Hedged PACE Mortgage-Backed Securities

Hedging the Risk of the Senior Lien

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Abstract

The financial risk posed by the senior lien status of PACE assessments is the primary concern outlined by the Federal Housing Finance Agency (FHFA) in their July 6th, 2010 statement on PACE programs. This risk can be hedged if the same investor or investors own both the mortgage and the financing for the PACE assessment on the property.

On August 31, 2010, Freddie Mac started allowing certain property owners to refinance their mortgage and roll their PACE assessment into their new mortgage. Freddie Mac and Fannie Mae also offer energy efficiency mortgages that allow property owners to use their mortgage to finance energy efficiency improvements. These programs allow the same investor or investors to own the financing for the property and the improvements to the property.

However, using a mortgage rather than a PACE assessment to finance energy efficiency improvements increases the credit and prepayment risk for the investor. Mortgage default rates are generally higher than tax default rates and PACE assessments can be setup so that they cannot be accelerated. It is therefore in the investor's interest to combine a mortgage and the financing for the PACE assessment on the property in a manner that maintains the PACE repayment method.

If securities were created that included the mortgage and a small municipal bond based on the revenue generated by the PACE assessment on the property, these mortgage/bond securities, or hedged PACE mortgage-backed securities (HPMSs), would hedge the risk posed by the senior lien status of PACE assessments. Investors are protected from this risk just as they are with mortgages that have a PACE assessment in the junior position. HPMSs would also have less credit and prepayment risk than the energy efficiency mortgages sponsored by Fannie Mae and Freddie Mac.

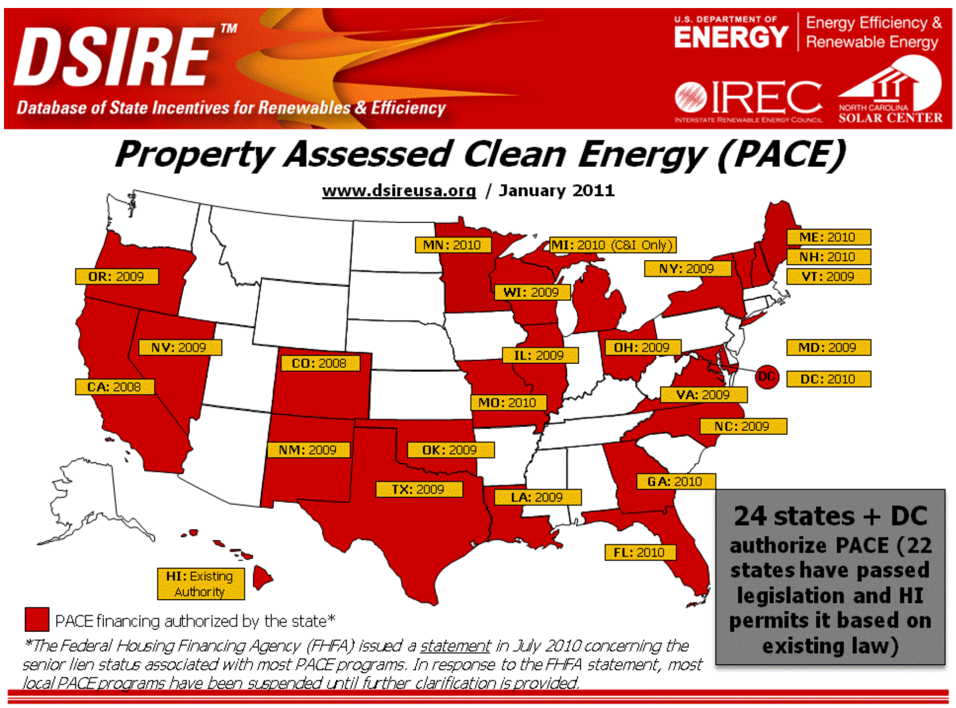
When PACE liens are placed on properties or at refinancing, property owners and PACE program administrators could create HPMSs and sell them to Fannie Mae, Freddie Mac or private investors. HPMSs could then be taken through the securitization process and sold on the secondary mortgage market. This approach would enable residential PACE programs to operate in a manner that removes the financial risk of the senior lien status of PACE assessments.

There is a pent-up demand for PACE programs across the country. If an organization could use HPMSs to expand its ability to administer residential PACE programs at this unique point, it could enable the organization to acquire a large share of the PACE administration market for residential and commercial programs.

Hedged PACE Mortgage-Backed Securities

Introduction

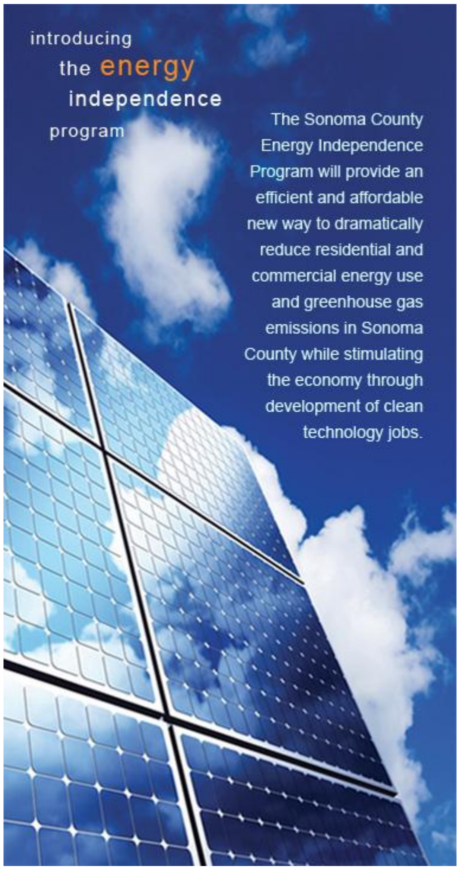
Property Assessed Clean Energy (PACE) financing programs were described in the *Harvard Business Review* as one of the top ten breakthrough ideas for 2010.[1] 22 states have passed legislation authorizing PACE programs. Most residential PACE programs have however been put on hold recently because of concerns raised by Fannie Mae, Freddie Mac and the FHFA. This proposal outlines a way for communities to work with financial institutions to address these concerns through the use of a unique financial instrument: Hedged PACE Mortgage-Backed Securities (HPMSs).



Two Kinds of Risk

Risk Posed by Senior Lien Status

The primary concern Fannie Mae, Freddie Mac, and the FHFA have with PACE financing programs is the senior status of the PACE lien. In their view, it represents a financial risk to mortgage holders.[2] Since PACE assessments are paid through property taxes, they like all other property taxes are considered to be senior to the mortgage at foreclosure. Since the size of the PACE assessment will be limited by the ***Savings to Investment ratio*** requirement (discussed below) and it will not be accelerated at foreclosure, estimates place the average outstanding PACE balance at foreclosure to be around $1000 or $2000.[3]



Reduced Risk of Foreclosure

PACE programs also have another impact on the risks associated with mortgages: when the White House and Department of Energy (DOE) guidelines are followed, PACE programs decrease the risk of foreclosure. The first White House and DOE guideline for homeowners is that the ***Savings to Investment ratio*** for projects should be greater than one: property owners should save more on their energy bill than they will have to pay in additional taxes for the project.[4] This leaves property owners more disposable income to cover their mortgage which decreases the risk of a foreclosure. This risk is also decreased because of the added value the property has for the property owner.

One analysis done in 2009 found that homes that had achieved energy star standards of efficiency had an 11% lower rate of foreclosure.[5] The Sonoma County PACE program is the largest in the country. As of July 22, 2010, the program included 1,010 homes and 22 commercial properties. It had received no notices of default. The general mortgage default rate in the county is 7%. The tax delinquency rate is also 60% lower in the PACE program than it is throughout the county: it is 3.5% in the county; and 1.2% in the PACE program.[6]

The Hedge

Many have legitimately questioned the relative value of the risk posed by the senior lien status of PACE assessments. For the sake of this argument, we can put this question aside. Regardless of its size, this risk can be hedged. If an investor or group of investors owns both the mortgage and the financing for the PACE assessment on the property the risk associated with the senior status of the PACE lien disappears—because the same investor or group of investors will be in both the senior and junior position on the lien.

In an article on PACE financing in *Bloomberg Law Reports*, Cisco DeVries writes, "If the delinquent assessments are secured by a senior lien, a subordinate private lender may protect its lien by paying the delinquent assessment amount (which will typically be a nominal amount compared to the outstanding balance of the private mortgage) and adding the amount of any such protective advance to the amount of its loan."[7] This is how virtually all cases in California that involve foreclosed properties and delinquent assessments are resolved, according to one attorney who specializes in foreclosing delinquent special taxes and assessments on behalf of local agencies in California: the lenders essentially pay for a small part of the assessment at foreclosure and protect their private lien.[8]

This idea of private lenders protecting their subordinate liens by acquiring a part of an assessment can be further developed. The lender could acquire the whole assessment and do so before foreclosure. If securities were created that included both the mortgage and the financing for the PACE assessment on the property and they were sold on the secondary market, it would enable investors to hedge the risk associated with the senior status of PACE liens and profit from the reduced risk of foreclosure.

Energy Efficiency Mortgages

In a bulletin released on August 31, 2010, Freddie Mac agreed to take a similar approach on a limited basis.[9] They agreed to allow property owners that participated in PACE programs before July 6th to refinance their mortgage and to either pay off their PACE assessment or roll it into their new mortgage. Freddie Mac and Fannie Mae also sponsor Energy Efficiency Mortgage programs.[10] These programs allow property owners to use their mortgage to finance energy efficiency retrofits for their home that either have or will be made. This allows the same investor or investors to own both the mortgage and the financing for energy efficiency improvements on the property and removes any risk to the investor posed by a senior lien.

In Freddie Mac's Energy Efficiency Mortgage program higher housing expense to income and debt to income ratios can be used if the home is energy efficient or contains energy efficient items. These ratios are stretched because the increases in energy efficiency reduce utility costs and increase the property owner's ability to pay the mortgage.

Energy efficiency mortgages are also sponsored by the United States Department of Housing and Urban Development and the Federal Housing Administration. They have been around since the 1970's. They have only recently become popular. There were improvements made recently that streamlined processing. There are now energy auditors that can document increases in efficiency. And there is now more attention being paid to energy costs and environmental considerations.

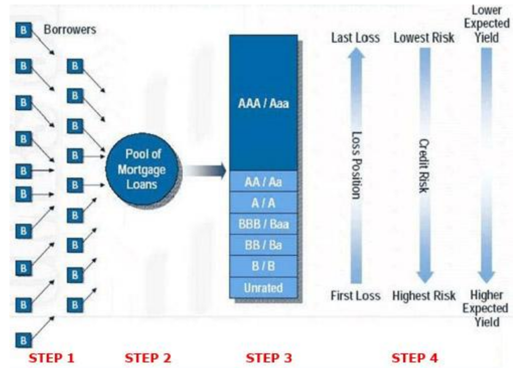
Hedged PACE Mortgage-Backed Securities

Energy efficiency mortgages provide a number of advantages; but there is a more secure way for investors to hedge the financial risk associated with the senior lien status of PACE assessments. When these assessments are rolled into mortgages, including energy efficiency mortgages, investors actually lose the most secure component of the investment—the PACE assessment.

PACE assessments are more secure than mortgages for, at least, two reasons. First, as evidenced by the information from Sonoma, tax default rates are generally lower than mortgage default rates: the mortgage default rate in Sonoma is 7%; the tax default rate is 3.5% and it is 1.2% in the PACE program. So there is less credit risk with PACE assessments. Second, mortgages can be paid off early and this creates a risk to the profit of the mortgage holder. PACE programs can be setup so that payments cannot be accelerated and this protects bond holders from prepayment risk.

When PACE assessments are rolled into mortgages, the credit and prepayment risk of the investment is increased. It is in an investor's interest to combine mortgages with the financing for PACE assessments in mortgage securities that maintain the integrity of the assessment so that it is repaid through property taxes rather than as a part of the mortgage.

Mortgage-backed securities group mortgages according to different levels of risk in order to enable investors to better manage the risks of their investments. Grouping the financing for PACE assessments with mortgages would be a further development of this same trend: investments are grouped strategically to better manage risk.



There are some fundamental reasons to combine the financing for PACE assessments with mortgages.

- PACE assessments and mortgages are both attached to the property and use it as collateral.
- Both can be long term commitments: up to 20 years with PACE assessments.
- PACE assessments affect the risks associated with mortgages.
- Their risks can be managed more effectively when they are combined.

One way communities have financed the assessment fund used in PACE programs is by selling municipal bonds. In order to create a security that combines the mortgage with the financing for the PACE assessment these municipal PACE bonds could be sliced up and each piece could be combined with the mortgage to which it is attached: a small municipal bond could be created based on the revenue generated by the PACE assessment on a property and this bond could be combined with the mortgage on the property in a security -- which we could call a *Hedged PACE Mortgage-backed Security* (HPMS). These securities would enable investors to hedge the risk of the senior lien status of PACE assessments and profit from a reduced risk of foreclosure on the property.

HPMSs could enable PACE programs to be financed through the secondary mortgage market, similar to the way energy efficiency mortgages use this market to finance improvements to properties. Communities would sell small municipal bonds attached with mortgages on the secondary mortgage market to finance PACE programs on an ongoing basis.

Fannie Mae, Freddie Mac, and the FHFA

The Senior Lien

The logic of the argument Fannie Mae and Freddie Mac have used against PACE programs gives us reason to believe they will buy HPMSs. In all the public statements they and the FHFA have made on PACE programs they have made it clear their primary concern is the financial risk to investors posed by the senior lien status of PACE assessments.[11] HPMSs hedge the risk of the senior lien.

The risk to the investor from a senior lien is completely removed in HPMSs as it is with PACE assessments in a junior position. Fannie Mae and Freddie Mac purchase mortgages with PACE assessments in a junior position. The FHFA's statement on PACE programs makes it clear that PACE programs with subordinate liens are not affected by the guidelines provided. The argument they have provided against PACE programs provides reason to believe Fannie Mae and Freddie Mac will treat HPMSs like mortgages with PACE assessments in a junior position.

HPMSs vs. Energy Efficiency Mortgages

A second reason to believe Fannie Mae and Freddie Mac will purchase HPMSs is that these securities have less risk than the energy efficiency mortgages they presently sponsor. This will undermine any potential effort to argue they should not buy HPMSs. Their position has been consistently guided by the aim of protecting mortgage holders and HPMSs are simply more secure than energy efficiency mortgages.

Fannie Mae and Freddie Mac have a financial interest in purchasing HPMSs. When Freddie Mac released its bulletin stating it would enable those who participated in PACE programs before July 6th 2010 to refinance their mortgage and roll their PACE assessment into their mortgage, the Treasurer and Tax Collector in Sonoma County, Rodney Dole, was quoted as saying, "It almost looks like a land-grab."[12] He suggested that Freddie Mac was trying to profit from PACE programs by skimming "off the top borrowers." HPMSs provide Freddie Mac and Fannie Mae a more secure way to profit from PACE programs. If they use these securities instead of mortgages, their investments will have less credit and prepayment risk.

Potential Resolution to Lawsuits

Because of their opposition to PACE programs, Fannie Mae and Freddie Mac are being sued by the state of California and several communities around the country. HPMSs provide a legitimate potential resolution to these lawsuits that could save Fannie Mae and Freddie Mac legal fees and more bad press. Neither side would have to compromise: Fannie Mae and Freddie Mac could continue to protect investors from the risks posed by senior liens; communities could run residential PACE programs and use the secondary mortgage market to finance them. There is legislation in the U. S. House and Senate presently under consideration that will force Fannie Mae and Freddie Mac to support PACE programs. Congress is also having hearings on the future of Fannie Mae and Freddie Mac. Buying HPMSs could provide Fannie Mae and Freddie Mac a way to help resolve the PACE issue without having their authority limited by congress or the courts.

In Practice

HPMSs provide a couple options for running PACE programs. We can distinguish two general approaches. HPMSs can be created when the lien is placed on the property for a PACE assessment or at some later point, perhaps in conjunction with refinancing. A program could also provide customers both options.

Lien Placement

PACE programs can be setup so that HPMSs are created when the lien for the PACE assessment is placed on the property. PACE program administrators could combine the mortgage on the property with a small municipal bond based on the revenue generated by the assessment on the property. The security created could be sold to Fannie Mae, Freddie Mac, or private investors. It can be taken through the securitization process and sold on the secondary mortgage market. PACE programs that use this approach would not need a large assessment fund; the primary financing would be provided by the secondary mortgage market.

Right now mortgages are sold on the secondary market and property owners receive a notice in the mail. The sale does not affect the property owner's mortgage in any significant way, *e.g.*, the interest rate or amortization period. The process of creating and selling HPMSs would be similar from the property owners' perspective. The experience of a participant in a PACE program that uses HPMSs will be hard to distinguish from the experience of a participant in a program that does not use them.

Refinancing

PACE Programs can also be set up so that HPMSs are created at refinancing. In this case, these securities can be used to support a more traditional PACE program that uses a PACE assessment fund to provide financing for energy efficiency improvements. This fund can be supported by municipal funds, the selling of municipal bonds or private investors. In this approach, the HPMSs are used to protect the property owner's ability to refinance their mortgage. Instead of having to pay off their PACE assessment or roll it into their new mortgage during refinancing, they can have their assessment combined with their refinanced mortgage through the creation of a HPMS. This security can then be sold to Fannie Mae, Freddie Mac, or private investors, taken through the process of securitization and sold on the secondary mortgage market.

In this approach, HPMSs are used to protect property owners from the concerns the FHFA, Fannie Mae and Freddie Mac have raised about PACE programs. Property owners can be assured that if they participate in a PACE program it will not adversely impact their ability to refinance their mortgage.

Participants in the PACE program could be given a set period of time (a couple of years) to decide whether they want to refinance their mortgage or simply create a HPMS and when they want to do it. This time period would limit the exposure of mortgage holders to the risks associated with PACE assessments with senior liens.

The expenses associated with the administration of PACE programs using either approach can be covered by a positive spread in the assessment interest rate. Either approach would allow residential PACE programs to operate in a manner that directly addresses the primary concern raised by Fannie Mae, Freddie Mac, and the FHFA.

Interest Rates

The interest rates on mortgages will affect the way property owners participate in PACE programs that use HPMSs. When property owners have a mortgage with an interest rate that is higher than the market rate, it will be in their interest to refinance their mortgage as a part of their participation in a PACE program. HPMSs provide property owners a way to refinance their mortgage without having to pay off their PACE assessment or roll it into their mortgage.

When property owners have mortgages with an interest rate that is the same as the market rate, creating and selling a HPMS without refinancing their mortgage will be the most efficient option.

When property owners have mortgages with an interest rate that is lower than the market rate, it will not be in their interest to refinance their mortgage. Fannie Mae's and Freddie Mac's guidelines on mortgages with PACE liens will not impact them. If the interest rate on the mortgage is too low to resell it as a part of a HPMS, property owners can participate in PACE programs without forming a HPMS. Participants in the PACE program can be assured that if in the future interest rates fall below that of their mortgage, they will be able to refinance their mortgage without having to pay off their PACE assessment by creating and selling a HPMS.

If the interest rate on the mortgage is too low to resell, Property owners and PACE program administrators can get approval for PACE projects from mortgage holders. Since these projects have a savings to investment ratio that is greater than one, Mortgage holders have an interest in approving these projects: they decrease the risk of foreclosure. Mortgage holders can be offered an opportunity to provide all or a part of the financing for the PACE project. Innovative options can also be explored that enable the mortgage holder to profit in a small way from the project directly without putting any money down: essentially reimbursing them for allowing the senior PACE lien.

In all three situations—when the interest rate on the mortgage is below, equal to, or above the market rate— HPMSs can be used to help protect the interests of investors and PACE program participants.

Investors

One recent report by Pike Research found that 75% of the homeowner's surveyed were interested in PACE financing.[13] As mentioned, 22 states have recently passed legislation authorizing PACE programs. There is a broad demand for these programs across the country. An organization that uses HPMSs to offer residential PACE programs with the support of Fannie Mae and Freddie Mac could acquire the right to administer a large share of these residential PACE programs. Investors that finance the operation of both residential and commercial PACE programs can see a return generated by a positive spread in the assessment interest rate.

An organization that administrates a large share of residential PACE programs will have an opportunity to administrate a large share of the commercial PACE programs. Communities will tend to use organizations to administrate their PACE program that can effectively provide both residential and commercial programs. Many processes can be handled more efficiently if the same organization administrates both programs. So organizations that can administrate residential programs effectively will get opportunities to administrate commercial programs. Investors will have opportunities to profit from the uniquely secure investment opportunities provided by these commercial programs.

A Secure Mortgage-backed Security

Investors that finance PACE programs can allow the secondary mortgage market to provide the primary financing for residential programs that use HPMSs. These securities do however provide investors in the secondary mortgage market a way to invest in the most secure mortgage securities. They take secure mortgages and reduce their risk of foreclosure.

First, the participants in PACE programs will have to be current on all mortgage debt after the worst recession experienced in our life time. These mortgages are secure. Second, HPMSs will reduce the risk of foreclosure on properties by reducing their utility costs and increasing the disposable income available to property owners. This is a particularly significant fact to take into account in the present economic environment. Sales of existing homes fell 27% in July 2010. Foreclosure rates have been extremely high over the past three years. The number of foreclosures went up 25% in August 2010 relative to the year before. In this environment, mortgage securities that have a decreased risk of foreclosure have an increased value.

Third, HPMSs will finance energy efficiency improvements in a manner that has less credit and prepayment risk than mortgages, including Fannie Mae's and Freddie Mac's energy efficiency mortgages.

Emerging Energy Financing Market

HPMSs provide a secure way for investors in the secondary mortgage market to profit from the emerging energy efficiency and renewable energy financing market. The money property owners can save on energy costs represents a promising new source of profit. According to a recent study by Pike Research, by 2015 PACE financing for commercial buildings could reach $2.5 billion annually.[14] HPMSs use this emerging energy financing market to increase the profitability of the secondary mortgage market.

Conclusion

HPMSs provide investors an innovative way to better manage the risks associated with financing the ownership of property. They could enable residential PACE programs to operate in a manner that removes the financial risk of the senior lien which is the primary concern of the FHFA, Fannie Mae and Freddie Mac. These securities could help open the flood gates on residential PACE programs across the country. If an organization were able to use HPMSs to begin operating more residential PACE programs at this unique point, it could enable the organization to acquire a substantial percentage of the PACE administration market for both residential and commercial programs.

Notes

[1] Jack Hidary, *Harvard Business Review*, January-February 2010, p. 52.

[2] FHFA Statement on Certain Energy Retrofit Loan Programs, July 6, 2010: http://www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf

[3] This estimate is developed in this PACEnow memo: http://pacenow.org/documents/PACE%20Concerns%20and%20White%20House%20Solutions.pdf

[4] Whitehouse guidelines for PACE, http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf US DOE, http://www1.eere.energy.gov/wip/pdfs/arra_guidelines_for_pilot_pace_programs.pdf

[5] Johnathon Hiskes, "Energy Efficiency Helps Homeowners Avoid foreclosure," *Grist***,** July, 7, 2010: http://www.grist.org/article/2010-07-12-home-energy-efficiency-cuts-mortgage-default-rates.-fannie-fredd

[6] These statistics on the Sonoma program come from a presentation to the Senate Banking Committee by PACEnow 7/22/2010, http://pacenow.org/blog/.

[7] Cisco DeVries, *Bloomberg Law Reports*, volume 3, edition 1, pg. 6: http://pacenow.org/documents/Bloomberg%20Law%20Article.pdf

[8] Mark Zimring and Merrian Fuller, "Accelerating the Payment of PACE Assessments," *Clean Energy Financing Brief*, Lawrence Berkeley National Laboratory, May 4, 2010, p. 2-3.: http://eetd.lbl.gov/ea/EMS/reports/ee-policybrief_050410.pdf

[9] http://www.freddiemac.com/sell/guide/bulletins/pdf/bll1020.pdf

[10] For information about Energy Efficiency Mortgages sponsored by Fannie Mae and Freddie Mac see: http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.energy_efficient_mortgage

[11] 5/5/10 Fannie Mae Lender Letter on PACE, http://pacenow.org/blog/wp-content/uploads/2010-05-05-Fannie-Mae-Lender-Letter1.pdf; 9/18/09 Fannie Mae Lender Letter on PACE, http://pacenow.org/blog/wp-content/uploads/2009-09-18-Fannie-Mae-Lender-Letter1.pdf; 5/5/10 Freddie Mac Industry Letter on PACE, http://pacenow.org/blog/wp-content/uploads/2010-05-05-Freddie-Mac-Lender-Letter.pdf; See endnote 2 for the FHFA statement.

[12] Loralee Stevens, "Federal housing officials ease some existing energy loan rules," *Business Journal: Sonoma, Marin, and Napa Counties*, September 13th, 2010, http://www.northbaybusinessjournal.com/24795/federal-housing-officials-ease-some-existing-energy-loan-rules/?tc=ar

[13] Reported in *The Energy Collective* February 16, 2011, http://theenergycollective.com/petertroast/51910/will-pace-financing-rise-ashes

[14] "PACE Financing for Commercial Buildings Could Reach $2.5 Billion by 2015," *SustainableBusiness.com,* June 23, 2010: http://www.sustainablebusiness.com/index.cfm/go/news.display/id/20553