

# Single-Family Green Mortgage-Backed Securities (MBS)

## A spotlight on Green Building Certifications (GBCs)

**Our Single-Family Green Bonds are designed to bring to light the benefits of energy-efficient homes and encourage the housing industry to continue to strive to build homes with better energy standards.**

That's why Fannie Mae's Single-Family Green Bond program relies on the power of green building certifications for new construction. We believe the rigor of GBCs for newly constructed properties sets an important standard for the market. Certifications help ensure that energy-efficient features are thought of from the home design process through execution, resulting in a greener property with multiple benefits to the homeowner.

As the issuance of Green Bonds rise, environmentally focused investors have an array of investment opportunities with various levels of green impact. Here we describe Fannie Mae's Single-Family Green Bond program in more detail to provide better insight into our green criteria and the corresponding projected environmental impact, providing investors with transparency to support their investment decisions.

### Selecting green building certifications

GBCs generally have strict requirements as to what constitutes an energy-efficient residence. In Fannie Mae's program, [eligible GBCs](#) include those that meet or exceed the criteria for ENERGY STAR® Certification for New Homes (Residential) 3.0 for properties backing loans underlying its Single-Family Green MBS.

We evaluate our list of eligible GBCs annually to determine if a certification should be removed or added, and further partner with PEG, LLC, who provides an independent verification that all properties underlying our Green MBS achieve these certification standards.

### ENERGY STAR certification

**Why is the ENERGY STAR certification our minimum threshold for new construction?** Because it is at least 10% more efficient than homes built to *current state energy building codes* and a 20% improvement on average, and we aim to drive the housing industry to continue moving toward higher energy efficiency standards.

The ENERGY STAR program was developed by the U.S. Environmental Protection Agency (EPA) and is a government-backed symbol for energy efficiency. A new home that has earned the ENERGY STAR label has undergone a process of inspections, testing, and verification to meet stringent requirements set by the EPA, delivering better comfort, durability, and energy efficiency.

Before construction begins, ENERGY STAR builder partners submit their home plans to a Home Energy Rating Company for review and analysis to determine the precise energy-efficient features to include in the home. Home Energy Rating Companies work with ENERGY STAR builder partners throughout the construction process to ensure that:

- The new home has the appropriate energy-efficient features that fit its climate region.
- Critical construction details are verified at different building stages.
- The key systems in the new home are working properly to deliver better efficiency, durability, and comfort.

While the 2006 International Energy Conservation Code is often referenced as a reasonable measurement for energy efficiency, approximately 80% of states have energy building codes above the 2006 International Energy Conservation Code.

Conversely, the ENERGY STAR certification is based on a state's current energy efficiency code, meaning that **as the requirements rise, the threshold to receive an ENERGY STAR certification also rises.**



## Homeowner benefits

Green building certifications not only focus on home energy efficiencies but also offer a broad range of features that benefit homeowners, including:

- **A complete thermal enclosure system**, including properly installed insulation and comprehensive air sealing that significantly reduce drafts, moisture, dust, pollen, pests, and noise. Energy-efficient windows use advanced technologies to keep heat in during winter and out during summer, helping reduce potential for condensation that can cause paint to crack and encourage mold growth. All these elements work hand in hand to reduce maintenance costs and lower monthly utility bills.
- **A complete water management system** that meets the EPA's water management requirements to help protect the home from water damage and reduce the risk of indoor air quality problems through moisture-resistant barriers and materials.
- **A complete heating, ventilation, and cooling system** designed and installed to optimize performance, lower utility bills, provide better moisture control, and provide better indoor air quality.
- **Efficient lighting and appliances** that help reduce home operating costs through lower monthly utility bills. For example, ENERGY STAR-certified clothes washers use 45% less water and 25% less energy than standard clothes washers. ENERGY STAR-certified light bulbs and fixtures use 70% – 90% less energy than traditional models and last at least 15 times longer than traditional incandescent light bulbs.
- **Independent inspections and testing** conducted on-site at different stages of the construction process, following a set of comprehensive checklists, to verify critical details before walls are covered up.

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## 2020 – 2021 Single-Family Green MBS impact metrics



**\$265** average homeowner utility cost savings per single-family home per year



**>45M kilo** British Thermal Units (kBtu) of source energy saved



**>2,100 metric tons** of carbon dioxide equivalent (MTCO<sub>2</sub>e) of GHG emissions prevented

Fannie Mae publishes projected impact metrics on an annual basis.

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