

At last, A Retrofit Program with the Right Design

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Date: **November 19, 2010**

→ For some time, Zerofootprint and many others have been highlighting the need to focus on the energy inefficiency of buildings, particularly if we are to make serious inroads into reducing global carbon emissions. We have looked at the issue of how to [fund energy efficiency measures](#), and argued that the most effective way to use government funding would be to design programs for financial market support rather than to spend funds directly on retrofitting. We have also argued that we urgently need to [gather benchmark data](#) on energy efficiency and the impact of retrofits if investors are to have the confidence in a market in retrofit funding. Now, at last, we have a government program that aims to do precisely these things.

On November 9, 2010, the US Department of Housing & Urban Development (HUD) launched a pilot program to offer creditworthy borrowers low-cost loans to make energy-saving improvements to their homes. Instead of lending money directly to homeowners, the program will use Government funds to underwrite loans provided by financial institutions. By leveraging the funds in this way, the program estimates that it will achieve around ten times more retrofitting than by lending the money directly.

Upfront costs have proved one of the main barriers to homeowners undertaking energy retrofits. The new program – created under the American Recovery and Reinvestment Act, administered by Federal Housing Administration (FHA) and called FHA PowerSaver – aims to overcome this barrier while creating a new model for mainstream mortgage financing of energy retrofits.

If you look at the costs of retrofitting and the potential reduction in energy bills, it's clear we could make major cuts in energy consumption in a payback period that is economically attractive. Energy retrofits not only help homeowners save money, they improve the comfort of homes and add to their equity. Retrofitting programs will also create desperately needed jobs. Last, but by no means least, they cut carbon emissions. The nation's 130 million homes generate more than 20 percent of its carbon. Retrofits can cut energy use, and therefore emissions, by up to 40 percent.

Energy-saving retrofitting makes so much sense, that you would think we would be rolling programs all over the country. So why aren't we doing it?

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CREATING INCENTIVE FOR INVESTMENT

→ Two reasons – first, the cost. Retrofitting a single-family home costs upwards of around \$10,000 to \$15,000. That's more than many families can afford. Likewise, the total cost of retrofitting all 130 million homes could amount to almost \$2 trillion, way more than any government could afford, especially during an economic downturn. If retrofitting is viewed as an investment with an attractive return, however, then it should interest the financial markets.

If financial institutions are able to package up loans as secure investments with a decent return, then the markets will provide the funding. But the process needs to be properly designed – and that's where the loan insurance comes in. By underwriting the homeowner loans, the Government gives financial institutions the incentive they need to start lending. *That is, the government acts as a credit enhancer and not a funder of capital.* The FHA PowerSaver program aims to demonstrate how to “highly leverage grant funding in order to significantly enhance the resources available for supporting the program.”

FHA PowerSaver will direct up to \$25 million towards insuring up to 24,000 loans over a two-year period, with an expected average loan size of \$12,500. Using the insurance mechanism to leverage the funding, “the program is therefore expected to result in the extension of \$300 million in FHA-insured energy efficiency property improvement loans over the 2-year period,” says HUD.

[To ensure the integrity of the program, homeowners will have to have a FICO credit score of 660 or above and a debt-to-income ratio of less than 45 percent. Furthermore, FHA PowerSaver leaves some risk with the lenders to encourage proper standards of underwriting. The program restricts the Government insurance to 90 percent of any single loan and 10 percent of a lenders' loan pool total.]

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BENCHMARKS: NECESSARY TO FINANCIAL MARKETS

→ The second reason that retrofitting programs haven't taken off is [a lack of benchmark data](#). We have very little hard data on the energy consumption of our buildings despite their contribution to global carbon emissions. If you add commercial, government and other buildings to homes, then buildings contribute around 40 percent of U.S. carbon emissions, and nearly 80 percent in cities such as New York.

As we see with the HUD program, the Government can't afford to tackle this problem on its own, so it needs to bring in the financial markets. But markets need data and benchmarks in order to give confidence to investors, and that's precisely what we don't have at present. HUD says that one of the principal purposes of the pilot program, "is to generate data on key questions that can help make the case for additional mainstream mortgage products to support home energy retrofits, including first mortgage options."

FHA plans to undertake a rigorous evaluation of the program. It will measure the reduction in energy consumption and energy bills after retrofits and whether the value of homes is affected. "Data from the PowerSaver Pilot Program ... will help fill a major void and start to establish a basis for analyzing other financing options," says FHA, adding, "otherwise, FHA is concerned that continued progress on mainstream mortgage financing options for home energy retrofits will be frustrated."

Zerofootprint welcomes the FHA PowerSaver initiative and its attempt to create a new model for retrofit funding. To find out more about Zerofootprint's ideas on retrofit funding and the benchmarking of building energy efficiency see our papers, "How Governments Should Fund Retrofits" and "What the Environmental World Needs is Universal Benchmarking in the Fight Against Global Warming" available at: <http://www.zerofootprintfoundation.org/publications>

ABOUT US

→ Zerofootprint is a socially responsible enterprise with a mission to apply technology, design and risk management to the massive reduction of our environmental footprint. We operate both in the for-profit and charitable domains through two entities, Zerofootprint Software and Zerofootprint Foundation, using shared technology.

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