MEEA
MIDWEST ENERGY EFFICIENCY ALLIANCE

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March 8, 2023

Iowa State Senate
1007 East Grand Avenue
Des Moines, Iowa 50319

Re: MEEA comments on the energy code adoption process in Iowa

Dear Honorable Members of the Iowa State Senate,

Thank you for the opportunity to speak on the residential energy code adoption process in Iowa. The Midwest Energy Efficiency Alliance (MEEA) is a member-based, non-profit organization promoting energy efficiency to optimize energy generation, reduce consumption, create jobs and decrease carbon emissions in all Midwest communities. MEEA has worked in Iowa and other states to provide technical assistance and education on energy efficient building policies since 2009. We currently provide a residential energy code compliance education and training program in Iowa that includes a circuit rider and is supported by the state.

MEEA supports regular updating of statewide energy codes as a best practice for improving the lives and reducing energy costs of all residents. Standards for energy efficiency in buildings are best set by using the International Energy Conservation Code (IECC) as a baseline. Iowa has an established process by which it updates its energy codes administratively and this process has resulted in nearly $398,715,683 in energy savings over the last decade[1]. Iowa's current stakeholder-driven process allows opportunities for meaningful input from across the state in the development and adoption of new building codes. Moving the responsibility of energy code adoption to the legislature will make this process more burdensome and less transparent – to the detriment of Iowa residents. It will remove members of the building industry from having a deciding voice in what is appropriate regulation. The proposed process would also freeze the residential energy code and not provide a comprehensive path for workers to keep current with fast developing cost-saving technologies and construction techniques.

1. **Energy efficiency is the most cost-effective way to ensure lower utility bills for homeowners.**

Energy efficiency simply means using less energy to get the same job done. By lowering energy use, energy efficiency also reduces monthly energy bills and makes energy more affordable. Encouraging adoption and implementation of the most up-to-date model energy code standards presents a cost-effective way to reduce the energy consumption of homes in Iowa and save residents money. For example, if Iowa updated to the 2021 IECC for residential buildings, the state would see first year energy cost savings of over 12%, which equates to $336 of annual utility bill

[1] Building Energy Code Impacts in the Midwest: Cumulative Savings 2009-2019 (https://www.mwalliance.org/sites/default/files/meea-research/codes_infographic_2009-2019.pdf)

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savings for the average Iowa household.[2] This would result in a net annual consumer cast flow in year one of $174 and a life-cycle cost savings of $5,991.[3] The easiest and most cost-effective time to make these long-lasting improvements is during initial construction, making energy codes a significant driver of cost savings in the state and generating energy savings for the life of the home. Between 2009 and 2019, Iowa's energy code saved the state $398,715,683 and 2,605,064 tons of CO_{2e}.[4] By making the energy code update process more difficult, Iowa will likely lose out on greater savings going forward.

Energy codes are the only building codes with a monetary payback over time. Each code development cycle takes cost-effectiveness into consideration. The upcoming 2024 IECC (which improves energy efficiency but does not require full electrification nor ban fossil fuels) has created a cost-effectiveness tool for new measures. All new measures must use this cost-effectiveness tool and be voted through a rigorous consensus development process.

2. Energy codes are crucial for ensuring construction of energy efficient and resilient homes.

Building energy efficiency policies establish a baseline minimum standard for new homes. Changing the adoption process and allowing government subdivisions to enact less stringent energy efficiency requirements in buildings will hurt Iowa residents. Homeowners expect new homes to be built following leading construction practices which include energy code provisions like proper insulation, air sealing and ventilation. As an example, home insulation provides resistance to heat flow which lowers heating and cooling costs.[5] In general, heat flows from warmer to cooler areas. When a home is properly and sufficiently insulated, the overall heat flow is decreased, and less energy is needed – reducing homeowner costs while maintaining their comfort.

Energy codes also help increase building resilience. Continuing with the example above, when buildings have better insulation, residents can shelter in place more comfortably and for longer periods during extreme weather events such as tornadoes and during power outages. Evidence shows that energy efficient construction techniques and products best protect homes in extreme weather events, especially when utility services are disrupted.[6]

[2] Cost-Effectiveness of the 2021 IECC for Residential Buildings in Iowa (https://www.energycodes.gov/sites/default/files/2021-07/IowaResidentialCostEffectiveness_2021_0.pdf)
[3] Cost-Effectiveness of the 2021 IECC for Residential Buildings in Iowa (https://www.energycodes.gov/sites/default/files/2021-07/IowaResidentialCostEffectiveness_2021_0.pdf)
[4] Building Energy Code Impacts in the Midwest: Cumulative Savings 2009-2019 (https://www.mwalliance.org/sites/default/files/meea-research/codes_infographic_2009-2019.pdf)
[5] U.S. Department of Energy, Insulation, https://www.energy.gov/energysaver/insulation
[6] The Important Role of Energy Codes in Achieving Resilience (https://www.iccsafe.org/wp-content/uploads/19-18078_GR_ANCR_IECC_Resilience_White_Paper_BRO_Final_midres.pdf)

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3. Energy codes result in healthier and safer buildings for residents and health cost savings for the state of Iowa.

The state of Iowa has a responsibility to protect the health and safety of its residents. This includes regularly adopting and enforcing energy codes, which are critical to ensuring that buildings operate as intended. They integrate electrical, heating, cooling, ventilation and building envelope components to provide a safe, healthy and comfortable place to live.[7] One way energy codes do this is by ensuring good indoor air quality. Energy codes require that homes be well sealed to keep pollutants out and properly ventilated to control incoming air. Insulation and ventilation are important, and only energy codes contain requirements that dictate the proper balance between these components. Energy codes also protect health and safety through moisture management. When moisture infiltrates a building, it can lead to rotting construction materials and harmful mold growth. A well-sealed envelope and proper insulation, as required in energy codes, help keep cold outside air from the warm interior, reducing condensation and ice damming.

Energy codes also result in health cost savings. Due to the cost-effective efficiency improvements made in each model code, states that adopt the latest energy code will reap the greatest benefits. To understand the impact of delayed residential energy code adoption and amendments to the adopted code, MEEA calculated the lost energy savings and corresponding monetized health impacts for Iowa. According to this analysis, between 2009 and 2019, ***Iowa lost $2,848,878 in health care savings and $6,270,889 in energy savings*** by not regularly adopting the latest residential model energy code.[8] Changing the residential energy code update process and further delaying moving to an updated model code will result in even more lost savings for Iowa.

4.Making energy codes more difficult to update will hurt the Iowa workforce.

The current legislation would lock in a decade old energy code and would negatively impact the state's construction workforce, particularly in jurisdictions that would be allowed to enact requirements less efficient than the state building code. The building industry is constantly evolving, and industry professionals understandably want to remain ahead of the curve. Updated energy codes give them that chance. By continuing to adopt and implement updated building energy efficiency standards, Iowa will see increased economic development and technical innovation within the construction industry.

Currently, the clean energy sector supports more than 30,000 jobs in Iowa.[9] Of those jobs, 62% are in the energy efficiency sector, and the vast majority in the building industry, whether it be in

[7] Energy Codes are Life-Safety Codes (https://www.mwalliance.org/sites/default/files/meea-research/codes-life-safety.pdf)
[8] Documenting the Expanding Benefits of Strong Energy Codes: How Energy Codes Impact Community Health (https://www.mwalliance.org/sites/default/files/meea-research/documenting_the_expanding_benefits_of_strong_energy_codes.pdf)
[9] Clean Energy Trust, Clean Jobs Midwest, https://www.cleanjobsmidwest.com/state/iowa

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HVAC, insulation or lighting. These are good-quality jobs in a vital, growing sector of Iowa's economy. In fact, the clean energy sector grew at a rate of 5% from 2020 to 2021 in Iowa – over two times faster than the overall state economy.[10] Since over 40% of energy is consumed by the building sector, energy codes are the foundation upon which most clean energy jobs are built. In order to ensure that Iowa's robust energy efficiency workforce continues to grow, the energy code should be updated regularly through a transparent, stakeholder-driven process which is already in place administratively. Modifying the process for energy code adoption from an administrative to a legislative process would make it more difficult to routinely update the code and hinder future workforce growth in the Iowa energy efficiency sector.

Changing the adoption process would also inhibit the deployment of the latest building and energy efficiency technologies in the state. Routinely updating energy codes allows the workforce, and communities, to stay current with new and emerging technologies. Additionally, updated building codes provide the workforce with information about construction best practices and guidance on how to implement new construction technologies, ensuring better and healthier buildings. Maintaining an outdated energy code mandates the use of older building technologies and techniques by preventing the installation of newer, more cost-effective technologies that have been developed since the outdated code was written.

5. Energy conservation efforts must be made if Iowa wants to access upcoming federal funding.

More than one billion dollars will be made available through the Bipartisan Infrastructure Law and the Inflation Reduction Act for advancements in building energy efficiency. By prohibiting the adoption of energy efficiency requirements for residential buildings, the state of Iowa would be denying its local jurisdictions and residents the opportunity to receive that federal funding. This would be detrimental to the state's overall economy.

If you have any questions about this testimony, references or general impact and analysis of building energy codes, please contact Corie Anderson, Senior Building Policy Associate at MEEA at canderson@mwalliance.org. Thank you for your consideration.

Sincerely,

Stacey Paradis

Stacey Paradis
Executive Director

[10] Clean Energy Trust, Clean Jobs Midwest, https://www.cleanjobsmidwest.com/state/iowa