Memo on Freddie Mac's Underserved Markets Plan

Date: July 10, 2017
To: Federal Housing Finance Agency (FHFA)
From: Rocky Mountain Institute (RMI)

Rocky Mountain Institute appreciates the opportunity to provide comments and recommendations to FHFA on the Underserved Market plans developed by Federal Home Loan Mortgage Corporation (Freddie Mac). Our comments are specifically focused on lending and underwriting interventions that promote energy efficiency for Affordable Markets Preservation, as we believe energy costs are a significant part of the total cost of home ownership and a material risk to lenders. Per the 2010 U.S. census, the average homeowner spends $2,506 per year on energy costs—an amount higher than either property tax or insurance. The average low-income household spends 16 percent of its annual income on home energy costs—more than four times the level that all households, on average, devote to home energy bills. These costs create a real burden for homeowners and present a growing risk to lenders if left unaddressed. We believe financing solutions that support transparency about energy costs, and support improvement in the energy performance of our housing stock will enable market transformation and mitigate material risks for the industry. We see Duty to Serve as an incredible opportunity for GSEs (Government Sponsored Entities) to work towards incorporating energy transparency within underwriting to preserve the affordability of our housing sector. We would like to take the public comment opportunity to advise Freddie Mac on ways to further their impact in the sector.

CENTRAL TENETS OF OUR COMMENTS

RMI lauds Freddie Mac's intention of driving meaningful change in the marketplace by serving and ensuring preservation of the affordable housing markets under the FHFA Duty to Serve rule. We also appreciate the detailed proposal that Freddie Mac has developed under Activity 7 and 6 to drive energy and water efficiency improvements in single-family and multifamily properties (based on FHFA Criteria 12 C.F.R. § 1282.34 (d) (3) and (2) respectively) within the Affordable Housing Preservation section of the underserved markets plan. However, there are objectives within these activities that warrant major revisions and in some cases, more detail to be effective. The central tenets of our comments are: 1) to focus on clearer and more ambitious goals for the proposed activities; and 2) that this can be accomplished by building upon the extensive work on these topics which is already underway in the industry.

OUR COMMITMENT

In closing, we would like to extend our technical and domain expertise to support FHFA and Freddie Mac to advance their mission and achieve success under the Duty to Serve, especially as it relates to incorporating energy efficiency into loan products, and underwriting procedures. We welcome the opportunity to directly engage with Freddie Mac on specific research projects and offer to host and convene diverse actors to design optimal market solutions for their proposed pilot projects. Please contact Radhika Lalit (rlalit@rmi.org), if you would like to discuss the contents of our comments or our offer to support your efforts further.

Sincerely,

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Comments on Freddie Mac's Underserved Markets Plan

Below are some specific comments from Rocky Mountain Institute (RMI) regarding the draft underserved market plans developed by Freddie Mac. Our comments primarily address objectives listed under the Activity 7 of the Affordable Housing Preservation section of the plans with the intent to advise Freddie Mac on ways to further their impact and reach within the single-family affordable housing market. We have also made specific comments on Activity 6 and Activity 1, which further support the primary objectives outlined under Activity 7.

Comments are divided into three sections. The first section covers the top priority changes we recommend. These have the most significant impact on fulfilling the goals of the plan and are critical to the success of Duty to Serve. The second section provides additional comments for suggested changes to the plan. The recommended changes in this section are also highly recommended and should not be considered "low priority" for not being included in the "top priority" section. Finally, in the last section, we seek to clarify our intent, provide ideas, guidance, and additional implementation considerations to support the successful implementation of these plans. The suggestions in the last section are not intended for actual changes to the plan itself but are meant to guide Freddie Mac throughout their implementation process.

1. TOP PRIORITY COMMENTS

Comment 1

Activity 7; Objective B – Develop Valuation Data Collection Guidelines That Factor In Energy-efficient Property Features
Overall Comment: This is a high-impact objective which puts forth an important step for correcting a current market failure that does not account for home performance and utility costs. Freddie Mac can include more concrete, actionable steps to lead the industry in solving this problem.
RMI Recommendation: Specify additional interventions within the objective: For this comment, we do not recommend replacing any text, but rather adding additional text as an additional set of bulleted actions.
Suggested additional text: ● In Year Two, Freddie Mac will: o Expand the Uniform Appraisal Dataset (UAD), in consultation with Fannie Mae, by including relevant energy efficiency data into UAD for both underwriting and research purposes. ● In Year Three, Freddie Mac will: o Require lenders to obtain energy performance information from appraisers as part of the standard appraisal process for all new and existing loan products for LMI households in accordance with the guide bulletin update and appraisal form redesign. o Develop or fund the development of an automated tool that standardizes, auto-

	populates energy and water performance information into home appraisals, and automatically calculates the revised home value using the income/cost appraisal approach.

Additional Notes:

The current plan fails to address the biggest market barrier to valuing home performance and the true cost of home ownership, which includes utility costs. These suggestions are within Freddie Mac's purview, support its mandate to create safe and sound markets, and the industry has already done a great deal to prepare for this step.

"Energy-efficient Property Features" may imply to some people specific products or technologies installed on the property, such as insulation or high efficiency windows and furnaces. The concept of energy-efficient property features should not be limited to these types of features however. It should include the overall energy performance of the house. Overall home performance is the most important indicator of the efficiency of a home, even more than individual products or technologies.

While the suggested language change specifies gathering energy performance information for LMI households, as per the purview of the Duty to Serve rule, it may be simpler to institute this measure for all households to avoid cumbersome differences between LMI and non-LMI procedures.

Comment 2

Activity 7; Objective C – Product Flexibilities to Support Energy Efficiency

Overall Comment:
Freddie Mac should not only introduce product flexibilities but also engage with lenders to set targets around their adoption. Further, by the end of the third year, Freddie Mac should mainstream the lessons learnt from piloting product flexibilities into their line of Home Possible Mortgages and set targets to fuel their adoption in the marketplace.

RMI Recommendation: Replace the following text:

Year One:

• Issue updated energy efficiency product flexibilities through at least one Guide bulletin update.

• Conduct lender training and marketing campaigns to:

– 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.

Year Two:

• 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.

Suggested replacement text:

Year One:

• Issue updated energy efficiency product flexibilities through at least one Guide bulletin update.

• Engage with lenders to pilot the energy efficiency product flexibilities, set targets, and provide incentives to drive adoption of these flexibilities in different markets, and report-out the findings in the annual update to Duty to Serve. Targets should aim to expand the number of LMI households served in the pilot markets by at least 5% annually.

• Conduct lender training and marketing campaigns to:

– 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.

Track and report out metrics on the number of lenders/homeowners reached and homeowners converted through these campaigns at the end of the year.

Year Two:

• Develop additional first-lien product flexibilities, incentives, and parameters to finance energy efficient homes or energy efficiency retrofits along with a comparison with results from last year. Freddie Mac's objective is to issue a Seller/Servicer Guide Bulletin update or, at least, one negotiated term of business.
• Track and report out metrics on the number of homeowners reached and converted through the pilots at the end of the year.
•Document key findings and recommendations from the last two years of product flexibilities piloted and share them with the energy advisory group and FHFA for their review and feedback.

Year Three:

• Incorporate select features from product flexibilities into the Home Possible Mortgages line of products.

Additional Notes:

Freddie Mac should incentivize adoption of the product flexibilities programs by offering competitive interest rates, and automate and update mortgage values to reflect energy costs in pricing—possibly by modifying the debt-to-income (DTI) ratio or Loan-to-value (LTV) ratio. Ultimately, it should aim to ensure automation of energy data to the Loan Prospector (LP). This energy data automation in underwriting is likely to incentivize adoption and scale the impact. Freddie Mac should engage in pilots in existing state and local programs with lenders that have both infrastructure and resources to implement the flexibilities. Moreover, since Freddie Mac does not make a mention of any pilots/product flexibilities in the year 3, it should showcase commitment by incorporating insights from these pilots into Freddie Mac's existing and new product portfolio to promote standardization and automation of energy data, and ultimately scale better home performance and lower risks across its loan portfolio.

Freddie Mac should also look to leverage the opportunity that Duty to Serve is providing them to further their leadership in designing futuristic lines of products for ZNE (Zero Net Energy) affordable homes.

For possible small-scale limited pilots to obtain market-based results, Freddie Mac could consider building in additional features within their Home Possible Mortgage, by:

- Offering eligible borrowers, the option to obtain up to a set amount of additional proceeds (e.g., up to x% of their property value) at the time of a conventional purchase or refinance, to use only for making certain specified energy or water repairs and improvements, such as weatherization, air sealing, duct sealing, insulation, etc. This could be achieved through the following financing models:
    - A first-lien loan that allows a borrower to receive an additional advance up to an amount that would be added to the loan balance secured by the existing instrument.
    - Reserve funds at origination that may be used within a certain defined period for eligible energy efficiency repairs and improvements, and to defer financing charges on the reserved funds until a draw.
    - Treat a subsequent financing to an existing first-lien borrower as a first-lien financing for purposes of DTS (Duty to Serve) credit. There may be a reasonable basis to conclude that additional financing supported by Freddie Mac for replacing an essential system in the property should be treated as eligible first-lien financing for purposes of DTS credit.
- Implement this program in conjunction with a utility program that uses the Home Energy Score/Home Energy Rating System or partner with a local State Energy Office residential energy efficiency financing program and define specific “eligible measures” or home performance within the program.
- Offer incentives, discounts, and/or rewards in the form of lower re-financing charges to borrowers who have made certain limited energy and water related improvements to their property (such as weatherization, air sealing, duct sealing, insulation, and the like).
- Bear or share the cost of an energy assessment, such as the Home Energy Score/Home Energy Rating System, and a smart energy meter at the time of home inspection.
- Allow customers making repairs and improvements identified in an energy audit to count some amount of expected savings as “income” for purposes of fulfilling eligibility requirements.

We strongly encourage Freddie Mac to devote their product development expertise and resources to test ideas, incentives, and flexibilities that could scale in the market. We recognize that challenging business-as-usual would present significant challenges to conventional origination and securitization machinery, but nonetheless we feel the potential benefits merit attention to exploring these possibilities.

Comment 3

Activity 7; No Targets to Purchase Loans
Overall Comment: There is no mention of loan purchase targets for Home Possible Mortgages in the plans. Targets which reflect Freddie Mac's ambition and resolve to serve the underserved markets should be set forth in these plans to bring about meaningful impact. The targets should be defined as a percentage of Freddie Mac's total loan portfolio to drive impact and provide perspective around the issue. Further, the loan purchase program must begin within the second year of program implementation once the loan purchase tracking capabilities and supporting infrastructure are in place.
RMI Recommendation: Specify additional interventions within the objective: We propose adding another Objective within Activity 7 which sets forth clear targets for Freddie Mac over the next three years.
Suggested additional text: Objective #E: Set Targets to Purchase Home Possible Mortgages In Year Two of the Plan, Freddie Mac will ensure that at least 5 percent of purchased loans, eligible under the Duty to Serve rule, are Home Possible Mortgages or equivalent new loan product that meet and/or exceed the FHFA Criteria (12 C.F.R. § 1282.34 (d) (3)). In Year Three of the Plan, Freddie Mac will ensure that at least 7 percent of purchased loans, eligible under the Duty to Serve rule, are Home Possible Mortgages or equivalent new loan product that meet and/or exceed the FHFA Criteria (12 C.F.R. § 1282.34 (d) (3)).
Additional Notes: If the targets set forth are not ambitious, it will not inspire the market actors or lenders to take any action in this regards.

2. ADDITIONAL COMMENTS

Comment 4

Activity 7; Objectives A – Quantify outreach outcomes and enhance market research
Overall Comment: Several initiatives outlined within Objectives A are not quantified around impact metrics. There is a need for Freddie Mac to develop ambitious metrics and targets around its outreach initiatives to be able to maximize its impact under the Duty to Serve. Further, it could enhance its research objectives by partnering with research institutes to leverage their market intelligence and insights to design financing tools which match the needs of the affordable housing market. Freddie Mac should use these research findings towards building a product portfolio for the future.
RMI Recommendation: Replace the following text in Objective A **Year One:** 1. Conduct research on the impact of energy efficiency features on property values and loan performance, which will lay the groundwork for loan product development. 2. Additionally, Freddie Mac intends to conduct periodic trending analysis and to use the results of our research to adjust our product offerings. 3. Use research findings to: a. Inform future product design or issue product flexibilities; and, b. Test potential product offerings through at least one pilot.
Suggested replacement text: **Year One:** 1. Conduct research in partnership with research organization(s) to study: a. Impact of energy efficiency features on property values and loan performance, which will lay the groundwork for loan product development. b. Consumer motivations which trigger home performance improvements and develop different financing tools and processes around the triggers for tapping into the market. 2. Additionally, Freddie Mac intends to conduct and report-out the periodic trending analysis. Freddie Mac will also use the results of this research to adjust its present and future energy-efficiency financing mortgage offerings. 3. Use research findings to: a. Inform future product design, issue product flexibilities, and test different business models b. Define market opportunity and develop strategic plans to capture the market of

energy/water efficiency improvements in U.S. Households b. Test potential product offerings through multiple pilot projects
Additional Notes: Internally, Freddie Mac should also track, benchmark, and report-out on the number of lenders and LMI homeowners reached and influenced through pilot programs. Without appropriate monitoring and benchmarking metrics, these initiatives are unlikely to be effective.

Comment 5

Activity 1; Objective A, B, and C – Partner with Programs seeking to expand the volume of LIHTC rehabilitation projects by deploying deep energy retrofits in affordable housing at scale
Overall Comment: Energy efficiency savings can be captured and monetized to increase financeable low-income housing tax credit projects. Programs that support such efforts help decrease project financing gaps expanding the pipeline of implemented projects. Working with such programs will support Freddie Mac in reaching its goals to increase purchases of mortgages secured by LIHTC funds. In working with such programs, there will also be an opportunity to think holistically about streamlining the financing process while also innovating solutions to close capital gaps— further expanding the project pipeline and therefore volume of the market.
RMI Recommendation: Specify additional interventions within the objectives: We recommend adding an additional point around partnering with existing programs to Objectives A, B, and C respectively
Suggested additional text: Freddie Mac will: • Work with existing programs and partner with institutions seeking to expand the volume of LIHTC rehabilitation projects by deploying deep energy retrofits in affordable housing at scale, in order to increase volume of LIHTC secured mortgages while supporting the energy and water savings objectives of the plan.
Additional Notes:

Comment 6

Activity 6; Objective A – Publish annual study on energy/water efficiency measures
Overall Comment: Publishing an annual report analyzing the energy/water efficiency measures under the Green Advantage program is a good start, especially since the program appears to be seeing some success. However, it is important for Freddie Mac to research, document, and share the best practices and key insights from the successes and failures of the program and address issues around standardization of green building valuation, automation of energy use in underwriting, and

designing better practices for faster approval for multifamily residences. The recommendations from both the proposed studies should feed into their program either in the form of flexibilities or modifications to the program itself.
RMI Recommendation: Specify additional interventions within the objective: We recommend adding additional text within this objective to include other meaningful activities within the scope of this objective.
Suggested additional text: Year One: • Partner with industry organization(s) to researching and documenting the best practices in energy efficiency financing for multifamily residences within affordable housing preservation. Share key insights from the research with lenders and other industry stakeholders. Design a communication plan to disseminate the findings and report-out on the impact metrics to quantify outreach Year Three: • Incorporate best practices and recommendations from the research studies conducted in the last two years into Freddie Mac's new and existing loan product portfolio for multifamily housing. Report-out changes and impact numbers for evaluation.
Additional Notes:

3. ADDITIONAL SUGGESTIONS AND IMPLEMENTATION CONSIDERATIONS

Below are some additional suggestions and implementation consideration for Freddie Mac as it looks to implement its underserved markets plan. We would like to share the concern that without paying heed to these basic implementation considerations, Freddie Mac runs the risk of not meeting the defined overarching stated purposes and goals set forth by the FHFA per the Criteria 12 C.F.R. § 1282.34 (d) (3).

Financial stability of many moderate income and first-time home buyers is significantly affected by the energy costs of their homes. Therefore, the ultimate goal of the Duty to Serve action plan should be to standardize and incorporate the energy costs within all existing and future product lines and underwriting platforms for home mortgages. This effort would require extensive outreach and stakeholder engagement, consumer education, lender training, product development, and regulatory approval from FHFA. The need of the hour is to build an inclusive, consumer-focused lending platform with the support of lenders, counselors, realtors, builders, remodelers, local utilities, and governments to achieve the ambitious goals set forth in the Duty to Serve. RMI would like to take this opportunity to share some of the key implementation considerations as Freddie Mac begins to roll-out these plans in 2018:

A. Utilize pilots and lender variances to test new products and practices

The Opportunity: Early stage pilots can inform Freddie Mac's understanding of the market and consumer dynamics about including energy efficiency and renewable energy features in underwriting. However, stakeholder engagement is key to the success of Freddie Mac's objectives. Listed below are select market actors and stakeholders that could help seize the market opportunity:

1. **Coordinate with lenders and home valuation professionals:** Provide lender flexibilities that utilize the new residential high performance home appraisal guidance to better reflect the added value. Engage and set-up pilots in key markets, where energy efficiency demand is high such as CO, NY, OR, VT, TX, WA, etc. to test the market for potential success stories and possible barriers to adoption.
2. **Partner with Earth Advantage, Umpqua bank, and Heritage Bank for a pilot in Portland, Oregon**: Portland, Oregon is uniquely positioned to be a great pilot location for Freddie Mac, given its existing infrastructure and its recent policy ordinance on home energy performance disclosure. Work with environmental organizations (such as Earth Advantage and RMI) and others in the Greater Portland market to demonstrate the utility of Home Energy score/Home Energy Rating System to evaluate the energy performance of existing homes to ensure that FHFA's energy performance criteria is being met.
3. **Partner with Build-it-Green for a pilot in California:** Build-it-Green has a large grant to create energy efficient homes for low and moderate income borrowers in distressed markets in California. Freddie Mac could partner with them for a pilot project.
4. **Retrofit REO/Distressed Properties:** Partnering with existing programs which are seeking to expand the volume of LIHTC rehabilitation projects by deploying deep energy retrofits in affordable housing at scale, will not only support improved quality of life for the future occupants of those buildings but will support the fiscal health of those families.
5. **Work with Appraisal Institute and Appraisal Foundation to standardize energy data for valuation:** Freddie Mac should engage a wider set of stakeholders to standardize energy data inputs and take leadership in providing guidance to appraisers and lenders alike on adopting simple and automated methods to require incorporation of energy data in valuation.
6. **Partner with Green Banks and Green Lenders:** Michigan, Connecticut, and New York State have functioning green banks and specialized green lenders offering single family and multifamily programs that could be leveraged to promote Freddie Mac green financing products.

7. **Work with counseling agencies:** Engage select large HUD-approved national housing counseling agencies that have green housing expertise in select states. Work with these agencies to advise LMI consumers on the best mortgages options available to them for energy retrofits in their area.
8. **Build pilots in partnership from local utility, government programs, research institutes, etc:** There is substantial program experience to draw upon while designing pilot ideas. The programs listed below have assisted thousands of low to moderate income homeowners with improvements that deliver substantial energy savings. The program results of all these programs are highly instructive. These existing programs might also serve as potential partners with controls and systems in place which can help with the implementation of a small-scale test. We encourage Freddie Mac to work with entities administering programs like these programs to test their variances.
    - In Massachusetts, the MassSaves program has organized a network of local and regional lenders to finance such transactions, in cooperation with local and regional utilities, which can act as loan servicers, collecting the loan payments on the utility bill.
    - In New York, NYSERDA offers homeowners a small loan for such repairs and improvements, also in conjunction with local utilities to act as loan servicers.
    - In the southeast US, the Tennessee Valley Authority (TVA) offered a program that arranged and guaranteed a small loan from a regional lender to customers of rural electric co-ops for the installation of high efficiency heat pumps.
    - New Jersey Natural Gas's SAVEGREEN Project® offers rebates and incentives to residential customers who install qualifying, high-efficiency equipment, and up to $15,000 in financing is available, including a 0% APR on-bill repayment program option to help make energy efficiency upgrades more affordable.
    - The Connecticut Green Bank is a leader in developing programs and policies that promote fiscally sound investments in energy efficiency and renewables.
    - The Nebraska Energy Office's Dollar and Energy Savings Loan Program uses a loan participation approach to offer low-interest energy efficiency financing in partnership with local lenders and credit unions; since the program's establishment in 1990, the program has made over $320 million in loans.
9. **Work with builders:** The *Leading Builders of America* has members that are building new energy efficient homes in affordable markets such as Houston, Columbus, Atlanta, etc. Freddie Mac could work with the association of builders to conduct training and promote their offering.
10. **Work with remodelers:** Certain cities are experiencing are experiencing waves of renovation activity. Choose those cities that are affordable in this group such as Baltimore, Cleveland, Pittsburgh, parts of Chicago, etc. Freddie Mac could leverage the NAHB (National Association of Home Builders) member network in these cities and work with contractors and remodelers in these cities.
11. **Work with research institutes:** High performance homes are generally linked to better design and greater energy efficiency. Work with research institutes which are knowledgeable about these areas. Research organizations such as RMI and NREL, might be able to provide Freddie Mac with some credible business insights and research expertise.

Note: Even though DTS credit will only be provided for supporting financing to the eligible LMI borrowers, the Enterprises' Plans should describe products and tests that reach a broader set of borrowers and prospective borrowers, not limited to the eligible borrowers. In other words, the process of designing and testing flexibilities should not be subject to the eligibility constraints within Duty to Serve rule. These flexibilities should have a market that goes beyond just the Duty to Serve eligible borrowers.

B. Work with partners to build an inclusive, consumer-centric product suite

The Opportunity: Given the variability in the effort and process of financing minor energy efficiency improvements versus a larger home renovation, and the necessity to tie it to a more seamless and efficient overall transaction, there is a need to innovate and develop new products to drive greater consumer demand. The product suite should recognize the type of mortgage events most relevant to consumers—from refinancing to purchase—along the following lines:

- **Purchase money:** Develop a consumer-friendly mortgage that provides access to an additional 5—10% of escrowed funds for energy efficiency. In this model, the consumer would have a fixed period to make the improvements after closing. This avoids adding complexity to first time buyers already challenging purchase and financing process, and lets them make needed improvements once in the home and at a manageable pace. It also helps change the narrative with Realtors, who generally advise against any improvements that slow down the buying or selling process, allowing them to use this as a marketing incentive for older homes that need such improvements.
- **Cash-out refinance:** Create a simple cash-out refinance version of Home Possible Mortgages that provides a 10% cash-out for energy efficiency improvements along with an interest discount. This opportunity can be offered to existing homeowners at time of application.
- **Incentivize and promote Home Possible:** Home Possible mortgages have seen limited adoption in the market. It is important for Freddie Mac to extensively promote the product line through its lender network, by providing discounts and incentives as well as by redesigning the underwriting process to make it quick, simple, and intuitive to both the lender and the homeowner. There is also a need to identify the most common trigger points for retrofits, and leverage the expertise of market actors to promote the product line at these consumer touchpoints.
- **Construction-to-permanent loans:** For homeowners looking to undertake a major overhaul of their homes, such a product might be useful. Freddie Mac should design a product line which incentives deep energy retrofits and upgrades during the renovation process.
- **New zero energy home products:** Considering how technology in the residential energy performance space is evolving with homeowners demanding smarter zero energy homes with solar rooftops and storage, Freddie Mac should consider these trends as opportunities to develop new products for net zero energy retrofits in coordination with builders, solar manufacturers, and others.

Within these products, Freddie Mac should look to include opportunities for both solar generation and energy efficiency. Both factors contribute to the overall performance and resilience of a home, and depending on the location, adding solar generation might be more cost-effective than some efficiency measures. These products should support a variety of approaches to better home energy performance, and not just efficiency.

C. Sponsor data access and standardization

The Opportunity. The industry has developed several high-quality energy rating systems, data capture mechanisms in real estate and appraisal forms, and other high quality data sources. However, considerable work and leadership from the GSE's is necessary to integrate this data with the underwriting process.

- **Convene major data providers:** Invite the active home energy data providers that have been cited in the regulation to discuss how to incorporate this data into the underwriting process and understand the number of criteria that must be met for market adoption. These include real time availability, standardized inputs into underwriting forms, auto population of these forms, quality control, etc.
- **Sponsor an industry data platform:** Utilize Freddie Mac's industry leadership to bring these data providers together with a major third-party data aggregator to meet the above criteria. This platform should be self-funding, well governed, provide quality control and other services.

- **Expand the uniform appraisal dataset:** Include relevant energy efficiency data into UAD for both underwriting and research purposes. A good start would be utilizing the fields from the Green Multiple Listing Service, which the realtor, appraisal and building industry has developed.
- **Auto populate appraisal fields:** Utilize UAD data to populate the appraisal fields in Freddie Mac's uniform residential appraisal report. This would correct a current deficiency in underwriting, where all homes are assumed to operate and cost similarly.

D. Undertake Consumer Research in Tandem with Pilots

The Opportunity: Numerous studies have been undertaken over the last few years that demonstrate the demand and value of more energy efficient homes. However, the demand by consumers to include energy efficiency in their mortgage transaction has not met expectations. This could be a function of many factors; lack of information, concern about realizing projected savings, flawed mortgage products, lender apathy, etc. The exists an urgent need to pursue this research as well as test ideas in the marketplace. Some ideas on consumer research that could provide Freddie Mac additional insight for designing better energy efficiency financing products are as follows:

- **Understand the role of energy costs:** Utility costs is the second major cost after PITI (Principal, Interest, Taxes, and Insurance) for a borrower. This cost is particularly important for first-time moderate-income borrowers, who experience a higher proportion of their monthly income going towards utility bills and frequently buy older and less-efficient homes. Anecdotal data from loan modifications sharply illustrates this issue at the same time budget data shows such costs as major strain on borrower finances. An analysis of this loan modification data or partnering with a utility company to develop a study would be a valuable contribution to underwriting knowledge.
- **Understand and educate first-time homeowners:** Several studies have demonstrated that consumers rate energy efficiency as a major decision criteria in their home purchase. However, this hasn't yet translated into the consumer's actual decision to do so when buying an existing home. A survey of these borrowers might be useful to understand their concerns, knowledge level, potential barriers, ability to evaluate, etc. At the same time, Freddie Mac should ensure that they take every opportunity to educate first-time homeowner to develop sensitivities around energy costs and develop pilot variances to test the market reaction to their new variances and incentives.
- **Understand the needs of existing homeowners, educate them, and pilot products with them:** Most homeowners who have lived in their homes for years, understand the burden of higher monthly energy costs. Commissioning a third-party to survey homeowners in affordable markets to understand their needs, decision making process, and financing concerns is an important step towards gaining market insight. At the same time, Freddie Mac should look to educate prospective and existing homeowners and test pilot variances with varying degree of incentives and requirements to see consumer reactions to their offerings.
- **Provide consumer counseling:** Several large national homeowner counseling agencies offer some training on energy and other operating costs of a home. Freddie Mac should leverage the expertise of these agencies to help the consumer make and finance these improvements.