

Home Purchase Counseling: The Untapped Green Financing Tool

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Abstract This paper introduces home purchase counseling as a supplement to or substitute for current green residential finance products by proposing an experimental demonstration. By integrating energy conservation and efficiency education in homebuyers' financial decision making, counseling indirectly addresses the exclusion of energy costs in home finance, while directly confronting the lack of homebuyer knowledge regarding their potential energy costs and available formal finance products. As a description of the demonstration project currently under development, this paper does not provide new data or findings; rather, it explores the respective bodies of literature on the performance of green financial products, the economic behaviors of consumers regarding energy use, and home counseling outcomes to design the demonstration and its evaluation.

Introduction

Two overarching but interrelated goals confront our public- and private-sector housing policymakers; the first and more ominous problem relates to developing a new—and probably more fiscally conservative—housing finance system in the wake of the recent housing recession. Among the findings within the January 27th US Financial Crisis Inquiry Commission's report, for example, homebuyers and homeowners “borrowing to the hilt” while not understanding the terms of their mortgages or home-related loans lead to the increased risk of imprudent financial decisions (NCCFEC 2011). While households were not solely singled out by the Commission,

their behaviors and vulnerabilities will certainly be central to any reform of housing finance markets. This theory has been supported most recently by the White House's February 11, 2011 report on housing finance reform; which supports ongoing federal intervention for "qualified" homebuyers while redefining the terms of that qualification more conservatively.

The second seemingly conflicting goal involves developing more flexible financial products that can accommodate housing quality characteristics, like energy-efficiency. Advocates for linking real estate finance and green building have studied a variety of mechanisms in the pursuit of improving the state of practice: financial, technological, programmatic, behavioral, and public policy, to name a few. Of particular interest is the area of financing models and other mechanisms to ease the upfront costs for making energy-efficiency improvements in existing single-family residential buildings or increase the attractiveness of investments in energy efficiency for new homes.

Of the products that are currently available to most homebuyers and homeowners (like traditional mortgages, home equity loans, personal loans for home improvement, or retail loans or credit card), there is little to no information regarding their use for energy-efficient ends. The verdict on products that were created explicitly with improved energy performance in mind (like energy-efficient mortgages, property-assessed clean energy (PACE) financing, and "on bill" utility financing) is still out; the overall limitations on the current credit market have complicated analysis of products that were already underutilized. Recent efforts by the US Department of Housing and Urban Development to pilot effective and efficient energy-efficient single-family housing finance products—specifically, the "Energy Efficient Mortgage Innovation" pilot required in the Department's 2010 appropriations—have provided interim opportunities to pursue both alternative products and studies of them.

Throughout the development of these products, however, little to no attention has been paid to developing non-product strategies for shaping consumers' financial decision-making. As constraints on new products increase, alternatives that will either increase the demand for them or satisfy the same objectives may be viable.

This paper presents the conceptual framework and methodology for a proposed pilot project of one such alternative: the incorporation of an energy-efficient training module within existing counseling agencies in pre-purchase training programs and post-purchase training, and an analysis of subsequent home owner decision and behavioral choices. In addition to the details for conducting the pilot itself, the paper describes the literature and current practices for green residential financing products, consumer awareness and financial decision-making, and the performance of housing counseling in general to form a foundation for the project.

Green Home Finance

One well-noted barrier to the financing of energy-efficient improvements in the existing, market-rate housing stock has been the inability of homeowners to value the savings in utilities and maintenance and the increases in occupant comfort when compared to the costs of the physical work—even when the savings outweigh the costs within reasonable payback periods. Yet, studies on the performance or demand for these products have been limited, when they exist at all.

Existing financing methods for residential energy-efficiency have all had mixed results because of this constraint. Subsidies (like DOE's Weatherization Assistance Program), utility or retail

rebates, and income tax credits have been surprisingly underutilized or underfunded (Hasset and Metcalf 1995).

Aside from direct subsidies, tax credits, and rebates used for improvements after home purchase, the two best known financing methods for easing that initial cost burden have been property-assessed clean energy programs (PACE) and energy-efficient mortgages (EEMs). Property-assessed clean energy (PACE) programs, where municipal bonds fund loans to homeowners' energy improvements which are then repaid through property taxes, were deemed too risky for loan securitization by Fannie Mae and Freddie Mac (FHFA 2010).

More significantly, energy-efficient mortgages (EEMs) that incorporate improvement costs or added costs for new construction based on expected utility savings have shown mixed promise in different markets (Freedberg 2008; Energy Programs Consortium 2007; Plympton 2000; Farhar 2000). First offered in the early 1990s in a pilot program managed by HUD's Federal Housing Administration (FHA), EEMs were made available nationally soon after with Fannie Mae and Freddie Mac soon offering loan securitization. The use rates for these products are only known for the FHA program, which reported 441 EEMs in 2005 and 1,066 in 2007 only—suggesting some clear limitations in consumer demand or industry implementation.

In particular, it has been suggested by Fannie Mae that there is a basic lack of consumer demand for EEMs and that, on the whole, homeowners use other mortgage and loan products to accomplish energy-efficiency improvements or purchase a new energy-efficient home because of the reduced burdens (Fannie Mae 2008). They also speculate that changes to debt-to-income ratio limits for a product (that do not currently account for energy expenses in most underwriting models) have not historically been demonstrated to have an effect on the increased demand for the

product, even for current or previous homeowners who may be more conscious of maintenance and utility costs.

While some variations of these innovations show promise in certain markets, significant behavioral challenges and competing financial incentives among lending and public institutions have thwarted efforts to expand EEM and PACE pilots even beyond these industrial constraints. All variations of these financial tools continue to press for the absorption of the costs and benefits into the lending and public institutions' products. While there are few evaluations of these to date, anecdotal reports suggest that they are utilized only by homeowners who have already made the decision to invest in energy-efficient homes or home improvements—conjecturally, a generally more educated and wealthier segment of the home buying population—rather than those who may benefit most from both the immediate financial savings and the long-term behavioral awareness.

In all cases, it appears that the core challenges have not been the inability of homeowners to find the right financing (which was readily available during the housing boom), but in their ability to fully understand the basic costs and financial implications of implementing energy-efficient improvements or purchasing an energy-efficient home (Jaffe and Stavins 1994; Kats 2009). Of the few studies on green financial products' performance, most have focused on institutional and commercial building finance products like energy service companies (Taylor et al 2008; Peretz 2009). There is certainly a need to perform more robust and comprehensive studies as well as pilot evaluations on all financial mechanisms, from subsidies, through tax credits, and to PACE and EEMS. For the time being, though, the middling results of the residential products'

performance hamper policy advocates and policymakers anxious for market approaches to residential energy efficiency.

Household Energy Behavior

To combat at least the primary reported constraint to these financial products, advocates have proposed more extensive marketing and promotional campaigns to encourage homebuyers and homeowners to demand them. Yet, this advocacy has surprisingly not accounted for the findings from recent experiments and studies in the fields of behavioral economics regarding such awareness-building attempts. A niche but growing body of work has looked at the effectiveness and efficiency of awareness campaigns rather than the performance of financial incentives themselves (McKenzie-Mohr and Smith 1999; Wilson and Dowlatabadi 2007; Fuller et al 2010) primarily because of the underwhelming utilization of financial incentives, limitations in regulatory advocacy, and often unavailable resources to perform mass marketing campaigns; indeed, in many cases, behavioral techniques have been shown to be more effective than financial incentives.

Commonly referred to as “market transformation” studies by energy and environmental scholars, much of this work has not focused exclusively on the homebuyer decision to purchase an energy-efficient home or the homeowner decision to pay for making energy-efficient improvements, it does shed light on some key strengths and weaknesses among available techniques (Sebold et al 2001). In particular, the literature distinguishes multiple kinds of consumer acts and two kinds of

awareness campaigns that lead to those acts. In the first category, those that are relevant to residential energy efficiency include “purchase-oriented” or “investment” actions which involve a single, non-repetitive decision such as an energy-efficient home purchase or improvement, and recurring deeds such as energy conservation (like turning lights off regularly) are referred to as “daily behaviors” (Goldstein, Cialdini and Griskevicius 2008; Barr et al., 2005; Cialdin 2003; Macey and Brown 1983; Stern 1992; and McKenzie-Mohr 1994).

Likewise, the approaches used to inform decisions and create these actions are categorized between “antecedent” strategies that focus on a single moment before a decision to act is made, and “consequence” strategies that give recipients individualized motives or guidance while taking actions. The former is the most common approach in energy-efficiency campaigns (especially public ones); the latter requires significantly more resources in the form of financial incentives, instructions and coaching, regular feedback (like real-time utility use), and transforming social norms.

While categories of public and private approaches and their subsequent effect on consumer action and behaviors are robust, the actual effects and impacts are only partially conclusive due largely to the difficulty in replicating demonstrations in different geographic areas with different public, utility, and private entities—not to mention different demographic populations. Of those lessons that have been learned which have broader applicability, there are several that are applicable to the residential energy-efficiency finance community, for example:

- The simple provision of information is insufficient for creating behavioral change (Fuller 2010);

- Providing financial incentives or opportunities (even when these may be of clear benefit to the recipient and significantly large) are helpful but are insufficient on their own (Stern et al 1985);
- The messenger is just as important as the message; local trusted organizations that offer personalized attention and services tend to be more effective at increasing consumer demand (Lutzenhiser 1993);
- Purchase-oriented actions that follow antecedent campaigns tend to lead to ineffective long-term results because of their singular interventions, while daily behavior changes elicited by consequence-based strategies (a combination also known as “small concessions” that leads to a series of increasing actions) are more effective (Weber 1997); and
- Peer-to-peer networks, peer comparisons, or other strategies that introduce social norms into the education and awareness campaign tend to be more effective than individual requests to action (Cialdini 2001).

Extent green residential financial products are currently not designed or marketed in ways that take advantage of these lessons. To compensate for these, they would either need to be serviced to the point of being unfeasible for the lender, or supplemented with a servicing or monitoring component provided by another entity. If the findings of the literature hold more conclusively, this supplemental servicing may even be more effective than the financing itself. Though not quite as intensive, on-bill utility financing approaches some of this servicing but in residential finance, the only offering that can satisfy this tall order, aside from microfinance, is home purchase counseling.

Home Counseling

It is in this light that the residential energy-efficiency movement might consider unobvious and, in fact, non-financial financial decision mechanisms that have not been explored to date—like pre-purchase and post-purchase homebuyer counseling. Counseling is a “financial” tool that does not involve a financial transaction but, rather, enables it. Counseling introduces homeownership costs and savings to the homebuyer while educating them on decisions (potentially, including energy-efficiency improvements) that benefit them for a lifetime, and may lead to reduced risk for the lender.

The perceived value of housing counseling is evident in Congress’s increased support and HUD’s increased advocacy for housing counseling both in response to the foreclosure crisis and for consumer awareness in general. Even as early as 1995, when public and private interests were advocating the expansion of mortgage opportunities for subprime borrowers, the federal government suggested that contemporary attempts to increase homeownership, particularly if they included reduced down payment requirements “should generally be associated with enhanced homebuyer counseling...” (HUD 1995).

By reducing information asymmetries in home purchase and ownership, counseling has been associated with reduced delinquency, improved knowledge and financial health, more efficient transactions, and increased neighborhood satisfaction. Studies on homeownership counseling are more plentiful. Early studies of the growth of counseling in the 1990s defined counseling and counseling’s outcomes in vary disparate ways (Hornburg 2004). As the body of scholars grew,

new definitions as well as techniques developed to more adequately track the effects of counseling interventions (Quercia and Wachter 1996; McCarthy and Quercia 2000; Mallach 2001; Hirad and Zorn 2001; Wiranowski 2003). Subsequent literature also supported the conclusion that home counseling is associated with reduced delinquency, improved knowledge and financial health, and more efficient transactions (Herbert et al 2008).

In this group, however, one study expands the frame of understanding counseling's impact beyond loan performance to include additional outcomes regarding the satisfaction of the counseled borrowers with their dwelling and neighborhood (Carswell 2004). If it is true, as many housing counselors believe, that counseling is "about more than just a loan," then there appears to be a need to further link counseling to housing quality outcomes (Hornburg 2004). There is significant opportunity to add to Carswell's analysis in exploring this relationship, but also to make the specific housing quality concern an energy-efficient one.

The Demonstration

Counseling could be an effective method for educating potential homebuyers not only on the financial process for the home purchase, but also on the financial alternatives available to them that impact their utility bills, on their individual capacity to take advantage of them, on the physical qualities and inspections of the home they may purchase, and on the maintenance and operations required after purchase.

Given the preponderance of scholarly findings that suggest that counseling could be an effective intervention, the author has been involved in the development of a pilot demonstration to investigate this hypothesis: do complementary activities like pre-purchase homebuyer counseling alter both the utilization of existing energy-efficient financial products as well changes in homebuyer behaviors and purchase decisions? Currently, the preliminary conceptual framework and design have been established and are the subject of this paper while resource development and research instruments are finalized. Because this study's point of departure from the literature is clear, some preliminary concepts can be presented.

In its preliminary design, this project would involve piloting an energy-efficiency training module within existing counseling agencies in pre-purchase training programs, post-purchase training, or both, and tracking the clients to see if there are any successful decision and behavioral choices. Each approach has its own benefits and disadvantages:

- pre-purchase counseling could make buyers more aware of deficiencies in homes that they review prior to purchase as well as alternative financial products like EEMs, though energy-efficiency and more technical construction performance issues compete with many other concerns—particularly among first-time buyers;
- post-purchase counseling introduces energy-efficiency at a time during homeownership when the owner is most aware of the physical condition of her home, but is less likely to seek training or counseling;
- a combination of pre- and post-purchase counseling would increase the likelihood of energy-efficient behaviors (i.e., buying an already efficient home or making improvements after purchase) but is least likely to be undertaken by any one client. Pre-purchase

counseling would focus on: mortgage alternatives; inspections, audits, and utility documentation that the homebuyer may seek from a seller; and home labels like Energy Star that may alter their purchase criteria. Post-purchase counseling would focus on: financial incentives and products for improvements; the specific kinds of improvements that the homeowner may elect to perform; and the process for selecting contractors and auditors to perform those.

This project will involve piloting an energy-efficiency module within existing counseling agencies in pre-purchase training programs, post-purchase training, or both as feasible, and tracking the clients to see if there are any successful decision and behavioral choices in a traditional control group design with pre- and post-tests. An up to 4-hour energy-efficiency awareness module will be piloted within select current and accredited homebuyer counseling programs through their traditional homeownership training courses, followed by additional materials to provide one-on-one counseling as offered and coordinated currently by the counseling agency. The module will include audience-appropriate instruction on:

- general energy conservation behaviors
- the process of energy audits and inspections, utility bill/HERS score information where mandated, and new home labels and certifications during home purchases
- survey of energy-efficiency improvements
- the costs of and savings from those improvements
- the practical methods for implementing improvements (DIY, auditors, contractors)
- an introduction to financing options and current incentives for both improvements and newly-constructed home purchases

The module will be included in 5-10 different training cohorts of 20-40 clients split between the pilot and control groups at different counseling sites selected based on the availability of

training cohorts, on geographic and economic-condition diversity, on the performance record of the counseling agency, and their similarity in current training content and delivery. The sites would gain the permission of each client participating in the cohort along with their participation in the surveys (below) and would be compensated in exchange at a predetermined rate per training client within the pilot and control groups. The training will become the property of the agencies after the pilot to be able to expand the pilot and scale if they so choose.

The tracking of the pilot and control groups with regard to energy-efficiency awareness, purchase or improvement decisions, and additional behaviors or actions through the implementation of survey instruments will occur before training, after training and before purchase (for pre-purchase scenarios), after purchase (if applicable), and six months after purchase and settlement. The respondent data will be analyzed statistically for variance and covariance on specific indicators of awareness or action of the materials presented in the energy-module including: purchase selection (looking for an efficient home and/or using a financial product), purchase process (requiring and/or reviewing energy audits, energy consumption information, or seller energy improvements), improvements (post-purchase changes), incentives (claims for energy-efficient purchases), and other energy-related behaviors.

While the limited size of the pilot and the impossibility to control for numerous other intervening variables prohibits the findings from being viewed as conclusive evidence of counseling's use for energy-efficient financial decision-making, this demonstration will be the first step not only towards subsequent counseling pilots. More significantly, the study will shed light on alternative programs to supplement energy-efficient financial products.

Conclusions

Counseling could be an effective method for educating homebuyers not only on the financial process of the home purchase, but also on the alternatives available to them that impact their long-term housing costs, their capacity to take make other financial and construction decisions, and the physical qualities (like energy-efficiency) of the home they purchase and maintain. In short, counseling can introduce the real costs and savings of homeownership to the homebuyer before and after the point of purchase while educating them on decisions (like energy-efficiency improvements) that will benefit them for a lifetime.

There is a clear opportunity to utilize counseling as an innovative financial model for overcoming the financial challenge of energy-efficient improvements, and a very easy method to implement it on a national scale. Appropriately designed counseling is one of the few current options that accomplished three key objectives: 1.) counseling leads to consumer financial decision-making that accounts for energy-efficiency; 2.) counseling applies empirically sound strategies for incentivizing consumers through behavioral change; and 3.) counseling has a demonstrated record of satisfying residential finance institutions while accomplishing positive outcomes for the consumer herself. Though just a demonstration, positive and significant findings from the proposed evaluation could contribute to more profound inquiry into alternatives beyond the currently advocated financial products.

Indeed, the need to develop market-based financial strategies for residential energy-efficiency in this post-recession era still exists. The extent to which housing finance market reform is

effectively in conflict with the expansion of energy-efficient housing finance products will likely be the source of further debate. Combined with the unlikely advance of energy and climate regulations, though, alternative strategies may be essential.

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