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Energy Efficiency Proposals in Fannie Mae and Freddie Mac's Draft Underserved Markets Plans

*Prepared May 17, 2017 by the National Association of State Energy Officials (NASEO)
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Through the Duty to Serve (DTS) rule, the Federal Housing Finance Agency (FHFA) requires Fannie Mae and Freddie Mac to facilitate a secondary market for mortgages on housing for low-income families in three underserved markets: manufactured housing; affordable housing preservation; and rural housing. Energy and water efficiency is among the activities that are eligible for DTS credit, including financing of multifamily energy efficiency improvements and financing of single-family energy efficiency improvements.

On May 6 and 8, respectively, Freddie and Fannie released their proposed Underserved Markets Plans under the DTS rule. They are seeking public comment through July 10, 2017. The plans are available at <https://www.fhfa.gov/PolicyProgramsResearch/PROGRAMS/Pages/Duty-to-Serve.aspx>.

Both plans must receive a non-objection from FHFA before becoming effective, and the content in each plan may change based on public input, FHFA comments, safety and soundness considerations, and changing market or economic conditions.

Following are excerpts from each plan related to energy and water efficiency. **Please note: we encourage you to use the excerpts provided below to help you more easily navigate the portions of each plan relevant to energy. Reviewing the plans themselves in whole will provide you more context about how each agency is approaching and handling housing energy issues.**

To jump to a specific topic covered by each plan, use the links in the Table of Contents on the following page.

If you would like to work with NASEO to develop comments or provide input into these plans, please contact Sam Cramer at scramer@naseo.org.

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Energy-Related Excerpts from Freddie Mac's Proposed Duty to Serve Plan

(<https://www.fhfa.gov/PolicyProgramsResearch/Programs/Documents/FreddieProposedUMP.pdf>;

submitted to FHFA May 6, 2017)

Summary of our Underserved Markets Plan

(pp. 2-3)

Manufactured Housing

Our activities and objectives related to manufactured housing will be multi-faceted, supporting manufactured housing titled as real property and as chattel, as well as resident-owned manufactured housing communities. In addition, we will be exploring opportunities for the comprehensive set of tenant protections identified in the Duty to Serve final rule.

While we have programs in place to purchase loans on manufactured homes titled as real property, there is a need for additional resources that include enhanced product offerings, additional homebuyer education specific to manufactured housing titled as real property and technical training for lenders and appraisers to increase financing of manufactured homes titled as real property. Additionally, we plan to address the challenges facing the chattel market by conducting thorough data-gathering and analysis prior to developing and initiating a chattel pilot program. We also intend to focus on standardization and consumer protections in the chattel market.

Rural Housing

The rural areas we will be serving are socially, economically and geographically diverse but they face many similar challenges. In order to support this market, over the next three years, we intend to work directly with appraisers, lenders, nonprofits, housing finance agencies, small financial institutions and title companies by:

- launching research projects,
- enhancing product offerings,
- providing homebuyer education and technical training,
- collaborating with the U.S. Department of Agriculture and the U.S. Department of Housing and Urban Development
- re-engaging in the LIHTC equity market, subject to FHFA approval, and
- exploring opportunities in the single-family rental market to increase access to credit, provide liquidity and promote more affordable housing options in rural areas.

In addition to engaging in these proactive activities, our single-family business plans to increase its purchase of mortgage loans in certain high-needs rural regions each Plan year to increase liquidity in these submarkets. Furthermore, our multifamily business intends to develop a product that leverages Low Income Housing Tax Credits equity investment in order to help meet the affordable rental needs of low-income families that are members of Indian tribes in Indian areas as well as agricultural workers in designated rural areas.

Affordable Housing Preservation

Freddie Mac will expand its strong support for affordable housing preservation through loan purchases, new offerings and new partnerships that will channel private capital to the communities that need it most. Our efforts to serve renters are particularly focused on several vital federal programs, such as low-

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income housing tax credits (LIHTCs), the Section 8 program, Rental Assistance Demonstration (RAD) and Section 515 loans from the U.S. Department of Agriculture (USDA).

We anticipate providing liquidity to small financial institutions that are best positioned to serve their communities. In turn, they will be able to provide more financing to small, unsubsidized, multifamily properties. We also plan to work with them to make inroads in energy-efficient financing. In addition, we plan to focus on shared equity programs that are administered by community land trusts, other nonprofit organizations, or State or local governments. During our outreach and discussions with shared equity program sponsors, we continually heard that shared equity structures are not widely understood by lenders and other market participants; thus, one of our activities will be to increase awareness of such programs.

Challenges and Needs

(pp. 12-13)

In Freddie Mac's public outreach, we repeatedly heard concerns from a wide range of market participants about the limited number of active lenders providing loans to manufactured housing buyers. These market participants encouraged us to expand the secondary market in order to bring standardized products that include consumer protections and to provide additional liquidity. From our outreach, including through FHFA's public listening sessions, we have gained a deeper understanding of the current challenges facing this market and the unique needs that must be met in order to serve it successfully.

1. Limited supply of manufactured homes: The production of manufactured housing has significantly declined since its peak in the 1990s. Although it is beginning to rebound, the low volume of new manufactured housing continues to limit market growth. In addition to the low volume of new units, there is also a limited number of units available for resale due to financing issues on older units, title constraints and declining values on chattel-financed homes.
2. Specialization and limited size of Duty to Serve identified MHC market: The Duty to Serve regulation provides credit for activities that serve a small subset of the MHCs market. The two categories of MHCs that are eligible for credit are:
 - a. Communities owned by a nonprofit, government instrumentality, or by the majority of its residents; and
 - b. Communities that have a combination of specific tenant protections. Datacomp/JLT does not currently track the ownership structures of MHCs and there are no other definitive data sources. Based on our outreach, we understand that there are likely no more than 1,000 resident-owned communities, and only a few nonprofits and instrumentalities that operate MHCs. Of these, not all are suitable for financing due to their condition and/or size, with a portion containing fewer than 25 homes and some with fewer than five. Moreover, our outreach and research efforts have not revealed any states that require all of the tenant protections identified in the rule, nor have surveys of leases among communities for which we have purchased loans revealed any communities that currently include the full complement of protections. Assuming that approximately 1,000 MHCs are eligible for Duty to Serve credit, that equals roughly 2.5 percent of the total financeable MHC market. Communities in this segment of the market generally require specialized financing. This specialization, combined with the very small market size, makes it difficult to attract private capital at scale.

3. Limited number of manufactured housing lenders: Due at least in part to relaxed underwriting credit standards and less stringent requirements for supporting loan documentation, the manufactured housing industry experienced a crisis in the late 1990s. The poor quality of the originated loans led to a large number of distressed loans with high rates of delinquencies, defaults and, eventually, repossessions. This led to a collapse in the secondary market for manufactured housing real property loans. Even today, many lenders are reluctant to provide manufactured housing mortgage financing and the secondary market remains constrained.
4. Appraisals of manufactured housing: Appraising manufactured housing as real property is a challenge due to the limited amount of comparable data in the multiple listing service used by real estate professionals, the variety of secondary market and lender requirements concerning the comparable property's distance from the subject property, and the timeframe between sales of comparable properties. In addition, appraisal guidelines currently do not account for energy- efficient upgrades, which can lead to under-valuation of the home and over-estimation of the borrower's cost burden. These challenges can impede a borrower's ability to obtain a mortgage loan, which in turn creates an incentive for borrowers to rely on chattel financing. There are additional challenges when appraising manufactured housing titled as chattel. Although there are no consistent standards, and while lenders may set their own appraisal standards, manufactured housing titled as chattel is typically appraised according to the National Automotive Dealer Association guidelines. These guidelines allow for numerous adjustments, which result in a broad variance of values. The guidelines also do not take location into consideration during valuation, which can lead to higher depreciation rates in comparison to manufactured housing titled as real property. According to a Consumers Union study, the appreciation rate of manufactured housing financed through mortgage loans is in line with the appreciation rate of site-built housing. In contrast, chattel-financed manufactured housing may depreciate in value.
5. Titling manufactured housing as real property Titling manufactured housing as real property can be challenging for lenders because laws concerning manufactured housing vary by state. State ordinances also vary on converting title from personal property to real property, which may act as a disincentive for borrowers to complete such conversions.
6. Lack of mortgage financing products: During our public outreach into manufactured housing finance, participants frequently indicated that the market needed new secondary market offerings, enhancements to existing offerings, flexible underwriting, more purchase volume, pricing adjustments, low closing costs and shorter processing times.
7. Lack of defined standards, borrower education, and data for analysis: Many market participants expressed the need for research, technical assistance and best practices for appraising and titling homes, along with loan product assessment and testing to evaluate potential enhancements to underwriting guidelines. In addition, we frequently heard of the need for additional outreach by the GSEs to educate borrowers about both manufactured housing generally and mortgage financing availability. In addition, the market lacks comprehensive data on chattel financing. The available HMDA information shows that, due at least in part to the limited secondary market for manufactured housing loans, over 70 percent of chattel loans are held in lenders' portfolios, compared to only 16 percent of mortgages on site-built homes. Analysis of the HMDA data is limited as HMDA does not require institutions to distinguish chattel financing versus financing of homes titled as real property.
8. Lack of private mortgage insurance: The manufactured housing market currently suffers from limited offerings from private mortgage insurers providing comprehensive mortgage insurance coverage on manufactured homes, which affects the ability of the GSEs to purchase mortgages with loan-to-value ratios of more than 80 percent. This impedes lenders' ability to provide

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conventional financing. Because very low-, low-, and moderate-income households frequently lack the financial resources for significant down payments, limited availability of mortgage insurance reduces the availability of affordable low down-payment mortgages.

Manufactured Housing Activities and Objectives

(pp. 10-29)

Activity 1 – Manufactured Homes Titled as Real Property: Regulatory Activity

Objective C: Increase Homebuyer Access to Education and Resources

(pp. 18-19)

During our outreach, we repeatedly heard that the manufactured housing market requires focused homebuyer education to address consumer questions about the unique aspects of manufactured housing, the benefits of an energy-efficient manufactured home, and general homebuyer education. Freddie Mac intends to address this need by developing a more expansive homebuyer education curriculum that specifically addresses manufactured housing, expanding existing outreach activities to a larger geographic area, promoting homeownership with partners through homebuyer fairs and providing a more comprehensive homebuyer education platform that includes credit counseling along with pre-purchase and post-purchase education. Through borrower education, we hope to help manufactured housing consumers build and maintain better credit, and understand the steps to sustainable homeownership.

Freddie Mac strongly supports the benefits of homebuyer education and providing educational tools for consumers. We believe that well-informed and well-prepared homebuyers are more likely to enjoy successful and sustainable homeownership. Freddie Mac has extensive experience with homebuyer education and housing counseling. We provide education and counseling through our 14 Borrower Help Centers and the national Freddie Mac Borrower Help Network.

Freddie Mac also recently partnered with Next Step® and eHome America on a pilot to provide educational information to prospective buyers of manufactured homes in Kentucky, including information about the availability of down payment assistance programs, the benefits of energy-efficient homes and credit rebuilding services via housing counseling agencies. The pilot also aims to expand the number of local lenders who originate energy efficient manufactured homes that are titled as real property.

Freddie Mac plans to expand our outreach beyond the state of Kentucky by partnering with nonprofits, housing finance agencies and community development financial institutions (CDFIs) that provide homebuyer education and credit counseling to grow capacity and serve very low-, low-, and moderate-income homebuyers. We also plan to track education outcomes and use the information obtained to adjust the curriculum in the future. We believe the schedule proposed is reasonable and incorporates sufficient flexibility for us to learn from initial program feedback and make course corrections, if necessary.

Specific Actions

Year	Action
2018	<ul style="list-style-type: none"> ▪ Expand beyond the state of Kentucky, to at least one additional state, our existing homebuyer education pilot that specifically addresses manufactured housing titled as real property and the benefits of energy efficiency by adding at least one additional lender. The target will be to provide education to at least an additional 200 consumers ▪ Provide additional information on Freddie Mac’s website to support manufactured housing content for potential homebuyers
2019	<ul style="list-style-type: none"> ▪ Expand to at least one additional state our homebuyer education pilot that specifically addresses manufactured housing titled as real property and the benefits of energy efficiency. We will add at least one additional lender to the pilot. The target will be to provide education to at least an additional 200 consumers ▪ Hold one to two homebuyer fairs that include a discussion of the value and benefits of manufactured housing ▪ Conduct consumer surveys on homebuyer education curriculum at six to twelve Next Steps education training sessions
2020	<ul style="list-style-type: none"> ▪ Expand to at least one additional state our homebuyer education pilot that specifically addresses manufactured housing titled as real property and the benefits of energy efficiency. We will add at least one additional lender to the pilot. The target will be to provide education to at least an additional 200 consumers ▪ Use survey results to adjust homebuyer education curriculum, as applicable ▪ Hold one to two homebuyer fairs that include a discussion of the value and benefits of manufactured housing

Market Opportunity and Impact: This objective addresses the need for information about financing options and homeownership developed specifically for potential manufactured homeowners. It will not be without challenges. We anticipate that some borrowers may require credit rebuilding in addition to pre- and post-purchase counseling. In addition, as we expand the homebuyer education curriculum to additional states, tracking training outcomes will be challenging. However, we believe that a successful education program will have a significant positive impact on manufactured housing titled as real property by increasing the number of mortgage-ready borrowers and educating borrowers on financing options that may be available. Furthermore, the market will be positively affected by the homebuyers’ education curriculum that emphasizes manufactured housing, energy efficiency education and the increased availability of education and counseling services. Educating potential borrowers also generally addresses safety and soundness concerns, as we believe that educated borrowers are likely to be more successful homeowners.

Activity 2 – Chattel: Regulatory Activity

Objective C: Increase Homebuyer Access to Education
(pp. 23-24)

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If Freddie Mac’s research supports the development of a pilot program, we plan to develop a homebuyer education curriculum that emphasizes the benefits of manufactured housing, including a discussion on chattel financing that is focused on the underwriting parameters of Freddie Mac’s Chattel Pilot. The objective will target the manufactured housing market titled as personal property. The goal of this objective is to expand on our existing homebuyer education curriculum to focus on pre-purchase education that delves into the unique characteristics of chattel-financed manufactured housing loans along with the benefits of purchasing energy-efficient manufactured homes.

Specific Actions

Year	Action
2019	<ul style="list-style-type: none">▪ Expand our homebuyer education pilot that showcases the benefits of manufactured housing and energy efficiency to include chattel financing by year end in the states where the curriculum has been implemented▪ Conduct consumer surveys on homebuyer education curriculum at two to four training sessions
2020	<ul style="list-style-type: none">▪ Continue homebuyer education, including chattel lending and energy efficiency.▪ Conduct consumer surveys on homebuyer education curriculum at two to four training sessions. Use survey results to inform future changes to the curriculum and counseling efforts

Market Opportunity and Impact: Freddie Mac has extensive experience with education; our successful CreditSmart program is available in five languages and has been taught for over 15 years. In addition, Freddie Mac has successfully opened 14 Borrower Help Centers to provide credit counseling and homebuyer education. We intend to leverage our experience and solicit feedback from industry leaders on effective content for a homebuyer education program and the hurdles manufactured home buyers face. We also plan to track training outcomes and use the information obtained to adjust the program in the future. This objective addresses potential manufactured homeowners’ need for information on financing options and homeownership. Unlike other homebuyer education programs we have developed in the past, this program will be focused on chattel financing along with the benefits of purchasing energy-efficient units. Accordingly, development of the curriculum will require research and time.

Affordable Housing Preservation

Strategic Priorities Statement

(p. 66)

Freddie Mac is the nation’s leading provider of financing for affordable rental housing. In 2016, we financed more than \$6.3 billion in loans on multifamily properties with regulatory agreements or other features that preserve long term affordability, and we introduced several new offerings to provide greater liquidity in the affordable rental housing market. Freddie Mac also plays a critical role in financing affordable homeownership for America’s families. In 2016, we financed \$22.5 billion and \$26.3 billion in single-family purchase and refinance loans, respectively, to low-income borrowers. Through our enhanced mortgage offerings, continued policy adjustments to keep up with evolving market needs and sustainable underwriting flexibilities, we have expanded access to credit for a significant number of

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borrowers. Despite these successes, discussions with borrowers and other market participants, as well as our experience, reveal headwinds in the near future, from rising interest rates to reduced Low-Income Housing Tax Credit (LIHTC) equity pricing to the potential reduction in vital public subsidies for affordable rental housing. These upcoming challenges make our support even more important to this market. We see opportunities to continue our support and expand our capabilities for affordable housing preservation for both multifamily and single-family markets.

Multifamily

We will look to support both subsidized and unsubsidized affordable housing and promote residential economic diversity through the following strategic priorities:

1. Continue to provide stability through loan purchases on properties receiving federal subsidies, such as LIHTCs, Section 8 or the U.S. Department of Housing and Urban Development's Rental Assistance Demonstration (RAD),
2. Innovate with new offerings to reduce financing costs and close capital gaps to at least partially offset the reduction in LIHTC equity and federal and local subsidy necessary for long-term affordable properties,
3. Provide liquidity to small financial institutions, which are a key source of financing for smaller, unsubsidized affordable housing properties,
4. Continue to promote energy and water efficiency to reduce tenant utility bills and promote affordability, and
5. Identify ways to support USDA Section 515 program to preserve long-term affordability for rural renters.

Single-Family

We will look to leverage our experience and existing capabilities in designing activities to support energy efficiency and shared equity. Based on the input we have received from a wide range of industry participants, setting industry standards for these market segments is a key component for long-term growth. As such, our activities are grounded in the following strategic priorities:

1. Achieve long-term sustainable growth by laying out market infrastructure and developing standards for financing,
2. Provide the market with data and underwriting guidance that can be leveraged across market participants,
3. Enhance consumer awareness about financing options and lender awareness about Freddie Mac product flexibilities,
4. Minimize operational complexity and incorporate automation, where feasible, and
5. Leverage pilots to test new product features and underwriting flexibilities.

Current Freddie Mac Support to Affordable Housing Preservation

(p. 68)

Freddie Mac has long been active in affordable housing preservation, which the company views as fundamental to our mission, and we consistently have increased our support over the past several years.

For the multifamily market, Freddie Mac offers a broad suite of products that support subsidized and unsubsidized affordable housing in a manner that is consistent with and sometimes beyond the scope of Duty to Serve. In fact, nearly 90% of the rental units we finance overall are affordable to households making very low, low and moderate incomes in markets across the country. We are the market leader in

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multifamily financing overall in Targeted Affordable housing and in specific programs, such as RAD. In fact, we have doubled the size of our Targeted Affordable platform and purchased a record number of loans in 2015 and 2016, supporting numerous federal and local programs. We have demonstrated further leadership in multifamily energy efficiency. We launched our Green Advantage suite of products in August 2016 and, in the remaining five months of that year, purchased nearly \$3.3 billion of loans supporting energy and water efficiency improvements. We also have focused our attention since 2015 on providing liquidity to small financial institutions, testing methods to enable such institutions to increase their lending capacity.

In the single-family market, Freddie Mac currently has a range of products that are consistent with affordable housing preservation. Freddie Mac believes that reducing home utility costs places families in a better financial situation, and we are committed to supporting the energy efficiency market with the objective of helping to preserve affordability. Although not well-known among lenders, Freddie Mac currently provides flexibilities to support the financing of energy efficiency improvements through its existing products.⁷⁴ Freddie Mac also purchases mortgages secured by properties with resale restrictions. And, in June 2016, Freddie Mac updated its requirements to purchase mortgages secured by properties with income-based resale restrictions that survive foreclosure.⁷⁵ The updated requirements also provided additional flexibility as it relates to collateral valuation to help address existing market needs. In addition, Freddie Mac purchases mortgages originated under shared appreciation loan programs if specific requirements are met pursuant to the Single-Family Seller/Service Guide (Guide). Freddie Mac also has been working with select lenders to test features associated with inclusionary housing programs that offer flexibility, and we intend to use these results to inform future product design.

Under Duty to Serve, we look to leverage our infrastructure, resources and experience to provide further support for affordable housing preservation as we help address the affordable housing gap and cost burdens faced by so many renters and homeowners.

Energy Efficiency

(pp. 69-70)

New renewable energy technologies have created new ways to reduce housing costs, primarily through utility savings, and through energy efficiency home improvements. According to the Department of Energy, heating and cooling costs are the largest utility expense for most U.S. homes. In fact, they account for more than half of energy use in a typical home.⁷⁹ Since utility expenses are a factor of overall housing costs, a reduction of energy expenses is a direct reduction of housing costs. However, utility expenses are typically not factored into traditional underwriting methods, and thus the value of energy efficiency home features has not been consistently accounted for in first-lien financing.

The market for home energy efficiency has gained momentum, with several market participants pioneering new financing options, yet the residential energy efficiency market remains relatively small. During our outreach and research into this market, we learned that while there are a number of challenges and needs, the most significant challenge is the lack of standardization. Lack of standardization makes it difficult for lenders and investors to support the market in any scalable way. It also makes research challenging when it comes to assessing risks and/or the impact of property values of energy-efficient homes. The lack of standardization contributes to the challenges and needs related to energy efficiency in four categories:

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1. Products: Transactional ease is a key factor for lenders to provide first-lien energy efficiency products. The complexity of mortgage underwriting guidelines, coupled with paperwork and longer settlement timelines, puts first-lien mortgage financing at a disadvantage in comparison to unsecured financing options where the underwriting, approval and funds disbursement timelines are simpler and shorter.
2. Securitization: Given the fragmented energy efficiency industry, financing programs vary significantly, which means securitization can be economically unfeasible. In 2014, a report issued by the Coalition of Green Capital says the “lack of standard documents, processes and program structures is one of the oft-cited barriers in the clean energy finance sector.”
3. Data and research: In general, the market needs more energy efficiency-specific performance data to properly assess risks, model performance of properties with energy efficiency features and design appropriate underwriting guidelines. On a longer-term basis, the data collected must be standardized to allow for more streamlined and broad-based modeling.
4. Market education and outreach: Through our research and market outreach, we learned that the average consumer has limited awareness of the benefits of incorporating energy-efficient features into a home. We also found that consumers who are knowledgeable about the potential value of investing in energy efficiency home features may not have access to comprehensive information about financing options to facilitate such improvements.

Activity 6 – Energy or Water Efficiency Improvements on Multifamily Rental Properties: Regulatory Activity (pp. 90-91)

In 2016, Freddie Mac released its Green Advantage suite of energy and water efficiency financing offerings, which are focused on helping borrowers improve properties and reduce energy or water consumption by at least 15 percent. Prior to the suite’s launch, we understood that general market interest in financing to support energy or water efficiency improvements existed, and the market saw opportunities for savings, particularly in older and more affordable properties. However, there were several challenges that limited market adoption:

1. Energy or water efficiency were not consistently top priorities for borrowers,
2. Timing for energy analysis did not align with deal timelines, and
3. Energy usage data, particularly for tenants, was not readily available in the majority of markets.

In designing our Green Advantage program, we focused on ways we could reduce these challenges and develop broadly adoptable offerings. To address questions of borrower priorities and timing, we took three actions:

1. Established simple criteria for properties that would be a good fit for Green Advantage so seller/servicers and borrowers would have a clear understanding of the properties that would be candidates for green improvements;
2. Worked with energy efficiency consultants to design our Green Assessment, which can be completed within two weeks and helps borrowers make decisions about improvements early on; and
3. Decided to pay for the Green Assessment (up to \$3,500) as long as the borrower obtains a Freddie Mac loan (whether or not it is a Green loan) so the borrower does not have to decide if it is worth considering green improvements.

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As a result of these efforts and our collaboration with industry partners, we purchased approximately \$3.3 billion of loans across 28,000 units under Green Advantage in the first five months of the program, and we have an active pipeline of several billion dollars of loans continually forthcoming. Clearly, the program has achieved broad market acceptance. We expect to see continued interest in the program, and we intend to leverage the information we collect both through our Green Assessments and through our annual property energy and water consumption benchmarking requirements⁹⁹ for the benefit of the broader market by producing an annual study of energy and water efficiency through the Green Advantage program.

Objective A: Publish an Annual Study of Energy and Water Efficiency Through the Green Advantage Program

In developing Green Advantage, and through subsequent conversations with various organizations and advocates, we have found strong interest in the data we collect and the types and benefits of improvements borrowers are making. This data and analysis of efficiency measures on multifamily properties will likely strengthen the market for energy and water efficiency improvements and support efforts beyond the GSEs specific programs.

Therefore, in all three years of the plan term, we intend to publish a report on the Green Advantage program based on the loans we have purchased, the energy and/or water efficiency improvements planned and made, the costs of those improvements, the projected savings and the savings realized thus far. We intend to work with market participants such as energy-efficiency stakeholders, appraisers and property owners to inform our analysis and reporting.

In the early years of this report, we will focus more on the measures selected by borrowers and the projected savings. By year three, we will begin to see actual savings based on our benchmarking data collection. In later years, our reports will analyze this information, which will provide valuable insights on the likely savings for different efficiency measures in the context of multifamily properties, which should serve as industry benchmarks.

Specific Actions

Year	Action
2018	▪ Publish a report identifying and analyzing energy and water efficiency measures selected through Freddie Mac Green Advantage loans.
2019	▪ Publish a report identifying and analyzing energy and water efficiency measures selected through Freddie Mac Green Advantage loans.
2020	▪ Publish a report identifying and analyzing energy and water efficiency measures selected through Freddie Mac Green Advantage loans.

Market Opportunity and Impact: We anticipate that the publication of much-needed data and analysis about energy and water efficiency will have broad market benefits. This analysis will provide an understanding of the pragmatic steps necessary to improve the efficiency of multifamily housing stock as well as the benefits of doing so. Industry groups have consistently requested the ability to leverage this data. Our analysis of Green Advantage data will increase the market's understanding of energy efficiency improvements and help to inform borrowers' property improvement decisions related to their

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efforts to reduce expenses and increase or preserve affordability. The data should also benefit appraisers as they develop valuations and other market participants as they seek to create more efficient, cost effective buildings. In so doing, we are laying the groundwork for future innovations in energy and water efficiency tied to applications on multifamily properties.

Activity 7 – Energy or Water Efficiency Improvements on Single-Family, First Lien Properties: Regulatory Activity (pp. 92-98)

Freddie Mac is committed to supporting the energy efficiency market as part of its goal to preserve home affordability. Through our outreach, we have found that lenders have limited awareness of Freddie Mac’s flexibilities to finance energy efficiency improvements, summarized here:

- Freddie Mac will purchase a mortgage on a property that is being retrofitted, refurbished or improved with energy efficiency features if an escrow account is established.
- On manually underwritten loans, lenders can use energy efficiency features as a compensating factor for higher debt-to-income ratios.
- Freddie Mac’s Home Possible mortgages offer eligible borrowers a low down payment option with flexible underwriting features, which can be combined with other Freddie Mac provisions that support energy renovations and retrofits in purchase or refinance transactions.
- Freddie Mac’s cash-out refinance allows borrowers to obtain funds that can be used to make energy-efficient improvements, pay off existing unsecured debt obligations related to energy efficiency improvements or pay off property assessed clean energy (PACE) loans. Freddie Mac also offers a no cash-out refinance option that allows payoff of PACE loans with the proceeds from the refinance transaction.

Through our outreach, we found that a number of challenges still face this nascent market. Freddie Mac’s objectives focus on laying the foundation for the growth of first-lien financing for energy efficiency improvements beyond current offerings. In addition, we plan to address the limited consumer awareness and lack of standardization, both of which have prevented this market from growing further. Freddie Mac intends to engage in the following objectives during the plan term:

1. Conduct research and publish our findings to provide the market with broad empirical information on the impact of energy efficiency improvements on property values and loan performance,
2. Increase secondary market activity through standardization of data and property valuation guidance,
3. Increase lender awareness of Freddie Mac product features and adjust our products to further meet the market’s needs, and
4. Improve loan purchase tracking capabilities and test potential product features through pilots.

Objective A: Provide the Market with Broad Empirical Information about the Impact of Energy Efficiency on Property Values and Loan Performance

In 2016, Freddie Mac established its Energy Efficiency Task Force, a collaborative effort to learn about the energy efficiency market and issues preventing its growth. Task force members consisted of executive level representatives of leading organizations in this market as well as trade organizations. During our meetings, we repeatedly heard about the need for data to be used in product design. Through our evaluation of potential product features that could be implemented to help this market develop, we found that there is limited data to support meaningful modeling for product design or

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policy development. Additionally, several of Freddie Mac's Energy Efficiency Task Force members encouraged us to take on research to help inform the market as a whole about the effects of energy efficiency property features on property values and loan performance — two key factors that help inform product design and underwriting policy decisions.

During the first year of the plan, Freddie Mac intends to conduct research on the impact of energy efficiency features on property values and loan performance, which will lay the ground-work for loan product development. Freddie Mac is uniquely situated to accomplish this because we have a national presence, we can leverage larger data sets and we already have access to much of the foundational information. Freddie Mac plans to expand the scope of existing research by leveraging our own data and partnerships and sharing conclusions with the industry. Additionally, Freddie Mac intends to conduct periodic trending analysis and to use the results of our research to adjust our product offerings. . Freddie Mac will deem this effort successful if it either validates existing findings, uncovers at least one new finding or enables us to provide lenders with adjusted product flexibilities through a pilot or a Guide update.

We also intend to build awareness about energy efficiency across the industry. Market participants told us that consumers have limited access to information about the value of energy-efficient homes, and real estate professionals often do not have readily available property-level information. Both groups lack appropriate awareness about financing products available to pay for energy efficiency improvements. A 2012 study by Resource for the Future, a Washington, D.C.-based think tank, indicates that consumer behavior coupled with the absence of good information about the pay-offs from particular investments and the relatively low price of energy, have contributed to the lack of demand.

Given these low levels of awareness, Freddie Mac intends to publish our research findings on our website during the second year and incorporate them into our customer training curriculums or present them during industry events as appropriate. In year three, we intend to increase consumer access to education and information about the value of energy efficiency improvements and first-lien mortgage options available to finance them. Freddie Mac is well positioned to effectively accomplish this objective by leveraging its existing outreach capabilities, dedicated customer education teams and wide-ranging communications channels.

During 2016 and early 2017, Freddie Mac started work to define its research plan and design. This will enable us to focus on the execution of the research plan during the first plan year.

Specific Actions

Year	Action
2018	<ul style="list-style-type: none">▪ Conduct and complete research on the impact of energy efficiency on single-family properties' value and loan performance▪ Use research findings to:<ul style="list-style-type: none">○ Inform future product design or issue product flexibilities; and,○ Test potential product offerings through at least one pilot
2019	<ul style="list-style-type: none">▪ Publish research findings about the impacts of energy efficiency improvements on property value and loan performance on Freddie Mac's website▪ Present or disseminate research findings during one to three industry events and, when applicable, Freddie Mac Customer Advisory Council meetings▪ Provide new or updated Seller/Servicer training based on or informed by research findings
2020	<ul style="list-style-type: none">▪ Provide education or information, based on our research findings, about the value of energy efficiency and first-lien mortgage options available to finance energy efficiency improvements by:<ul style="list-style-type: none">○ Disseminating consumer education or information in two to four homebuyer events in partnership with entities supporting homeowners and homebuyers or through our Borrower Help Centers○ Conducting marketing campaigns about Freddie Mac product features and the benefits of energy efficiency improvements

Market Opportunity and Impact: Performing this research will provide valuable information that is not currently available and therefore address a comprehensive need that was repeatedly echoed during our outreach. The information derived from the study's conclusions will significantly help set the foundation for this market for future impact since the challenges affecting it stem directly from a lack of information on the impact of energy efficiency improvements on property values and loan performance.

Freddie Mac plans to use the research findings to inform our own product design efforts and we expect the industry will be able to leverage our published findings in similarly useful ways. In order to meet this objective, we will need to obtain wide-ranging and comprehensive data to analyze. Nevertheless, we are well-positioned to do so given our experience in this area and our partnerships with a wide range of energy efficiency participants.

During year two, Freddie Mac plans to publish its findings to inform the market through industry outreach and education campaigns. These campaigns would directly address the lack of consumer information and industry awareness, as described above.

Finally, we anticipate that our outreach efforts will increase awareness about the value of energy efficiency and available financing options may also help increase market demand and lender adoption.

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Objective B: Develop Valuation Data Collection Guidelines that Factor in Energy-Efficient Property Features

Another important challenge we heard through our public outreach relates to property valuation. Members of our Energy Efficiency Task Force with expertise in property appraisals encouraged Freddie Mac to provide specific guidance on property valuations. They believe that the lack of guidance from the GSEs has contributed to this problem. Specifically, we learned there are differences among energy improvements that present challenges for appraisers. Market participants want to ensure property values take into account energy efficiency improvements and lenders want to be certain the valuations will be accepted by Freddie Mac. To help the industry appropriately account for these differences, during the first year of the plan term, Freddie Mac intends to provide more specific property valuation guidance. We intend to accomplish this by issuing updated guidance via Freddie Mac's Seller/Service Guide Bulletin or issuing at least one negotiated term of business.

Members of our task force also told us that the absence of property-level data adds complexity to current valuation practices. We learned that the market needs a central repository for energy efficiency information within the appraisal report. The Appraisal Institute introduced the Residential Green and Energy-Efficient Addendum,¹⁰³ a form that is meant to augment information within the appraisal report, standardize the energy efficiency information reported about a home and provide a basis for comparable sale selection. However, adoption of the addendum has been limited.

Our task force members specifically encouraged us to consider incorporating data collection methods into our appraisal requirements. Freddie Mac has considered this request and believes it to be important for market growth. Therefore, during the first two years of the plan, Freddie Mac intends to engage in conversations with FHFA and other stakeholders to identify additional data that should be collected in the Uniform Residential Appraisal Report. Provided alignment is reached among key stakeholders during the second year of the plan term, we intend to take steps to incorporate energy efficiency data collection fields into a redesigned appraisal report during the third year of the plan term.

Specific Actions

Year	Action
2018	<ul style="list-style-type: none"> ▪ Develop additional guidance on valuation methodologies for energy-efficient properties and test them via pilot or issue updated guidelines via Guide bulletin. ▪ Conduct stakeholder outreach about incorporating data collection and high efficiency property appraisal guidelines into collateral policy requirements; we intend to engage, at least, one representative organization from each of the following: <ul style="list-style-type: none"> ○ national lenders, ○ regional/community lenders, ○ small lenders, ○ appraisal trade organizations, ○ real estate professional organizations and other market participants.
2019	<ul style="list-style-type: none"> ▪ Continue stakeholder outreach about incorporating energy efficiency property data collection requirements into property appraisal guidelines and reach GSE stakeholder alignment on energy efficiency data fields to be incorporated into the Uniform Residential Appraisal Report.
2020	<ul style="list-style-type: none"> ▪ Incorporate agreed upon energy efficiency data fields into the future redesign of the Uniform Residential Appraisal Report. (Actual completion of appraisal form redesign will be dependent on the project timeline for the Uniform Mortgage Data Program®.) ▪ Provide updated appraisal guidance on properties with energy efficiency features through a Guide bulletin update or, at least, one negotiated term of business. (Issuance of any guidance will be dependent on completion of appraisal form redesign).

Market Opportunity and Impact: Provided the stakeholders agree on the energy efficiency data that should be collected through the Uniform Residential Appraisal Report, providing a data collection repository would directly address a challenge that participants have repeatedly cited as a key gap. Freddie Mac believes that incorporating energy efficiency data collection fields into the Uniform Residential Appraisal Report would also enable ongoing tracking, trending and analysis of high efficiency homes, which would be used for product design and for assessing the risks and performance of loans on properties with energy efficiency features. The collected information, in aggregate, will also be used to continuously inform the market about the value of energy efficiency as appropriate.

Additionally, designing appropriate standard valuation guidance on energy-efficient home improvement features will provide certainty to lenders and appraisers. This task will be difficult given the varied costs, value and benefits of each distinct energy efficiency feature and the need to align key stakeholders. These efforts represent a meaningful attempt to lay the foundation for future impact. Freddie Mac is well-positioned to lead these efforts given our data mining experience, our role in the Uniform Mortgage Data Program (UMDP105) and our existing data collection capabilities.

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Objective C: Develop Additional Product Flexibilities to Support Energy Efficiency

During our outreach, we learned that many of Freddie Mac's existing product and underwriting flexibilities in support of energy efficiency are not well known at the lender level and are not being widely used. As a result, during the first year of the plan term, Freddie Mac plans to conduct lender training by leveraging its existing outreach capabilities and dedicated customer education teams to increase lender awareness about its product features and flexibilities in support of financing of energy-efficiency retrofits and high-efficiency homes.

Market participants also asked Freddie Mac to focus on product features that are easy to adopt, provide economic incentives for lenders and appraisers and reduce paperwork through automation. We heard that niche energy efficiency mortgage products, although helpful, may not be the best solution. Moreover, we were asked to focus on requirements and guidelines that can be used in combination with other mortgage products. In addition, several parties cautioned us that any products or flexibilities we design would have to be competitive with existing financing mechanisms, such as PACE loans, unsecured financing and other financing options currently being used outside the first-lien space, due to ease of process and speed.

During the first year of the plan term, Freddie Mac also intends to conduct limited pilots to test new product features. Additionally, during the second year of the plan term, we intend to leverage our research findings from Objective A and any results from pilots under this objective to develop additional product flexibilities to finance energy-efficient homes or energy efficiency improvements. We intend to communicate any updated product features and flexibilities through a Freddie Mac's Seller/Servicer Guide Bulletin update or through, at least, one negotiated term of business.

Specific Actions

Year	Action
2018	<ul style="list-style-type: none">▪ Issue updated energy efficiency product flexibilities through at least one Guide bulletin update▪ Conduct lender training and marketing campaigns to:<ul style="list-style-type: none">○ increase lender awareness about Freddie Mac's product flexibilities to finance energy-efficiency retrofits and high-efficiency homes, and○ use training sessions as a vehicle to obtain product related feedback to be incorporated into future product enhancements.
2019	<ul style="list-style-type: none">▪ Develop additional first-lien product flexibilities and parameters to finance energy-efficient homes or energy efficiency retrofits. Freddie Mac's objective is to issue a Seller/Servicer Guide Bulletin update or, at least, one negotiated term of business.

Market Opportunity and Impact: Freddie Mac recognizes that we have opportunities to further enhance our product features to specifically address valuation challenges and other market needs. However, as a first step, we see an immediate opportunity to encourage implementation of our existing product features and flexibilities by increasing lender awareness. Doing so would help the market by driving up lender adoption and/or helping Freddie Mac gather feedback on our existing flexibilities that can be incorporated into future product design or pilots.

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While we work to increase lender awareness about our existing product features, Freddie Mac also plans to conduct limited pilots to test product features ahead of any new offerings. The feedback received during our outreach efforts and the information we obtain from our pilot results will augment the results of the research and development described in Objective A. This comprehensive strategy will provide Freddie Mac with a wide-ranging view to make decisions, within safety and soundness standards, about which underwriting flexibilities and product features have the greatest impact and should therefore be adopted.

Freddie Mac is well-positioned to meet this objective by leveraging its existing corporate training and education resources, website presence and advisory boards. It can provide technical assistance through account management resources and customer support teams. Additionally, we have experience structuring pilots prior to rolling out new requirements broadly. Competing with unsecured financing, which is the most widely used option in this market, will be a challenging undertaking.

Objective D: Develop Loan Purchase Tracking Capabilities

Freddie Mac does not currently have specific monitoring processes to track existing loans related to energy efficiency improvements. This precludes us from analyzing loan performance trends and from tracking loan purchase volumes internally. A key priority during the first year of the plan term will be to define and improve our ability to track loans used to finance energy efficiency improvements. The scope will include tracking of loan deliveries under our products that are broadly available as well as loan deliveries under pilots.

Specific Actions

Year	Action
2018	<ul style="list-style-type: none">▪ Develop infrastructure and processes to better identify and track loan purchases tied to financing of energy-efficient homes or energy efficiency retrofits. Freddie Mac intends to issue updated delivery guidance through a Seller/Servicer Guide Bulletin update or at least one negotiated term of business.

Market Opportunity and Impact: This objective is critical because tracking loans and underwriting features related to energy efficiency will allow Freddie Mac to conduct ongoing analysis on loan performance and provide a mechanism to analyze results from our pilots and evaluate the safety and soundness of these initiatives. We will leverage these results to inform product design and to provide the market with transparency about how this segment performs in comparison to non-energy efficiency related loans. Additionally, this objective will lay the foundation for measuring our future market impact. Completing this objective will also allow Freddie Mac to quantify our overall support of the market as measured by loan volume.

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Energy-Related Excerpts from Fannie Mae's Proposed Duty to Serve Plan

(<https://www.fhfa.gov/PolicyProgramsResearch/Programs/Documents/FannieProposedUMP.pdf>;

submitted to FHFA May 8, 2017)

The Single-Family Affordable Housing Preservation Market

Energy and Water Efficiency Improvements on Single-family First Lien Properties

(pp. 65-66)

Across the United States, the number of homes owned by those with very low- to moderate-incomes is estimated to be 34.4 million. There is no data, however, to determine how many of these are energy and/or water “efficient” or how many are in need of upgrades. Relative to those with higher incomes, in general populations of more modest means live in older homes that are more in need of repair and upgrades.²⁷ Yet regardless of its owner or tenant’s income level or if it meets high standards such as LEED or ENERGY STAR® certification, unless a home operates under complete zero net energy we believe there is almost always an opportunity to lower energy and/or water consumption, thereby lowering total housing costs.

Addressing energy and water efficiency is particularly important for very low-, low-, and moderate-income consumers because utility bills make up a greater percentage of these families’ monthly expenditures relative to the average household. According to the U.S. Bureau of Labor Statistics, consumers overall spend 7.1 percent of their income on utilities, fuels and public services. Those earning below \$20,000 a year spend 9.6 percent of their income on utilities, fuels and public services compared to 5.8 percent spent by those with incomes above \$70,000. Another study of the American Council for Energy-Efficient Economy (ACEEE) found that the majority of single-family low-income households experienced higher energy burdens than the average household in the same city. The median U.S. energy burden across all cities in ACEEE’s sample was 3.5 percent while the median low-income household’s energy burden was more than twice as high at 7.2 percent.

Significant barriers exist for very low-, low-, and even moderate-income households to make energy and/or water efficiency improvements that will yield savings. Home energy repairs and improvements may require a large amount of upfront capital, which these populations typically do not have. A study by the Lawrence Berkeley National Laboratory estimated comprehensive energy improvements to be between \$5,000 and \$15,000. Even smaller and simpler steps such as purchasing insulation and weatherization materials may be a burden. Homeowners also may be challenged with understanding their best options for equipment and financing so that they may achieve meaningful savings. Lack of standardization and recognition of the value of improvements in the real estate market also deters some from making upgrades.

Financing choices for energy and water efficiency improvements are varied in terms of interest rates, payment methods, underwriting, and consumer protections. They each carry pluses and minuses based on the circumstances of the equipment and the homeowner and include credit card debt, manufacturer/contractor financing, Property Assessed Clean Energy assessments, utility on-bill financing, home equity loans or lines of credit, energy mortgages, grants and assistance programs, and State loan fund programs. There is no data as to the market size of each of these options as used by different income populations nor how they compare in terms of achieving savings. Also, today there are

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no energy or water efficiency improvement financing products that require that the criteria set forth in the Regulation be met.

An additional challenge in helping to establish and support a market for financing that meets the Regulations' criteria includes the breadth of participants and stakeholders for energy and water efficiency. There are hundreds of equipment manufacturers, utility companies, energy programs, and financing agents. While we cannot reach all, efforts must be made to identify valuable sources of information and to perform robust data collection, research, and analysis. Furthermore, understanding how homeowners and tenants make choices, access resources, and behave needs to be a factor in developing this market.

The Multifamily Affordable Housing Preservation Market

Energy Efficiency Finance

(pp. 78-79)

In the last five years, green building, sustainability, and energy efficiency principles have become increasingly integrated into the multifamily housing sector. A prime driver for developers, owners, operators, and even tenants toward sustainability is cost reduction, rather than natural resource use reduction; yet sustainability principles achieve both. Given the multitude of benefits realized through implementing sustainability measures, even lenders are now offering programs to incentivize investment in green property improvement in the multifamily housing sector.

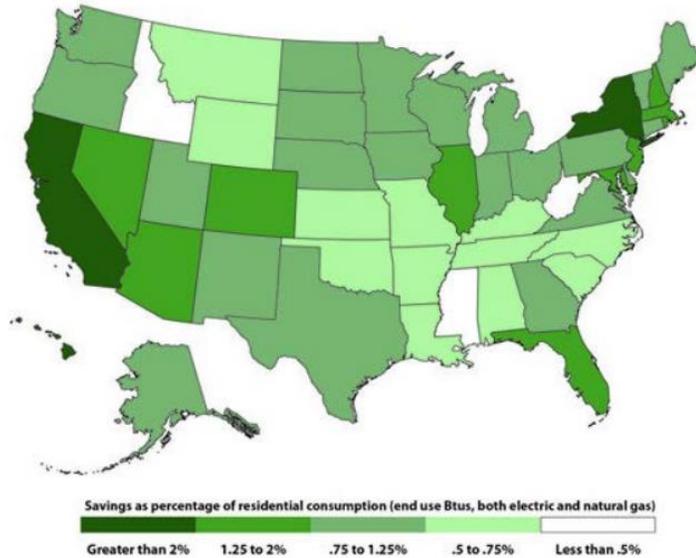
There has been strong market demand for sustainability by all industry players in the multifamily housing sector over the last several years. Developers and owners are looking for ways to save money when it comes to building and maintaining multifamily housing; property managers see sustainability principles as reducing tenant turnover and increasing tenant satisfaction with building temperatures and overall quality; and tenants are attracted to the lower costs in their utility bills while also living in a healthier home.

From a pure business and economic standpoint, green is important because of the money it saves for both property owners and tenants. The implementation of energy- and water-efficient features in a property helps owners save money and can qualify the property for various tax breaks and specialty products. When owners save money, it reduces the pressure to raise rents while it extends the useful life of the property and can play a large part in long term affordable housing preservation.

Most importantly, the biggest significance of green is the positive outcome on the environment. Studies have concluded that green multifamily housing properties can significantly decrease overall energy use. For example, according to a report from the American Council for an Energy-Efficient Economy (ACEEE) and CNT Energy, comprehensive retro fits can effectively improve the efficiency of multifamily buildings by three percent for natural gas and 15 percent for electricity, which in 2010, national average energy prices translates into an annual utility bill cost savings of almost \$3.4 billion for the multifamily sector. Furthermore, buildings that have been certified to a LEED Gold certificate consume 25 percent less energy, 11 percent less water, and have maintenance costs that are 19 percent lower than buildings without the gold certificate. Below is a map highlighting the annual potential savings from green multifamily building in each State.

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**Annual Potential Savings from Multifamily Buildings by State
at 15% electricity and 30% natural gas efficiency improvement**



One of the challenges in green financing is a lack of common standards and a dearth of data. Fannie Mae Multifamily will join forces with Single-Family to conduct outreach and research in order to develop some standards that can help make green financing a staple in the affordable housing preservation toolkit.

Proposed Energy Efficiency Objectives and Scoring

Proposed Multifamily Market Objectives and Actions

(pp. 89-91)

Regulatory Activity: Finance improvements on multifamily properties: (a) which reduce energy or water consumption by tenant or property by at least 15 percent; and (b) where the savings generated over the improvement's expected life will exceed its cost (FHFA Criteria) (12 C.F.R. § 1282.34 (d)(2)).

Objective 1: Conduct outreach and market research through engagements with lenders and cross-functional industry representatives to identify and analyze market challenges, provide information about energy and water efficiency lending products, facilitate the delivery of loans, and maintain a communication feedback loop to facilitate a continuous improvement process.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Host one energy advisory group with cross-functional industry representation.
- Participate in two key industry conferences.
- Engage three industry participants who finance energy or water efficiency improvements to identify potential innovative financing opportunities that would meet the FHFA Criteria.

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- Produce, or update, and distribute educational materials that provide information about Fannie Mae’s HomeStyle Energy and Multifamily Green Financing products, and assist lenders in meeting loan delivery requirements, including:
 - Engaging 15 Fannie Mae lenders.
 - Hosting two lender webinars.

The energy and water efficiency market for residential homes and rental housing is complex with a wide range of participants and products and is continuously evolving with new technologies, standards, and regulations. The options and terms to pay for energy or water efficiency improvements are varied and may be costly. In order to increase liquidity for financing improvements that will meet the FHFA Criteria, Fannie Mae must engage a wide variety of participants to understand and discuss the evolving market and its challenges and opportunities. These collaborative discussions will also assist market participants in better serving their customers. The information gathered under this Objective will be a key contributor to support our work with the industry to gather and analyze data, increase consumer awareness, assess other innovative approaches to provide financing to the target markets, and establish industry standards as well as to support loan product changes to increase access to Fannie Mae financing. Fannie Mae also has identified a need to educate our lending partners further about our product offerings and requirements. Our strategy to engage lenders will also be a key input into changes that will simplify loan requirements and result in increased delivery of our HomeStyle Energy and Green Rewards products. Fannie Mae is active in outreach and market engagement. Existing resources dedicated to market outreach will be leveraged and enhanced to accommodate outreach specific to the energy and water efficiency market. Based on this experience and the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. The ultimate opportunity available in this market is to increase purchases of financial products for energy and water efficiency. Market research and stakeholder input gained from this outreach will be used to create underwriting guidelines, credit standards, and loan purchases that are consistent with notions of safety and soundness.

Objective 2: Conduct research, develop data, and analyze findings to understand the challenges and opportunities in financing energy or water efficiency improvements and distribute findings.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Acquire data and research and, as relevant, prepare one analysis addressing utility expenses, financing of types of energy and water efficiency improvements, and first lien mortgage loan performance related to energy and water efficiency measures.
- Through third party survey entities, conduct primary consumer research to understand consumer sentiment and needs on energy and water efficiency through one survey and/or focus group.
- Create one written analysis of Fannie Mae’s portfolio of loans where borrowers have financed energy and/or water efficiency improvements.
- Publicize one set of key findings to promote industry awareness and inform future research.

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There is no market today for products that finance energy or water improvements that meet the FHFA Criteria. The information gathered under this Objective will be a key contributor to its development and provides the foundation for informing Fannie Mae in establishing related financial products and/or loan product changes. In particular, this research and data analysis is key to developing products and incentives that will drive borrowers to engage and will help us to underwrite energy or water efficiency improvements effectively and to identify methodologies to measure energy and/or water savings that meet the FHFA Criteria as set forth in Objective #5. It also provides support to the target income markets to help them reduce their monthly housing costs by achieving energy and/or water savings, thereby increasing stability in the housing market. Through our strategy to invest in research, data collection and analysis, Fannie Mae will improve the market and our understanding of the needs and opportunities, factors driving energy or water improvements and sensitivities driving each factor, and outcomes for very low-, low-, and moderate-income homeowners and tenants. Fannie Mae has considerable experience with data collection and analysis and consumer research. Fannie Mae will leverage existing expertise and resources dedicated to data analysis and publication efforts, as well as outside expertise as necessary. Based on this expertise, coupled with outreach results, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. The ultimate market opportunity is to increase financing for energy and water efficiency improvements. By gaining a better understanding of the challenges of financing energy or water efficiency improvements and then distributing our findings, we will assist the market and Fannie Mae in financing products in a safe and sound manner.

Objective 3: Work with industry stakeholders to increase consumer and tenant awareness, access to energy or water efficiency savings, and programs that help to finance energy or water improvements, including those that meet the FHFA Criteria.

In Year One of the Plan, Fannie Mae will undertake the following measurable actions:

- For single-family only, work with two counseling agency networks to enhance and incorporate energy and water efficiency education into pre-purchase and post-purchase education.
- Research and produce one catalog of programs to finance energy or water efficiency improvements leveraging:
 - Database of State incentives for Renewables and Efficiency.
 - Engagement with two utilities, two HFA, five State and local administrators (total), and three nonprofit/mission-oriented groups to determine other available programs.
- Develop and maintain one consumer-facing platform for energy and water efficiency, which will include:
 - Online tools, resources and social media with current and relevant information.
 - Education for homeowners, tenants, and multifamily property owners on energy and water efficiency opportunities and ways to save on utilities.
 - Framework to disseminate education and resources to be provided by lenders, housing counselors, non-profit agencies, and/or other organizations, and delivered through one event such as a housing fair.

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Objective 4: Work with industry stakeholders to enhance industry standards on how energy and/or water efficient products are captured in real estate listings, appraisals, and other documents, including ways to identify the FHFA Criteria.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Engage the industry to identify opportunities and challenges in setting standards for valuations, financing commissions, and measuring utility savings from energy and water improvements by:
 - Participating in one industry working group that addresses standardization.
 - Engaging with five related trade organizations, valuation services, rating groups, and appraisal companies (total).
 - Attending one conference or educational seminar.
 - Evaluating the opportunity for, and contributing to as appropriate, a relevant national training program for the financial industry.

In Year One of the Plan, Fannie Mae will undertake the following additional measurable action:

- Research and identify two methods or tools that assist Fannie Mae and the industry in identifying property-level information about energy and water efficiency features.

By taking a prominent role to help establish standards within the industry, Fannie Mae will meet the need for the market to ensure that data and representation of energy and water efficiency improvements and products are adequately reflected in the value of homes and multifamily properties. Fannie Mae will also be able to incorporate related guidance into its Selling and Service Guides. For Fannie Mae's Multifamily Green Financing, this in turn will provide for better loan pricing and better MBS execution.

The ultimate opportunity available in this market is to increase financing for energy and water efficiency improvements, and a component of Fannie Mae's strategy for this Objective is to ensure standards are set. Establishing standards for the industry will contribute to creating and financing products that incorporate notions of safety and soundness. This Objective will leverage output from Objectives #1 and #2, and will inform the development of loan product enhancements as outlined in Objective #5.

Fannie Mae plays an active role within the industry to set standards in many areas, including collateral value, data, and property valuation. Based on this experience, coupled with the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described.

Objective 5: Implement updates to the HomeStyle® Energy mortgage single-family loan product and Multifamily Green Financing products to include projections or expectations that the FHFA Criteria are met, simplify product parameters and loan requirements, and maintain appropriate risk controls.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

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- Create variance terms for one or more changes to Fannie Mae loan products that support the financing of energy or water efficiency improvements.¹
- Create one economic and operational impact analysis to determine feasibility of Fannie Mae's purchase of loans under the variance terms.
- Engage five Fannie Mae lenders to discuss opportunities and challenges to sell variance program loans to Fannie Mae.
- Issue one or more variances to select lenders.

In Year One of the Plan, Fannie Mae will undertake the following additional measurable action:

- Evaluate how to establish standards and guidelines to demonstrate the FHFA Criteria have been met by:
 - Engaging four administrators of major energy rating programs.
 - Researching three energy and water saving calculation methodologies and lists used by State, local, tribal and utility programs.

The information gathered through outreach and analysis will assist in identification of product enhancements for Fannie Mae's HomeStyle Energy and Multifamily Green Financing mortgage loan products that will increase eligibility and simplify loan requirements, resulting in increased liquidity for the financing of energy or water efficiency improvements. Our strategy to employ a test-and-learn approach to enhance Fannie Mae loan products facilitates a continuous learning process that will further the development of loan products that are tailored to best serve the needs of very low-, low-, and moderate-income families, and multifamily property owners serving such families, in financing of energy or water efficiency improvements.

Fannie Mae is active in product development activities, and existing resources dedicated to product development will be leveraged to achieve this Objective. Based on this experience and the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. Changes in credit parameters and product guidelines will be supported by thorough economic, risk and operational analysis and will be subject to Fannie Mae's governance and approval processes, including safety and soundness standards. The ultimate opportunity available in this market is to increase financing for energy and water efficiency improvements that meet the FHFA Criteria.

Objective 6: Purchase loans that have or will finance energy or water efficiency improvements on multifamily properties that meet the FHFA Criteria.

Fannie Mae will undertake the following measurable actions in the three Years of the Plan.

In Year One of the Plan, Fannie Mae will:

¹ The Duty to Serve statute and the Regulations direct the Enterprises to develop loan products and flexible underwriting guidelines to facilitate a secondary market (i.e., provide liquidity to) for the three underserved markets. Fannie Mae's single-family loan products and underwriting standards are contained in its Selling Guide. From time to time, Fannie Mae amends the agreement it has with a lender to allow the delivery of loans that were originated with terms that are different than those in the Selling Guide. These amendments are called "variances." Accordingly, a variance is one of the tools Fannie Mae will use to provide loan products to and flexible underwriting guidelines for the underserved markets.

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- Purchase at least 25 loans that meet FHFA Criteria.
- Baseline: Fannie Mae does not track loans that have or will finance energy or water efficiency improvements based on the FHFA Criteria, so it is unable to establish a Baseline.

In Year Two of the Plan, Fannie Mae will:

- Increase the volume of loan purchases by 25 percent over Year One.

In Year Three of the Plan, Fannie Mae will:

- Increase the volume of loan purchases by 25 percent over Year Two.

Through its Green Initiative, Fannie Mae has purchased \$4 billion in loans since 2013, which have financed various levels of energy and water efficiency improvements. Fannie Mae's Green Rewards product requires that a property owner commit to installing capital improvements that target a 20 percent reduction in energy or water use. Fannie Mae's Green Initiative leads the market with a holistic approach to green housing. Strategic activities undertaken to achieve this Objective will increase liquidity to the Affordable Housing Preservation Market by increasing stability of the housing as a result of owners and tenants benefitting from energy and water cost savings from green upgrades. Fannie Mae has originated green multifamily loans for some time, has knowledge of the market, and has built relationships with market stakeholders. Based on this experience and these partnerships, Fannie Mae has determined this Objective may be achieved within the time periods described. The market opportunity as reflected in the loan purchase estimates is based on market analysis and historical activity. Loan purchases will be made in accordance with applicable underwriting guidelines and risk standards that incorporate notions of safety and soundness.

For all Years of the Plan, this Objective will serve very- low, low- and moderate-income families.

Proposed Single-Family Market Objectives and Actions

(pp. 92-99)

Regulatory Activity: Energy or water efficiency improvements on single-family, first lien properties which: (a) reduce energy or water consumption by the homeowner, tenant, or property by at least 15 percent; and (b) where the savings generated over the improvement's expected life will exceed its cost (FHFA Criteria) (12 C.F.R. § 1282.34 (d) (3)).

Objective 1: Conduct outreach and market research through engagements with lenders and cross-functional industry representatives to identify and analyze market challenges, provide information about energy and water efficiency lending products, facilitate the delivery of loans, and maintain a communication feedback loop to facilitate a continuous improvement process.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Host one energy advisory group with cross-functional industry representation.
- Participate in two key industry conferences.
- Engage three industry participants who finance energy or water efficiency improvements to identify potential innovative financing opportunities that would meet the FHFA Criteria.

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- Produce, or update, and distribute educational materials that provide information about Fannie Mae’s HomeStyle Energy and Multifamily Green Financing products, and assist lenders in meeting loan delivery requirements, including:
 - Engaging 15 Fannie Mae lenders.
 - Hosting two lender webinars.

The energy and water efficiency market for residential homes and rental housing is complex with a wide range of participants and products and is continuously evolving with new technologies, standards, and regulations. The options and terms to pay for energy or water efficiency improvements are varied and may be costly. In order to increase liquidity for financing improvements that will meet the FHFA Criteria, Fannie Mae must engage a wide variety of participants to understand and discuss the evolving market and its challenges and opportunities. These collaborative discussions will also assist market participants in better serving their customers. The information gathered under this Objective will be a key contributor to support our work with the industry to gather and analyze data, increase consumer awareness, assess other innovative approaches to provide financing to the target markets, and establish industry standards as well as to support loan product changes to increase access to Fannie Mae financing. Fannie Mae also has identified a need to educate our lending partners further about our product offerings and requirements. Our strategy to engage lenders will also be a key input into changes that will simplify loan requirements and result in increased delivery of our HomeStyle Energy and Green Rewards products. Fannie Mae is active in outreach and market engagement. Existing resources dedicated to market outreach will be leveraged and enhanced to accommodate outreach specific to the energy and water efficiency market. Based on this experience and the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. The ultimate opportunity available in this market is to increase purchases of financial products for energy and water efficiency. Market research and stakeholder input gained from this outreach will be used to create underwriting guidelines, credit standards, and loan purchases that are consistent with notions of safety and soundness.

Objective 2: Conduct research, develop data, and analyze findings to understand the challenges and opportunities in financing energy or water efficiency improvements and distribute findings.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Acquire data and research and, as relevant, prepare one analysis addressing utility expenses, financing of types of energy and water efficiency improvements, and first lien mortgage loan performance related to energy and water efficiency measures.
- Through third party survey entities, conduct primary consumer research to understand consumer sentiment and needs on energy and water efficiency through one survey and/or focus group.
- Create one written analysis of Fannie Mae’s portfolio of loans where borrowers have financed energy and/or water efficiency improvements.
- Publicize one set of key findings to promote industry awareness and inform future research.

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There is no market today for products that finance energy or water improvements that meet the FHFA Criteria. The information gathered under this Objective will be a key contributor to its development and provides the foundation for informing Fannie Mae in establishing related financial products and/or loan product changes. In particular, this research and data analysis is key to developing products and incentives that will drive borrowers to engage and will help us to underwrite energy or water efficiency improvements effectively and to identify methodologies to measure energy and/or water savings that meet the FHFA Criteria as set forth in Objective #5. It also provides support to the target income markets to help them reduce their monthly housing costs by achieving energy and/or water savings, thereby increasing stability in the housing market. Through our strategy to invest in research, data collection and analysis, Fannie Mae will improve the market and our understanding of the needs and opportunities, factors driving energy or water improvements and sensitivities driving each factor, and outcomes for very low-, low-, and moderate-income homeowners and tenants. Fannie Mae has considerable experience with data collection and analysis and consumer research. Fannie Mae will leverage existing expertise and resources dedicated to data analysis and publication efforts, as well as outside expertise as necessary. Based on this expertise, coupled with outreach results, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. The ultimate market opportunity is to increase financing for energy and water efficiency improvements. By gaining a better understanding of the challenges of financing energy or water efficiency improvements and then distributing our findings, we will assist the market and Fannie Mae in financing products in a safe and sound manner.

Objective 3: Work with industry stakeholders to increase consumer and tenant awareness, access to energy or water efficiency savings, and programs that help to finance energy or water improvements, including those that meet the FHFA Criteria.

In Year One of the Plan, Fannie Mae will undertake the following measurable actions:

- For single-family only, work with two counseling agency networks to enhance and incorporate energy and water efficiency education into pre-purchase and post-purchase education.
- Research and produce one catalog of programs to finance energy or water efficiency improvements leveraging:
 - Database of State incentives for Renewables and Efficiency.
 - Engagement with two utilities, two HFA, five State and local administrators (total), and three nonprofit/mission-oriented groups to determine other available programs.
- Develop and maintain one consumer-facing platform for energy and water efficiency, which will include:
 - Online tools, resources and social media with current and relevant information.
 - Education for homeowners, tenants, and multifamily property owners on energy and water efficiency opportunities and ways to save on utilities.
 - Framework to disseminate education and resources to be provided by lenders, housing counselors, non-profit agencies, and/or other organizations, and delivered through one event such as a housing fair.

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Objective 4: Work with industry stakeholders to enhance standards to capture the value of energy and/or water efficient features in real estate listings and appraisals.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

- Engage the industry to identify opportunities and challenges in setting standards for valuations, financing commissions, and measuring utility savings from energy and water improvements by:
 - Participating in one industry working group that addresses standardization.
 - Engaging with five related trade organizations, valuation services, rating groups, and appraisal companies (total).
 - Attending one conference or educational seminar.
 - Evaluating the opportunity for, and contributing to as appropriate, a relevant national training program for the financial industry.

In Year One of the Plan, Fannie Mae will undertake the following additional measurable action:

- Research and identify two methods or tools that assist Fannie Mae and the industry in identifying property-level information about energy and water efficiency features.

By taking a prominent role to help establish standards within the industry, Fannie Mae will meet the need for the market to ensure that data and representation of energy and water efficiency improvements and products are adequately reflected in the value of homes and multifamily properties. Fannie Mae will also be able to incorporate related guidance into its Selling and Service Guides. For Fannie Mae's Multifamily Green Financing, this in turn will provide for better loan pricing and better MBS execution.

The ultimate opportunity available in this market is to increase financing for energy and water efficiency improvements, and a component of Fannie Mae's strategy for this Objective is to ensure standards are set. Establishing standards for the industry will contribute to creating and financing products that incorporate notions of safety and soundness. This Objective will leverage output from Objectives #1 and #2, and will inform the development of loan product enhancements as outlined in Objective #5.

Fannie Mae plays an active role within the industry to set standards in many areas, including collateral value, data, and property valuation. Based on this experience, coupled with the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described.

Objective 5: Implement updates to the HomeStyle® Energy mortgage single-family loan product and Multifamily Green Financing products to include projections or expectations that the FHFA Criteria are met, simplify product parameters and loan requirements, and maintain appropriate risk controls.

Fannie Mae will undertake the following measurable actions in each of Year One, Year Two, and Year Three of the Plan.

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- Create variance terms for one or more changes to Fannie Mae loan products that support the financing of energy or water efficiency improvements.²
- Create one economic and operational impact analysis to determine feasibility of Fannie Mae's purchase of loans under the variance terms.
- Engage five Fannie Mae lenders to discuss opportunities and challenges to sell variance program loans to Fannie Mae.
- Issue one or more variances to select lenders.

In Year One of the Plan, Fannie Mae will undertake the following additional measurable action:

- Evaluate how to establish standards and guidelines to demonstrate the FHFA Criteria have been met by:
 - Engaging four administrators of major energy rating programs.
 - Researching three energy and water saving calculation methodologies and lists used by State, local, tribal and utility programs.

The information gathered through outreach and analysis will assist in identification of product enhancements for Fannie Mae's HomeStyle Energy and Multifamily Green Financing mortgage loan products that will increase eligibility and simplify loan requirements, resulting in increased liquidity for the financing of energy or water efficiency improvements. Our strategy to employ a test-and-learn approach to enhance Fannie Mae loan products facilitates a continuous learning process that will further the development of loan products that are tailored to best serve the needs of very low-, low-, and moderate-income families, and multifamily property owners serving such families, in financing of energy or water efficiency improvements.

Fannie Mae is active in product development activities, and existing resources dedicated to product development will be leveraged to achieve this Objective. Based on this experience and the available resources, Fannie Mae has determined that this Objective is realistic and may be achieved within the time periods described. Changes in credit parameters and product guidelines will be supported by thorough economic, risk and operational analysis and will be subject to Fannie Mae's governance and approval processes, including safety and soundness standards. The ultimate opportunity available in this market is to increase financing for energy and water efficiency improvements that meet the FHFA Criteria.

Objective 6: Purchase HomeStyle Energy mortgage loans that meet the FHFA Criteria.

Fannie Mae will undertake the following measurable actions in Year Two and Year Three of the Plan.

In Year Two of the Plan, Fannie Mae will:

² The Duty to Serve statute and the Regulations direct the Enterprises to develop loan products and flexible underwriting guidelines to facilitate a secondary market (i.e., provide liquidity to) for the three underserved markets. Fannie Mae's single-family loan products and underwriting standards are contained in its Selling Guide. From time to time, Fannie Mae amends the agreement it has with a lender to allow the delivery of loans that were originated with terms that are different than those in the Selling Guide. These amendments are called "variances." Accordingly, a variance is one of the tools Fannie Mae will use to provide loan products to and flexible underwriting guidelines for the underserved markets.

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- Purchase between 50 and 100 HomeStyle Energy loans that meet the FHFA Criteria.

In Year Three of the Plan, Fannie Mae will:

- Purchase between 100 and 200 HomeStyle Energy loans that meet the FHFA Criteria.

Purchasing HomeStyle Energy loans provides direct liquidity to the market. For the financing of energy or water efficiency improvements, a Fannie Mae mortgage loan offers homeowners low interest rates and the opportunity to amortize costs over a long period, which allows for lower payments than through other financing means. Furthermore, a mortgage product is subject to standards that provide consumer protections and underwriting criteria that assess a borrower's ability to repay the debt.

Fannie Mae has the systems, operations, and resource tools needed to facilitate efficient loan delivery in a safe and sound manner. In addition, underwriting standards and credit guidelines that are simplified and consistent with safety and soundness will continue to be applied to improve acquisition of this product.

Proposed Objectives and Actions for Certain Distressed Properties (pp. 112-113)

Regulatory Activity: Purchase or rehabilitation of certain distressed properties (12 C.F.R. § 1282.34 (d) (7)).

Objective 4: Develop and execute strategies to support aging in place through loan products that help older adults preserve housing that is both physically accessible and affordable.

Fannie Mae will undertake the following measurable actions in the three Years of the Plan.

In Year One of the Plan, Fannie Mae will:

- Research and document seven barriers to aging in place related to household characteristics, housing status, location, and other factors:
 - Engage two national organizations focused on the elderly.
 - Engage two academics focused on the elderly.
 - Engage five Fannie Mae lenders.
- Assess the appropriateness of five existing single-family and multifamily rehabilitation lending products (total) to meet accessibility as well as energy and water efficiency needs, and document findings.
- Investigate the feasibility of two financing incentives to increase access to broadband telecom services and incorporate universal design features in significantly rehabilitated housing, and document findings.

In Year Two of the Plan, Fannie Mae will:

- Publicize one analysis of findings and recommendations resulting from Year One activities.
- Convene one cross-sector meeting of stakeholders from the real estate, finance, and aging services industries, among others, to discuss findings.

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- Conduct outreach to 10 industry participants to share best practices, promising tools, and resources and services, engaging sectors adjacent to housing that serve seniors to support aging in place as appropriate.
- Implement one pilot to test incentives to expand access to broadband and incorporate universal design features in substantial rehabilitation.

In Year Three of the Plan, Fannie Mae will:

- Monitor and assess the impact of the pilot(s) and document determination to refine or expand.
- Publicize one analysis reflecting learnings to accelerate adoption of most effective strategies.

The market opportunity for housing services for the elderly is driven by the unprecedented increase of the population that is projected over the next 20 years. By 2035, one in three U.S. households will be headed by a person aged 65 or older, and the population will go from one in nine to one in seven people 65 or older. Rural America is disproportionately older than the nation as a whole. Currently, more than 25 percent of America's seniors live in rural areas. The number of people 80 or older will double by 2035. This group is lower income, more likely to be disabled and has less access to support from family or friends. The vast majority of older people will age in place, whether by choice or necessity. Most older persons prefer to age in place. But for those unable to do so, or who prefer dedicated senior living, the options are costly and in short supply. Only one percent of the existing housing stock includes five key universal design elements – no-step entrance, single-floor living, wide doors and hallways, lever faucets and door handles and wheel chair height electrical and appliance controls. Aging in place requires products and programs to assist with making energy efficiency improvements to reduce costs and removing physical barriers to mobility, self-care and household activity limitations. Through a combination of Fannie Mae's experience in financing the development of seniors housing, our expertise in construction financing, and our experience in financing energy efficient improvements to homes, we are uniquely positioned to develop solutions to the housing challenges faced by the elderly population, and to do so within the parameters of safety and soundness. Based on this data, and our expertise and experience, we have determined that this Objective may be achieved within the time periods described.