Federally Assisted Housing and Finance

KEY TAKEAWAYS

- The federal government provides financial support for most new homes.
- Many of these homes are required to meet energy efficiency criteria, but those criteria are out of date, inconsistent, and weakly applied.
- If updated, expanded, and fully implemented, these criteria could make efficient construction the norm throughout the country, significantly reducing greenhouse gas emissions while saving money and improving health and comfort for occupants.

INTRODUCTION

Although building energy codes are set at the state or local level, the federal government has long set efficiency criteria for the many new and rehabilitated homes for which it provides financial support. This includes new homes purchased with loans guaranteed by the Federal Housing Administration (FHA) and new homes with Department of Veterans Affairs (VA) and Department of Agriculture (USDA) loans. These loans are designed for low-and moderate-income borrowers, and collectively, these categories cover at least 15% of new single-family homes (see table 1).[1]

Other federal mortgage support does not consider energy efficiency or costs. Fannie Mae and Freddie Mac, which buy most other mortgages, are government-sponsored enterprises (GSE) under the supervision of the Federal Housing Finance Agency (FHFA), an independent agency. They have remained under the conservatorship of the FHFA since the government rescued them in 2008. While we were not able to find specific data on their loans for new homes, Fannie Mae and Freddie Mac buy almost 50% of mortgages for home purchases.[2]

Table 1. Estimated market share of federal single-family home mortgages

	Number of new homes	% of new homes built	% of home purchase mortgages
Federal mortgages and guarantees			
FHA insured mortgages	74,000	9	17
VA mortgages	43,000	5	8
USDA mortgages			~2
Conventional mortgages			
Fannie Mae			26
Freddie Mac			21

Sources: **U.S. Census Survey of Construction (2018 data); FHA, VA, Fannie Mae, and Freddie Mac annual or quarterly reports (2019 data).**

Multiple federal affordable-housing programs also provide financial support for the construction or rehabilitation of homes, mostly in multifamily buildings, including the Low-Income Housing Tax Credit (LIHTC), support for rehabilitation of public housing, and the Community Development Block Grant (CDBG) programs (see table 2). Section 8 Housing Choice Vouchers provide important support, primarily for existing rental units.

Table 2. Estimated annual new or rehabilitated public and assisted housing units and funding

	Number of new and rehabilitated units	Annual federal funding (billion $)
Direct assistance		
LIHTC	~100,000	9.0
Public Housing Capital Fund (PHCF)	12,000	2.9
HOME partnerships	6,000	1.35
Rental Assistance Demonstration (RAD)	7,000	
CDBG-Disaster Recovery (DR)		4.1
CDBG-Mitigation (MIT)		

LIHTC has supported 3 million units since 1987, but the number has recently declined. RAD supports conversion of public and assisted housing to Section 8 rental assistance. CDBG-DR funding is intermittent in response to disasters but carried over $31 billion into 2020. Other programs include Choice Neighborhoods and Supportive Housing for the Elderly and for Persons with Disabilities. *Sources:* U.S. Department of Housing and Urban Development (HUD; mostly 2016 unit data, 2020 appropriations), Joint Committee on Taxation (2019 data).

The stringency of building energy codes varies widely around the country, from no code to codes approaching zero-net-energy performance. In addition, code compliance is always a challenge. Implementing efficiency requirements for new homes with federal loan guarantees, funding, or other assistance can decrease the number of homes with excessive energy waste.

Efficiency Criteria

HUD and USDA are required to set efficiency criteria for new homes to be eligible for FHA and single-family USDA loans and for some public housing programs. In setting their criteria, they use the model energy codes, the International Energy Conservation Code (IECC) for single-family and low-rise multifamily homes and ANSI/ASHRAE/IES Standard 90.1 for high-rise buildings. The agencies are required to update the criteria when those models are revised every three years, but they have made the necessary determination only once, for the 2009 IECC and 90.1-2007 in 2015. They are now three code cycles behind, and Standard 90.1-2019 and the new 2021 IECC promise significantly greater savings and better health and comfort.

Implementation is different for each program. For the largest, FHA loans, the builder of a new home that receives an FHA loan is required to submit a certification to the lender that the home meets a large number of requirements, one of which is the model energy code. However, in 2018, HUD modified the form to refer to the IECC generally but not to any particular edition, which may leave builders and lenders confused about the requirement. [3]

Fannie Mae and Freddie Mac have no efficiency requirements. But Fannie Mae, Freddie Mac, and FHA all reduce interest rates or insurance rates on their multifamily loans for buildings that meet several green building standards.[4] These financial incentives are reportedly achieving

good market share. Fannie Mae just started a program to bundle loans for ENERGY STAR® single-family homes and sell them in "green" bonds.

Other federal programs have a variety of criteria, many of which are shown in table 3, and may go beyond codes to include criteria for appliances or other requirements.

CURRENT STATUS

See table 3.

RECOMMENDATIONS

We recommend the following actions that agencies can take now under current law:

1. Update and effectively implement HUD, USDA, and VA criteria

HUD and USDA should conduct a determination on the 2021 IECC / 90.1-2019 as soon as possible: To update their efficiency criteria, HUD and USDA need to make a determination that doing so will "not negatively affect the availability or affordability" of covered housing, and the Department of Energy (DOE) needs to make a separate determination that the new code edition will save energy. HUD and USDA can, in part, use the analysis that Pacific Northwest National Laboratory is conducting for DOE. If the determinations are slowed, HUD should, in parallel, conduct the process on the 2018 IECC and 90.1-2016 as fallbacks; DOE analysis of those is complete, and builders have more experience working under similar codes. As they did in the previous determination, the agencies should also determine whether voluntary green certifications offer similar or better energy savings and should be used as an alternative means of compliance. Under current law, the agencies could also set their own criteria for the covered homes, but doing so would require a full rulemaking without a direct precedent.

Provide training and measure compliance: HUD and USDA will need to issue guidance and documents for each program under the criteria, including clarifying the builder certification for FHA loans. Because the updates in the model code will be new for many builders and other design and construction professionals, training and technical assistance are also important. Fortunately, efficiency organizations, state energy offices, model code developers, community colleges, state codes collaboratives, industry consortia, and others have experience with codes training; they could help if given sufficient funding. For large programs, the agencies should also independently verify compliance rates to determine whether efforts are successful; DOE has a codes compliance study methodology that could be adapted.[5]

The VA should adopt the same efficiency criteria for new homes as HUD and USDA: VA loans are under a different legislative provision that refers to the HUD criteria but is not clear about updates to them. The VA should apply the same efficiency criteria that HUD and USDA adopt.

2. Extend savings to more multifamily and low-income housing

HUD should develop model language for the LIHTC: The Department of Treasury may be able to set more-specific requirements for LIHTC, but at least HUD could show states how to encourage greater efficiency in rehabilitation, major renovation, and new construction. The state housing finance agencies (HFA) often lack energy expertise and could use assistance.

HUD should complete its notices on benchmarking public and assisted housing: in 2016, HUD issued draft, but not final, notices to require energy benchmarking of the multifamily housing it supports.[6] It should finalize them. Benchmarking energy use compared with similar buildings, notably using the ENERGY STAR Portfolio Manager, enables better energy management. The loans for green multifamily buildings described above already require energy benchmarking.

HUD, Fannie Mae, and Freddie Mac should offer greater incentives for meeting more-stringent standards: The mortgages with reduced interest rates for green multifamily buildings have been successful at promoting relatively modest energy savings; they could do more to promote zero-net-energy or zero-energy-ready homes such as Passive House homes. In addition, the HUD product is not reaching affordable housing, for which efficiency is most important, because affordable housing already receives the reduced rate. HUD should modify terms so that green affordable housing has the lowest rate.

3. Improve the efficiency of homes with Fannie Mae and Freddie Mac loans

FHFA should direct Fannie Mae and Freddie Mac to adopt the same criteria as HUD and USDA: The GSEs set property eligibility requirements for loans they buy in addition to loan requirements. The requirements for new homes should include energy criteria as a prudential matter. A home that does not meet the model energy codes is wasteful and may have poorer performing loans, both because high energy bills threaten the borrower's ability to make mortgage payments and because borrowers may be less motivated to keep homes that are less healthy and comfortable.

HUD, Fannie Mae, and Freddie Mac should study the relationship between home ratings and green certifications, energy bills, home value, and loan performance: One careful study found much lower mortgage default and prepayment rates for homes with high efficiency ratings, while another found higher home values but no clear effect on loan defaults.[7] Further study is needed, including collection of loan performance and energy bill data.

FHFA should authorize Fannie Mae and Freddie Mac to buy tailored energy home improvement loans: FHFA does not allow GSEs to buy loans with subordinate liens (which get paid after the primary mortgage in case of default). These loans are often more appropriate for home repairs and improvements, including for energy efficiency. To reduce risk to GSEs, the authority could be limited to installing specific equipment (especially high-efficiency heat pumps and heat pump water heaters) or to specified energy-saving measures, could require independent quality control, and could be limited to homes with mortgages in the GSE's portfolio.

POTENTIAL SAVINGS

HUD and USDA estimated that adopting the 2009 IECC/90.1-2007 would save $3.1 million in energy costs a year and would yield net present value savings of $10.9 million over 10 years. However, the energy savings under current model codes are much greater, and a federal requirement would apply to more homes, because fewer states have adopted the codes. Less than half of new homes are built in states with codes at least at the level of the 2012 IECC (some others are close). The 2021 IECC and 90.1-2019 each save more than one-third of covered energy use compared with the current criteria. If half of new homes were shifted from 2009 IECC efficiency to 2021 IECC levels, after 10 years of construction, the savings would be almost $4 billion in energy costs and 15 million tons of carbon dioxide each year.[8] Most of these savings

would go to low- and moderate-income households, and they would improve health and comfort as well.

Current Requirements and Legal Citations

Table 3. Current code requirements and legal authorities

	Current requirements	Legal authority	Regulations	Implementation
HUD-USDA programs	2009 IECC/ ASHRAE 90.1-2007	42 USC 12709	80 FR 25901	See FR-5647-N-01
FHA loans			24 CFR 200.926d (not updated)	HUD-92541 Builder certification (no longer specifies edition)
USDA loans (single-family only)			7 CFR 1924 Subpart A Exhibit D (not updated)	HB-1-3555, c. 12
RAD		42 USC 12745(a)(1)(f)		Notice H-2019-09 PIH-2019-23
FHA HOME Investment Partnerships		42 USC 12745(b)(4)	24 CFR 92.251(a)(2) (not updated)	
VA Home Loans	1992 Model Energy Code	38 USC 3704(f)	38 CFR 36.4351	VA Pamphlet 26-7 Lenders Handbook, c. 10, 12 (no longer includes req.)
LIHTC	Varies by state	26 USC 42(m)(1)(C)		
PHCF	2009 IECC/ 90.1-2010		24 CFR 905.312	Capital Fund Guidebook 6.9
CDBG-DR	One of seven green building standards			83 FR 5844
CDBG-MIT	Encourages green building			84 FR 45838

See final HUD–USDA determination at 80 FR 25901 for information on additional programs.

RAD also encourages ENERGY STAR and green certifications and requires that systems and appliances generally be at least at ENERGY STAR or WaterSense levels.

VA loans: new homes appear to be required to meet the 1992 Model Energy Code (based on the FHA requirement when the provision was enacted), but the Lenders Handbook no longer makes that clear.

LIHTC: State HFAs set requirements in Qualified Allocation Plans (QAPs), which by law must consider energy efficiency. However, the HFAs set their rules in a range of ways, including different minimum standards and preferences (added points).[9]

CDBG: HUD sets requirements for each appropriation; these are the most recent. Green building standards include ENERGY STAR, Enterprise Green Communities, Leadership in Energy and Environmental Design (LEED), and the National Green Building Standard.

CONCLUSION

The federal government has a role in most new construction and rehabilitation of homes in this country. For many of those homes, the law already requires agencies to set minimum efficiency criteria, but those criteria are badly out of date. For other homes, the agencies could add energy criteria to other property requirements that ensure the loans are secure and federal dollars are well spent. Quick action to set strong criteria will save low- and moderate-income households money in energy bills, while pushing new construction and major renovations toward the efficiency levels needed to address climate change.

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ENDNOTES

[1] Ginnie Mae, a government-owned corporation, also insures FHA, VA, and USDA loans. For more information on federal programs, see Maggie McCarty, Libby Perl, and Katie Jones, *Overview of Federal Housing Assistance Programs and Policy* (Washington, DC: CRS (Congressional Research Service), 2019). crsreports.congress.gov/product/pdf/RL/RL34591.

[2] In addition, the federal government's largest financial support for housing is the mortgage interest deduction. There is no efficiency requirement for the deduction, nor legal authority for one.

[3] HUD (U.S. Department of Housing and Urban Development), *Form HUD-92541: Builder's Certification of Plans, Specifications, & Site* (Washington, DC: HUD, 2018). www.hud.gov/sites/dfiles/OCHCO/documents/92541.pdf. To add to the confusion, a referenced regulation has not been updated and still cites the 1992 Model Energy Code.

[4] See Fannie Mae, "Green Financing Loans," multifamily.fanniemae.com/financing-options/specialty-financing/green-financing/green-financing-loans; Freddie Mac, "Freddie Mac Multifamily Green Advantage®," mf.freddiemac.com/product/green-advantage.html; and HUD, "Utility benchmarking is required in some programs," www.hudexchange.info/programs/utility-benchmarking/toolkit/policies-and-programs/. All accessed October 8, 2020.

[5] See DOE (U.S. Department of Energy). 2020. "Energy Code Field Studies." Accessed October 6. www.energycodes.gov/compliance/energy-code-field-studies.

[6] HUD (U.S. Department of Housing and Urban Development), 60-Day Notice of Proposed Information Collection: Energy Benchmarking, 81 FR 68446 (Oct. 4, 2016). See also beta.regulations.gov/docket/HUD-2016-0081.

[7] Nikhil Kaza, Roberto G. Quercia, and Chao Yue Tian, "Home Energy Efficiency and Mortgage Risks," *Cityscape* 16 (1): 279–98 (2014). www.jstor.org/stable/26326871; Robert Argento, Xian Fang Bak, and Lariece M. Brown, *Energy Efficiency: Value Added to Properties & Loan Performance* (McLean, VA: Freddie Mac, 2019). sf.freddiemac.com/content/_assets/resources/pdf/fact-sheet/energy_efficiency_white_paper.pdf.

[8] ACEEE estimate using Pacific Northwest National Laboratory estimated savings per home and Energy Information Administration construction projections.

[9] Dana Bartolomei, *State Strategies to Increase Energy Efficiency in Low Income Housing Tax Credit Properties* (Washington, DC: EEFA (Energy Efficiency for All), 2017). www.energyefficiencyforall.org/resources/state-strategies-to-increase-energy-efficiency-in-low-income-housing-tax-credit-properties/.