Seizing the Moment: Incorporating Efficiency, Health, and Renewables Upgrades into Affordable Housing Financing Events

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ABSTRACT

The time of refinance is an ideal time to incorporate efficiency, health, and renewables upgrades[1] into affordable multifamily (AMF) housing properties. Low cash flow and limited capital reserves mean that a refinancing event[2] is often the only time sufficient funds are available to make major capital improvements. These events do not happen frequently, often only every 10-15 years. Seizing that moment to enable upgrades that make properties more efficient, healthy, comfortable, and affordable for their residents is essential. However, the complexity of the financing process and a lack of information and resources can make it challenging to take advantage of this important opportunity to upgrade our nation's affordable housing.

Since 2013, Energy Efficiency for All[i] has worked with our allies in 13 states to increase and improve the pool of resources available to support efficiency upgrades in affordable housing, align those resources with the refinancing[ii] process, and encourage the adoption of policies and practices that make it possible to incorporate efficiency upgrades into underwriting. This has led to the development of several new approaches that help to overcome the barriers preventing investment in efficiency upgrades at the time of financing. This paper will share what we have learned, discuss how partners in our states and nationally are beginning to implement new solutions, and provide an overview of how programs, policies, and stakeholders can work together to make efficiency and healthy building upgrades a standard practice for every housing refinancing event.

Introduction

The time of refinancing is an ideal time to incorporate efficiency, healthy building, and renewables upgrades into affordable housing properties[3]. More importantly, for most properties, it is the only time they will be able to make the deep efficiency, healthy building, and renewables upgrades to the buildings; that will become increasingly necessary in the coming years. The Natural Resources Defense Council (NRDC) estimates that for the United States to meet the goal of reducing greenhouse gas (GHG) emissions 80% below 1990 levels by 2050, commercial and residential buildings will have to reduce their energy demand by 46% and electrify approximately 90% of all end uses by 2050.[iii] Considering most existing affordable housing

[1] Throughout this paper we will use the term "efficiency upgrades" as shorthand for efficiency, health, and renewables upgrades.

[2] Throughout this paper we will use the term "refinancing event" as shorthand for both resyndication and mortgage refinancing.

[3] Energy Efficiency for All's (www.ee4a.org) definition of "affordable housing" includes public housing, subsidized affordable housing, and market rate housing that is affordable to low-income renters a.k.a. unsubsidized affordable housing. This paper focuses on solutions for subsidized and unsubsidized affordable housing.

properties will still be in use in 2050[iv], over the next 30 plus years, we need to take advantage of every possible refinancing event that can lead to significant reduction in energy use and address deferred maintenance to provide safe, healthy, and comfortable homes to low-income residents.

Making these upgrades requires capital investment, which is why it is crucial to take full advantage of refinancing events – the only time most affordable housing owners have access to capital. There are many barriers that prevent that from happening:

- *(1) Bandwidth* – AMF housing owners, managers, and operators have many demands on their time, especially during financing. Selecting technical consultants, overseeing an energy and water audit, selecting energy and water upgrades, identifying incentives or additional financing to cover the cost of those upgrades, and ensuring upgrades are properly installed is a huge job that many owners are not able to take on.
- (2) *Awareness* – Maximizing the efficiency of traditional capital improvements and adding additional efficiency or renewable upgrades to a project's scope can have a significant positive impact on an owner's net operating income (NOI) over the life of their mortgage. However, many owners are unaware of the positive financial benefits, or do not feel sufficiently comfortable with efficiency or renewables to investigate opportunities.
- *(3) Technical Assistance* – Energy and water audits are a wise investment, but they are not cheap. Many owners struggle to identify sufficient funds to cover the upfront cost of the audit or decide it may not be worth the investment of time and money because they are unsure they will be able to implement recommended efficiency upgrades. Owners who do invest in audits still require additional technical assistance to choose upgrades and translate recommendations into their capital improvement scope. When that additional assistance is unavailable, it can prevent owners with audits from using them.
- *(4) Utility Savings*– Even when owners identify efficiency upgrades, those upgrades are often the first to be value engineered out of a project when loan funds are insufficient to cover all the capital upgrades that need to be made. This happens because efficiency upgrades are seen as an additional expense to cover, as opposed to a way to unlock additional capital to cover both efficiency upgrades and other improvements.
- *(5) Requirements & Incentives* – Market transformation efforts, such as benchmarking or audit requirements, alone cannot create demand for efficiency upgrades at scale, especially in the AMF sector. Requirements for efficiency work, or at least the evaluation of efficiency potential, combined with incentives (i.e. extra points for a tax credit application) are necessary if efficiency is going to become a standard part of refinancing events.

In this paper we will explore ways to improve existing tools and resources, and best practices to help the multifamily affordable housing sector overcome these barriers.

Background

Energy Efficiency for All (EEFA) is a national initiative focused on bringing together the energy, affordable housing, and health communities to tap the benefits of energy efficiency and other holistic building measures for millions of low-income families. The project is led by four partners: Elevate Energy, Energy Foundation, National Housing Trust, and Natural Resources Defense Council, with funding from the JPB Foundation, working together to ensure EEFA achieves its goals. EEFA, along with our many allies[v], has established coalitions of housing, justice, community development, resident, finance, energy, and environmental organizations in

13 states (CA, GA, IL, LA, MD, MI, MN, MO, NY, NC, PA, RI, VA) focused on increasing and improving the pool of resources available to support energy efficiency and health upgrades in multifamily affordable housing, and removing barriers that prevent owners from accessing those resources. The project also conducts research, education, and outreach on a national scale and has launched a national social impact network, the Network for Energy, Water and Health in Affordable Buildings (NEWHAB)[vi], to engage and empower an even broader array of stakeholders. Over the past five years, EEFA has secured over $300 million of principally ratepayer and cap-and-trade funding to support AMF energy efficiency retrofits.

Nearly five years of research and engagement with AMF owners as well as with utilities, HFAs, and public and private lenders, have informed the strategies we believe can move the AMF sector towards the incorporation of efficiency upgrades as a standard practice for every refinance event.

Traditional Tool & Resource Barriers

Mortgage financing has long been the best source for long-term, low-cost financing for capital upgrades in multifamily properties, and utility programs have been used for decades to support energy upgrades in properties. These traditional tools can be combined to enable robust investment in efficiency upgrades at the time of refinance, but there are many barriers that prevent that from happening.

Mortgage Financing

Traditional mortgages are the largest source of non-tax credit financing for AMF owners. At the time of refinance, mortgages provide owners with low-cost, long-term financing. For many owners, this is the only time they can invest in major capital improvements. The size of a traditional mortgage relies on the owner's demonstrated experience and financial strength, key loan-to-value calculations based on the appraised value of property, and the property's debt coverage ratio, which measures the ability of the owner to pay back the loan based on the NOI of the property.

Lenders typically require potential borrowers to provide a Physical Needs Assessment (PNA) to evaluate the condition of the property, identify necessary and/or planned capital improvements, and test for health-based hazards. Traditionally, PNAs do not include an evaluation of opportunities for improving energy and water efficiency, recommended efficiency upgrades, or estimated cost savings from those upgrades. This is a significant missed opportunity to ensure that planned capital upgrades that impact utility bills are as efficient as possible, and to identify additional investments in efficiency that can improve the financial performance of the project and potentially increase the size of the loan.

Energy efficiency presents an opportunity to lower expenses for both building owners and residents, and improve NOI. Utility bills can make up almost 29 percent of operating expenses for multifamily buildings[vii]. When rental income is capped by the market or rent regulations, efficiency presents an opportunity to lower expenses to help maintain affordability. Efficiency improvements can also lower vacancy losses and mitigate exposure to escalating utility prices. These factors can have a significant positive impact on cash flow, increasing a property's NOI, and increasing the debt coverage ratio throughout the loan term[viii], while also reducing the risk of default for the lender.

However, many lenders are wary of energy savings estimates from energy audits, and even if they do trust estimates, don't necessarily know how to appropriately incorporate them into their underwriting. Below we outline strategies to more accurately forecast and account for cost savings from efficiency upgrades to improve both a property's physical quality and financial performance.

Utility Programs

Utility programs provide much-needed technical and financial assistance to help AMF owners invest in efficiency upgrades. Utility incentives and rebates provide funding without the complications of financing and can make it possible for owners to install upgrades they otherwise would not have been able to install, or help to offset the cost of upgrades. Technical assistance is also incredibly valuable to AMF owners. Programs that cover or offset the cost of an ASHRAE Level II audit at the time of a refinance provide owners with the information they need to make smart investment decisions at a crucial time. Other types of assistance, including helping owners navigate available programs, can make a big difference as well.

While there is significant potential for utility programs to play a major role in facilitating investment in efficiency upgrades at the time of refinance, few of these programs are designed to take advantage of that opportunity. Barriers include:

- *Program Timelines* – Capital improvements that happen as part of a refinance process often have long timelines. An ideal process, where efficiency opportunities are considered from the beginning would look like this:
  - Owner conducts an energy audit to assess the efficiency opportunities in their property along with, or as part of, the Physical Needs Assessment they must complete to seek financing. (1-3 months)
  - Owner secures funding and selects final capital improvement work scope based on the funding and subsidies they are able to secure. (2-6 months)
  - Owner closes on the loan and construction takes place. Construction typically involves major capital improvements in addition to efficiency upgrades. (6-18 months)

  Most utility programs are designed to serve properties quickly, by either providing direct install services, or giving owners rebates after they have already completed work. Even those that do provide technical assistance are often still expected to get a project through the program from start to finish in a year or less, due to the way their budgets and reporting are structured. These types of programs cannot accommodate a process that can take up to two years.
- *Restrictions on Funding Common Area Measures* – Many low-income utility programs have restrictions on supporting upgrades outside of residential units, typically referred to as "common area". The intention behind these restrictions is good; to ensure that the program directly benefits residents. However, this leaves many efficiency upgrades that could benefit residents unaddressed. Common area upgrades such as installing a more efficient central heating or domestic hot water system, air sealing, and balancing ventilation systems create more affordable, safer, healthier, and more comfortable homes for low-income residents.
- *Thinking Small* – The quickest and easiest way to get kWh and therm savings is by addressing low-hanging fruit upgrades in a large number of properties (i.e. lighting, low-flow showerheads). However, those types of upgrades only have a minimal impact on utility bills for residents or owners and, in many markets, programs have already exhausted such

opportunities in their affordable multifamily stock. Programs focused on low-hanging fruit are a great resource for owners with little to no money to invest in efficiency upgrades, but are not ambitious enough to enable owners to take full advantage of the opportunity to invest in significant efficiency upgrades at the time of refinance.

The refinancing event constitutes a unique opportunity to incorporate utility incentives to secure deeper, whole-building energy savings. Upon refinancing, owners are already making capital upgrades that may impact energy usage and there is private and or public capital on the table that programs can leverage to cover the cost of upgrades that may otherwise be out of reach for owners and/or too costly for programs to incentivize.

New Approaches for Subsidized Affordable Housing

Qualified Allocation Plan (QAP) Requirements for Energy and Water Efficiency

The Low-Income Housing Tax Credit (LIHTC) program is the largest AMF rental construction and preservation program in the nation, constructing or preserving more than 2.2 million affordable homes and leveraging over $100 billion in private sector investment since its creation in 1986. Annually, the LIHTC program gives state housing finance agencies (HFAs) nearly $8 billion in budget authority to issue LIHTCs for construction or rehabilitation of affordable housing.[ixx]. Each year, between 40-50 percent of the tax credits are allocated for the rehabilitation of existing apartments.

Each HFA develops a plan by which it allocates LIHTCs, called a Qualified Allocation Plan (QAP), to ensure developments built with LIHTCs address the specific housing needs of the state. After publication of an initial draft QAP, each state allows public comment on the document.

While the QAP is not a new tool, HFAs have increased their focus on the role energy, water, health and renewables upgrades play in providing affordable, safe and healthy housing over the long term. Since 2013, EEFA has tracked QAPs in all 50 states and provided recommendations to HFAs in its 13 EEFA states as they develop QAPs on opportunities for including requirements or incentives that encourage projects to incorporate efficiency, health, and renewable upgrades.

In that time, requirements or incentives to encourage efficiency upgrades in preservation projects has become far more common. HFA QAP requirement and incentive strategies include:

QAP Requirement or Incentive	States Where HFAs Have Adopted Requirement or Incentive
Energy and water benchmarking requirements	AK, IL, NJ, NY, PA, RI
Energy and water audit requirements	AZ, CA, CT, DE, GA, IA, KS, MD, MO, NV, NY, PA, WI
Water conservation requirements	AL, AZ, AR, FL, GA, IN, IA, KS, ME, MA, MD, MI, MS, MT, NV, NH, NY, NC, ND, OK, SD, TN, TX, VA, WV, WY
Energy performance-based requirements or incentives	AZ, CA, DE, ID, IL, IA, KS, MD, NM, NV, PA, SD
Renewable energy incentives	AK, AZ, CA, CT, MD, MA, NV, VA

Coordination with utility programs	CT, FL, IA, MD, MN, NJ, OR, PA, RI, UT, VT, WI[xi]

LIHTC property owners must maintain their affordability commitments for at least 30 years, and HFAs are increasingly recognizing the important role efficiency upgrades play in maintaining AMF housing long-term. Investments that improve building performance and lower operating costs can increase property cash flow and reduce loan default risk, while also making homes more comfortable and healthy for residents. QAP requirements and incentives are an important step toward making efficiency and health upgrades and renewables a standard part of every LIHTC transaction.

Alternate Approaches to Utility Allowance Calculations

Another way to improve the energy and water efficiency of AMF housing is to improve the accuracy of utility allowances to properly account for efficiency investments. In subsidized affordable housing, the definition of "affordable" rent must include both housing and reasonable utility costs. Where some or all utilities are tenant-paid, the amount a tenant can be charged must be reduced by the "utility allowance", a numeric proxy for what a tenant typically pays for utilities in a given community. The method by which utility allowances are calculated can have a significant impact on an owner's ability to invest in efficiency upgrades, specifically in properties that receive LIHTCs. For LIHTC properties, the maximum net rent that an owner can collect is equal to maximum affordable rent for a household minus a utility allowance[4]. This structure can provide a pathway for owners to invest in efficiency and recover some of the cost of those investments through increased net rent.

Table 1: Sample LIHTC Utility Allowance Structure

	Without efficiency upgrades	With efficiency upgrades
Maximum Allowable LIHTC Rent	$700	$700
Utility Allowance	$100	$80
Rent Paid to Landlord	$600	$620

Most owners calculate utility allowances based on their local Public Housing Authority (PHA) schedule[xii], which in turn is based on the typical cost of utilities paid for local energy-conservative households, using community consumption data for housing of similar size and type. This method is popular because it is easy and inexpensive. However, the PHA schedule often provides an inaccurate measure of actual consumption by LIHTC units, which tend to be newer and more energy-efficient than the rest of the rental housing stock available to PHA voucher holders.

[4] In LIHTC properties that receive HUD or RD subsidies, the utility allowance for all rent-restricted units is determined under the applicable HUD or RD program rules, which generally require project-specific allowances based up on average actual consumption and cost. C.F.R. §1.42-10 (2016).

Project-specific utility allowances, calculated through either a high-quality energy consumption model[5] or an analysis of the project's actual consumption data[6], more accurately reflect the energy and water use of residents at a specific property. In addition, these methods can account for cost-savings from efficiency upgrades, making it easier for owners to make upgrades because some of those costs can be recovered through increases in the net rent an owner receives, without increasing the tenant's overall housing costs (i.e., tenants are held harmless as the reduction in the tenant's allowances are offset by the tenant's energy cost savings). See Table 1.

However, there are barriers to implementing project-specific utility allowance calculation methods, including access to utility consumption data for tenant-metered units, data collection and other upfront costs to enable modeling, model quality and application, and HFA staff capacity to verify the accuracy of utility allowance calculations. Market conditions can present another barrier. LIHTC rents are capped to remain affordable to families earning less than 60% area median income. However, in some markets LIHTC properties are not able to charge the maximum and compete for tenants. In these markets, reducing the utility allowance may not result in higher rents, potentially eliminating this mechanism for owners to recoup investments in energy efficiency. Despite these challenges, most HFAs allow developers to use project-specific approaches, and owners are incorporating them into project financing and operation.

While there has been movement toward adopting project-specific utility allowances, in order to fully unlock utility allowances as a mechanism to support efficiency upgrades in LIHTC properties, more work needs to be done. Owners and HFAs require access to anonymized tenant-level data to support the use of the actual consumption method and verify energy consumption models. Almost all utilities could provide this data, but many do not. In addition, energy consumption models must continue to be refined until they reach a point where both owners and HFAs are comfortable with the accuracy of model results. EEFA and our partners will continue to track and help develop policies and practices for project-specific utility allowances that allow owners to capture energy savings from improvements, while ensuring they are fair to tenants.[7]

Expanding the Scope of Physical Needs Assessments

Physical Needs Assessments (PNAs), also known as Capital Needs Assessments (CNAs), are a standard requirement for all borrowers seeking financing for an existing property, including both affordable and market rate property owners. A PNA involves the evaluation of all major property components and systems, the identification of necessary and planned upgrades, and an estimate of the costs associated with those upgrades. Lenders, both HFA or private bank, use the PNA to evaluate how much capital must be invested in necessary and planned upgrades over the

[5] Actual Tenant Consumption Data: An analysis of actual consumption based on a representative sample of tenant consumption data or utility bills. The owner or regulatory agency must still select the appropriate data point for determining "reasonable" consumption, whether average or another data point. The use of actuals can only be used after a project has been in operation for 12 months or more.

[6] Energy Consumption Model (ECM): An engineering-based method that provides an estimate of reasonable consumption, considering specific building and unit characteristics affecting consumption including unit size, building orientation, design and materials, mechanical systems, appliances and location.

[7] When setting utility allowance calculation policies and procedures, care should be taken to safeguard tenants and ensure that any net rent increase is based solely on a reduction in energy consumption due to energy efficiency upgrades to the property, and that rents are not increased due to a change in utility allowance calculation methodology.

life of the loan and determine whether a property can carry sufficient debt to cover the cost of those upgrades as part of their refinance loan.

Integrating an evaluation of energy and water efficiency upgrade opportunities, the costs associated with those upgrades, and expected utility bill savings into a PNA:

- provides a comprehensive understanding of the needs and opportunities presented by the property and how capital improvements will impact NOI;
- allows owners to prioritize investments, complete efficiency improvements and system upgrades simultaneously, and leverage traditional financing and funding sources to complete the work, and;
- provides the necessary information for willing lenders to underwrite utility bill savings to unlock additional loan proceeds required to complete a full scope of capital improvements.

Agencies and lenders have begun to encourage or require this more comprehensive approach to evaluating the needs and opportunities in a property. The United States Department of Housing and Urban Development (HUD) now requires an energy audit as part of their CNA. Fannie Mae and Freddie Mac both offer the option to underwrite to utility bill savings if an owner conducts an energy and water audit in addition to a traditional PNA, and they also offer improved loan terms if an owner reduces energy usage by a certain amount. This applies to the majority of multifamily loans they each provide.

Several HFAs now require owners applying for LIHTCs to conduct an energy or water audit, and the three HFAs in New York took that approach further in 2017 with the adoption of their Integrated Physical Needs Assessment (IPNA) as a requirement for all preservation projects accessing tax credits, subsidies, or special loan products offered by these three agencies: New York City Department of Housing Preservation and Development (HPD), New York City Housing Development Corporation (HDC), and New York State Homes and Community Renewal (HCR).

To develop the IPNA, EEFA led a collaborative effort with HPD, HDC, and HCR, city and state government representatives, the New York State Energy Research and Development Authority (NYSERDA), utilities and financing organizations. The goal was to develop a more advanced and comprehensive version of the Green Physical Needs Assessment (GPNA) HPD and HDC created in 2015 that could be used by all three HFAs. The first of its kind IPNA that came out of that process provides information in a useful format for owners and lenders, and allows them to participate in NYSERDA and other New York State utility incentive programs. It includes an improved energy efficiency audit, a water efficiency audit, a health assessment developed by Local Initiatives Support Coalition (LISC) and Enterprise Community Partners, a solar potential evaluation tool developed by Solar One, and a requirement to identify upgrades that would reduce energy use by at least 30 percent.

If something like the IPNA can become a standard requirement for all subsidized AMF housing, it would ensure that both owners, and the agencies and lenders who finance their properties, understand the full range of needs and opportunities. The IPNA would have all the information they need to identify sufficient capital to comprehensively upgrade those properties.

New Approaches for Subsidized or Unsubsidized Affordable Housing

Smarter Utility Programs

Building owners of all types should become familiar with available utility programs and attempt to time participation in utility-sponsored efficiency programs with refinancing to provide greater opportunity for efficiency investment. However, as highlighted earlier in the paper, few utility programs are designed to work well with refinancing.

EEFA, with the help of our partners, has spent nearly five years advocating with utility regulators to dedicate more funds to programs, or create new programs, that serve the needs of the AMF sector. We have also worked to improve the design of new and existing programs to help overcome barriers that prevent owners from using them and prevent both programs and owners from achieving deeper and more comprehensive energy savings. Based on EEFA's experience to date, below are our recommendations on the best ways to adapt programs so they can be used at the time of a refinancing event, get deeper savings at a lower cost, and create a win-win situation for the utility, their customer, and the customer's lender.

- *Design programs based on where a property is in its capital cycle, rather than trying to create one approach that works for all properties at any point in their capital cycle*. – AMF properties at the time of refinance have different needs and present different opportunities than properties that are "mid-cycle" or in between financing. Many AMF mid-cycle properties have limited or no access to capital and are only likely to undertake low-hanging fruit improvements or improvements that address unexpected equipment failure. All but the most sophisticated AMF owners require richer incentives and a lot of handholding to make it worth the owner's time to participate in any program that is not direct install. However, properties going through a financing event do have access to capital and are likely already planning improvements that could have a significant impact on energy consumption if they are done correctly. This means that programs may be able to offer lower incentives that address incremental rather than total costs and get more savings for less money. Owners of properties going through a financing event are also already jumping through many hoops to apply for and secure financing, so are likely to be more open to dealing with the hoops required to participate in an efficiency program, but only if that program works with the financing process and timeline. Programs should either be explicitly designed to serve properties at the time of a refinancing event or have sufficient flexibility to serve both refinancing event properties and mid-cycle properties. Strategies for making a utility program compatible with a refinancing process are outlined in the bullets below.
- *Offset or cover the cost of technical assistance and accept audits an owner has already completed.* The first step for owners and lenders to include efficiency improvements in a work scope is understanding the opportunity. Utility programs are reluctant to invest in energy audits that many owners never act on, but helping owners get an ASHRAE Level II audit (an assessment of efficiency opportunities, detailed energy calculations, and financial analysis of proposed energy efficiency measures) at the time they are preparing to apply for financing has tremendous potential to influence decision-making and equip both owners and lenders with the information they need to make smart decisions about how they invest in the property at this crucial moment. Utilities should also be flexible if an owner comes to them with a sufficiently recent audit they have already completed, rather than requiring owners to do another audit to access their programs.
- *Adapt the program so incentives can be considered as part of the property's capital stack*. – Utility programs can make it possible for owners to invest in deeper efficiency upgrades by committing incentives before owners finalize their work scope and close on financing. Utilities set aside program funds to cover the incentives and provide a letter that documents

the utility's commitment to provide the funds if the project is completed as planned. If incentives can be committed before that point, then they can be considered part of the property's capital stack and can make the difference between installing or not installing major efficiency upgrades. The utility's commitment allows lenders to assume that the incentives will cover a certain portion of costs that then do not have to be incorporated into the loan. If incentives are not committed in time to be considered part of the capital stack, then owners or lenders may need to value engineer out certain aspects of the efficiency scope that loan proceeds are insufficient to cover, and the work may not get completed.

- *Accommodate long project timelines.* – As mentioned earlier, it can take up to two years from the time an energy audit is conducted and the time a project is completed and incentives are dispersed. Regulators need to ensure that program timelines, goals, and reporting requirements can accommodate such timelines without penalizing the program administrator. Regulators should allow committed funds to be considered "spent" with mechanisms in place to deal with the occasional project that does not complete construction or does not meet their savings goals.
- *Design incentives to encourage deeper savings*. – Prescriptive rebates can be useful to properties going through a financing event but can be constraining and are unlikely to drive deeper whole-building energy savings. Custom rebates based on estimated savings calculated by utility technical service providers, or even better, incentives tied to achieving a certain level of savings that go up as more savings is achieved (i.e. covering 50% of qualified costs for properties achieving 15% whole building energy savings and 70% of qualifying costs for properties achieving 20% whole-building energy savings) are preferable. Those types of incentives are good to include in any program, but are particularly impactful at the time of refinance. They give owners the flexibility to choose the most cost-effective and practical means of achieving savings that is well-aligned with the other capital improvements they plan to make.
- *Collaborate with HFAs* –The best way for utility programs to serve subsidized affordable housing at the time of a financing event is to partner with the local HFA to identify properties applying for LIHTCs or other forms of financing. There are many ways to do this including working with an HFA to get a list of properties that are coming up on a financing event that the program can target (e.g. Consumers Energy's commitment to work with the Michigan State Housing Development Authority to target LIHTC applicants for program participation), partnering with an HFA to align financing applications with program applications (e.g. IPNA alignment with NYSERDA and utility program applications in New York), or collaborating with an HFA to help owners conduct an energy rebate analysis as part of their financing application to ensure that the owner identifies all possible incentives and facilitate participation in those programs once a project moves forward (e.g. Minnesota Housing Energy Rebate Analysis requirement).

Examples of programs following one or more of these principles include:

- California's Low-Income Weatherization Program for Multifamily (Administrator: Department of Community Services & Development, Implementer: Association for Energy Affordability)
- Income Eligible Energy Savings and Public Housing Energy Savings (Administrator: ComEd, Peoples, Nicor, Northshore Gas, Implementer: Elevate Energy)

- Energize Delaware (Administrator: Delaware Sustainable Energy Utility, Implementer: New Ecology Inc.)
- Maryland's Multifamily Energy Efficiency & Housing Affordability Program (Administrator & Implementer: Department of Housing & Community Development)
- Massachusetts's Low-Income Multifamily Retrofit Program (Administrators: Action for Boston Community Development & ACTION, Implementer: LEAN)
- Minnesota's Multifamily Building Efficiency Program (Administrators: Xcel Energy & Centerpoint Energy, Implementer: Energy Insight)
- New York's Multifamily Performance Program (Administrator: NYSERDA, Implementer: TRC Solutions)
- Portland, Oregon Multifamily Energy Program (Administrator: Oregon Housing and Community Services, Implementer: TRC Solutions)

Educating Lenders & Borrowers About Incorporating Efficiency Improvements into Standard Mortgage Products

The cost of energy is the largest controllable, variable operating expense in multifamily housing. As such, lenders should look for ways to incorporate energy and water efficiency measures into mortgage financing to improve the financial and physical quality of buildings. In turn, owners should incorporate energy and water efficiency, and health assessments into capital and physical needs assessments to plan for, and align, energy efficiency upgrades at the time of capital improvements, and account for cost savings.

There are several organizations in the lending space who are pioneering the incorporation of renewables, and energy and water efficiency into mortgage products. As mentioned in the previous section, Fannie Mae and Freddie Mac both offer borrowers the option of improved loan terms and/or underwriting to up to 75% of utility bill savings to encourage and fund efficiency and renewables work through the standard mortgage products offered by their designated lenders. The Community Preservation Corporation (CPC), a nonprofit affordable housing and community revitalization finance company based in New York, is training their mortgage lending staff to understand and properly use the information from efficiency audits or IPNAs, and how to incorporate efficiency into their standard underwriting process. They have also committed to underwriting to up to 50% of utility bill savings from efficiency or renewables upgrades. And, the Connecticut Green Bank is working with the Connecticut HFA, government, CDFIs, and other lending partners to develop a streamlined approach to efficiency underwriting for multifamily projects.

To encourage more lenders to incorporate support for efficiency and renewable upgrades into their standard mortgage lending practices, EEFA and our partners have been working to develop peer learning forums, tools, and trainings that educate lenders on why this is important and how to go about pursuing it within their own organizations. Those efforts include:

- *Sustainability in Affordable Housing Lender Learning Network (SAHLLN)* – In 2017, EEFA partnered with a group of leading affordable housing lenders (Community Investment Corporation, CPC, Enterprise Community Partners, and National Housing Trust) to form the advisory committee for a new lender learning network. SAHLLN has brought together 100 affordable multifamily lenders and their allies (i.e. technical service providers, advocates) across the country to collaborate in building and implementing multifamily efficiency financing solutions. SAHLLN provides a platform where they can share successes and

challenges, and access resources such as case studies and a transaction database around increasing efficiency investments in affordable multifamily properties.

- *Underwriting Efficiency Handbook* – When CPC made its commitment to underwriting to utility bill savings as part of their mortgage lending, they realized that their mortgage lenders would need training on how to incorporate efficiency into their work. CPC recognized this lack of knowledge was not only an internal barrier but could also stand in the way of broader adoption of efficiency underwriting. In 2016, CPC partnered with EEFA and several other organizations to develop an efficiency training tool for lenders. The final product of that effort: Underwriting to Efficiency: A Mortgage Lender's Handbook for Realizing Energy and Water Efficiency Opportunities in Multifamily Housing[xiii], harnessed the expertise of lending institutions, owners, and efficiency experts to provide systematic strategies for weaving efficiency into standard lending practices.

  The Handbook has been well received by national lenders, New York State lenders, and Community Development Financing Institutions (CDFIs) across the country. It serves as an effective tool for helping lenders wrap their heads around what it might look like to do this within their own organizations. It is effective as a conversation-starter and has been used in several contexts to simply and clearly explain efficiency in a context familiar to lenders and borrowers. The group that developed the Handbook is currently exploring next steps and potential new strategies for educating lenders about the benefits of efficiency and how to incorporate it into property upgrades.
- *Trainings and Local Forums* – EEFA and many of our partners recognize the need for more trainings, discussions, and resources to engage and educate lenders, borrowers, and policy makers about the need for underwriting to utility bill savings as part of a mortgage, the benefits it brings to both lenders and borrowers, and its key role in making it possible to upgrade the energy and water performance of affordable multifamily buildings at scale. So far, EEFA has collaborated with our partners to deliver educational webinars through SAHLLN, trainings on how to use the IPNA and underwrite to the savings identified by the IPNA for NY's three Housing Finance Agencies and hosted a lender roundtable in Minnesota to begin a discussion about underwriting to efficiency with some of the primary affordable housing lenders in the state. However, there is clearly opportunity to do more with lenders. Borrowers must also be educated about why they should ask for energy and water upgrades to be included in the capital upgrades funded by their mortgages, and to ensure that they are fully aware of the resources already available to them such as Fannie Mae's Multifamily Green Financing offerings[xiv]and Freddie Mac's Multifamily Green Advantage offerings[xv].

Using C-PACE to Fill Financing Gaps

Commercial Property Assessed Clean Energy (C-PACE) is a financing structure that enables owners of commercial, industrial, and multifamily residential properties to obtain long-term financing for up to 100% of the cost of energy and water efficiency retrofits. C-PACE works by allowing building owners to finance qualifying improvements by placing a voluntary assessment on their property tax bill, paying for these improvements over time through an additional charge on this bill. Almost always, the voluntary assessment is more than paid for by the energy savings produced by the retrofit.[xvi]

In 2017, EEFA released a report exploring how C-PACE works for affordable housing. The report identifies many reasons why C-PACE may be appealing to affordable multifamily

owners and several barriers that prevent broader uptake of C-PACE in the sector. One key finding of the report was the significant potential to use C-PACE to fill gaps in loan proceeds at the time of refinance that otherwise might prevent owners from incorporating comprehensive efficiency upgrades.

At the time the report was released, only one affordable project had used C-PACE to fill a financing gap, but the report authors believe this strategy has significant potential to help borrowers maximize their ability to upgrade the energy and water performance of their property.

Conclusion

While there has been meaningful movement towards incorporating efficiency, healthy building, and renewables upgrades at the time of refinance over the past few years, standard practice will have to change if we want to see efficiency upgrades happening at scale in affordable multifamily housing, and many other sectors. As highlighted in this paper, there are still many barriers we need to overcome to make sure owners, and the agencies and lenders who finance their properties, understand the value of efficiency, and have the information and tools they need to identify sufficient capital to invest in upgrades that make properties more efficient, healthy and comfortable for residents. We hope to see progress continue on the development of new tools and strategies to overcome those barriers, but there is still much more that can be done with the strategies EEFA and our allies have already identified and developed. We are only beginning to scratch the surface of what is possible. Continued education, outreach, and advocacy with key stakeholders to encourage them to embrace these strategies has the potential to take us a long way towards the goal of making efficiency a standard part of every refinance event.

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