESSIONS

Tuesday, July 22, 2008

Choose one:

Building Tours

or

**Training: 2006 International Energy Code Chapter 1322, Minnesota's Residential Energy Code /
Overview of How to Use REScheck**

Wednesday, July 23, 2008

**U.S. Department of Energy
Building Energy Code Enforcement – A Significant Challenge
Tools of the Future**

Choose one of these tracks:

**Residential – Energy Efficient Designs –
Societal Change Through Affordable Energy Efficient Homes**

or

**Commercial – Public-Private Partnerships – Beyond 30% – ASHRAE's Path to Net Zero Energy Buildings
Cracker Barrel**

Thursday, July 24, 2008

Choose one of these tracks

Residential:

Residential 30% Initiative – Beyond 30% Building America – Builders Making it Happen

or

Commercial:

**Bringing It Together: Envelope – The Evolution of ASHRAE 90.1: Mechanical – Advancement in Lighting –
Standard 189.1 – Beyond 2030: Measuring Pay-Back on Green Building Technologies**

Friday, July 25, 2008

**Training: COMcheck Commercial Code Compliance/Chapter 1323,
Minnesota's Commercial Energy Code**

Continuing Education and Learning Units

AIA REGISTERED PROVIDER

DOE's Building Energy Codes Program (BECP) is a Registered Provider with the American Institute of Architects Continuing Education Systems. Credit earned on completion of this event will be reported to CES Records for AIA members by the Provider. Certificates of Completion for non-AIA members are available upon request for participation in pre-, post-, and core training sessions conducted July 22-25, 2008. Pre- and post-training credits are defined with each session description. Main core session credits are based on the number of sessions attended and will be tabulated at the end of the event. An AIA / CES Conference Participation Form is included in each attendee's registration packet. Attendees will need to fill out the form and indicate which sessions they attended and submit to the registration desk before final departure.



Pre-Training Sessions

TUESDAY, JULY 22, 2008

Registration

7:00 am - 7:00 pm

Building Tours *(Pre-load on the motor coach 9:45 am)*

10:00 am - 5:00 pm

Wellstone - Phase III Wellstone is Phase III of the Franklin-Portland Gateway project and features 49 units of new mixed-income housing (37 units affordable to families with incomes at or below 60% area median income) in Minneapolis. The Wellstone features an array of green and sustainable features for the benefit of residents and the community.



Ripley Gardens A redevelopment of the historic Ripley Memorial Hospital, Ripley Gardens is a mixed-income development providing rental and home ownership opportunities for households at very-low, low, and moderate-income levels. The project is re-using three existing historic buildings and construct three new buildings to provide a range of housing types for a mix of incomes. Underground parking, with the help of Livable Communities Demonstration Account (LCDA) funds, will enable more housing and open space opportunities.



Homes for Generations

Minneapolis Central Library Designed by world-renowned architect Cesar Pelli, the 353,000-square-foot building features an eye-catching canopy roof that projects over the Hennepin and Nicollet entrances; a combination of transparent and translucent glass with seasonal Minnesota imagery such as water, snow, trees, and prairie grass; an 18,560-square-foot "green" roof planted with low-growing, sun- and drought-resistant ground cover; and 140,000 square feet of underground parking—a great example of 30% better than code.



The Winnipeg The Winnipeg is a mixed-use development consisting of 56 units of workforce rental housing and 6,000 square feet of commercial space to be built on the corner of Rice Street and Winnipeg Avenue in St. Paul. The Winnipeg is distinguished by its extensive use of "green" design features.



St. Paul District Energy Plant Red Hot, Cool & Green - District Energy St. Paul owns the largest hot water district heating system in North America in addition to a large chilled water cooling system. District Energy brings "green energy" to downtown St. Paul buildings from a new combined heat and power plant that is fueled by clean, renewable wood waste.



DISTRICT ENERGY
ST. PAUL™

The St. Paul City Hall/Ramsey County Court House A once-in-a-lifetime opportunity to see the onyx Indian statue and the rest of the incredible building. This huge, brooding Indian, towering in 55 tons of cream-white Mexican onyx 36 feet above a slowly rotating pedestal in the black marble concourse in St. Paul's City Hall. One great hand holds the Pipe of Peace. The other is raised in a vaguely benedictory gesture over some little chiefs from whose council fire the mighty figure seemed to rise. This boldly romantic Indian God of Peace had been made for St. Paul by Sweden's great, famed Sculptor Carl Emil Andersson Milles, whose international reputation overawed literal-minded objectors to his scheme. The idea had come to Sculptor Milles before the St. Paul commission, when he was watching a New Year's Eve celebration in which 3,000 Oklahoma Indians quietly listened while an old Chief spoke of peace with a "deep, masculine feeling of brotherhood and understanding."



Building Tours lunch sponsored by Xcel Energy.



July 22-25, 2008



St. Paul, MN

Overview of How to Use REScheck

3:30 pm - 5:00 pm

This all-day training session will be on the residential energy code and compliance.

- overview of the Minnesota Rules, Chapter 1322, residential energy code requirements
- overview of the 2006 International Energy Conservation Code
- overview of how to use REScheck energy code compliance software.

Don Sivigny – MN Department of Labor

Scott Nelson – MN Department of Labor

Pam Cole – Pacific Northwest National Laboratory



AIA Learning Units (LUs)



ICC Continuing Education Credits (CEUs)

**Chapter 1322, Minnesota’s Residential Energy Code and Overview of How to Use REScheck
Continuing Education and Learning Units**

AIA/CES Learning Units (HSW) (7.0 LUs) and ICC Continuing Education Credits (.70 CEUs) toward renewal of an ICC certification are available.
Certificates of completion will also be offered.

Welcoming Reception

6:00 pm - 8:00 pm

Please join us for a casual welcoming reception with hors d’oeuvres and beverages.

Reception sponsored by Advanced Building Coalition.



Energy Codes 2008 Session

WEDNESDAY, JULY 23, 2008

Registration and Continental Breakfast

7:00 am - 8:30 am

Breakfast Sponsored by Entherm, Inc. and Northwest Energy Efficiency Alliance

Welcome, Agenda Overview and Keynote

8:30 am - 10:00 am

Anne Hunt – Sustainability Coordinator, Saint Paul Mayor Chris Coleman's Staff

Janet Streff – MN Department of Commerce

Bruce Nelson – MN Department of Commerce

Jim Rannels – U.S. Department of Energy

Jean Boulin – U.S. Department of Energy

Break

10:00 am - 10:15 am

Building Energy Code Enforcement – A Significant Challenge

10:15 am - 11:15 am

Building code officials face a number of issues when reviewing building plans and actual construction sites for code compliance. The energy aspect of the code is rarely the highest priority for the code officials. A variety of the issues faced by code officials when reviewing the energy portion of the residential and commercial portions of the energy code will be discussed along with various "solutions" that have been successful enforcing the code. In addition, there will be some discussion regarding other ideas that need to be considered by the building community to further enhance building energy code enforcement. There will be significant discussion at Energy Codes 2008 regarding major jumps in energy efficiency that are being considered for residential and commercial buildings. Once these increases are accepted by ASHRAE and the IECC, there will be significant pressure on the states to adopt and implement the energy codes. This will no doubt put further pressure on building code officials. Code enforcement is the final step to ensuring energy savings will be achieved in the newly constructed buildings and alterations to existing buildings. This topic should be of interest to everyone!

Randy Dahmen – WI Department of Commerce, Safety & Buildings Division

Jeffrey A. Johnson Award for Excellence in the Advancement of Building Energy Codes and Performance Announcement

11:15 am - 11:30 am

Keynote and Banquet Lunch

11:30 am - 12:30 pm

Representative Jeremy Kalin, Minnesota House of Representatives

Tools of the Future

12:45 pm - 1:45 pm

SMARTcodes The presentation will focus on efforts underway to facilitate the ability for software applications to create a building information model (BIM), "read" the BIM and then apply energy codes or standards as a limiting rule set to automatically show where the BIM may be lacking needed information and of the information provided if it satisfies energy codes and standards. Details will be provided on making codes and standards "smart", how auto code checking works and what lies ahead for application of BIM and auto code checking in an e-government environment.

Dave Conover – ICC

EnergyPlus and Google SketchUp Google's SketchUp is the tool of choice for early design for quick development and testing of building massing and form. The Energy Design Plugin integrates the EnergyPlus building simulation program into SketchUp, allowing building simulation at the earliest stages of design.

Drury Crawley – DOE



Choose Track 1 – Residential or Track 2 – Commercial Sessions

TRACK 1 – RESIDENTIAL

Energy Efficient Designs

2:00 pm - 3:00 pm

Widespread attention is now given to issues of climate change, energy consumption, and resource depletion and buildings play a large part in these issues. The U.S. building sector accounts for approximately 40% of all energy use and CO2 emissions. Indicators regarding climate change, fossil fuel supply and demand, and rising costs suggest that anything built today should use a maximum of half the energy of that which we built yesterday, and far greater reductions in energy use and emissions are likely to be required in the next 10-20 years.

The opportunities for energy conservation and greenhouse gas emission reduction in residential buildings are significant, using readily available materials and methods. Building design practices coupled with energy modeling can be used to create buildings that use 10%-50% of the energy commonly found in current code-compliant practice. Concepts discussed will include passive solar design, relevant measurements, defining targets, and the need to embrace math as a design tool.

Rachel Wagner – Wagner Zaun Architecture

Societal Change Through Affordable Energy Efficient Homes

3:00 pm - 4:00 pm

We will speak to Habitat for Humanity's expected leadership role in helping bring about broader societal change in this important aspect of our world today. The affordability and value position of building to Habitat's "new" U.S. Construction Standards Guidance (essentially ENERGY STAR® plus Indoor Air Quality measures) and ENERGY STAR as a starting point to focus on the home as a whole collection of systems. Beyond Code and Beyond ENERGY STAR in a step-by-step method and program support at each level. (Beyond ENERGY STAR ...Raising the Bar)

Marty Kooistra – Habitat for Humanity

Kevin Gobble – Habitat for Humanity

TRACK 2 – COMMERCIAL

Public-Private Partnerships

2:00 pm - 2:30 pm

DOE has launched a series of Commercial Building Energy Alliances to minimize the energy and environmental impact of commercial buildings and reduce energy costs for these buildings. Alliances are under way or planned for Retailers, Commercial Real Estate and Institutional buildings, as well as a separate alliance serving the needs of the Commercial Buildings Industry—architects, engineers, consultants, utilities, finance, contractors, and manufacturers. In addition, DOE is seeking proposals to build new commercial buildings with 50% energy savings and to retrofit existing buildings for at least 30% energy savings.

Drury Crawley – U.S. Department of Energy

Beyond 30%

2:30 pm - 3:00 pm

Working with ASHRAE, IESNA, AIA, and USGBC, DOE has been developing a series of guides for 30% energy savings beyond Standard 90.1-1999—for small offices, small retail buildings, warehouses, K-12 schools, and motels. In addition, DOE is working on energy design guides for 50% energy savings in grocery and "medium box" retail stores.

Drury Crawley – U.S. Department of Energy



In collaboration with other industry partners, ASHRAE is developing tools for design professionals to use in designing net zero energy buildings. From improvements in existing standards and developing new standards to creating Advanced Energy Design Guides, ASHRAE is promoting strategies to improve energy efficiency in new and existing buildings. The speaker will discuss the many ASHRAE activities underway to support and advance sustainability.

Lynn Bellenger – ASHRAE

CRACKER BARREL

Cracker Barrel

4:00 pm - 6:00 pm

Come enjoy light hors d'oeuvres – select your five favorite topics of interest and spend 20 minutes exploring each of them.

Jean Boulin – U.S. Department of Energy

Linda Connell – Pacific Northwest National Laboratory

Aleisha Khan – Building Codes Assistance Project (BCAP)

Nils Petermann – Efficient Windows Collaborative, Alliance to Save Energy

Muthusamy Swami – Florida Solar Energy Center (FSEC)

Craig Conner – Building Quality

Mangesh Basarkar – Southern Energy Efficiency Center (SEEC)

Gary Nordeen – Northwest Building Efficiency Center (NBEC)

What Can DOE Do to Help?

Jean Boulin, Mike DeWein, and Rose Bartlett

DOE will discuss technical resources and advocacy assistance that are available to states through the BECP. Learn about new tools and examples of successful advocacy. DOE and BCAP will review what's happening around the country with code adoption and discuss how to make the most of these freely available resources.

Sneak Preview of Check Software Enhancements

Linda Connell

See new features planned for REScheck and COMcheck, including:

- COMcheck implementation of ASHRAE 90.1-2007, including a new green roof option
- REScheck additions and alterations feature
- Performance-based compliance in COMcheck based on EnergyPlus

Energy Code Compliance Issues

Aleisha Khan and Kym Willock

Participate in a discussion on the issues and barriers to code compliance as experienced by those who use the code and those who enforce it. BCAP will present data from a national survey, highlighting key areas that consistently present problems, along with recommendations offered from the field to make improvements. This is an opportunity to take a national perspective and formulate local strategies to better implement energy codes.



Efficient Windows Collaborative

Nils Petermann

Building energy codes have helped foster more energy-efficient options in the windows market. However, where code requirements for windows do not exist or are not enforced, long-term energy savings are often sacrificed to minimize initial cost. Millions of new windows installed in the U.S. still lack even the most cost-effective energy-saving features. In this cracker barrel session, the Efficient Windows Collaborative will discuss:

- What do codes mean for window performance and, in turn, home energy performance?
- What's missing to ensure the use of reasonably efficient windows throughout the United States?
- What opportunities exist for energy savings on a large scale?

Tools for Code Compliance and Energy Rating

Muthusamy Swami

Demonstrate residential and commercial building code compliance and rating tools that implement the latest IECC (residential through IECC 2006) and ASHRAE (Chapter 11 and Appendix G, through 90.1-2007) standards. In addition, the presentation will also demonstrate tools that allow one to qualify for the 2005 Energy Bill's provisions for residential energy tax credits and commercial building energy tax deductions. The latest feature, LEED 2.2 NC Energy Modeling, will show how to obtain LEED credits.

Unvented Heaters

Craig Conner

Unvented heaters (vent-free heaters) are gas heaters that operate without a vent, chimney, or flue; taking their combustion air from inside the residence and venting combustion products back into the residence. The industry claims about 1 million were sold last year. Local regulations vary from acceptance within code guidelines to complete prohibition. As homes become tighter and more energy efficient, IAQ and moisture concerns increase. The combustion products and potential risks associated with unvented heaters will be discussed. Proposed regulation of unvented heaters will also be discussed.

Southern Energy Efficiency Center (SEEC)

Mangesh Basarkar

The SEEC is a pilot, high-performance buildings technology application center serving the southern United States. Its overall mission is to leverage the existing interactions and outreach activities of the SEEC principals and partners to substantially increase the deployment of high-performance, beyond-code buildings across the southern region of the United States. Primary funding is from the DOE Building Technologies Program (BTP), administered by the National Energy Technology Laboratory. The three SEEC principals are the Florida Solar Energy Center, Southface, and Texas A&M Energy Systems Lab.

Northwest Building Efficiency Center (NBEC)

Gary Nordeen

The NBEC is a new program that delivers energy efficiency information to building professionals in Alaska, Idaho, Montana, Oregon, and Washington. NBEC offers assistance with designing, building, remodeling, or maintaining a residential or commercial building. NBEC is a source for timely and objective information on energy efficiency.



Energy Codes 2008 Track 1 – Residential

THURSDAY, JULY 24, 2008

Registration and Continental Breakfast

7:00 am - 8:00 am

Breakfast Sponsored by National Fenestration Rating Council and Midwest Energy Efficiency Alliance

RESIDENTIAL

Residential 30% Initiative

8:00 am - 10:00 am

Joining forces with numerous interested and affected parties, DOE is pursuing the aggressive goal of a 30% reduction in the energy consumption of IECC-complying homes by 2012. This session features a diverse set of speakers trying to answer the question of how. Afterward, the speakers will join other building construction and energy codes experts in a spirited panel discussion. Come prepared to participate.

Ron Majette – U.S. Department of Energy

Todd Taylor – Pacific Northwest National Laboratory

Bill Fay – Energy Efficient Codes Coalition

Craig Drumheller – NAHB Research Center

Thom Zaremba – Advanced Building Coalition

Craig Conner – Building Quality

Brad Oberg – IBACOS

Sean McDonald, Moderator – Pacific Northwest National Laboratory

Break

10:00 am - 10:15 am

30% Initiative Discussions (continued) / Panel Discussion

10:15 am - 11:15 am

Lunch and States Rally

11:30 am - 1:30 pm

In this fast-paced session, representatives of the Regional Energy Efficiency Groups will provide an overview of the code activities in their respective regions, after which each State representative in attendance will identify the most critical codes efforts and compliance issues they face day-to-day.

Don Vigneau – Northeast Energy Efficiency Partnerships (NEEP)

David Cohan – Northwest Energy Efficiency Alliance (NEEA)

Ben Taube – Southeast Energy Efficiency Alliance (SEEA)

Steve Dunn – Southwest Energy Efficiency Project (SWEEP)

Stacey Paradis / Anne McKibbin – Midwest Energy Efficiency Alliance (MEEA)

Linda Sandahl – INDEPENDENT States



Beyond 30% Building America

1:30 pm - 2:30 pm

As researchers for energy-efficient solutions in residential construction, IBACOS partners with and participates as a team leader in the U.S. Department of Energy's Building America program. The Building America Program combines the knowledge and resources of industry leaders with the U.S. Department of Energy's technical capabilities to act as a catalyst for energy efficiency in the homebuilding industry. Through the Building America program, IBACOS works together with manufacturers and production homebuilders towards advancements in research that can be built into today's home. This session will provide some of the most recent research results directly from the field.

Brad Oberg – IBACOS

Break

2:30 pm - 2:45 pm

Builders Making it Happen

2:45 pm - 3:45 pm

Yes it's cold here...but that's why we build such energy-efficient homes! Come learn how Minnesota's residential energy code and the builders who follow it are producing the most energy-efficient homes in the country. On-site testing results from over 400 homes will be presented. Also learn which mistakes other states can avoid when adopting more stringent energy codes.

Karen Linner – Builders Association of Minnesota

Are States Ready to Adopt and Implement More Stringent Building Energy Codes?

3:45 pm - 5:00 pm

States are looking toward adopting energy codes and standards that will be 30% above the current national levels. The 2006 IECC and ANSI/ASHRAE/IESNA Standard 90.1-2004 have been listed as the benchmark for determining a 30% solution. Each state or region in the country will encounter advocates for moving forward with this adoption and also barriers that will need to be overcome. Political, technological, and economic issues will need to be overcome for a state to move forward with adoption and implementation of these programs. This panel will explore these issues from a state and regional perspective and also provide some solutions that will help overcome the barriers.

Eric Makela – Britt/Makela Group

Joe Hill – NY Department of State

Gary Nordeen – WA State University

Robin Boudreau – AZ Department of Commerce

Steve Dunn – SWEEP

Evening Events *(Departure from Lobby 5:30 pm)*

5:30 pm

ST. CROIX RIVER DINNER BOAT CRUISE - \$19.95

Menu consists of BBQ Ribs & Roasted Chicken, Potatoes, Cole Slaw, Baked Beans, Rolls, and Cookies. Water and Coffee are complimentary; a cash bar is on board. Complimentary transportation is provided to the St. Croix. The bus will depart from the Crowne Plaza **promptly** at 5:30 pm and will return at 9:00 pm. You must make your own reservations, in advance, by calling **(651) 430-1234**, be sure to mention Building Energy Codes 2008. For additional information, please visit <http://www.stillwaterriverboats.com>.

TRIP TO THE MALL OF AMERICA

Complimentary shuttle service to and from The Mall of America will be provided. The bus will depart from the Crown Plaza, to The Mall of America, at 5:30 pm. The bus will depart from The Mall of America, to the hotel, at the transit center on the North End entrance at Lindau Drive. The last returning bus will depart for the Crowne Plaza at 9:00 pm. For additional information, please visit <http://www.mallofamerica.com>.



Energy Codes 2008 Track 2 – Commercial

THURSDAY, JULY 24, 2008

Registration and Continental Breakfast

7:00 am - 8:00 am

Breakfast Sponsored by National Fenestration Rating Council and Midwest Energy Efficiency Alliance

COMMERCIAL

Bringing It Together: Envelope

8:00 am - 9:00 am

The Standard 90.1 Envelope Subcommittee is looking at options for increased stringency in existing criteria, but is also tackling other issues. The presentation will summarize addenda already approved that will appear in the interim supplement, as well as other addenda approved for public review. The presentation will then address concepts being considered for increased insulation and better fenestration, as well as low air leakage, cool roofs, visible light transmittance of fenestration, and thermal bridges in opaque assemblies.

John Hogan – Seattle Department of Planning and Development

The Evolution of ASHRAE 90.1: Mechanical

9:00 am - 10:00 am

ANSI/ASHRAE/IESNA Standard 90.1 is used as the basis for energy codes by NFPA, IECC, and many local jurisdictions. The standard is under “continuous maintenance,” which allows issuance of addenda for public review in response to public and committee proposals. This presentation discusses the significant changes between ASHRAE 90.1-2004 and 2007 and addenda since the 2007 version was published, as well as some addenda not yet published. This information will give an understanding of possible future changes to address energy efficiency in your own codes.

Mick Schwedler – Trane

Break

10:00 am - 10:15 am

Advancement in Lighting

10:15 am - 11:15 am

The lighting section of the 90.1 energy code is going to include some major new requirements in its 2010 version and other proposals are under consideration. This session will provide details on what the existing new requirements will be and give attendees a peek at other possible changes. Also, if you have ever wanted the opportunity to ask about your favorite part of the 90.1 lighting standard or provide some user input to the process, bring your thoughts and questions and they will be addressed.

Eric Richman – Pacific Northwest National Laboratory

Lunch and States Rally

11:30 am - 1:30 pm

In this fast-paced session, representatives of the Regional Energy Efficiency Groups will provide an overview of the code activities in their respective regions, after which each State representative in attendance will identify the most critical codes efforts and compliance issues they face day-to-day.

Don Vigneau – Northeast Energy Efficiency Partnerships (NEEP)

David Cohan – Northwest Energy Efficiency Alliance (NEEA)

Ben Taube – Southeast Energy Efficiency Alliance (SEEA)

Steve Dunn – Southwest Energy Efficiency Project (SWEEP)

Stacey Paradis / Anne McKibbin – Midwest Energy Efficiency Alliance (MEEA)

Linda Sandahl – INDEPENDENT States



High-Performance Green Buildings - After reviewing the comments from the second public review, the Standard 189.1 Project Committee is recommending a limited number of changes for additional review later this fall. The presentation will broadly cover the entire document, however, the focus will be on the energy provisions. Discussion will include the energy chapter (mandatory measures such as on-site renewable power generation, prescriptive options for envelope, mechanical, and lighting systems, and performance options related to energy cost and carbon dioxide equivalent) as well as energy-related issues in other chapters (heat island, light pollution, outdoor air quantities, and daylighting).

John Hogan – Seattle Department of Planning and Development

Break**2:30 pm - 2:45 pm****Beyond 2030: Measuring Pay-Back on Green Building Technologies****2:45 pm - 3:45 pm**

There are plenty of eco-friendly buildings these days, but are they actually good for the environment? A new tool is helping one design firm find out. LHB uses a tool called Performance Metrics™ to understand the implicit impact of the buildings they have designed. Such post-occupancy evaluations are rare—and potentially risky. LHB is currently taking that risk by assessing 74 of its own buildings constructed between 1996 and the present. The facilities measurements include not only energy efficiency, but also stormwater, water, and waste. These valuable results from previously designed facilities provide immeasurable knowledge for the future of “green design.”

Rick Carter – LHB Architects

Are States Ready to Adopt and Implement More Stringent Building Energy Codes?**3:45 pm - 5:00 pm**

States are looking toward adopting energy codes and standards that will be 30% above the current national levels. The 2006 IECC and ANSI/ASHRAE/IESNA Standard 90.1-2004 have been listed as the benchmark for determining a 30% solution. Each state or region in the country will encounter advocates for moving forward with this adoption and also barriers that will need to be overcome. Political, technological and economic issues will need to be overcome for a state to move forward with adoption and implementation of these programs. This panel will explore these issues from a state and regional perspective and also provide some solutions that will help overcome the barriers.

Eric Makela – Britt/Makela Group

Joe Hill – NY Department of State

Gary Nordeen – WA State University

Robin Boudreau – AZ Department of Commerce

Steve Dunn – SWEEP

Evening Events (*Departure from Lobby 5:30 pm*)**5:30 pm****ST. CROIX RIVER DINNER BOAT CRUISE - \$19.95**

Menu consists of BBQ Ribs & Roasted Chicken, Potatoes, Cole Slaw, Baked Beans, Rolls, and Cookies. Water and Coffee are complimentary; a cash bar is on board. Complimentary transportation is provided to the St. Croix. The bus will depart from the Crowne Plaza **promptly** at 5:30 pm and will return at 9:00 pm. You must make your own reservations, in advance, by calling **(651) 430-1234**, be sure to mention Building Energy Codes 2008. For additional information, please visit <http://www.stillwaterriverboats.com>.

TRIP TO THE MALL OF AMERICA

Complimentary shuttle service to and from The Mall of America will be provided. The bus will depart from the Crown Plaza, to The Mall of America, at 5:30 pm. The bus will depart from The Mall of America, to the hotel, at the transit center on the North End entrance at Lindau Drive. The last returning bus will depart for the Crowne Plaza at 9:00 pm. For additional information, please visit <http://www.mallofamerica.com>.



Energy Codes 2008 – Post-Training

FRIDAY, JULY 25, 2008

Registration, Continental Breakfast and Wrap-Up Feedback Session

7:00 am - 9:00 am

Breakfast Sponsored by CertainTeed Corp.

Code Compliance Software Training – COMcheck

8:00 am - 9:30 am

Minnesota's Commercial Energy Code

9:45 am - 4:00 pm

This all-day training session will be on the commercial energy code and compliance.

- overview of how to use COMcheck energy code compliance software
- overview of the Minnesota Rules, Chapter 1323, commercial energy code requirements
- overview of ASHRAE Standard 90.1-2004 to include the building envelope, heating, ventilating and air-conditioning, service water heating, power and lighting.

Pam Cole – Pacific Northwest National Laboratory

Rick Hermans – McQuay

Scott Nelson – MN Department of Labor

Bruce Nelson – MN Department of Commerce

Don Sivigny – MN Department of Labor



**AIA Continuing Learning
Credits (LUs)**



**ICC Continuing Education
Credits (CEUs)**

Overview of How to Use COMcheck and Chapter 1323, Minnesota's Commercial Energy Code

AIA/CES Learning Units (HSW) (7.0 LUs) and ICC Continuing Education Credits (.70 CEUs) toward renewal of an ICC certification. Certificates of completion will also be offered.



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The Midwest Energy Efficiency Alliance supports the 30% Solution and is a member of the EECC.

Visit www.thirtypercentsolution.org to find out about:

- U.S. Mayors position on "The 30% Solution"
- The New & Improved Version of "The 30% Solution"
- The Facts about Improving Energy Efficiency and "The 30% Solution"

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