Presented by:

GREEN LENDING

Agencies offer financial incentives for energy-efficient developments

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Climate change concerns are driving actions to reduce carbon emissions and improve energy and water efficiency in real property developments. Major lending agencies like Fannie Mae® and Freddie Mac® have instituted "**green**" lending programs to offset the costs of such improvements. The impact of these agency green-lending programs should be positive in both environmental and financial terms. There's a learning curve for borrowers in terms of implementing their selected green measures, but it's worthwhile on multiple fronts, including verifiable reduced costs over the life of a project, and less concrete benefits such as improved tenant comfort.

Energy and water conservation were once topics of interest only to property owners. However, over the past few years the agency green-lending programs have caught the attention of lenders, who appreciate that the multiple benefits of green loans are relevant to them.

Financial benefits (of particular interest to lender) include:

1. Reduction in building operating costs (resulting in higher Net Operating Income or "NOI")
2. Increase in building valuation and sale price
3. Reduced maintenance time and costs
4. Management of the risk inherent in variable utility costs
5. Ability to charge rental rate premiums and improve tenant retention

Additional not-to-be-overlooked benefits include:

1. Reduced risk of equipment obsolescence
2. Better indoor air quality
3. Improved tenant comfort
4. Reduced carbon footprint
5. Improve ESG* ratings, which may be important to stakeholders (*Environmental, Social and Governance)

Fannie Mae "Green Rewards®":

In 2010 Fannie Mae launched its Multifamily Green Initiatives. The purpose? To explore how energy and water efficiency can support quality affordable housing in the United States. This led to several green financing products such as the Fannie Mae Green Rewards program, which finances energy and water efficiency retrofits. The numbers are impressive: Green Rewards ramped up at the end of 2015 and by the end of 2018 accounted for $51.7 *billion* in green mortgage-backed securities (MBS). This includes over 2,000 properties covering 550,000 units. Recent figures bring the total green loan MBS amount through 2019 to $75 billion.

Energy and water efficiency measures (EWEMs) and cost saving opportunities are identified via an ASHRAE Level 2 energy audit and a written report titled the *High Performance Building* report, accompanied by Fannie Mae's Form 4099H. (Note that the cost of the energy audit is *reimbursed in full* by Fannie Mae when the loan closes green.)

Freddie Mac "Green Advantage®":

Freddie Mac initiated its Green Advantage program in August 2016. The agency emphasized the importance of green loans to their tenants' budgets. As of December 2018, 1,300 properties closed with green loans, covering 367,000 units. This represented a total of $36 billion funded. Recently published figures for 2019 indicate that the Green Advantage program posted $15 billion in volume. Program goals include: improving workforce housing; sensitizing borrowers to environmental issues; creating a positive environmental impact; and, saving money for borrowers and their tenants.

Borrowers who qualify for the Green Advantage program have an ASHRAE Level 1 energy audit completed, titled the *Green Assessment* report, in addition to the Form 1106. Alternatively, borrowers can select an ASHRAE Level 2, Green Up PLUS report, which includes access to better underwriting (American Society of Heating, Refrigerating and Air-Conditioning Engineers). Freddie Mac reimburses the cost of the energy audit when the loan closes, even if it doesn't close green. *(See note at article end about Freddie Mac now focusing on workforce housing.)*

Benefits: Pricing Break and Underwriting

Borrowers who opt for green loans — and who commit to attaining the required energy and water savings threshold — benefit from better pricing, as well as underwriting of some of the cost savings. The amounts are considerable: Freddie Mac offers to underwrite between 50% and 75% of the owner's projected cost savings, while Fannie Mae offers 75% underwriting of the owner's projected cost savings and 25% of tenant's projected cost savings (if tenant utility data is provided).

The pricing break is what drives green loan volume. Pricing breaks during the past several years have varied throughout the year and from loan to loan, landing anywhere between 2 bps (Basis Points) and 40+ bps. Wherever the green quote lands, the pricing break results in a reduced interest rate. (A basis point = 100th of 1% used in expressing difference in interest rates).

Beyond the agency pricing breaks, energy and water efficiency retrofits and projects reduce expenses, which results in higher Net Operating Income (NOI). And a higher NOI typically leads to a higher sale value for the property. Implementing green improvements that decrease owner-paid utility costs is a clear "win-win"; green improvements that decrease tenant-paid utilities is considered a "split-incentive" (less appealing to owners). The pricing break offered by the agencies, therefore, is a boost in the right direction.

Program Reporting and Impact

Both agencies require that borrowers report utility data for the lifetime of the loan. Reporting is completed using ENERGY STAR® Portfolio Manager — an online tool created by the EPA. The free program tracks energy and water consumption as well as greenhouse gas emissions. In addition to tracking utility data, Fannie Mae conducts verification visits at each property to confirm that green improvements are completed as specified. Green Rewards borrowers have one year to implement their selected green measures; Green Advantage borrowers have two years to complete the retrofits. (Data from verification site visits as well as measurement and verification of the savings have not yet been released but is anticipated in 2020.)

Green Certifications

Newer properties that were constructed with energy efficiency in mind may have already participated in a program to certify their commitment to reduced energy. If a property has a recognized green certification, both agencies will provide a pricing break. Energy audit reports and selected EWEMs don't need to be completed if borrowers are able to select this path. Both agencies recognize several levels of green building certifications, and their pricing breaks vary accordingly.

Full List of Accepted Green Certifications
BY FANNIE MAE

Full List of Accepted Green Certifications
BY FREDDIE MAC

Additionally, borrowers who do not pursue any other Green Advantage options can receive $5,000 from Freddie Mac for delivering an EPA ENERGYSTAR Score.

Renewables

Both agencies allow renewable energy systems, such as solar, as an EWEM. When renewables are installed, the amount of energy used on site may not change, but generated energy is treated as a usage reduction. Renewable system infrastructure must be owned by the property and connected to grid-tied meters. (Solar photovoltaic arrays are the most commonly recommended type of renewable energy system.) The financial benefits of installing solar can vary significantly depending on the location of the property and the available state incentives. In some states, payback for a solar array can be as low as four years. If solar is selected as an EWEM, Fannie Mae requires a Technical Feasibility Study, which must be submitted at the time the loan closes.

Changing Requirements and the FHFA Scorecard

Both Fannie Mae and Freddie Mac are government-sponsored enterprises (GSE). Since September 2008, they've operated under the conservatorship of the Federal Housing Financing Agency (FHFA). The FHFA releases a "scorecard" each year outlining the goals its regulators will use for judging performance and by which the enterprises are assessed in how well they're meeting their goals. FHFA-implemented changes to energy or water savings thresholds resulted in increases from 15% (Freddie) and 20% (Fannie) to 25% (for both agencies) in 2017. In 2018 the threshold changed to 30% cumulative energy and water savings, with a minimum of 15% attributed to energy. Each adjustment resulted in a lag in green loans as lenders and their borrowers adjusted to the impact of the new thresholds.

Fannie and Freddie's share of new multifamily loans rose from 36% in 2015 to 49% in 2017 and, based on preliminary estimates, 42% in 2018. This growth was largely attributed to green loans being excluded from the lending caps. In reaction to this, the FHFA revised the structure of the caps in September, 2019. The lending cap for both agencies was set at $100 billion each for the five-quarter period Q4 2019 to Q4 2020, and green loans are no longer excluded from the cap. Additionally, 37.5% of the loans for multifamily business must be mission-driven affordable housing.

Anticipated Green Program 2020

Since the release of the 2020 scorecard by the FHFA, agency green-loan volume has been significantly reduced. Following the announcement, both agencies were in a self-reported "discovery phase" to determine what their green lending will look like in 2020. Fannie Mae has subsequently communicated that green loans are an important part of its mission and that it will continue to offer competitive pricing loans that close green. Freddie Mac announced in mid-November, 2019 that its Green Advantage program will focus solely on workforce housing going forward. Properties qualifying for a green loan will need to meet affordability requirements. (Both agencies will continue to reimburse the full cost of the energy audit.)

Success Stats

Freddie Mac released a white paper titled —*Spotlight on Underserved Markets*, which includes the results of its analysis of the Green Advantage program. Findings include:

- Average year built: 1985
- States with highest concentration of green loans: Texas, Florida, California and Georgia
- Top three water improvements: showerheads, aerators/faucets, toilets
- Top three energy improvements: LED lighting, appliances (dishwashers), HVAC thermostats
- Average gallons of water saved per loan: 2.8 million
- Average kBTU saved per loan: 1.1 million (BTU: British Thermal Units, a measure of energy)

Fannie Mae released its *Multifamily Green Bond Impact Report 2012-2018*. Additional successes shared by Fannie Mae include:

- Estimated jobs created or supported: 170,000
- Average payback for owners: 6 years
- Average payback including tenant savings: 2 years
- Portfolio-wide water savings: 5.9 billion gallons
- Portfolio-wide reduction in carbon emissions: 287,000 metric tons of CO_2
- Benefit to tenants: 10% reduction to utility bill (approximately $145/unit annually)

> "By participating in the green financing programs offered by Fannie Mae and Freddie Mac, Jones Street was able to combine our effort to be economically advantageous with our desire to have a positive impact on the environment. A major benefit of this program is having the energy audit conducted cost-free. Additionally, we have enhanced our understanding of which green improvements have the best returns, and we hope to continue to make these improvements to our multifamily communities."

JONES STREET SPOKESPERSON

Jones Street has almost $400 million in loans with Fannie Mae and Freddie Mac, and four of our communities have green loans.

AGENCY GREEN

A Case Study

Project Overview
170 Units, Garden Style Multifamily
Date of Construction: 1998
Location: Dallas, TX
Type of Loan: Fannie Mae
Savings Threshold: 30%, 15% from energy measures

GREEN ENERGY AND WATER EFFICIENCY MEASURE (EWEM) SELECTIONS

Sample Measures	Install	% Energy Savings	% Water Savings
Install ENERGY STAR certified learning thermostats	$33,060.00	6.6%	0.0%
Insulate all exposed hot water lines and first 3 feet of cold water lines	$3,420.00	4.0%	0.0%
Upgrade in-unit lighting with high efficiency LEDs	$17,829.00	5.3%	0.0%
Install low-flow, 1.25 GPM showerheads	$11,050.00	2.4%	9.5%
Implement EPA WaterSense certified weather based controls to reduce irrigation	$3,800.00	0.0%	5.2%
Total	**$69,159.00**	**18.3%**	**14.7%**

Financial Benefits

Note: this case study was calculated with 10bps pricing break (current/typical quoting standard).

Summary of Savings

- Water Savings: 2.7 million gallons
- Energy Savings: 288,064 kWh
- Cost/unit to implement: $406
- Annual owner savings: $10,515
- Annual tenant savings: $39,422 ($231 per unit)
- Savings allowed for underwriting: $8,907

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	Standard Loan	Green Loan
Purchase Price	$ 12,000,000	$ 12,000,000
10 year loan amortized over 30 years		
DSCR (Debt Service Coverage Ratio) - stipulated by Fannie/Freddie	1.25	1.25
NOI (net operating income)	$ 600,000	$ 600,000
Allowable savings for underwriting	$ -	$ 8,907
Updated NOI for underwriting percentages	$ 600,000	$ 608,907
Interest rate (10 basis pt discount for green)	4.5%	4.4%
Loan Proceeds	$ 7,894,446	$ 8,106,423
Additional loan proceeds for going green	N/A	**$ 211,977**

	Standard Sale, No green Measures Implemented	Green Measures Implemented, Increased NOI
NOI	$ 600,000	$ 610,515
Sales Price	$ 12,000,000	$ 12,210,300
Profit	$ -	$ 210,300
Cost of work	$ -	$ - 69,159
Increased value of property	N/A	**$ 141,141**

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