

Inaugural Energy Codes Collaborative meeting

Hosted by the Nebraska Energy Office (NEO),
and the Building Codes Assistance Project (BCAP)

March 27, 2013, 9:30 AM- 12:30 PM

[Valentino's](#) 3457 Holdrege Street | Lincoln, NE 68503 ([map](#))

Attendees: **Danielle Jensen**, Lynn Chamberlin, and **Bruce Hauschild**, Nebraska Energy Office; **Paul Karrer** and **Maria Ellingson**, Building Codes Assistance Project (BCAP); **Chris Burgess**, Midwest Energy Efficiency Alliance (MEEA); **Todd Aerni**, NE Code Officials Assc; **Nate Barry**, University of Nebraska, College of Business and Technology; **Lash Chaffin**, League of Nebraska Municipalities; **Rick Cheloha**, Loup

Power District; **Thomas Christensen**, Christensen Lumber, Inc; **Stu Craven**, City of Omaha (on phone); **Todd Enck**, T.C. Enck Builders Inc,; **Mel Goddard**, City of Lincoln; **Delrae Hirschman**, NE Green Builders/Delrae Designs; **Laurie Holman**, Urban Affairs Committee (on phone); **Don Killeen**, Building Owners & Management Assc; **Gene Knaggs**, Kearney Area Builders Assc; **Leon Komar**, Lifetime Home Services (energy rater); **Jesse Krivolavek**, AEA,

LLC; **Tom Lewis**, Omaha ASHRAE; **Mark Loscutoff**, Omaha Home Energy Analysis and Testing (O-HEAT); **Eric Makela**, Britt/Makela Group (on phone); **Milo Mumgaard**, City of Lincoln; **Larry Nyffeler**, Royal Homes; **Greg Parde** (on phone); **Garry Ruliffson**, Omaha Public Power District (OPPD); **Bob Ruskamp**, Lincoln Electric Systems; **Don Wisnieski**, Norfolk Area Homebuilders; **Steve Taft**, Advance Design & Construction

MEETING NOTES

Follow up TO-DOs:

- **If there are people that should be invited to the Collaborative meetings, send info to Danielle Jensen at Danielle.jensen@nebraska.gov or (402)471-2867.**

BEST PRACTICES / INSIGHTS / OPPORTUNITIES

- Omaha added a HERS score checkbox on MLS (searchable).
- University of NE study: education to consumers should occur at the point of sale and involve realtors and appraisers.
- The Nebraska Energy Office (NEO) will be launching additional training and support activities soon

BARRIERS TO CODE COMPLIANCE

- The housing market is currently an “unfair playing field” with builders that comply with the code competing against those that don’t. Different solutions are needed for metro and rural areas.
- Board of Appraisers won’t allow for an increase in appraised value of a home due to energy efficiency.
- City leaders need info on the importance of codes so that they can support code officials in upholding the policy.
- Training needs to be available pre-construction and regularly as sub-contractors move jobs.
- Need to educate the public so that they demand energy efficiency.
- Lenders (and underwriters, examiners), appraisers, real estate professionals need to be engaged.
- Cities and states have limited resources; utilities can be involved for future funding
- We have certified raters in Nebraska, but not enough for full coverage. New raters can be trained.
- “You can lead a horse to water...” Education is not enough; incentives/new actions are needed.

- Code official's focus is often "public safety"; "energy" is outside of that scope. (Perhaps we need to work on making energy efficiency a "public safety" concern.) Energy raters are currently the experts in energy efficiency, not code officials.

IDEAS

- Financially incentivize EE (via lower interest rate loan or other financial incentive) at time of sale.
- Involve state legislators.
- License builders and require CEUs.
- Require a HERS score on new homes. It is the equivalent of a MPG sticker on new cars – raises buyer awareness, creates demand for greater energy efficiency; helps transform the market.
- Develop an online technical forum for code officials, builders, others.
- Fund third-party raters to ensure energy code compliance across the state (example - Illinois is exploring the possibility of a utility-funded, code-compliance, claimed savings program). A similar structure could be considered in Nebraska.
- Require an approved building permit before installing power lines to new construction. (OPPD used to do so).
- Introduce legislation – an "Even the Playing Field Law" that addresses these issues.
- The whole system (lenders, underwriters, examiners, real estate professionals, appraisers, consumers, training, etc.) needs to move forward concurrently. If one part falls down, the system falls down (If the designers don't know how to design, appraisers don't know how to appraise, builders don't know how to build).

COMPLETE DETAILED MEETING NOTES

1. Introductions | Overview of Project | Meeting Goals

Introduction to Collaborative Project & Meeting Goals: Paul Karrer

Paul gave a brief overview of the BCAP Compliance Planning Assistance program, and the status of energy codes in Nebraska. (The LCD projector was not functioning.)

- Knowing that code compliance is a key issue to the Nebraska Energy Office (NEO), and that the Governor agreed to achieve compliance with the 2009 IECC, this group can help assure compliance.
- Meeting purpose: To provide a forum for stakeholders affected by energy codes to work together to help the state improve compliance with energy codes.
- Goal for today: To form an Energy Code Compliance Collaborative for Nebraska.

Lynn Chamberlin presented the NEO study on current energy code compliance, using the DOE recommended methodology as a guide. NEO chose 100 homes for the study, of various price ranges, areas (Northeast, Southeast, and central), and builders to be as fair as possible; get a good variety of new homes into the study. Home owners were offered a \$250 incentive to open their homes for the study. An energy rater went into each finished (post-construction) home, (built in 2010 – IECC 2003 was the required code version then) and looked for compliance with the energy code. A main objective was to determine training needs for improving compliance. Study results showed:

- **Average energy code compliance:** about 64.7%. Lowest score was 42.5%; highest 83% (my notes say 83%).
- **Areas of success:** windows, doors, ceiling ductwork, installing right ins. in floors and ceilings (installation needs improvement).
- **Areas for improvement:** Installing to manufacturers specification, caulking, sealing holes, specifying, documenting, installing appropriate HVAC equipment. Plans don't include HVAC info.

Eric Makela, Britt-Makela Group presented early results from a small follow-up study funded by IMT to gauge training effort successes / if energy savings occurred because of training. Overall, homes looked pretty good. Well-installed

fiberglass batts in walls; fairly complete documentation (can improve). From RES standpoint, things are well under way for compliance. The study will be out in next few months through IMT. Running an analysis on all 40 homes to compare what we saw before to what we're seeing now.

2. Identifying Key Issues for Code Compliance in Nebraska: Rick Hauffe, ICC

- What can we do as a group to improve compliance?
- Which area(s) should we focus on?
- Cross-jurisdictional issues:
 - What about rural areas that do not have code enforcement resources?
 - How might 2012 IECC adoption affect compliance in communities of Omaha/Lincoln metro areas?
- Impact on existing buildings? (additions/renovations/rehabs/repairs)
- Other compliance systems?

Discussion notes:

Milo Mumgaard: We've gone to great lengths to pass these laws, but we have widespread failure to comply with the laws. What is state law vs. city law? Are local leaders aware of the law?

Lynn Chamberlin: we provide info on the statute, and can respond to complaints from homeowners. Most of our effort has been to provide training – trained 1,200 in one year. Getting people to focus is very difficult. Especially in small jurisdictions, those code officials are strapped for time.

Larry Nyffeler, Royal Homes:

- Customers are moving in from out of town; our homes score around 53 on HERS rating – no problem.
- Customers don't want to pay more or "green". They care more about granite and schools.
- This needs to be customer driven; but people are afraid of energy audits. People can understand how the HERS score reduces bills when you give them clear information like "A 3,700 SF home will cost you \$3,500/yr". We need to educate customers – raise demand.
- In May, 2013 there will be a [searchable] checklist on the Omaha MLS for a HERS score. That'll help get customers asking what it means.
- We've met with the Board of Appraisers and they won't add to the appraised value due to energy efficiency (EE).
- EE impacts our energy infrastructure – as we build new homes, we're going to need to bring in more energy/raise rates.
- Larry: We started a group in Omaha; need to work it into the program. "A house without Energy star is like cheap fleece, a house with good insulation is like wearing Gortex".
- Chris, MEEA: A new NAHB study shows customer's top concern is EE and people are willing to pay more.
- Mark Loscutt: the energy law is like seat belt law. It's only enforced when breaking the law is discovered.
- Jim Harper, retired code official: Training of public will need to come from a regulatory agency. But right now, it's the building departments that are in contact with consumers and have the opportunity to educate them. We also need to foster advocates on city councils (sometimes they're reactive to builders that complain about a decision made by a code official; and pressure the code official to let the issue go.)

Group Q: If Omaha and Lincoln were to adopt the 2012, how would that affect compliance?

- In Omaha we've been meeting with code officials and will go to 2012 by early 2014 if not sooner. Blower door is biggest thing we're dealing with right now.
- Jessie: Most builders WANT to do a better job. HVAC people say that it's not a level playing field; it comes down to enforcement. There are problems with measuring compliance prior to completing a house: If at final test out if we require 3 ACH; the blower door test should occur before they hang drywall – it's fixable then. It's expensive to find out you've failed after the drywall is hung. But energy raters get fired if the rating shows it doesn't pass.

Also, duct leakage and sizing calcs (Manual J or REScheck inputs MUST BE VALID). Training needed. Even if we find that 10-15% fail before homeowner moves in - that's ok – it will get better as builders learn.

- Leon, Omaha energy rater. The 2009 code says 7 ACH and many buildings pass. The 2012 code requires 3 ACH and builders will have problems achieving that. We will need training for builders and their subs (who tend to move from job to job so need continual training). Right now we see fire stops being missed; back sheathing on attic wall is a leakage area if missing. These must be done at framing stage. Things are being missed in metro areas, but it's worse in rural areas – the structural code alone is a lot of responsibility for a builder – how can you air seal it all? They need training.
- Gene Knaggs (builder in the west). Where we build, there are no inspections required; no plans. Owner might even move in before the house is done. Education isn't going to help. Builders feel "Nobody can tell me what to do". Need to focus on educating the public so that they demand it. And Appraisers don't value it so we're competing against builders who are not building to code – that's not a level playing field. Each section (education to construction industry, better enforcement, more informed public, appraisers adding value, lenders engaged) must improve together. We can't expect less to solve the problem.
- Nate Barry Univ of NE – we worked on a 3-yr study in NE and FL on how to implement into market. We found that education needs to happen at the point of sale. It should be driven by financial institution – for example, it could require a HERS rating for a mortgage. Almost every home sale involves an appraisal and gets a mortgage. We should require the engagement of realtors and appraisers at the point of sale.
- Don Killeen – continuing education should be thru the Appraisal Institute geared to appraisers. Otherwise it comes back to financial institution.

What about rural areas without resources: Danielle – would this address that?

- We don't have enough raters to cover energy code compliance across NE.
- There's no permit required in rural areas except maybe zoning.
- We don't have the resources [to enforce code], but a loan would motivate consumers and drive a market. There's no county official that can go out and do inspections. In majority of counties, there are no resources.
- Many home owners don't know what makes a home EE. And misinformation prevails.
- Todd Aerni – City of Papillion and member of Bldg Officials assn. Only 23 jurisdictions are authorized to enforce codes. Builders won't like a requirement for energy ratings.
- Gene Knaggs– several people in my construction company are becoming energy raters. We could have raters in Kearney, but there's no market for them. I've been trying to increase the appraised value on our homes for EE features. I need a qualified appraiser, but there isn't one in Kearney.
- Danielle Jensen: NEO was recently awarded an extension on DOE funding. (More later in notes.)
- Gary Ruliffson: We get calls asking, "why are my bills are so high?" After an energy rating they ask "why didn't builder do this"? We need appraiser, real estate, lender education.
- A contractor's license creates more red tape, but if want to educate builders in western part of state, we need builder education and CEUs for builders. Many don't know what an air barrier or advanced framing is.
- Chris Burgess, MEEA: IDEA for NE- In IL, utilities are exploring the possibility of funding third-party raters throughout state.
- The whole system (lenders, underwriters, examiners, real estate professionals, appraisers, consumers, training, etc.) needs to move forward concurrently. If one part falls down, the system falls down (designers need to know how to design; appraisers to appraise, etc.).
- There's been a public investment to train more raters. Utilities need to be in a position to support raters. Cities and states have limited resources.
- LARRY: OPPD used to require having approved plans before running power to new buildings.

- Chris: Are there concerns about commercial construction?
- Code official answered: No. Every designer knows they need COM check so it's not so much of an issue. COM is also backed up with licensing for architects and engineers. In reviewing COM plans though, sizing is still an issue.
- Jim Harper: I used to review plans for COM buildings in Omaha and we had lots of questions around COM buildings. But the conversation is easier because it's usually with a mechanical engineer or someone.
- Bob Ruskamp: Code official's job is SAFETY. The energy aspect is totally different than building a safe house. "Energy compliance" is outside the scope of building officials.
- Bruce: We have certified raters, but don't have enough.
- LARRY: Since 1958 they put a sticker on a window with the MPG rating. Why can't we go to that system?
- The HERS rating score IS the MPG sticker, but is not required for homes.
- Lash Chaffin. Why isn't code compliance happening in the state? The answer differs by area:
 - In rural areas: If there's an inspection at all, you might spend the one hour you have with the builder discussing the basics: plumbing or structural problems, but not energy.
 - In an area that has a fully funded code dept., funded with bldg. permit fees: The answer is different – why don't those buildings comply?
 - It is an unfair playing field and need to be approached differently from rural to metro areas.
- Kearney is adopting the 2012 building code, but only the 2003 energy code will be enforced.
- Leon Komar: Why not use HERS ratings instead of making code officials do multiple inspections?

Danielle: The DOE has granted us an extension on spending the money we had left over from the code conference in October. NEO will spend it in several ways, including (but not limited to):

- For local jurisdictions that adopt the 2012 energy code: Code books and code commentaries; 15 IECC/ASHRAE combo books; 50 ACC Manual J books for jurisdictions; a 2012 IECC "Fundamentals workshop" with the code officials association (about 75 people per class).
- Contract with Jim Harper to go into similar jurisdictions for local code staff that need help, and "plans training" for Douglas, Lancaster and Sarpy counties.
- Three one-day Appraiser trainings (max 70 students per class);
- Three half-day trainings with HBA orgs (they'll help us identify what areas to target).
- Developing a Manual J tool for Nebraska (a HVAC table for meeting the 2009 or 2012 codes so that when inspectors are in the field, they can quickly see if there's a red flag), for local code enforcement staff.
- Develop consumer education materials for local jurisdictions.
- Two days of blower door / duct blaster training at code official meetings.
- Evaluation of our mortgage loan program. (Construction and long-term loans for above-code (45-35 HERS score depending on size of house) to see how well those homes are performing.)

3. Collaborative structure / Next steps: Chris Burgess, MEEA

- Possibly divide up into committees to work on different ideas.
- Next meeting place: NETV might be good location – possible video conferencing.
- We will discuss crafting a mission statement at the next meeting. BCAP can provide template / language used by other collaboratives.
- Doodle poll for next meeting date to be sent soon.

The group voted unanimously that an Energy Code Compliance Collaborative is necessary for the state of Nebraska. Lunch was provided.