



Fannie Mae®



Fannie Mae Multifamily Green Bond Framework

July 2020





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Background and Objective

Fannie Mae Multifamily Green Financing

The mission of Fannie Mae’s Multifamily Green Financing Business is to target positive, measurable impact to environmental, social and financial metrics, also known as the “Triple Bottom Line.” Our Green Financing portfolio is transforming rental housing in the United States to be more energy and water efficient.

Fannie Mae is committed to harnessing the positive impact of energy and water efficiency, green buildings, and renewable energy to create more affordable, quality housing in the United States, reduce real estate’s impact on the environment, and enhance financial value. The Green Financing Business at Fannie Mae was founded in 2010. Fannie Mae launched its first Green Mortgage Loan product in 2011, issued its first Green MBS in 2012, and is celebrating a decade in Green Financing in 2020.

We have made some significant updates in our policies and procedures since the development of our initial Green Bond Framework in 2018. These updates include:

- Raising the eligibility standard for Green Rewards loans and adding mandatory energy savings;
- Raising the bar for Green Building Certification (GBC) eligibility¹ and adding a new Towards Zero group to capture certifications aiming for zero net energy; and
- Establishing the Fannie Mae Green Measurement and Verification Service to verify that Green Rewards Borrowers have completed the energy and water efficiency improvements to which they committed and to enhance the annual benchmarking data collection volume and quality.

These changes not only increase the positive impact of Fannie Mae green financing, but also improve the back-end processes that ensure that Borrowers will meet their green financing obligations. Fannie Mae is committed to continue to enhance and develop Green Financing to meet the needs of the green bond market and our borrowers.

About Fannie Mae

Fannie Mae is the largest government-sponsored enterprise (GSE) provider of financing for the U.S. market. As a GSE, Fannie Mae was chartered by U.S. Congress in 1938 to support America’s housing market. Fannie Mae’s mission specifically is to provide stability in and increase the liquidity of the residential mortgage market and to help underserved markets, such as affordable housing and low- and moderate-income families. Fannie Mae supports the liquidity and stability of the U.S. mortgage market primarily through purchasing and securitizing mortgage loans originated by lenders into Fannie Mae mortgage-backed securities (MBS) that we guarantee.

Fannie Mae was placed into conservatorship in 2008. Our regulator and conservator, the Federal Housing Finance Agency (FHFA) and the U.S. Treasury entered into an agreement that permits us to continue to fulfill our mission. A key term of the agreement is that the U.S. Treasury provides funding if our net worth falls below zero in any given quarter. Upon entering into the agreement, the U.S. Treasury stated that holders of senior debt, subordinated debt, and MBS issued or guaranteed by the GSEs are protected by the agreement without regard to when those securities were issued or guaranteed.

Fannie Mae does not lend directly to consumers. Fannie Mae operates in the secondary mortgage market, in two business lines:

- Single-Family (1-4 residential units)
- Multifamily (5+ residential units)

¹ Please see Fannie Mae Form 4250, available at [mfguide.fanniemae.com](https://www.fanniemae.com/mfguide) for more information on Green Building Certification.



Fannie Mae Multifamily Mortgage Business

Fannie Mae supports multifamily housing by providing financing for the acquisition and refinance of individual properties or groups of properties. Fannie Mae Multifamily Mortgage Business provides this financing primarily through a nationwide network of Delegated Underwriting and Servicing (DUS[®]) lenders. Through its DUS lenders, Fannie Mae either finances or guarantees the financing of multifamily properties including:

- apartment buildings, where the property is owned and operated as a commercial entity and all the units are rented through a single owner or operator;
- manufactured housing communities, where the land on which manufactured homes are placed is owned and operated as a commercial entity;
- seniors housing, where the property is owned and operated as a commercial entity, all the units are rented through a single owner or operator and Independent Living, Assisted Living, and/or Alzheimer's/Dementia Care services are provided to senior residents;
- dedicated student housing, where the property is owned and operated as a commercial entity, all the units are rented through a single owner or operator and the rentals are primarily to students, but the property is not a dormitory owned by an educational institution;
- affordable housing, where the property is owned and operated as a commercial entity, all the units are rented through a single owner or operator and the rents are restricted to low and very low-income residents, and
- cooperatives with five or more individual units, where the property is governed by shareholders who live in and own shares in the property.

The loans are originated by our DUS lenders, sold to Fannie Mae, and then securitized into Mortgage-Backed Securities (MBS) that carry Fannie Mae's guarantee of timely payment of principal and interest. These securities are sold to investors and are freely tradable in the secondary market.

Fannie Mae Multifamily Green Financing Team and Governance

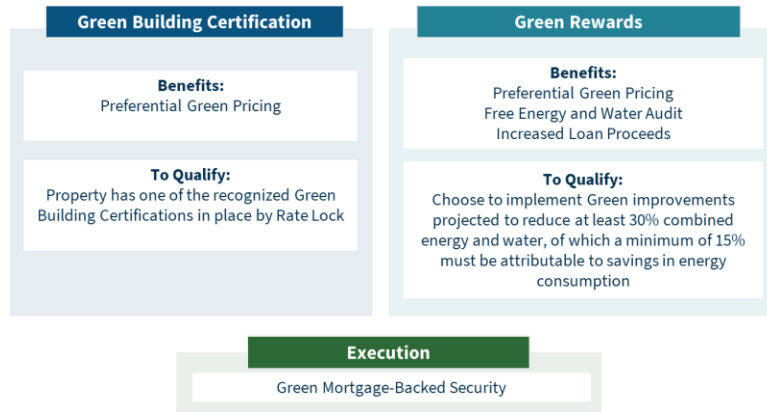
The Green Financing Business' strategy, loan products, and portfolio is led by a Director and consists of a dedicated team of finance and sustainability experts. The Director's and team members' deep expertise includes energy and water efficiency technologies, energy audit standards, energy benchmarking protocols, renewable energy financing, and green building certifications. The Director reports on the performance of the Green Financing Business to the executive leadership of the Multifamily Business. In addition, Fannie Mae has had an Advisory Council in place since 2010. Originally called the Green Rental Housing Task Force, the Advisory Council meets at least once a year to discuss market transformation goals and the strategy of the Green Financing Business. The Advisory Council's invited members represent key stakeholders in the multifamily and sustainability industries including U.S. federal agencies, Green Building Certification-issuing organizations, energy efficiency experts, utilities, non-profit entities engaged in energy efficiency policy, multifamily lenders, and property owners.



Use of Proceeds

Fannie Mae’s Multifamily Green Financing Program works within Fannie Mae’s 32-year old DUS Multifamily business to source green financing opportunities. Fannie Mae’s Green Bonds finance the acquisition of Green Mortgage Loans. Fannie Mae offers two Green Mortgage Loan offerings through its Multifamily DUS business², Green Building Certification and Green Rewards.

Figure 1. Fannie Mae's Green Mortgage Loan offerings.

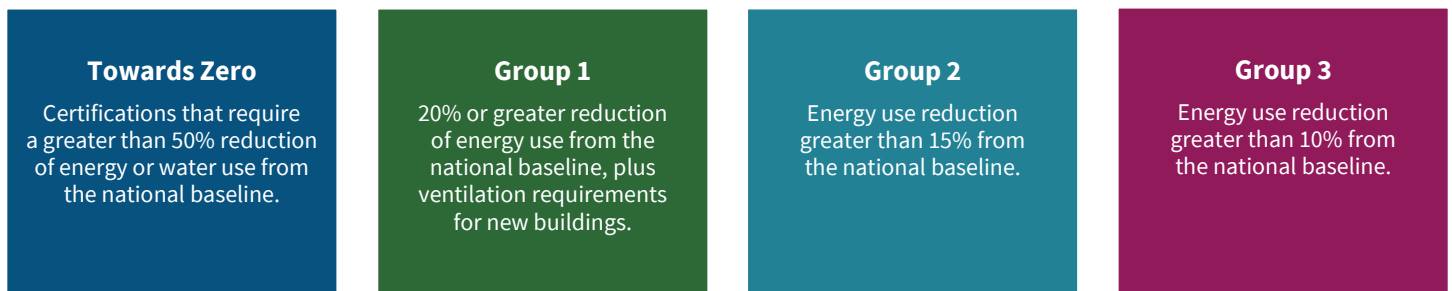


Green Building Certification

To be eligible for a Green Building Certification loan, a property must have been awarded a certification recognized by Fannie Mae. As of the date of this Framework, there are 35 different certifications from 12 different issuing organizations that are recognized.

Certifications are re-evaluated annually to determine if new certifications should be added, or if certifications should be removed due to failure to meet the criteria. In each of the past three years, Fannie Mae has engaged an independent consulting firm to conduct this review and create groupings of the certifications based on the prerequisites of each certification. The current groups are Towards Zero, Group 1, Group 2, and Group 3. The delineation and requirements for each group may become more stringent from year to year as the Green Building Certification market continues to develop and mature. For example, the Towards Zero group was added in 2019 as the greenest group, requiring a measurable reduction of at least 50% in energy usage from the national baseline, equivalent American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2004 and/or the national median Energy Use Intensity (EUI) for multifamily buildings. Fannie Mae also recently included a requirement that to be included in Group 1 or Towards Zero, certifications for new construction must have minimum ventilation requirements, ensuring that these properties are not improving building energy efficiency at the expense of occupant health.

Figure 2. Fannie Mae's Green Building Certification groupings.



² Fannie Mae’s Green Preservation Plus product was retired in November 2018. Income-restricted properties that would have used the Green Preservation Plus loan product are now encouraged to use Green Rewards.



Green Rewards

This Green Mortgage Loan product rewards an owner's initiative to improve the energy and water efficiency of an existing Multifamily property, including affordable, workforce, and seniors housing. To be eligible for a Green Rewards Mortgage Loan, the property owner must commit to install energy and water efficiency measures that are projected to reduce whole property energy and water consumption combined by at least 30%, inclusive of a minimum of 15% reduction in energy consumption. Loans acquired before January 1, 2019 were eligible if the owner committed to efficiency measures projected to reduce whole-property energy or water consumption by a minimum of 25%. Loans acquired before December 18, 2017 were eligible if the owner committed to efficiency measures that were projected to reduce whole-property energy or water consumption by a minimum of 20%. Energy consumption reduction requirements may be met through a combination of renewable energy generation and energy efficiency.

Eligible efficiency measures must be capital improvements to the property, requiring purchase and installation. Improvements to operations and maintenance procedures are not eligible, as they do not represent a permanent improvement to the property, however strategies for improving efficiency through operations and maintenance are recommended as a part of Green Rewards energy and water audits. Eligible efficiency measures include:

- Energy efficiency heating, ventilation, and air conditioning (HVAC) systems;
- Energy efficient lighting;
- Water efficient fixtures including low-flow toilets, faucets;
- Energy efficient appliances such as ENERGY STAR® refrigerators; and
- Solar photovoltaic systems.

Process for Project Evaluation and Selection

Fannie Mae Multifamily Selling and Servicing Guide, Forms, Loan Documents, and Loan Agreements

DUS lenders provide mortgage loans to commercial real estate owners for the acquisition or refinance of multifamily properties. If a loan conforms to Fannie Mae's standards, DUS lenders may then sell the loan to Fannie Mae to guarantee and securitize in the form of an MBS. These securities are then sold to investors in the capital markets as agency commercial mortgage-backed securities (CMBS). Loans purchased by Fannie Mae from its DUS lenders are considered to be **eligible Green Mortgage Loans** if they:

- Conform to the [Multifamily Selling and Servicing Guide](#) (the "Guide") requirements;
- Conform to additional requirements documented in Fannie Mae Forms; and
- Contain all required modifications and exhibits to the Loan Agreement.

The Guide chapters, Business Forms, and Loan Documents that specifically govern Green Mortgage Loan eligibility and the process for evaluation and selection of Green Mortgage Loans are listed in the Annex under Process for Project Evaluation and Selection.



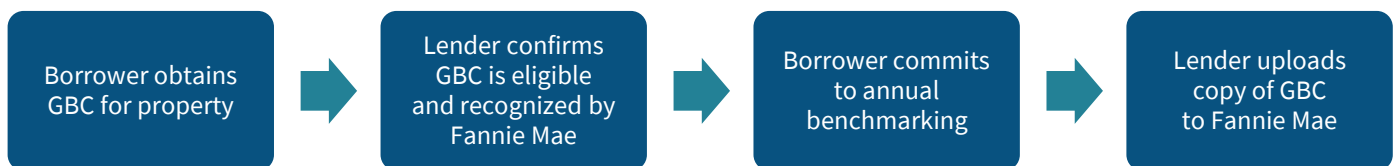
Process for Project Evaluation and Selection of Green Building Certification Mortgage Loans

To secure the Green MBS designation on a Green Building Certification loan:

- The borrower must provide the DUS Lender a copy of the property’s certification. The certification must be from the issuing certification organization; letters or emails confirming the award from consultants or other entities are not acceptable.
- The certification must be one of the certifications recognized by Fannie Mae in Form 4250; see Annex, Full list of Green Building Certifications recognized by Fannie Mae.
- The certification must be unexpired and must be awarded within the last five years prior to loan closing.
- At the time of loan closing, the borrower must sign loan document Form 6267 committing to report to Fannie Mae annually the property’s energy and water performance including the ENERGY STAR Score, Source Energy Use Intensity (EUI), EPA Water Score and Water Use Intensity; see “Modifications to Multifamily Loan and Security Agreement (Green Building Certification)” on our [website](#).
- The Lender must provide the certification to Fannie Mae at the time of loan delivery, which occurs after locking the interest rate and closing the loan with the borrower.

Failure to meet any of the above conditions will result in the inability of the MBS backed by the loan to obtain a green label, and the borrower will not receive the interest rate benefit available to loans in the Green Financing program.

Figure 3. Green Building Certification (GBC) mortgage loan origination overview.



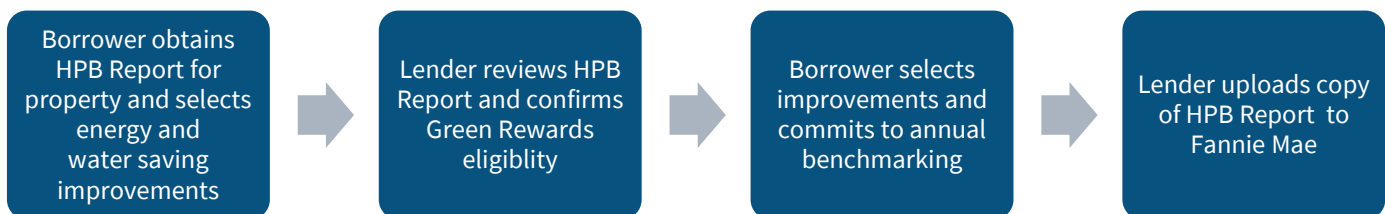


Process for Project Evaluation and Selection for Green Rewards Mortgage Loans

To secure the Green MBS designation on a Green Rewards loan:

- The DUS lender must have completed a High Performance Building (HPB) Report. The HPB Report must adhere to the requirements of an ASHRAE Level II Energy Audit and any additional requirements set by Fannie Mae.
- The HPB Report must be completed according to Fannie Mae Form 4099 “Instructions for Performing a Multifamily Property Condition Assessment (PCA)”, referencing MODULE: High Performance Building Assessment.
- The HPB Report must be completed by a Consultant who holds at least one of the following professional designations, in good standing:
 - Certified Energy Manager (CEM) or Certified Energy Auditor (CEA), certified by the Association of Energy Engineers (AEE);
 - Multifamily Building Analyst (MFBA), certified by the Building Performance Institute, Inc. (BPI);
 - High-Performance Building Design Professional (HPBD) certified by ASHRAE; or Building Energy Assessment Professional (BEAP) certified by ASHRAE.
- The HPB Consultant is required to report all opportunities to save energy and water or to generate energy at a property in a written document with photographs, and a standard Excel form that captures hundreds of data points on the property’s historical and projected energy and water performance. See Figure 5 on the following page and 4099.H in [the Guide](#).
- If the Borrower is also interested in installed solar photovoltaic systems, there is an additional report, the Technical Solar Assessment (Form 4099.I in [the Guide](#)) and Technical Solar Report which must be completed by a Consultant with North American Board of Certified Energy Practitioners (NABCEP). The HPB Report must be completed according to Fannie Mae Form 4099 “Instructions for Performing a Multifamily Property Condition Assessment (PCA)”, MODULE: Technical Solar Assessment.
- The borrower must select improvements that are projected to save 30% or more on Energy and Water Efficiency Measures (EWEM) or with a minimum of 15% reduction in energy consumption. See Figure 4 below for typical property improvements listed in an HPB Report that are projected to save energy and water at a multifamily property.

Figure 4. Green Rewards mortgage loan origination overview.



- At the time of closing the loan, the borrower must sign loan document Form 6241 committing to report to Fannie Mae annually the property’s energy and water performance. See “Modifications to Multifamily Loan and Security Agreement (Green Rewards Mortgage Loan),” on our [website](#). If the Borrower opts to install a solar photovoltaic system, they will sign loan document Form 6264 which also includes requirements specific to solar. See “Modifications to Multifamily Loan and Security Agreement (Green Rewards/Solar Mortgage Loan),” on our [website](#).
- The Lender must submit the HPB Report to Fannie Mae at the time of loan delivery, which occurs after locking the interest rate and closing the loan with the borrower.

Failure to meet any of the above conditions will result in the inability of the MBS backed by the loan to obtain a green label, and of the borrower to access the financial incentives available to loans in the Green Financing program.



Figure 5. High Performance Building Report sample table.

EWEM No.	EWEM Category	EWEM	Installed Cost	Owner Annual Cost Savings	Tenant Annual Cost Savings	Source Energy Savings	Water Savings
			\$	\$	\$	%	%
1	Building envelope	Add attic/knee wall insulation	\$199,750	-	\$6,400	1.4%	0.0%
2	Heating ventilating and air conditioning	Install programmable thermostats	\$116,000	-	\$22,200	4.6%	0.0%
3	Heating ventilating and air conditioning	Replace split system AC with furnace	\$1,600,000	\$1,500	\$51,000	10.7%	0.0%
4	Water and steam distribution	Add pipe insulation	\$3,750	\$1,100	-	0.2%	0.0%
5	Lighting	Upgrade in-unit lighting	\$131,500	-	\$64,100	12.9%	0.0%
6	Lighting	Upgrade common area lighting	\$121,250	\$20,200	-	4.2%	0.0%
7	Appliances and plug load reductions	Replace refrigerators with ENERGY STAR rated	\$100,250	-	\$6,300	1.3%	0.0%
8	Water and sewer conservation	Install low-flow fixtures	\$60,250	\$31,459	-	1.1%	14.2%
9	Water and sewer conservation	Install low-flow fixtures	\$141,250	\$28,299	-	0.0%	15.0%
10	Electric motors and drives	Add VSD motor controller	\$2,000	\$300	-	0.1%	0.0%
11	Renewable energy systems	Install photovoltaic system	\$570,000	\$19,000	-	4.9%	0.0%
TOTAL			\$3,046,000	\$101,858	\$150,000	41.3%	29.2%



Management of Proceeds

Green Loans

Each Fannie Mae Green mortgage loan product supports one or more multifamily properties (a) that have received a third-party Green Building Certification or (b) where the Borrower has committed to make efficiency improvements projected to reduce energy or water consumption by a minimum amount through Green Rewards. The process and management of the proceeds from these financings are consistent across Fannie Mae's Multifamily program.

For those existing property owners who choose to use Fannie Mae's Green Rewards to renovate an existing asset with energy and water efficiency improvements, the tool for proceeds tracking is the use of an escrow account. Escrow accounts are often used in the commercial real estate sector to provide lender control of loan proceeds and ensure completion of required improvements. Each Fannie Mae lender partner that oversees escrow accounts for Green Rewards borrowers holds a license to conduct Fannie Mae business and is a risk-sharing partner in each loan originated. This relationship ensures the responsible management of the proceeds reserved for energy and water efficiency improvements in the escrow accounts.

When a Green Rewards loan closes, the capital costs associated with the selected improvements are put into an escrow account and documented in a schedule to the Loan Agreement³. These proceeds represent the anticipated cost of making the necessary energy or water efficiency improvements to the property. The Green Rewards program requires that borrowers implement their energy and water improvements no later than 12 months from loan closing^{4,5}. The Lender releases the funds from escrow back to the multifamily owner/borrower only when the owner provides documentation, such as photos, invoices, and work orders confirming that the improvements have been completed.

Fannie Mae continues to enhance its IT systems in order to aggregate detailed data on the energy and water improvements made by borrowers in accordance with energy audits. In late 2019 Fannie Mae launched DUS Property Monitor™, a new portal integrated with our Asset Management systems that allows Fannie Mae and its lenders to track and monitor the status of energy and water improvement installations.

Green Mortgage-Backed Securities

Fannie Mae's green MBS are generally backed by an individual green loan originated by one of our DUS lenders in compliance with our published DUS origination and servicing standards. The lender enters into an interest rate lock with the borrower for each loan, with the rate determined through solicitation of bids from the general investor community for the lowest coupon on the MBS that will be backed by the mortgage loan. Lenders then complete the loan closing and deliver the loan to Fannie Mae, after which the loan is securitized with the Fannie Mae guaranty and delivered to the investor as a Fannie Mae MBS. This process ensures that borrowers receive the best possible interest rate for the mortgage financing and creates price transparency for the investor community. For loans to be labeled as Fannie Mae green MBS, they must also undergo an energy and water audit or provide a Fannie Mae-recognized Green Building Certification prior to delivery to Fannie Mae.

Fannie Mae green bonds are a subset of Fannie Mae's total securities, benefiting from the same features, including prepayment protection and conservative credit underwriting. Fannie Mae also guarantees timely principal and interest payments to the investor for all of our MBS, including our green bonds.

Green Guaranteed Multifamily Structures (GeMS)

Fannie Mae's green bond offerings also includes green Fannie Mae GeMS™, which are re-securitized pools of green MBS structured as Real Estate Mortgage Investment Conduits (REMICs). The intended audience for green GeMS is investors seeking a more diversified investment product than a single green MBS, whether by property-type diversity or geographic diversity, and who are interested in larger, block-sized transactions. Green GeMS also serve investors looking for specific payment structures. MBS

³ Some affordable housing properties that are leveraging Low Income Housing Tax Credits (LIHTC) may fund escrows in stages; historically, less than 1% of Green Rewards loans have been backed by LIHTC properties.

⁴ In select circumstances with an unusually large property or extensive scope of work, Fannie Mae may agree to extend the 12-month time frame permitted to complete the efficiency improvements.

⁵ Due to the COVID-19 pandemic, Fannie Mae is temporarily offering a 180-day extension to enable Borrowers to minimize risk to residents during installation of the efficiency improvements.



aggregated into a REMIC structure are typically segmented into sequential-pay tranches and interest-only tranches to meet investors' different cash flow demands.

Fannie Mae began incorporating green MBS in our GeMS issuances in 2017, and we now issue approximately three green GeMS securities every year. These GeMS deals range in size from \$500 million to \$1 billion, are U.S. dollar-denominated, and are backed by the same Fannie Mae credit as the underlying DUS MBS pools. Fannie Mae's long-term senior debt is currently rated AA+ by S&P, AAa by Moody's and AAA by Fitch. Of our total \$75 billion in green MBS issuances, Fannie Mae has re-securitized \$9 billion as green REMICs through the GeMS program.

Governance and Internal Audit

Fannie Mae uses various methods to ensure that Green mortgage loan borrowers will fulfill their obligations to Fannie Mae. These process steps start prior to loan closing and continue after loan delivery, to ensure that Green mortgage loans have been correctly assessed and delivered to Fannie Mae, and to provide ongoing feedback to our Lender partners and HPB Consultants to improve loan deliveries in the future.

Green Measurement and Verification Service

In November 2018, Fannie Mae launched the Green Measurement and Verification (M&V) Service, which provides customized, hands-on assistance to all Borrowers with a Green Mortgage Loan to meet their reporting obligations. A skilled energy analyst supports each Borrower with whole property energy and water consumption reporting (Measurement). After the energy and water efficiency measures are implemented for Green Rewards loans, energy audit specialists inspect properties to ensure that the efficiency measures were installed properly (Verification). Fannie Mae has partnered with Bright Power, a specialist in multifamily energy and water efficiency, as the service provider for the Green M&V Service. The creation of the Green M&V Service has allowed Fannie Mae to gather high-quality and consistent measurement and verification data. We continue to use this data to improve on the Green Mortgage Loan offerings, implement process improvements, and enhance disclosure and transparency for investors.

Measurement

On an ongoing annual basis for the life of the Green Rewards Mortgage Loan, the multifamily property owner must submit whole property utility data to Fannie Mae. Beginning in 2019, the Fannie Mae Green Measurement and Verification Service began collecting this data. Each Green Mortgage Loan property is assigned a Bright Power energy analyst who assists the Borrower with reporting whole property utility data. Similar to pre-retrofit data obtained through the HPB report, Fannie Mae requires owner and tenant data but relies on sampled and modeled data for tenant consumption in jurisdictions where aggregate utility data cannot be obtained or in instances where the Borrower is unable to gather an adequate sample of tenant releases. These data are entered in EPA's Portfolio Manager® tool which creates five key metrics: ENERGY STAR Score, Source Energy Use Intensity, EPA Water Score, Water Use Intensity, and Score Date. These metrics are disclosed to investors.

Verification

For all Green Rewards properties that commit to implement energy and water efficiency improvements, a third-party energy audit partner, engaged by Bright Power, is sent to the property to verify that the efficiency improvements are installed and are operating as expected. This verification site visit occurs at least one month after the property's deadline to complete improvements, which is 12 months from mortgage loan origination. If a property is found to be non-compliant, the Borrower establishes a remediation plan with their Servicer and with Fannie Mae's Green Asset Management team.



Green Mortgage Loan Reviews and Audits

There are two audit processes and two audited entities, the Lender and the HPB (“High Performance Building”) Consultants. These reviews validate that loans were made in accordance with established Fannie Mae processes, procedures, and requirements, ensuring that our loans and MBS consistently meet our standards. The two processes are:

1. The Fannie Mae Multifamily Loan Surveillance team conducts reviews focused on the Lenders’ compliance with the Fannie Mae Guide and related policies and processes. Their standard loan audit includes several Green Mortgage Loan characteristics.
2. The Green Financing Business team conducts expanded audits to review (a) items that Green Business determines are outside the scope of the Loan Surveillance audit, and (b) a higher proportion of Green Loans than are included in the Loan Surveillance process. Audits are conducted on a sampling of all Green Mortgage Loans and include analysis of both Lender and HPB Consultant activities.

Figure 6. Overview of Green Mortgage Loan validations.

Before loan closing: Form 4099 & HPB Report (Green Rewards only)

Fannie Mae’s Form 4099 contains detailed requirements for the High Performance Building Report, and the data form 4099.H contains dozens of automated checks to ensure that data are consistent and complete and that the property meets the eligibility requirements for Green Rewards.



At loan closing: Commitment & Delivery

C&D System has automated data checks built in to ensure that Green mortgage loans are correctly identified as Green.



Prior to Delivery: Certification

Certification validates that Green Building Certification documents have been submitted to Fannie Mae, and that Green Mortgage Loans have the correct exhibits included in the Loan Agreement that (a) obligate the Borrower to report the property’s energy and water performance annually (all Green Mortgage Loans) and (b) obligate the Borrower to complete selected efficiency measures (Green Rewards only).



After Delivery: Loan Surveillance

The Loan Surveillance team audits a random sampling of loans delivered by each Lender to ensure that all underwriting requirements and process steps were correct. Results of Loan Surveillance feed into the periodic Lender Assessments. Loans selected for review may include Green Mortgage Loans.



After Delivery: Green Loan Audit

To validate the Green aspects of Green Mortgage Loans, the Fannie Mae Green Financing Team performs a post-delivery audit focused specifically on the Green characteristics. This process is described below.



Selection of Loans for Green Loan Audit: By Lender

To ensure that each Lender fully understands all the requirements of Green Mortgage Loans, Fannie Mae reviews a randomly selected sample of loans delivered by each Lender. There are two loan sampling protocols:

1. For the first three months after a lender has been delegated approval of green loans, 20% of each lender's delivered Green Mortgage loans are reviewed each month.
2. Starting with month 4 after delegation of approval, 10% of each lender's delivered Green Mortgage loans that were lender-approved are reviewed each month. If a lender uses multiple HPB Consultants in a given month, at least one HPB Report by each consultant is reviewed.

Selection of Loans for Green Loan Audit: By HPB Consultant

To ensure that each HPB Consultant fully understands all the requirements of Form 4099 and produces a high-quality HPB Report, Fannie Mae reviews a randomly selected sample of Green Rewards loans with HPB Reports produced by each HPB Consultant. There are two loan sampling protocols:

1. For the first three months after a Consultant is pre-qualified, a minimum of three reports by each consultant that were approved by Lenders are reviewed each month.
2. Starting with month 4 after pre-qualification, a minimum of two reports by each consultant that were approved by Lenders are reviewed each month. If a given consultant has not submitted the number of reports needed for review in a given month, then all the reports submitted by the Consultant in that month are reviewed.

Audit process

Documentation required from the review includes, but is not limited to:

- HPB Report;
- Form 4099.H Excel file;
- Green Building Certification;
- DUS Gateway waivers and Chatter history;
- Loan Surveillance review results, if applicable; and
- HPB Report Post-Delivery Review Template (Excel file).

The HPB Report Post-Delivery Review Template contains a roadmap for each audit. The reviews cover:

- Green Loan Process (flags and waivers);
- Documentation;
- Green Loan Eligibility;
- Underwriting, if applicable;
- HPB Report review, if applicable;
- Green Building Certification review, if applicable;
- Acquisition Data; and
- Loan Documents.

The results of the Green Mortgage Loan audit are incorporated into Fannie Mae's bi-annual Lender Assessment process. More timely feedback is given to Lenders and HPB Consultants on a one-off basis if an issue is identified that could result in a repeated error. If a loan is found to have significant issues that impact its eligibility for Green pricing and disclosure as a Green MBS, remedies may include requiring repurchase of the loan by the lender and a change to the disclosure of the MBS as a Green Mortgage Loan. If multiple HPB Reports by an HPB Consultant are found to have significant issues, remedies may include loss of



an HPB Consultant's status as pre-qualified, or exclusion from eligibility to serve as a consultant. Findings from Fannie Mae's review of Green Loans are incorporated into Fannie Mae's bi-weekly Lender and Consultant update calls to raise the knowledge and performance of all Green mortgage loan stakeholders.

External Reporting

DUS Disclose

As part of our Green mortgage loan reporting, Fannie Mae maintains a Green Financing website where investors can find background materials on its Green Financing programs (www.fanniemae.com/green). In addition, Fannie Mae maintains a file listing all of the MBS and GeMS products backed by Fannie Mae Green Financing products by Pool Number and CUSIP Identifier (multifamily.fanniemae.com/financing-options/specialty-financing/green-financing/green-bonds). This file is updated on a monthly basis.

Fannie Mae's Multifamily business publishes data both at-issuance and ongoing for its MBS through a web-based system called DUS Disclose®. Through DUS Disclose, investors can obtain comprehensive information about multifamily securities including the performance of the loans backing multifamily MBS and financial information at the property level.

DUS Disclose provides the following features:

- At-issuance and ongoing disclosure documents and data that align with the industry;
- Detailed property financial statement disclosure;
- Security, loan, and property information in a downloadable format;
- Available active and terminated security information; and
- User-friendly interface.

DUS Disclose users can search a multifamily pool number or CUSIP in the website or use the advanced search feature. This search feature allows investors to customize a downloadable search result including extensive pool information such as factors, loan details, and weighted-average statistics. For more information on Fannie Mae's Multifamily disclosure system, please see <https://mfdusdisclose.fanniemae.com>.

Fannie Mae's disclosure system also includes energy and water performance data that is required to be reported by borrowers using Green Financing products. The data available has evolved over time as both the data points collected and the time points at which data are collected have expanded. Fannie Mae is committed to providing extensive disclosure on Green Mortgage Loans to enable investors to evaluate the performance of each property.

At-Issuance Disclosure Data

The data fields currently available on DUS Disclose and the dates at which they were added to the disclosure are:

- At-issuance ENERGY STAR Score and Source Energy Use Intensity (EUI) (Green Rewards only, added Dec 2017);
- At-issuance EPA Water Score and Water Use Intensity (Green Rewards only, added Jul 2019); and
- At-issuance data as-of date (Green Rewards only, added Dec 2016).

Additional fields are planned for disclosure as data availability and investors needs develop.



Ongoing Annual Disclosure Data

In 2019, Fannie Mae began disclosing ongoing energy and water performance data through DUS Disclose. These data are sourced from the Green Measurement and Verification Service. Ongoing data are generally available starting 18-24 months after the acquisition of the mortgage loan by Fannie Mae. The data fields currently available on DUS Disclose and the dates at which they were added to the disclosure are:

- Annual calendar year ongoing ENERGY STAR Score and Source Energy Use Intensity (all Green loans, added Nov 2019); and
- Annual calendar year ongoing EPA Water Score and Water Use Intensity (all Green loans, added Nov 2019).

Impact Reporting

Fannie Mae is committed to ongoing reporting and transparency of the energy and water performance of its Green Mortgage Loans. Fannie Mae publishes an annual investor report describing the financing of Green eligible assets for the preceding year. Fannie Mae published its first retrospective impact report for 2012-2018 in 2019. This report was made available on the [Fannie Mae website](#). The details of such financing for the purposes of this report will include (a) a list of the different categories of Green eligible assets financed and the percentage distribution to each such category of Green eligible assets, (b) a description of a selection of Green eligible assets, as examples of the eligible assets financed in that year, and (c) a summary of FNMA's Green Bond development and green financing activities in general.

Fannie Mae published its second Green Bond Impact Report in Q2 2020, covering our Green Bond program from inception through year end 2019.

At the time a Green Building Certification or Green Rewards mortgage loan is originated, the borrower signs a Loan Agreement that includes Form 6241, Form 6246, or Form 6267 committing to report to Fannie Mae annually the property's energy and water performance. Through the Fannie Mae Green Measurement and Verification Service, Fannie Mae collects whole property energy use and is able to disclose fields such as ENERGY STAR Score, Source Energy Use Intensity (EUI), EPA Water Score, and Water Use Intensity.

At the time of origination for Green Rewards, the lender reports the property's ENERGY STAR Score, Source Energy Use Intensity (EUI), EPA Water Score, and Water Use Intensity as determined by the HPB Consultant to Fannie Mae. These numbers are published through Fannie Mae's web-based disclosure site, DUS Disclose, described in the Annex, Disclosure Data Systems. The borrower is obligated by their Loan Agreement to report on the property's energy and water performance for the life of the loan.

External Review

Fannie Mae has obtained an independent opinion from the Center for International Climate and Environmental Research (CICERO), to verify the greenness and governance of our Green Bond Framework. The opinion can be found on Fannie Mae's website www.fanniemae.com/green.

In addition, this Green Bond Framework is incorporated by reference into [Fannie Mae's Sustainable Bond Framework](#), which has received a [Second-Party Opinion from Sustainalytics](#), evaluating the alignment of the Framework and proposed eligible project categories with the Social Bond Principles, the Green Bond Principles, and the Sustainability Bond Guidelines. The opinion can be found on Fannie Mae's website.



Annex

Process for Project Evaluation & Selection

Fannie Mae must conform to key requirements governing loan credit and property quality. These requirements are documented in the Guide and in multiple forms.

Name	Type
Form 4099.H – Appendix H: HPB Module Report Tables	Form
Form 4099 I – Appendix I: Technical Solar Assessment	Form
Form 4099 – Instructions for Performing a Multifamily Property Condition Assessment (PCA)	Form
Form 4250 – Green Building Certifications	Form
Form 4660 – Multifamily Underwriting Standards	Form
Guide Part IIIB Chapter 11 – Green Mortgage Loans	Guide
Guide Part IIIB Chapter 7 – Multifamily Affordable Housing Partners	Guide
Guide Part IVB Chapter 2 – Streamlined Rate Lock	Guide
MBS Prospectus	Prospectus
Form 6001 8.02(b)(2)(D) – Multifamily Loan and Security Agreement	Loan Agreement
Form 6241 – Modifications to Multifamily Loan and Security Agreement (Green Rewards Mortgage Loan)	Loan Agreement
Form 6264 – Modifications to Multifamily Loan and Security Agreement (Green Rewards/Solar Mortgage Loan)	Loan Agreement
Form 6267 – Modifications to Multifamily Loan and Security Agreement (Green Building Certification)	Loan Agreement
Form 6430 – Streamlined Rate Lock Agreement	Loan Agreement
Form 6502 – Multifamily Mortgage Loan Delivery Package Table of Contents	Loan Agreement
Form 6620.b – Annual Loan Agreement Certification	Loan Agreement



Full list of Green Building Certifications recognized by Fannie Mae

This list is current as of July 2020 but is subject to change without notice. Current information may be found on Form 4250 in [the Guide](#).

Group	Group Definition	Green Building Certification
Towards Zero	Certifications that require a greater than 50% reduction of energy or water use from the national baseline.	<ul style="list-style-type: none"> ▪ International Living Future Institute, Living Building Challenge ▪ International Living Future Institute, Zero Energy Certification ▪ Passive House Institute (PHI), Certified Passive House ▪ Passive House Institute (PHI), EnerPHit Certified Retrofit ▪ Passive House Institute US (PHIUS), PHIUS+ Certified ▪ USGBC, LEED Zero Energy
Group 1	20% or greater reduction of energy use from the national baseline, plus ventilation requirements for new buildings.	<ul style="list-style-type: none"> ▪ Build it Green, GreenPoint Rated New Home Multifamily ▪ Green Building Initiative, Green Globes Multifamily Performance Plus for New Construction ▪ Green Building Initiative, Green Globes Multifamily Performance Plus for Existing Buildings ▪ Enterprise Community Partners, Enterprise Green Community Criteria ▪ U.S. Department of Energy, Zero Energy Ready Home ▪ U.S. Environmental Protection Agency, ENERGY STAR Certified Homes ▪ USGBC, LEED BD+C: Homes v3 ▪ USGBC, LEED BD+C: Homes v4 ▪ USGBC, LEED O+M: Existing Buildings v4 ▪ USGBC, LEED O+M: Existing Buildings v4.1 ▪ USGBC, LEED BD+C: New Construction v4.1
Group 2	Energy use reduction greater than 15% from the national baseline.	<ul style="list-style-type: none"> ▪ Build It Green, GreenPoint Rated Whole Building Existing Multifamily ▪ Home Innovation Research Labs, National Green Building Standard (NGBS) Green Multifamily Building Certification ▪ International Living Future Institute, Zero Carbon ▪ Southface, EarthCraft ▪ U.S. Environmental Protection Agency, ENERGY STAR Multifamily High Rise ▪ U.S. Environmental Protection Agency, ENERGY STAR Certified New Construction ▪ U.S. Environmental Protection Agency, Existing Multifamily Buildings ▪ USGBC, LEED BD+C: Multifamily Midrise v3 ▪ USGBC, LEED O+M: Existing Buildings v3 ▪ Viridiant, EarthCraft
Group 3	Energy use reduction greater than 10% from the national baseline.	<ul style="list-style-type: none"> ▪ Green Building Initiative, Green Globes Multifamily for New Construction ▪ Green Building Initiative, Green Globes Multifamily for Existing Buildings ▪ Home Innovation Research Labs, National Green Building Standard (NGBS) Green Home Remodeling Project Certification ▪ USGBC, LEED BD+C: Multifamily Midrise v4 ▪ USGBC, LEED BD+C: New Construction v3 ▪ USGBC, LEED BD+C: New Construction v4 ▪ USGBC, LEED Zero Carbon



Disclosure Data Systems

DUS Disclose Samples

Green Building Certification and Energy Performance Data

Fannie Mae DUS Disclose

Transaction ID or CUSIP | Advanced Search

Resources | My Portfolios | Notifications | Account

HX MBS

Transaction ID	CUSIP	Product	Int. Type	Status	Issuance UPB	Loans	Properties	Resecuritization
AN7925	3138LLYX7	DUS	Fixed	Active	\$16,294,000.00	1 (1)	1 (1)	Eligible

+ Add to Portfolio | Download Data | Documents | Notifications | Security Detail

Financial Summary | Operating Statements | Green Performance

Green Financing Type: Green Building Certification
Leadership in Energy and Environmental Design (LEED), US Green Building Council

Issuance	2018 (Preceding)	(2nd Preceding)	(3rd Preceding)
ENERGY STAR® Score	75		
Source Energy Use Intensity	63.3		
EPA Water Score	80		
Water Use Intensity	30.0		
Energy Score Date	12/2018		

Green Financing Type and Energy Performance Data

Fannie Mae DUS Disclose

Transaction ID or CUSIP | Advanced Search

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HY MBS

Transaction ID	CUSIP	Product	Int. Type	Status	Issuance UPB	Loans	Properties	Resecuritization
AN8708	3138LMVA8	DUS	Fixed	Active	\$11,976,000.00	1 (1)	1 (1)	Eligible

+ Add to Portfolio | Download Data | Documents | Notifications | Security Detail

Financial and Performance Data

Financial Summary | Operating Statements | Green Performance

Green Financing Type: Green Rewards

Green Building Certification

Issuance	2018 (Preceding)	(2nd Preceding)	(3rd Preceding)
ENERGY STAR® Score	36	48	
Source Energy Use Intensity	138.0	119.7	
EPA Water Score		84	
Water Use Intensity		35.6	
Energy Score Date	1/2018	12/2018	

In addition to the [DUS Disclose](#) website, Fannie Mae issues a number of disclosure files that feed third-party security sites such as Bloomberg, Intex, eMBS, and Trepp. These third-party data providers are also working to improve their Green-related disclosures. Currently, Fannie Mae MBS carry a Green bond flag on their description pages in the Bloomberg system, enabling investors to quickly determine if a bond falls under the Green Financing Business. In addition, Green GeMS deals disclose the nature of their underlying assets on Bloomberg. Fannie Mae continues to work with these data providers to improve the clarity of a bond's ability to fit into a portfolio with a Socially Responsible Investment (SRI) mandate.



Bloomberg Green Bond Flag

DES 4-BLOOMBERG

GO F1 F2 F3 F4 PRINT HELP MEMO SEARC QUOTE QUOTE MONIT NEWS MSG

MENU PG BA PG FW BC35 10PRP 7PRP 5PRP 76ARM

< > FN AN8708 Mtge DES Related Functions Menu Message

FN AN8708 99-11³₈ 99-04⁷₈/99-18 Yield 3.603/3.552 Coupon 3.450% BVAL
As of 23 May Fannie Mae Pool Prepay OCPY

FN AN8708 Mtge Export Page 1/3 Security Description

US POOL 4.460(118)2 CUSIP 3138LMVAB Pool Level Buy Sell

Summary Comments Notes

Pool FN AN8708 As Of 05/2018
 Type (HY) Actual / 360 Balloon Conv >7 years Level pay Issue Date 03/01/2018
 Traits ID, Balloon, ACT/360 Maturity Date 03/01/2028
 Seller Arbor Commercial Funding I, LLC

Pool Information

Coupon	3.450	WAC*	4.460	Orig WAC	4.460
		WARM	118	Orig WAM	120
		WALA*	2		

Collateral Information

WADLS	11,976,000	Orig Amort	0	Prop Name	Duval Villa Apartments
WALS*	11,976,000	Rem IO*	118	Prop Addr	4305 DUVAL ST
Orig Date	--	Tier	3	City	AUSTIN, TX
		DSCR (Curr)*	1.87	Prop Type	Dedicated Student
LD End Date	--	DSCR (Orig)	1.87	Num Units	112
Orig Pen*	YM(114),1(3)...	NCF (Orig)	\$1MM	Units <60%	--
Rem Pen*	YM(112),1(3)...	Orig LTV*	63.7	Green-Bond	Y
		Occ (Orig)	95%		

States %UPB

Texas	100.0
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Paydown Information TRACE Eligible

Performance Hist May18 Apr Mar18

1 Month CPR	0.0	0.0	
3 Month CPR			
6 Month CPR			
12 Month CPR			

FN AN8708 115-07+ 115-01/115-13⁷₈ Yield 1.461/1.410 Coupon 3.450% BVAL

As of 21 Apr Prepay OCPY Fannie Mae Pool

FN AN8708 Mtge Export Page 3/3 Security Description

US POOL 4.460(95)25 CUSIP 3138LMVAB Pool Level Buy Sell

Summary Comments Notes

Mortgage Notes

Pool Number AN8708
 Fannie Mae Loan Number 1717474724
 Lender Name (aka Seller Name) Arbor Commercial Funding I, LLC
 Loan Issuance Upb Amount 11,976,000.00
 Security Issue Date 03/01/2018
 Original Note Rate Percent 4.46
 Current Interest Rate Percent 4.46
 Loan Interest Accrual Method Code Actual/360
 Loan First Payment Due Date 04/01/2018
 Loan Maturity Date 03/01/2028
 Loan Lien Priority Code First
 Loan Interest Only Term (aka Interest Only Period) 120
 Loan Note Signed Date 02/26/2018
 Loan Interest Type Code Fixed
 Green Financing Green Rewards
 Loan Purpose Renance
 Original Upb 11,976,000.00
 % Of Initial Pool Balance 100
 Loan Original Amortization Term 0
 Loan Last Interest Only Payment Date 03/01/2028
 Loan To Value Ratio (%) / Loan Combined Loan To Value Ratio Percent 63.7
 Loan Prepayment Premium Type Code YM(114) 1%(3) 0(3)
 Prepayment Penalty Provision YM(114) 1%(3) 0(3)

300) Edit Panel 301) Expand Panel

Screen images from Bloomberg.