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Re: Comments on Possible Rules Governing Adoption of the 2012 International Energy Conservation Code Residential Provisions, Minnesota Rules, Chapter 1322, R-04141

May 8, 2014

The Midwest Energy Efficiency Alliance (MEEA) supports the adoption of the 2012 International Energy Conservation Code (IECC), as amended by the Minnesota Department of Labor and Industry (DLI), as the statewide building energy efficiency code for residential buildings in Minnesota. MEEA is a non-profit organization that promotes energy efficiency policies that benefit consumers and businesses throughout a thirteen state region in the Midwest. We have analyzed the economic potential of adopting the 2012 IECC, with the modifications proposed by DLI. We conclude that, compared to Minnesota's current energy code, the energy savings and consequent utility bill savings that will result from building to this new code will outweigh any potential increase in initial construction costs. **Additionally, we are not requesting a public hearing on these draft rules.**

MEEA has found that a newly constructed 2,400 square foot home in Minneapolis will use an average of 1,300 fewer kWh and 550 fewer therms if built to the 2012 IECC, as modified in Minnesota, compared to the current energy code. **This would result in the average homeowner saving \$540 dollars annually in utility bills.** It is important to note that these energy and cost savings will continue for the life of a building, which can be 50 – 100 years or more. The United States Department of Energy (DOE) has also done an analysis with similar findings and concluded that a homeowner with a 30 year mortgage will realize a positive cash flow in the first year, after considering initial construction costs and annual utility bill savings.¹

Using the average number of one and two family residences built annually over the previous ten years in Minnesota (14,956 homes²), multiplied by the potential annual energy savings per home in Minneapolis (59 MMBTU), there would be an **annual statewide energy savings of over 880,000 MMBTU** from building to the proposed 2012 energy code for residential buildings. That is equivalent to the amount of energy used by almost 4,000 homes, and **utility bill savings would be over \$8 Million annually** for homeowners.

In addition to yielding economic benefits to homeowners, the proposed energy code will result in higher quality, healthier, and more comfortable buildings. In particular, the requirement for buildings to have air tight envelopes and well-sealed duct systems, verified with the appropriate diagnostic test, will help realize these benefits to air quality as well as generate energy savings.

¹ <http://www.energycodes.gov/sites/default/files/documents/MinnesotaResidentialCostEffectiveness.pdf>

² <http://www.census.gov/construction/bps/stateannual.html>

Other improvements that are included in the proposed energy code are higher efficiency windows and added basement insulation. All of these measures and their energy efficiency improvements are most easily incorporated during the design and initial construction phase. It can be cost prohibitive to improve these measures in existing buildings, which is why it is crucial for these measures to be addressed in the building codes that regulate new construction.

MEEA particularly supports the U-factor table as printed in the model code in Table R402.1.3, which was not modified in the draft code released by DLI. It is important that Table R402.1.3 remain unchanged, as this is crucial for the use of RESCheck (free software provided by the United States Department of Energy) to show compliance with Minnesota's energy code (R402.1.4). The Department of Energy will not provide any modifications to the RESCheck software if a jurisdiction adopts a code that is weaker than the model code. As such, any modifications made to this table would likely result in an unnecessary obstacle for those that currently use RESCheck to determine compliance with the energy code. The current code is not supported by RESCheck due to differences in U-factor values between the state code and the model code. As a result, use of RESCheck is non-existent. A recent survey by the Pacific Northwest National Laboratory found that of 32,569 single family homes constructed between March 2012 and March 2014, only 359 (1.1%) used RESCheck. In Iowa, where the U-Factor chart matches the model code, of the 20,326 constructed during the same period, 2326 used RESCheck (11%). Having a code that facilitated the use of RESCheck would encourage compliance across the state.

In 2012, the DLI convened a stakeholder working group to address the issue of updating the statewide energy code. MEEA participated in this process, along with many organizations in Minnesota's construction industry. Homebuilders, manufacturers, energy experts, building officials, and utility companies were some of the groups that participated and offered input on how to update Minnesota's statewide building energy code. The group reached consensus on what the new code should look like in order to yield the most cost-effective benefits in the form of energy and utility bill savings for Minnesota's building owners and operators. The code that was proposed by the DLI in April, 2014 was largely a result of this process. As such, MEEA strongly urges the state of Minnesota to adopt this code as the new statewide building energy code residential buildings.