



Minimum Energy Standards For HUD-USDA Financed Housing



Background: Statutory Requirements



The Energy Independence and Security Act of 2007 (EISA) amends Section 109 Cranston Gonzalez to require HUD and USDA to jointly adopt the most recently published energy standards subject to a housing “affordability and availability” test. HUD and USDA currently require 2009 IECC and ASHRAE 90.1-2007.



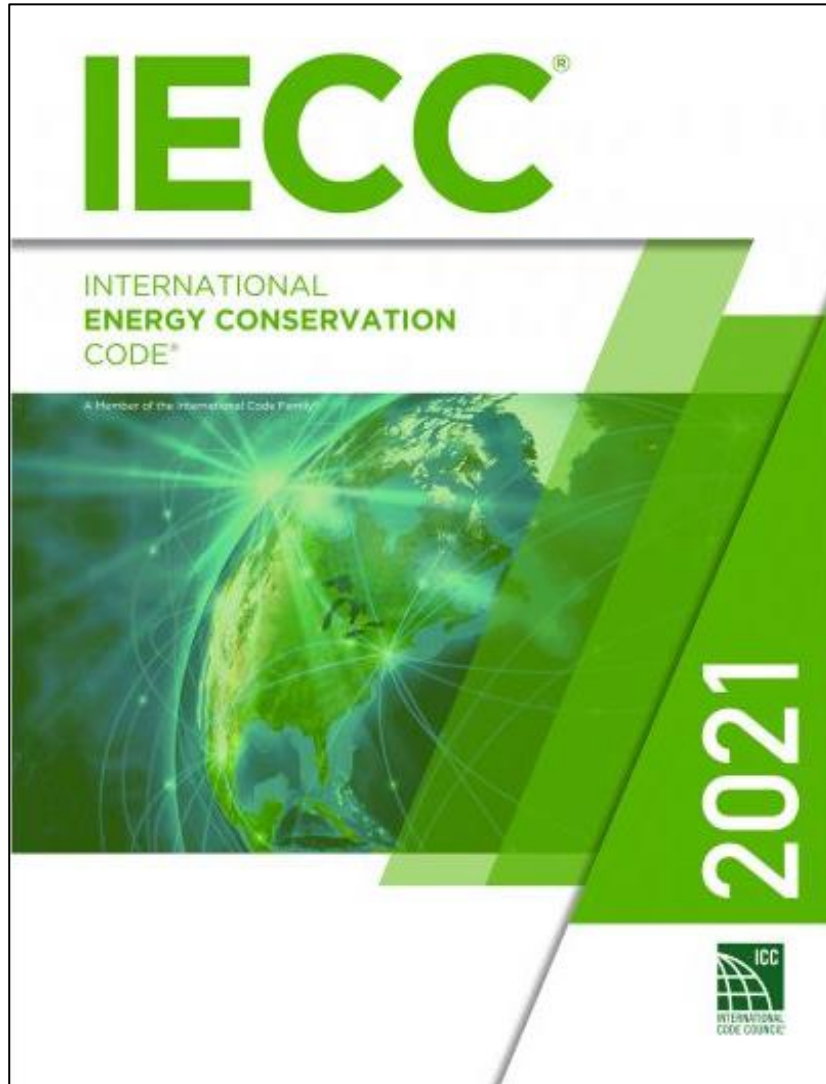
This notice brings HUD and USDA into compliance by adopting 2021 IECC and ASHRAE 90.1-2019 as minimum energy standards.



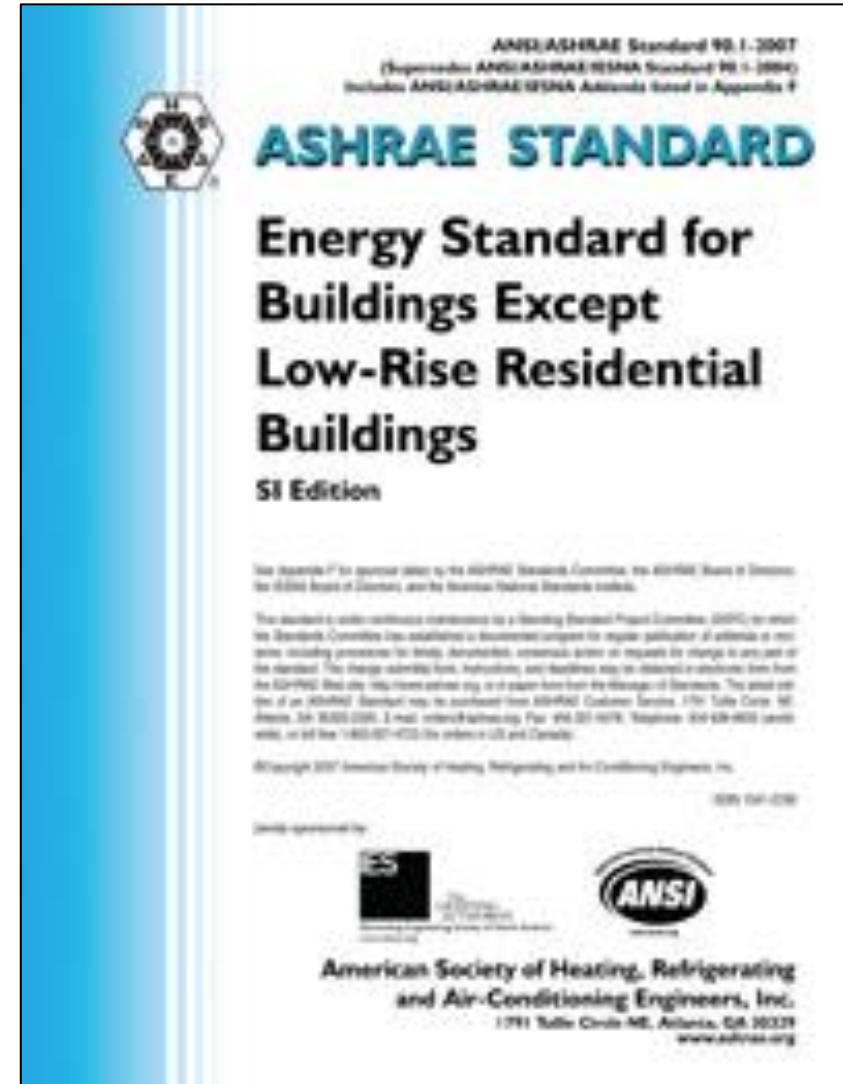
This notice impacts new construction only.

The updated energy code does not apply to FHA-insured or USDA mortgages financing for existing housing or manufactured housing.

Two Codes Specified in Statute

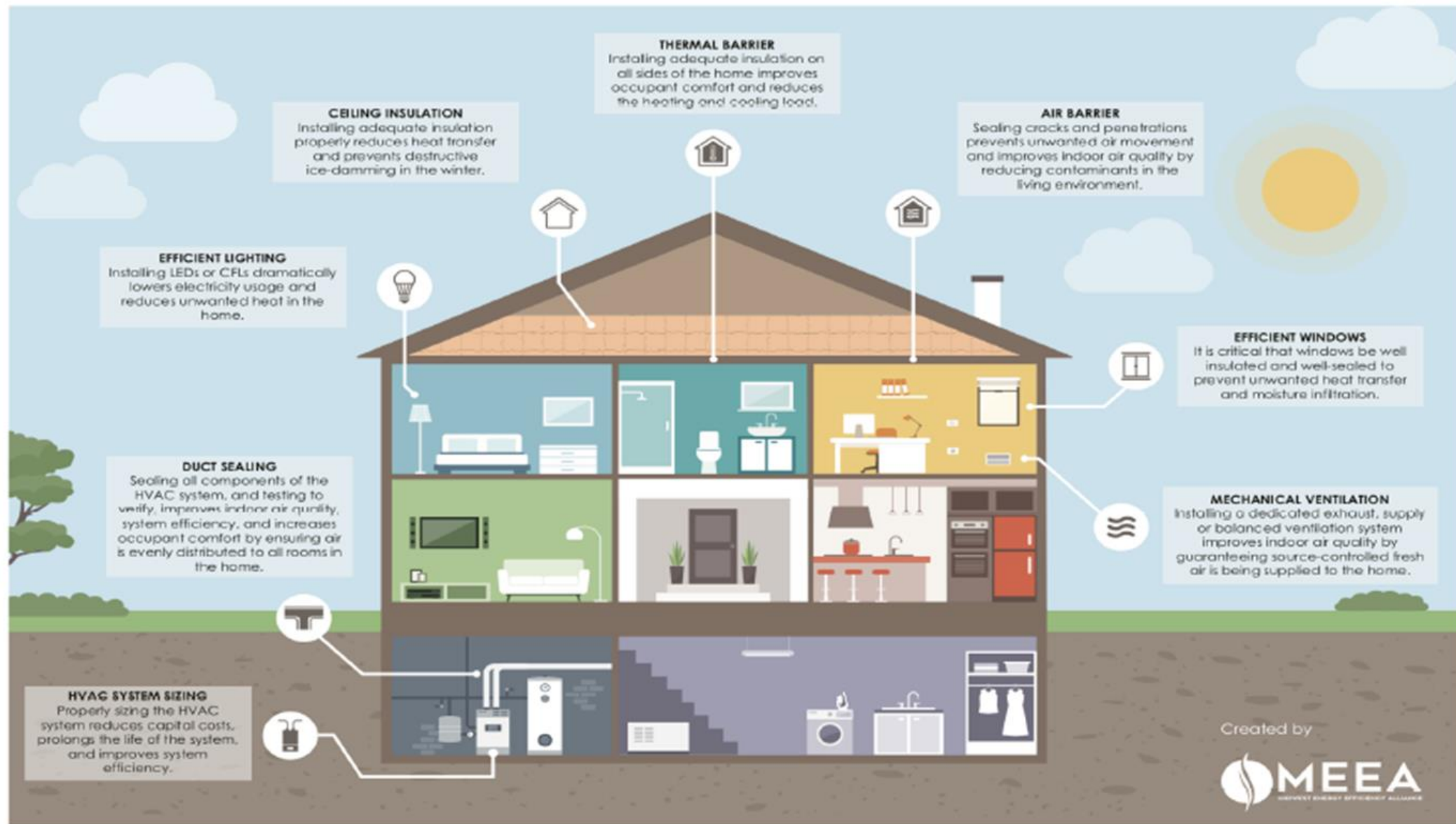


Single Family + Low Rise Multifamily



Multifamily 4+ Stories

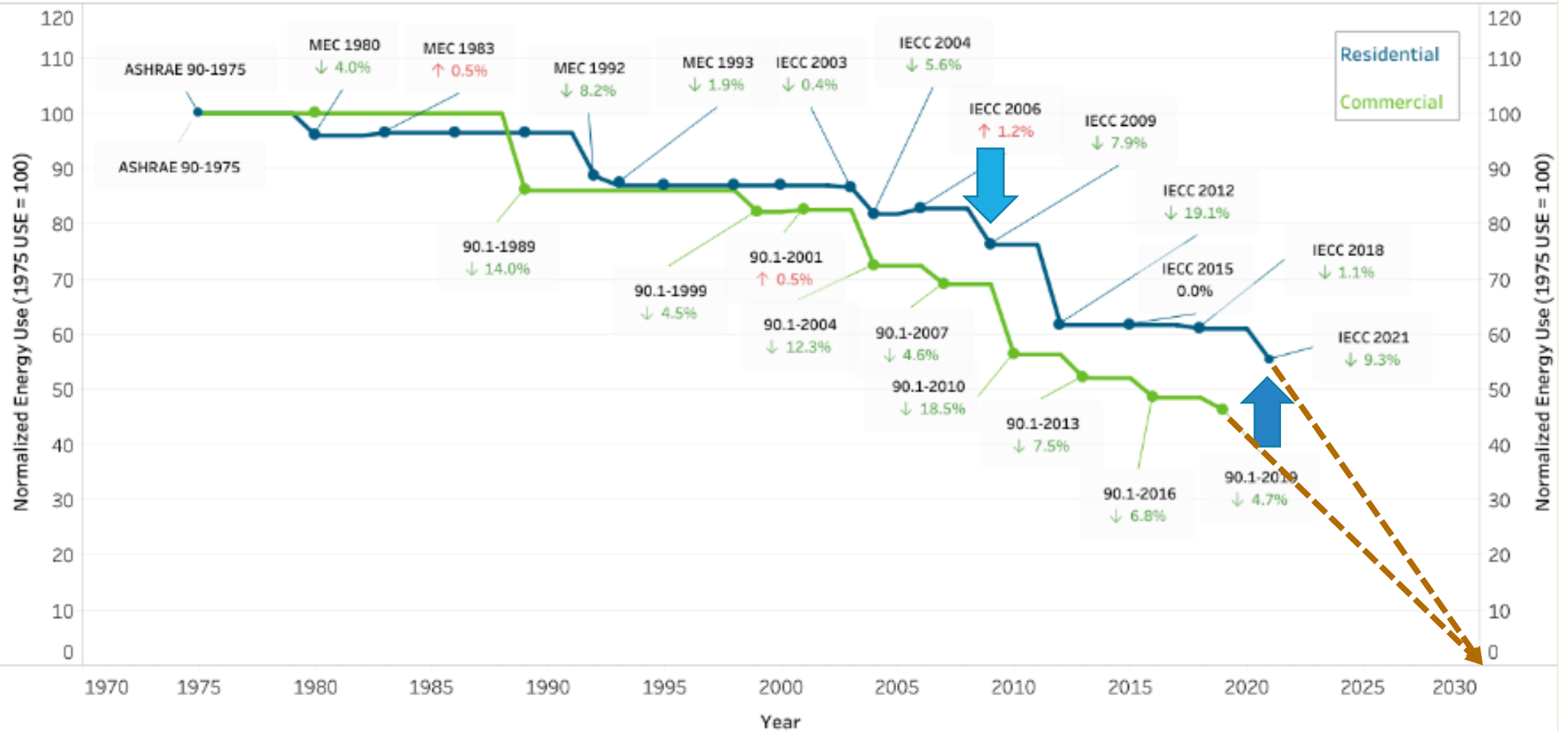
How the Energy Code Improves a Home



Energy Codes – Moving Towards Net Zero



Estimated Improvement in Residential & Commercial Energy Codes (1975 - 2021)



Importance of Updating Energy Standards

<p>Set baseline energy efficiency requirements for new construction</p>	<p>Energy standards are a subset of building codes; when updated, they set minimum efficiency requirements for new and renovated buildings.</p>
<p>Lower energy burden</p>	<p>Updated energy standards reduce energy bills and costs. Low- and moderate-income households have a disproportionately high energy burden: median spending on energy is 8.1% of household income for these households vs. national average of 3.1%.</p>
<p>Reduce carbon emissions</p>	<p>These standards will generate an estimated reduction of as much as 6.35 million metric tons in carbon emissions over 30 years, the equivalent of taking 46,000 cars off the road every year. This equates to annual societal cost savings of \$13.9 million.</p>
<p>Help address extreme heat and cold</p>	<p>Energy efficient homes are more comfortable and have improved passive survivability. They enable families to survive in homes longer during extreme heat or cold events and power outages.</p>
<p>Residential health</p>	<p>Evidence shows weatherized, energy efficient homes contribute to lower asthma rates, respiratory symptoms, and other beneficial health impacts.</p>

Significance of the Final Determination

Energy savings

- 2021 IECC is 34.3% more efficient than the 2009 standard.
- ASHRAE 90.1-2019 is 22.5% more efficient than the 2007 standard.

Cost benefits

- For the IECC (standard for single-family and low-rise under 4+ story) , aggregate cost savings are estimated at **\$73 million per year** or **\$1.48 billion over the 30-year life-cycle**.
 - Per household, this equates to \$963 in annual energy savings and \$15,000 in net life-cycle savings.
- For ASHRAE (standard for multifamily of 4+ story) , aggregate energy savings are estimated at **\$2.1 million per year** or **\$44 million over the life-cycle**.

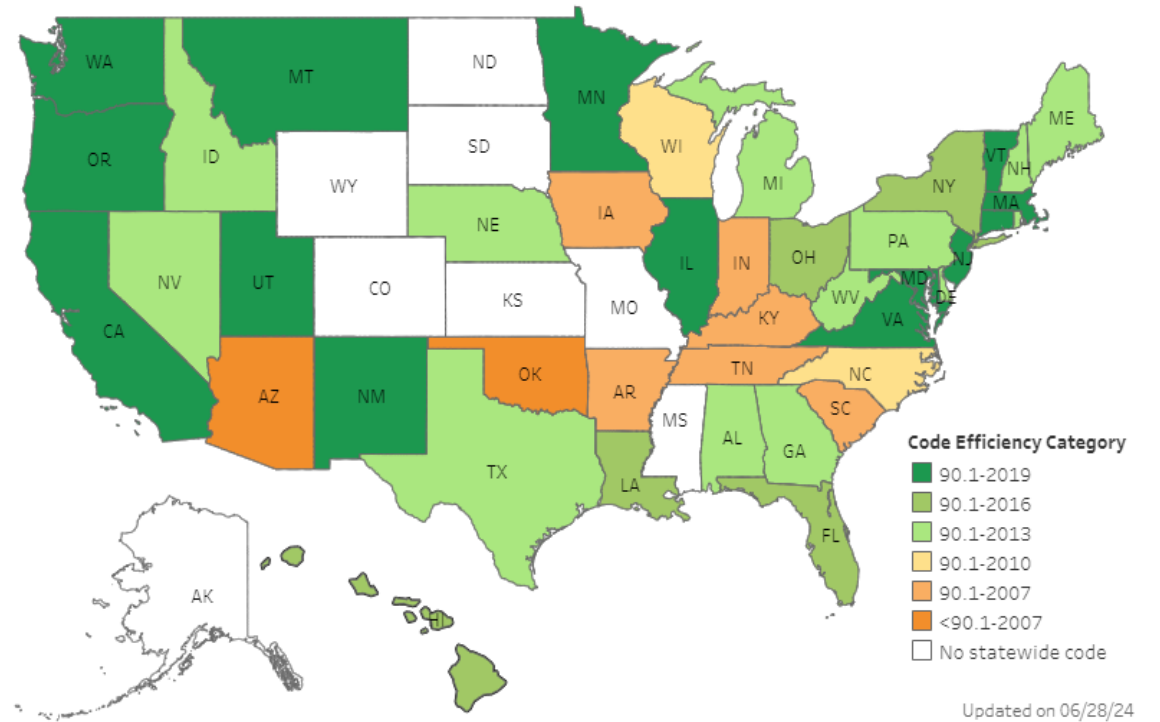
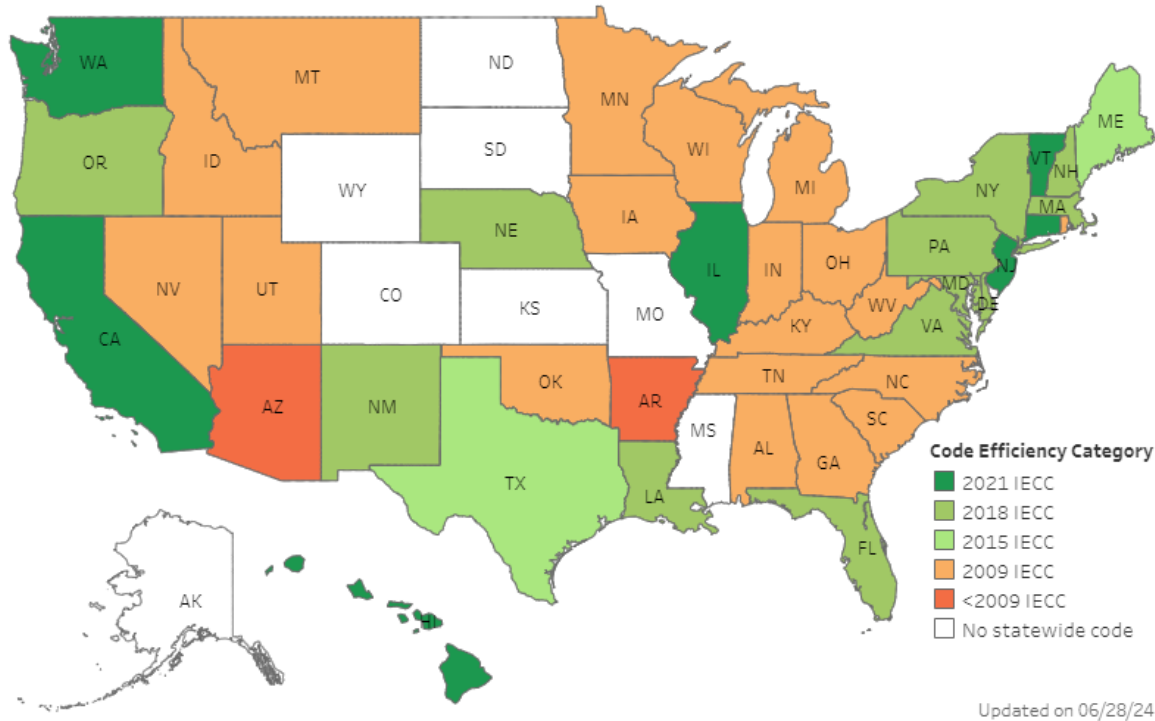
Covered Programs

- This update will impact approximately 165,000 units per year (150,000 HUD units and 15,000 USDA units).
- The notice will impact new construction in public housing, FHA-insured housing (single and multifamily), certain competitive grant programs, and the HOME Investment Partnerships and Housing Trust Fund programs.

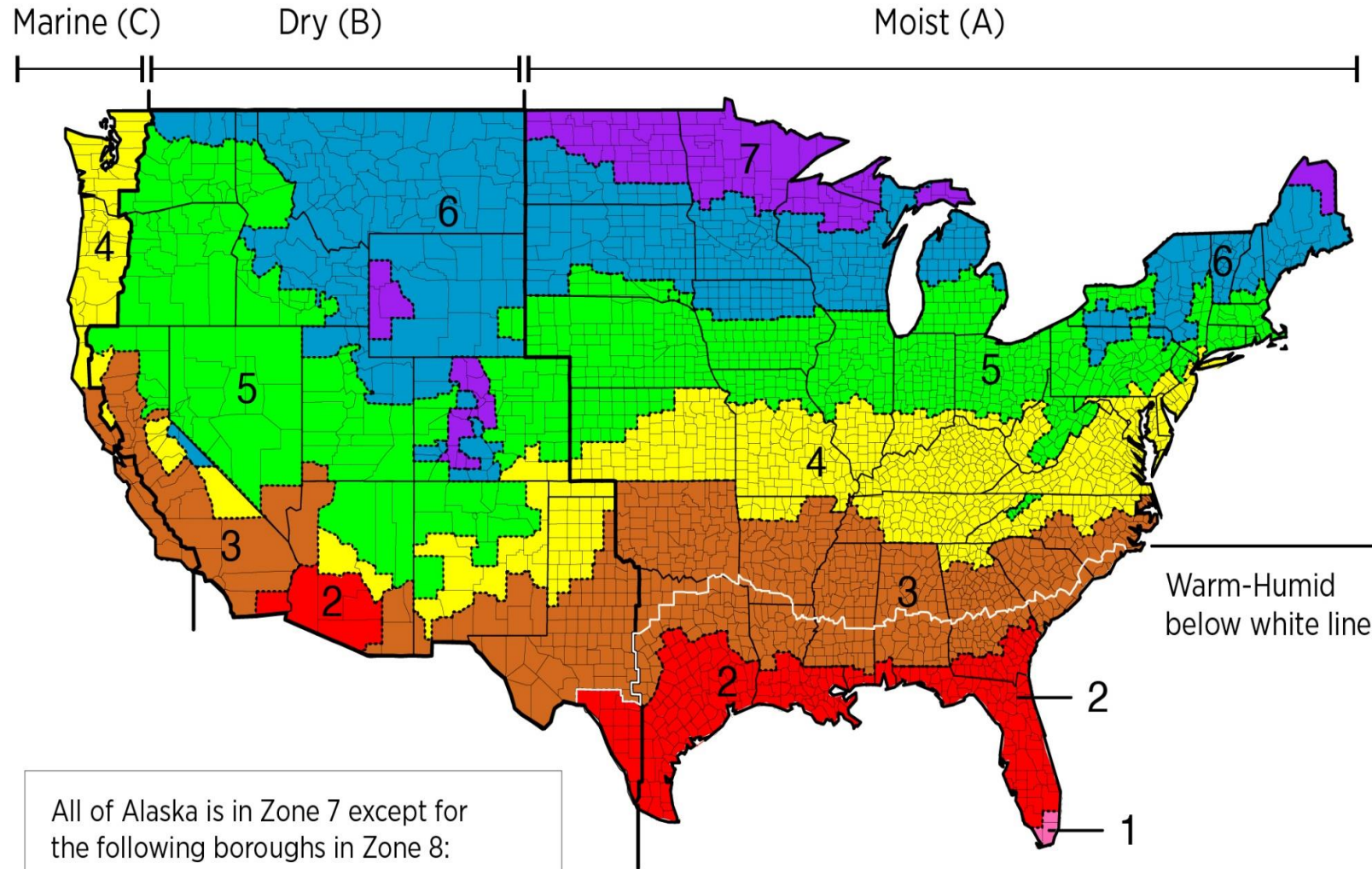
Current State Code Adoption

IECC:
 Single Family/Low-rise Multifamily
 - 7 states currently require 2021 IECC

ASHRAE 90.1:
 Multifamily 4+ stories
 - 14 states + DC currently require ASHRAE 90.1-2019



Codes Organized by Climate Zone: Include Both Mandatory and Climate Zone-Specific Requirements



All of Alaska is in Zone 7 except for the following boroughs in Zone 8:
Bethel, Northwest Arctic, Dellingham, Southeast Fairbanks, Fairbanks N. Star, Wade Hampton, Nome, Yukon-Koyukuk, North Slope

Zone 1 includes Hawaii, Guam, Puerto Rico, and the Virgin Islands

Final Determination – Key Public Comments

Extended implementation period

- HUD-USDA extended the implementation period out to a year and a half after effective date, or 19 months after publication. For persistent poverty rural areas, the compliance date is 24 months after the effective date. This extended timeline will allow the industry to prepare, help with state adoption, and enable additional IRA incentives to come online.

Updated construction costs

- HUD-USDA updated the construction costs used in the analysis. HUD-USDA adopted a 37% increase in construction costs and 32% increase in energy costs to reflect the increase to construction and energy costs since the 2021.

Revised economic factors

- HUD-USDA updated the standard economic factors from DOE's methodology to better reflect current economic conditions. This included an updated inflation rate of 2.2% and an update interest rate of 5.3%, which reflects the three-year Fannie Mae average rates. Additional adjustments were made to better reflect FHA and USDA financing (e.g. smaller-sized starter homes for FHA borrowers, lower minimum down-payment, up-front and annual MIP).

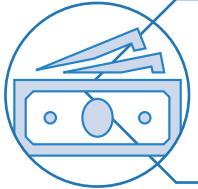
2024 IECC and alternative compliance pathways

- HUD-USDA are statutorily prohibited from adopting an amended IECC code; however, any code or standard that meets or exceeds the efficiency of the 2021 IECC is an acceptable pathway. This will include the 2024 IECC once it is published by the ICC and DOE issues their efficiency determination.

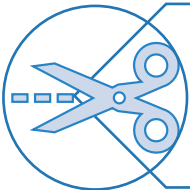
Affordability Analysis for Single Family (2021 IECC vs 2009 IECC – National Average)



While constructing a new, single-family home, on average, **\$7,229 of additional cost and profit** is incurred by the builder on energy efficient upgrades (to comply with 2021 IECC requirements).



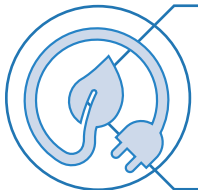
The homebuyer will pay an additional \$430-\$550 in upfront home purchase costs due to the increased initial price including \$360 in additional downpayment and other associated closing costs. **In approximately 1.5 years, the homebuyer will recoup that expense through energy cost savings.**



The **homeowner will save an estimated \$80 monthly** on their utility bills – resulting in net savings of \$31 monthly and \$377 annually in overall net savings. Net savings also remained positive over a 5-year and 10-year investment time horizon, which was added into the Final Determination based on public comment.



The homeowner will have a projected **\$25,000 total energy bill savings** over the life-cycle of a 30-year mortgage (net savings of **\$15,000** after the cost of financing the home, mortgage insurance, and the initial downpayment and closing costs over that same period).



The Inflation Reduction Act provides homebuilders tax credits of **\$2,500 - \$5,000** when homes meet EPA Energy Star or DOE Zero Energy Ready Homes programs. These savings result from exceeding 2021 IECC requirements and so are not reflected in cost estimates. (These incentives are not available for non-profit builders.)

Affordability Analysis for Multifamily (+4 story) (ASHRAE 90.1-2019 vs 2007 – National Average)

- Costs and benefits for multifamily (4+ story) buildings:
- Simple payback period is estimated at 0.1 years, with immediate payback in some climate zones.

Costs and savings (per unit)

Added construction cost: \$18

Annual energy savings: \$224

Net life-cycle cost savings: \$5,886

Costs and savings (per building)

Added construction cost: \$574

Annual energy savings: \$7,153

Net life-cycle cost savings: \$188,337

Implementation Timelines: HUD and USDA Programs



Program	Preliminary Determination	Final Determination (Current)
FHA-Insured Multifamily	90 days after effective date	12 months after effective date or May 28, 2025
**Pre-application submitted to HUD		
FHA-Insured Single Family USDA Single Family Direct, Guaranteed, and Self-Help Loans	180 days after effective date	18 months after effective date or November 28, 2025
**Building permit application		
HOME/Housing Trust Fund (HTF)	180 days after effective date	180 days after effective day (6 months) or November 28, 2024*
**Participating Jurisdiction or HTF grantee funding commitment		
Public Housing (Capital Fund, Project Based Vouchers)	180 days after effective date	12 months after effective date or May 28, 2025
**HUD approvals of development proposals for new Capital Fund, mixed financed projects, and PBVs		
Competitive Grants (Choice Neighborhoods, Section 202, Section 811)	-	Next published NOFO after effective date
**NOFO publication		
Rental Assistance Demonstration	-	Already implemented and applicable to new construction
**Required by Federal Register Notice published on July 27, 2023		
All programs, persistent poverty rural areas	-	24 months after effective date or May 28, 2026
**Based on program-specific event above		

*If HOME/HTF funding layered with other HUD funds, the later program compliance date applies.

**The event/project design step by which a proposed project would be required to comply with the new standards.

Alternative Compliance Pathways

- New construction that obtains the DOE's Zero Energy Ready Homes Program, Single Family Version 2.1 certification may be accepted as an alternate compliance pathway for the 2021 IECC.
- Energy Star Version 3.2 will be accepted as an alternative compliance pathway, which will be required to qualify for the \$2,500 45L tax credit beginning January 2025.
- After a positive efficiency determination by the DOE, HUD and USDA will accept future versions of the IECC and ASHRAE 90.1 standards that exceed the efficiency of the 2021 IECC or ASHRAE 90.1-2019.
- Additionally, the agencies will publish an annual list of acceptable third-party green building standards that meet or exceed the efficiency of the 2021 IECC or ASHRAE 90.1-2019. Such standards may include the National Green Building Standard (NGBS), Enterprise Green Communities, LEED, Passive House, and other recognized standards.

Tax Credits and Additional Funding Sources

- **Section 45L tax credit**
 - *Single family:* Up to \$2,500/unit for properties certified to EPA's Energy Star Single Family New Construction, up to \$5,000/unit for DOE's Zero Energy Ready Home (ZERH) standard.
 - *Multifamily:* Up to \$2,500/unit for properties certified to EPA's Energy Star Multifamily New Construction standard and up to \$5,000/unit for DOE's ZERH standard, when meeting prevailing wage requirements.
 - Beginning in January 2025, tax credits for Energy Star and ZERH will require 2021 IECC or ASHRAE 90.1-2019 as baseline energy standards and will be accepted as alternative compliance requirements.
- **Other potential funding sources**
 - **EPA's Greenhouse Gas Reduction Fund** targets low-income communities, non-profit developers, and community lenders and may provide for low-cost financing for developers.
 - **DOE's Home Electrification and Appliance Rebates** provide up to \$14,000 for low- and moderate-income households and may be available for new construction depending on state rollouts.
 - **Commercial Buildings Energy Efficiency 179D Tax Deduction** of between \$0.50 to \$5.00 per square foot is available for energy efficiency investments in new multifamily construction.

Training and Technical Assistance

- Technical assistance for builders, developers, and other key stakeholders will include:
 - An online resource page,
 - State compliance guides, and
 - Informational webcasts.
- *Appraisal Gap*. HUD technical assistance will help educate appraisers and lenders about acceptable methods and techniques for appraising energy efficient homes financed with an FHA-insured mortgage.
- DOE received \$1.2 billion in IRA and BIL funds to support energy codes. HUD and USDA are coordinating with DOE to leverage these resources in support of this notice.

Please submit additional questions to:

EnergyAction@hud.gov