

EEBC FORECAST

Quarterly Newsletter of the Energy Efficiency Building Coalition

Summer 2011

IN THIS ISSUE

Xcel DSM Program Review.....	pg 1
EEBC Board.....	pg 1
Member Focus.....	pg 3
Debbie Weingardt, Bestway Insulation	
Utility-Sponsored DSM.....	pg 2
by Eric Stern	
New Building Energy Code	pg 3
by Jim Meyers	

Join the EEBC Board

EEBC

Board of Directors' Application Process Begins This Month

New Board members for the Energy Efficiency Business Coalition (EEBC) will be chosen at the annual board meeting which will take place in February 2012. To qualify you must be a proven supporter of the EEBC, and have unique characteristics that will help move the EEBC forward. We are in a period of great opportunity. We are looking for future board members who will be innovative, creative, and willing to work hard to move the EEBC into 2012 and beyond.

(continued on page 2)

NEWS & PERSPECTIVE

XCEL FILES 2012-2013 DSM PLAN CO PUC Docket Number 11A-631EG

by Dave Schrock and Seth Portner
EEBC Board Co-Presidents

\$187,000,000

That's the dollar amount that Xcel Energy has asked for approval from the Colorado Public Utilities Commission to spend in 2012-2013 for its portfolio of electric and gas DSM products!

The application to approve Xcel's 2012/2013 DSM Plan was filed the first of August, and interventions were due the 19th. The EEBC filed a motion to intervene and will begin settlement negotiations the last week of August. The next important date for our membership is the first week of October. That is when answer testimony is due, and we have to make decisions of how much of our resources we are going to allocate to this docket.

What can we, as the EEBC, address in this docket:

- Any existing DSM Product — Residential or Business
- Policy issues such as Market Transformation and Competition
- Gas DSM sustainability program issues such as Measurement and Verification, Marketing dollars and auditing of program
- Xcel's request for 4.8 million dollars, to be allocated to as-yet conceived programs, that will be used to make up its compliance shortfall in 2013.

New programs will be difficult to propose in this docket, but we can at least bring the Company's attention to programs that need to be added in 2013.

(continued on back page)



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EEBC Board of Directors Position Application Process (cont.)

The job description for a Board Member includes mandatory attendance at Board Meetings held every 2 months. In addition, special meetings are sometimes called at the discretion of the board and EEBC Executive Director. Serving on a committee for a minimum of one year is also required. Board Members assist the EEBC staff with actions such as writing letters of support and utilizing contacts within the industry to move the EEBC forward. If you are able to commit your time to this effort, we need you to serve on our board!

According to our bylaws, we may not have any sector of the industry disproportionately represented on our board. We are currently in need of peo-

ple that have a proven track record in the areas of marketing and finance, so more weight will be given to applicants possessing experience in these areas.

An email will go out to all members when the application process opens. Serving on the Board for the EEBC is a privilege and requires dedication and hard work. We look forward to working with those of you willing to rise to the challenge.

If you have additional questions please contact:

Colleen Vogel
EEBC Outreach Manager
720-445-3728

Utility Sponsored Demand Side Management (DSM)-The Basics

by Eric Stern, CLEARResults

As a member of the energy efficiency industry, improving your understanding of the basic principles behind the design, development and implementation of utility sponsored Demand Side Management (DSM) programs is likely to benefit your business.

From insulation installers and HVAC contractors to energy auditors and lighting experts, gaining insight into the "why" and "how" utility programs are created will help your business to better take advantage of incentives available to you or your customers, as well as improve the effectiveness of your dialogue with the utility should you have ideas for improvements or changes to existing programs.

DSM programs are typically established by mandates stemming from either legislative or regulatory action. Legislative mandates are usually in the

form of some portfolio standard, percent of revenue requirement, or system benefit fund, while regulatory mandates can be an order from the state's Public Utility Commission (PUC) or federal law. Mandates for DSM are often created to require Investor-Owned Utilities to offset new load growth with energy efficiency as opposed to simply adding production. These mandates also frequently allow the utility to recover any costs associated with DSM programs, as well as establish financial rewards and penalties for reaching the mandated DSM targets.

Once a DSM mandate is established, a utility may, but not al-

ways, commission a market potential study to help establish a baseline of current market conditions and determine the energy savings potential from different energy efficiency measures.



The utility will often invite a public stakeholder group to review the potential study findings and offer input. The more involved you are at this point in the process, the greater your opportunity for influence. Once the potential study is completed, the utility will prepare and submit a program filing to the PUC.

(continued on page 4)

Member Focus

Debbie Weingardt is a long time advocate of energy efficiency education and best practices for the windustry. She began her interest in a well-insulated home when she was just 4 years old . . .



That year Debbie’s family was transferred to Sheridan, Wyoming. The winters were often 40 below zero. “I remember freezing a lot and I remember that our house was painted every year but the paint was always peeling. I took a screw driver to the real wood siding and found that it was rotting out and falling apart. So I stuck a screw driver thru the wall and found no insulation in the wall cavities,” Debbie said. The house was built in 1951. Debbie suggested to her dad that they might want to put in insulation but there weren’t a lot of options up there except vinyl siding with foam as a support for the siding. Nobody knew how to re-insulate homes.

Debbie moved to Denver and met her future husband Ken. On a motorcycle ride thru Martin Acres in Boulder in 1973 they noticed someone drilling a 3 inch hole thru the brick and really butchering homes to install insulation.

(continued on page 4)

New 2012 IECC Energy Code

by Jim Meyers
South West Energy Efficiency Project

In July the International Code Council released their latest energy code, the International Energy Conservation Code, called 2012 IECC for short. This code is in some cases dramatically different than the 2006 IECC which the state adopted as the baseline energy code back in 2007. The 2012 code advances efficiency in residential new construction and additions, and commercial new construction and renovations. Both codes are approximately 30-percent more efficient than the 2006 version of the code and

This code is in some cases is dramatically different from the 2006 IECC which the state adopted as the baseline energy code back in 2007.

in some case as simplistic as the 2006 energy code and in other cases more complex. For those of you who have owned your copy of the IECC for many years this new version looks and reads differently than its predecessor. The 2012 IECC now has a green cover, not the orangish brown we’ve come to look for over the last decade. The residential code follows the commercial code in the book, not the other sequence (residential then commercial) we have fol-

lowed for many years. It looks different and feels different, it’s thicker than the last two versions, and the administration section, and climate zone maps are repeated in each section. The numbering sequence is repeated with the commercial code section being preceded by a C and the residential provisions by an R.

The following summary can wet your appetite to what you will find when communities start adopting this new code early next year.

Key changes include mandatory air infiltration testing on new residential construction. Yep that means a blower door test on every house, and more CFL light bulbs, 75%, which shouldn’t be an impact when consumers and

(continued on page 5)

Member Focus (cont.)

Ken mentioned to Debbie that he had found a way to blow insulation thru a 3/4 inch hole in the mortar between the bricks. He asked if he could try it on their home. Debbie told him yes and he told her he had done it the weekend before! She hadn't even noticed the tiny hole. Ken talked Debbie into going to the insulation business. Three years later Ken went blind and Debbie took over the insulation business.

In 2007, during one of those freezing winters when it snowed every Friday in Denver, Debbie was contacted by the Governor's mansion to work on making Governor Ritter's home more energy efficient and comfortable. "The Ritter family is freezing," and the kids were threatening to leave for boarding school. Debbie and her team took one look at the footprint mansion and concluded there was more attic than

met the eye. She pulled in Nancy Kellogg at Lightly Treading and completed a blower door and infrared study of the house. They discovered 5,600 square feet of unaccounted for space including dumbwaiter shafts,

Governor Ritter was instrumental in promoting energy efficiency in the state and developing the GEO. Working with other industry members has become the norm and the EEBC was born out of peer projects like the mansion.

an elevator shaft, and more. Mere boards were the only thing between the Ritter family and the elements.

Debbie and her team went to work on properly sealing and insulating the mansion and today, with the inclusion of geothermal and solar, the mansion is a net zero structure. Governor Ritter was instrumental in promot-

ing energy efficiency in the state and developing the GEO. Working with other industry members has become the norm and the EEBC was born out of peer projects like the mansion.

Debbie is proud to be a member of EEBC and wants to see the organization activate cities and counties to participate in their own rebate programs.

She believes in rebates that reward and distribute the money to a wider audience but does not believe in providing goods and services free of charge. "The building owner should have a stake in the project as well as the contractor to make it effective and ensure quality workmanship" Debbie said. She also believes in inspectors to raise the standards of work and ensure quality.
by Chris Hudson, Cumulate Marketing

DEMAND SIDE MANAGEMENT (cont.)

The filing presents the utility's suite of program designs, budgets, goals and implementation plans for energy efficiency. The PUC will often hear supporting or opposing testimony from the public, known as interveners. You can participate as an intervener should you have ideas or concerns regarding a specific program. Again, the more involved your company is at this point in the process the more effective you may be in influencing the long term design of a specific program. From there, the program filing is approved by the PUC and the utility begins implementation of the programs by hiring a third-party implementation firm or with its own staff.

Additionally, as the programs are operated, the utility-sponsor will also hire a professional Measure and Verification (M&V) firm to verify or adjust the energy savings and par-

ticipation levels the implementation teams are reporting. The utility will then submit its annual program results to the PUC for review, and then plan to prepare new program filings for the next cycle of DSM programs.

There are several types of DSM programs with differing objectives and strategies. Reviewing the program filing to determine whether your program is a load reduction, load shifting, valley-filling, load growth, or flexible load shape program, as well as understanding what type of cost-effectiveness test it uses to evaluate its performance will make your discussions with the utility sponsor or implementation team much more effective should you desire changes or modifications.

There are numerous opportunities for your firm to be involved in your utility's DSM program design process that

will allow you to greatly influence how local energy efficiency programs are operated. The EEBC does a tremendous job of monitoring this process, and can often inform you as to what stage a program may be in, or advise you on your best opportunity to participate!

Eric Stern is based in Denver and serves as Director of Energy Efficiency Programs with CLEAResult. CLEAResult is a national DSM implementation firm, current managing programs in more than 15 states for its utility clients.

New 2012 IECC Energy Code (cont.)

contractors can pick up these energy savings bulbs for less than \$1 each. In most of Colorado which is Climate Zone 5 we'll see the need to put in more efficient windows down to 0.32 u-factor from the code standard of 0.35 for many years. Not to worry, the federal tax credits for the past few years drove the fenestration manufacturing industry to produce ENERGY STAR labeled windows to achieve the tax credit. The window industry has shifted and improved fenestration so that it should be a simple transition for the window contractor in Colorado.

INSULATION:

Next up are the insulation contractors who will now be installing R 49 insulation in all climate zones in Colorado. A raised heal truss, or energy truss, was not included in the code and hence R49 will only be achieved typically a few feet from the exterior wall top plate. Walls have also changed in the new code with Climate Zone 4 now requiring R20 or R13+ R5 exterior insulating sheathing. And in Climate Zone 6 and 7 an R5 is required on the exterior wall to reach R20+5 or a builder can still use 2x4 walls in these climate zones but will be required to add an R10 on the exterior. That can be fun attaching exterior insulation materials and fenestration (is it inside of the exterior foam sheathing or outside the foam sheathing). Basement walls and crawlspace walls also will see higher insulation values.



BLOWER DOOR TESTS:

When blower door testing was added to the energy code in 2009 it was optional and only required an ACH50 of 7. The 2012 IECC pushes the envelope, no pun intended, to get code built homes to an air leakage rate of < 3ACH. At this level we are talking infiltration rates of not just the minimum a builder could build to meet the law. No, we are talking about high performance building standards. The code also now has a mandatory air barrier checklist which was only



optional in the 2009 energy code.

DUCTS:

Duct tightness testing is still only required if ducts are installed outside of conditioned space. The 2012 code leakage rates are now down to a respectful 4CFM. Another important item for the HVAC contractor to know about is the requirement to install air handler boxes with only < 2% leakage per ASHRAE 193. Building cavities can no longer be used as ducts or plenums, which translates into return ducts that must either be a hard duct or a flex duct.

PLUMBING:

Plumbing has now been brought into the energy code with R3 pipe insulation required on most piping; e.g. piping serving more than one unit, from DHW to kitchen outlets, outside conditioned space, from DHW to distribution manifold, and new run length requirements have been added (example-pipe 1/2 inch that exceeds 20 ft run length must all be insulated). The run length requirements are only for prescriptively built homes and builders using the performance path will not be required to insulate piping per the new run length table.

Now that the code has tightened the building enclosure, tightened duct leakage, and implemented a mandatory checklist you'll be glad to learn ventilation requirements are present, not in the energy code, but in the residential construction code, section M1507 in the IRC, which references a table very similar to the ventilation requirements in ASHRAE standard 62.2.

Sounds like a lot of changes, but not really. The basis for these requirements was implemented in the 2009 IECC, albeit less stringent requirements and optional compliance paths instead of mandatory as we see in the 2012 code. Homes built to the 2012 IECC requirement should perform at levels recently seen only by above code programs. The commercial code provisions are for another day as there are many new requirements which need its own dedicated article to describe what the energy efficiency contractor will see in commercial construction.

Jim Meyers is the Director of Buildings Programs at the Southwest Energy Efficiency Project and has worked on, in, near, and about the energy code for the last decade in Colorado.

News:

(continued from page 1)

XCEL FILES 2012-2013 DSM PLAN - \$187,000,000

What can you as an EEBC member do?

- Review the proposed plan sections that you have concerns with:
http://www.xcelenergy.com/About_Us/Rates_&_Regulations/Regulatory_Filings/CO_DSM
- Send your comments to Colleen via email: colleen@eebco.org
- Join and participate with an EEBC committee (contact Colleen)
- Attend YOUR membership meetings
- Recruit new members