MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

January 10, 2025

Gary Feck, Director
Department of Housing, Buildings and Construction
500 Mero Street, First Floor
Frankfort, Kentucky 40601

Re: MEEA's Comments on Kentucky's Update of its Commercial & Residential Building Energy Efficiency Standards

Dear Director Feck,

Thank you for the opportunity to speak on the Department's review process regarding updating the energy efficiency provisions of the Kentucky Building Code (KBC) and Kentucky Residential Code (KRC). The Midwest Energy Efficiency Alliance (MEEA) is a membership-based nonprofit organization serving as a collaborative network, promoting energy efficiency to optimize energy generation, reduce consumption, create jobs and decrease carbon emissions in all Midwest communities. MEEA has experience supporting states and municipalities across the region to develop building energy policies and implement codes programs and trainings.

MEEA recommends the adoption of the full 2021 or 2024 International Energy Conservation Code (IECC) as the statewide minimum building energy code for both commercial and residential buildings. Adopting either of these editions without weakening amendments is cost-effective, reduces utility bills, opens new funding streams for the state, its municipalities and businesses, and provides opportunities for economic growth and workforce development. This update of the KBC's and KRC's energy efficiency standards is long overdue, with the state's current standards going on 15 years old.[1] The longer Kentucky waits, the less opportunity it has to reap the many benefits of energy-efficient buildings.

In short, adopting the 2021 or 2024 IECC in Kentucky:

- is **affordable,** cost-effective and will save residents and businesses money (nearly **$3 million within the first year of adoption** and almost **$1 billion in energy savings** over 30 years);
- will **create jobs** and stimulate the state economy (estimated **8,000 new jobs** over 30 years);
- will better position the state to **receive grants** and **improve disaster resiliency**; and
- will **further Governor Beshear's** energy, economic and disaster resiliency **goals**.

Adopting the 2021 or 2024 IECC is Cost-Effective and Will Save Residents, Businesses Money

Buildings have long-term impacts beyond their initial construction costs, and energy codes play a crucial role in providing monetary payback to owners and occupants. The adoption of the 2021 or 2024 IECC can significantly reduce energy consumption and lower utility costs for residents and businesses. Indeed, according to the U.S. Department of Energy (DOE), building energy codes have a 40-year history of reducing consumer energy bills. An analysis by the Pacific Northwest

[1] The state currently enforces amended standards of the 2012 IECC for commercial buildings and amended standards of the 2009 IECC for residential buildings.

MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

National Laboratory (PNNL) reported that updated energy codes would save U.S. home and business owners $126 billion between 2012 and 2040.[2]

PNNL, using methodology widely accepted across the country, also determined that an average Kentucky homeowner would see ***positive cash flow within just two years*** in a home built to the full 2021 IECC over the current Kentucky code. Moreover, the residential 2021 IECC would provide Kentucky-specific ***energy savings of 28.5%*** compared to the current state energy code, equating to an average of nearly $700 of annual utility bill savings for Kentucky households built under the code. Statewide, Kentucky homeowners would collectively save nearly ***$3 million within the first year of adoption***, resulting in almost ***$1 billion in energy savings*** over the next 30 years.[3]

Of course, these numbers would be even greater if the state updated to the 2024 IECC, as those standards were recently determined by the U.S. DOE to result in more savings – specifically, 7.8% site energy[4] savings and 6.6% energy cost savings from the 2021 IECC.[5] Building energy codes are updated on a three-year cycle, and with each update the code becomes more efficient, leading to higher cost savings for building owners and occupants on their utility bills.

Having outdated energy codes also runs contradictory to state and local goals to build affordable housing. Multifamily housing and mixed-use buildings (i.e., residential and commercial) are often classified as commercial buildings; therefore, commercial building codes also have a positive impact on those residential consumers as well. A recent study conducted by the American Council for an Energy-Efficient Economy (ACEEE) showed that low-income households spend an average of 20% of their income on energy alone, more than three times the national average. Additionally, three in four low-income households experience high energy burdens, meaning they spend at least 12% of their income on energy alone, compared to one in four households nationwide.[6] Low-income housing needs to be built to higher energy efficiency standards so that when it becomes occupied, residents are not burdened by outsized energy bills and can afford to live in their own homes. The mindset needs to advance from just being about affordable *housing* to also being about affordable *living*.

A step in the right direction of this is demonstrated by the U.S. Department of Housing and Urban Development's (HUD) recent decision to make its new building construction standards those of the ***2021 IECC*** and ASHRAE 90.1-2019. The decision came after HUD and the U.S. Department of Agriculture (USDA) determined that those ***standards are not cost-prohibitive, even to households***

[2] U.S. Department of Energy, December 2016, Saving Energy and Money with Building Energy Codes in the United States, Saving Energy and Money with Building Energy Codes in the United States.
[3] All this saved income could be used by residents to buy groceries, pay medical bills or support local Kentucky businesses. One in three Americans struggles to pay energy bills and maintain adequate temperature in their home, and one in five are forced to choose between utility bills and necessities like food and medicine. U.S. Energy Information Administration, 2020 Residential Energy Consumption Survey (RECS): Table HC11.1 Household Energy Insecurity, https://www.eia.gov/consumption/residential/data/2020/hc/pdf/HC%2011.1.pdf.
[4] Site energy is the amount of energy (e.g., electricity, natural gas) consumed by a building as reflected in its utility bills. U.S. Environmental Protection Agency, The Difference Between Source and Site Energy, The Difference Between Source and Site Energy | ENERGY STAR.
[5] U.S. Department of Energy, Model Energy Code Determinations, Model Energy Code Determinations | Building Energy Codes Program.
[6] American Council for an Energy-Efficient Economy, May 2024, Low-Income Households Spend Nearly 20% of Income on Home Energy and Auto Fuel Costs, https://www.aceee.org/blog-post/2024/05/low-income-households-spend-nearly-20-income-home-energy-and-auto-fuel-costs.

MEEA
MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

in need of the most affordable types of housing.[7] Of note, the previous HUD requirements were equivalent to those of the 2009 IECC and ASHRAE 90.1-2007, so the energy efficiency improvements would be the same, if not better, as what Kentucky would implement, as well.

The federal study considered many factors, including the internal rate of return, net present value, incremental and aggregate costs and savings, single family and multifamily buildings, home size, climate zone, cash flow impacts for homebuyers, inflation and interest rates. According to the analysis, "the impacts will vary across climate zones, states, and localities depending on changes in market conditions; however, ***HUD found the standards to be affordable and cost effective within each state***." The ruling concluded that HUD and USDA should update their minimum energy efficiency requirements to the 2021 IECC and ASHRAE 90.1-2019, providing energy savings to America's most vulnerable households and keeping them affordable. The final report stated, "energy costs are one of the few household expenses where significant cost savings can be achieved through efficiency, both in the short- and long-term, resulting in decreased costs for the resident."

Adopting the 2021 or 2024 IECC Will Create Jobs and Stimulate the State Economy

Like all industries, building construction techniques and technologies are updated over time. Newer building energy codes leverage the latest building science and technology while providing various building professionals with valuable learning opportunities. This technical assistance may include analysis of energy savings and cost impacts associated with code adoption, comparative analysis of future code options, customized educational materials, web-based or in-person training programs, or compliance resources and software tools (like COMcheck and REScheck).

If Kentucky stays up to date with the International Code Council's (ICC) model energy codes, there are more available resources to educate local designers, builders, building operators and code officials (among others) about how to properly comply. Conversely, if Kentucky does not stay up to date with the model energy codes, convenient resources will start to become scarce (e.g., typically, the latest version of REScheck-Web will only have the three latest editions of the model codes, so presumably when REScheck-Web is updated to the 2027 IECC, the 2018 IECC will no longer be included).[8] MEEA itself offers training sessions and webinars to building professionals, municipalities, states, utility companies and others. Once these entities learn how to properly use the newest building techniques and technologies, they start to realize significant cost savings as well. MEEA's energy code training has improved compliance in Kentucky,[9] Illinois, Missouri and Nebraska.

By adopting and implementing the most up-to-date editions of the IECC, Kentucky will see increased economic development and technical innovation within the construction industry. However, if the state fails to update its energy code, the result will be an undertrained workforce that falls behind neighboring jurisdictions and an out-of-date building stock that wastes energy

[7] U.S. Department of Housing and Urban Development, December 2024, Minimum Energy Standards, Minimum Energy Standards | HUD.gov / U.S. Department of Housing and Urban Development (HUD).
[8] U.S. Department of Energy, REScheck, REScheck | Building Energy Codes Program.
[9] Pacific Northwest National Laboratory, August 2017, Kentucky Residential Energy Code Field Study: Baseline Report, Kentucky Residential Energy Code Field Study: Baseline Report; Pacific Northwest National Laboratory, September 2022, Kentucky Residential Energy Code Field Study: Final Report, Kentucky Residential Energy Code Field Study: Final Report..

MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

and money. Most states around Kentucky have more recent residential energy codes in place, including:

- Tennessee – 2018 IECC
- Indiana – 2018 IECC
- Ohio – 2018 IECC
- Illinois – 2021 IECC

Updating Kentucky's code to exceed its regional partners would create a workforce that is future-ready to work and train regionally when these states inevitably pass more up-to-date energy codes. For example, Illinois mandates that its Energy Code Advisory Council review the newest edition of the IECC every three years and either adopt it as-is or with state-specific amendments. In this way, its code is always up to date. Kentucky should consider a similar process going forward, as it is easier to make small, incremental leaps to the newer editions of the IECC as they are published than it is to make big jumps every 15 years. Indeed, this is why the ICC also maintains its regular three-year update process.

From the PNNL study mentioned previously, it is estimated that Kentucky could add nearly 300 jobs in the first year that the 2021 IECC is adopted and close to 8,000 jobs over 30 years.[10] Additionally, the U.S. Bureau of Labor expects approximately 15,000 construction-related job openings per year for the next decade, mainly attributed to a workforce retiring faster than it is replenished.[11] This presents a unique opportunity to train a workforce that is readily equipped to understand and comply with the most up-to-date energy codes and those passed in future cycles. By updating to a modern code, the new Kentucky workforce would be trained in the latest in energy efficiency technology and techniques, making their skills more sustainable long-term and more valuable in the regional market.

Adopting the 2021 or 2024 IECC Will Better Position the State to Receive Code Grants and Improve Disaster Resiliency

Now is prime time for Kentucky to adopt at least the full 2021 IECC, as funding and technical assistance resources are becoming available for states adopting the unamended 2021 IECC. Adoption of the unweakened 2021 IECC would position Kentucky to leverage millions of dollars in funding opportunities, bolstering the state's capacity to advance its clean energy and sustainability objectives. In particular, the DOE State and Community Energy Programs (SCEP) office recently announced that it would provide up to $400 million to support states in adopting and implementing the latest model energy codes.[12] ***Over $8.8 million of this funding was available to Kentucky alone*** and may have been used for workforce development, implementation, compliance training, weatherization and more. The Bipartisan Infrastructure Law and Inflation Reduction Act have also provided for $225 million and $1 billion, respectively, to go towards resilient and efficient codes implementation. States are eligible to receive this money if they

[10] U.S. Department of Energy, July 2021, Cost Effectiveness of the 2021 IECC for Residential Buildings in Kentucky at ii–iii, https://www.energycodes.gov/sites/default/files/2021-07/KentuckyResidentialCostEffectiveness_2021_0.pdf
[11] U.S. Bureau of Labor Statistics, August 2024, Occupational Outlook Handbook: Construction and Building Inspectors, https://www.bls.gov/ooh/construction-and-extraction/construction-and-building-inspectors.htm.
[12] U.S. Department of Energy, Technical Assistance for the Adoption of Building Energy Codes, Technical Assistance for the Adoption of Building Energy Codes | Department of Energy.

MEEA
MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

update to more recent model energy codes or if they conduct studies, training and implementation of more efficient codes or building policies.

Another somewhat unlikely source of code funding has been the Federal Emergency Management Agency (FEMA) through its Building Resilient Infrastructure and Communities (BRIC) grant. This has historically been a pre-disaster, hazard mitigation grant program, but the latest cycle apportioned 10% of the available funding (about $137 million) for code-related projects. More specifically, the funds are to support communities seeking to update their codes to more current editions, improve their implementation and/or provide codes-related workforce training,[13] with an overall emphasis on resilient, hazard-resistant building codes. Applications for FY23 BRIC funding closed in February 2024, but applications for FY24 funding are expected to be available in early 2025.

For local governments in Kentucky to take advantage of these (and other) recent robust funding opportunities, it is imperative that the state raise its code standards to meet eligibility requirements. As an example, one such opportunity Louisville missed was a $50 million BRIC grant from FEMA that would have greatly mitigated the city's disaster risk and supported necessary wastewater upgrades; however, since the state building code was not adequately updated, the Louisville Metropolitan Sewer District did not qualify. As a result, the cost of these expensive upgrades is passed on to ratepayers through wastewater charges and increased flood insurance. These grants are necessary to adequately protect Kentuckians from weather events such as extreme flooding, heat, and winter storms (like the one that hit just this past week and has left thousands without power).[14]

"Energy codes play an important role in a building's resiliency, and they are just as significant as other life safety codes. A more resilient building can be defined as a building that is prepared for, can recover from, and can more successfully adapt to future adverse events."[15] When buildings are not up to code, insurance costs go up and those premiums are passed down to customers.[16] A well-insulated house with a sealed thermal envelope, as prescribed by the 2021 and 2024 IECC, will maintain a safe and comfortable living environment while also keeping energy costs down during extreme weather events.

Adopting the 2021 or 2024 IECC Will Further Governor Beshear's Energy, Economic and Disaster Resiliency Goals

As part of the foreword to his energy strategy for the state of Kentucky – "Kentucky Energy, Environment, and Economic Development (KYE^3)" – Governor Beshear writes "sustainability allows us to meet the needs of the present without compromising our future and that of our children. And

[13] Examples of eligible activities for BRIC funding include acquiring print or online publications to bolster building code activities; training and certification for code officials; technological upgrades like electronic permitting, virtual inspection technology, and remote building codes administration; building department accreditation; and consulting services for activities related to building codes, including adoptions and updates.
[14] LEX 18, January 6, 2025, Nearly 40,000 without power across Kentucky as winter storm system continues, Nearly 40,000 without power across Kentucky as winter storm system continues.
[15] Northeast Energy Efficiency Partnerships, Insurance Underwriting and Updated Building Energy Codes, https://neep.org/sites/default/files/media-files/building_energy_codes_and_insurance_underwriting.pdf.
[16] WKYT, May 16, 2024, How is extreme weather impacting home insurance rates in Kentucky?, How is extreme weather impacting home insurance rates in Kentucky?.

MEEA
MIDWEST ENERGY EFFICIENCY ALLIANCE
20 N. Wacker Drive, Suite 1301
Chicago, Illinois 60606
312.587.8390 Main Line
312.587.8391 Fax
www.mwalliance.org

yet we must do all of this while balancing the affordability and reliability of our energy systems." He goes on to list the Design Goals of the plan, which include building "next generation infrastructure," developing a "sustainable workforce," and fueling a "diversified energy economy." The plan also calls for "resilient, grid connected buildings" and "review[ing] regulations and codes for resilience and sustainability criteria."[17] Updating the energy code to either of the latest iterations of the IECC would be one of the first steps to furthering nearly all the energy goals laid out in this plan. Both the 2021 and 2024 IECC ensure that buildings are sustainable and resilient, and their implementation statewide would be foundational to the success of KYE3.

Governor Beshear has also made disaster resiliency a priority, which is evident through his designation of May as "Building Safety Month" (BSM)[18] and through his executive order 2022-665 establishing a Council for Community Recovery and Resiliency (CCRR).[19] In his BSM proclamation, the Governor urges Kentuckians to "consider the commitment to improve building safety, resilience and economic investment at home," and his executive order explicitly states that "[t]he CCRR will lead efforts to improve building codes…as well as other relevant polices, ordinances, and laws to reduce the impacts of disasters."

To conclude, the Kentucky DHBC should adopt either the 2021 or 2024 IECC as its energy efficiency building standards for the KBC and KRC because they would reduce costs for consumers, stimulate the economy, benefit local businesses and governments and align with state energy and sustainability goals. The longer the state waits to update these building codes, the farther behind it will fall and the more difficult it will be to update in the future. Kentucky can look to other states for successful examples, like Louisiana which recently updated to the 2021 IECC from the 2012 edition.[20] The energy landscape is rapidly changing, and Kentucky now has the chance to take advantage of available once-in-a-generation code funding and give its residents the opportunity to live and work in buildings that are energy efficient, comfortable, safe and future-ready.

If you have any questions about these comments, noted reports and references, or general impact and analysis of building energy codes, please contact John Gossman, Building Codes & Policy Senior Associate for MEEA, at jgossman@mwalliance.org. Thank you for your consideration.

Sincerely,

Paige Knutsen

Paige Knutsen, Executive Director

[17] Kentucky Office of Energy Policy (OEP), 2021, KYE3: Designs for a Resilient Economy, KYE3_Final_10.18.2021.pdf.
[18] Kentucky Building Safety Month Proclamation, May 2022, Kentucky, Kentucky Building Safety Month Proclamation.
[19] Governor Andy Beshear Executive Order 2022-665, September 22, 2022, 20220922_Executive-Order_2022-665_CCRR.pdf.
[20] Southeast Energy Efficiency Alliance, Energy Code Status by State, Energy Code Status by State - Southeast Energy Efficiency Alliance.