



Market
Engagement

ENERGY EFFICIENCY FINANCE FOR COMMERCIAL BUILDINGS: INSIGHTS FROM LENDERS

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Table of Contents

Executive Summary	4
1. Introduction.....	6
2. Survey Methodology.....	9
3. Interview Findings	11
4. Discussion.....	19
5. Recommendations and Conclusion	22
Appendix	23
Acknowledgements.....	24
About the Institute for Market Transformation (IMT).....	25

Executive Summary

Significant opportunities exist to finance energy efficiency projects for commercial buildings, yet current levels of investment remain stubbornly low. A 2012 report by The Rockefeller Foundation and Deutsche Bank Climate Change Advisors stated there is a \$72 billion investment opportunity for commercial energy efficiency retrofits. Some experts have argued the barrier to greater investment in energy efficiency is a lack of building owner demand, while others point to financial barriers, particularly for older Class B and C buildings. The Institute for Market Transformation (IMT) explored this complex issue by conducting a survey of 30 national, regional, and local commercial lenders.

The survey's primary finding was that most interviewed lenders do not experience sufficient demand for energy efficiency finance and therefore have not taken steps to incentivize better building energy performance. Energy efficiency is often a component of larger building capital improvement plans, but is rarely the driver of loan demand. Competing borrower priorities and the perception of high project costs were cited as reasons for the low demand.

Nevertheless, some promising lending practices that address building energy efficiency emerged from the survey:

- Three banks and two Community Development Financial Institutions (CDFIs) offer financial products specifically designed to facilitate building energy efficiency projects.
- Nine banks and three CDFIs think building energy data would be beneficial for their underwriting procedures, if such data were provided by the borrower.
- One bank and one CDFI consider building energy benchmarking requirements in their appraisal and underwriting processes, respectively.

This survey serves as a baseline engagement of the commercial banking industry that can be built upon by other stakeholders. Accordingly, the interview results revealed a few areas warranting further investigation:

- **Opportunity for federal banking regulators to issue guidance on appraising high-performance buildings:** The congressionally-chartered Appraisal Foundation will soon issue guidelines for valuing high-performance commercial buildings that should be incorporated into lenders' appraisal standards. Another useful resource for appraisers and underwriters to reference is "High-Performance Buildings

and Property Value,” a report co-produced by IMT and the Appraisal Institute.

- **Impact of energy project data on lender confidence in project performance:** Lenders generally identified “energy savings not materializing” as their greatest risk and welcomed more data to consider during underwriting. Building owners and managers are in a unique position to provide lenders with additional data that may increase their willingness to lend. However, this data must be in a usable format and whenever possible provided or reviewed by an impartial and competent third-party professional.
- **Opportunity to expand Environmental, Social, and Governance (ESG) policies to incorporate goals and strategies related to clean energy project finance:** While most interviewees stated that their institution has an ESG policy, no one mentioned that their policy focuses on increasing financing for clean energy projects.
- **Significance of proposed revision to the Community Reinvestment Act (CRA) Questions and Answers, which would include an example of how CRA examiners may consider loans for energy efficiency:** While several lenders were skeptical that this proposed revision would impact lenders’ willingness to finance energy efficiency projects, there were others who thought it would be a beneficial change. Additional engagement of professionals who specialize in CRA lending is needed to better understand this opportunity.

1. Introduction

In September 2015, the six largest U.S. banking institutions called for “policies that recognize the cost of carbon” ahead of the Paris Climate Conference (COP21) held at the end of the year.¹ These institutions see an appealing business opportunity to finance a low-carbon economy and seek a “strong global climate agreement.” Their joint statement is a significant departure from the banking industry’s traditional anti-regulation stance and a welcome sign for proponents of both high-performance buildings and the clean energy sector as a whole.

According to a 2012 report by The Rockefeller Foundation and Deutsche Bank Climate Change Advisors, there is a \$72 billion investment opportunity in commercial energy efficiency retrofits that could yield 848 trillion BTUs in energy savings and reduce greenhouse gas (GHG) emissions by 175 million metric tons per year,² which is approximately equivalent to the annual GHG emissions from 46 coal-fired power plants.³ While innovative financing mechanisms such as Property Assessed Clean Energy (PACE) have garnered more attention in recent years for facilitating investment in building energy efficiency,⁴ these niche energy efficiency products comprise only a small fraction of the overall commercial real estate loan pool. Far greater involvement from the commercial banking industry is needed to scale up energy efficiency finance solutions and attain the aforementioned potential level of investment.

Lenders can influence the market for building energy efficiency in a number of ways. To start, they are well-positioned to help incorporate the value of high-performance features in commercial appraisals, as described in IMT’s recently released report, “High-Performance Buildings and Property Value: A Primer for Lenders.”⁵ By facilitating “green appraisals,” lenders can motivate owners to invest in energy efficiency and other high-performance building attributes. Furthermore, lenders are incentivized to help develop the high-performance building market, as high-performance buildings

¹ <http://www.greenbiz.com/article/six-largest-us-banks-call-strong-cop21-agreement-and-carbon-pricing>.

² <https://www.rockefellerfoundation.org/report/united-states-building-energy-efficiency-retrofits/>.

³ <http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

⁴ [PACENation](#) estimates the size of the commercial PACE market to be \$200 million.

⁵ http://www.imt.org/uploads/resources/files/LenderGuide_FINAL.pdf.

can often attract higher rents and reduce owners' operating costs,⁶ making them less risky investments for lenders.

In addition to influencing valuation practices, lenders can also catalyze the market by adopting underwriting procedures that incorporate the projected cost savings of energy efficiency investments. Proposed project savings are of course unproven and represent additional risk to lenders, who require more confidence in savings estimates-or savings guarantees-before extending additional financing to borrowers seeking energy upgrades. With its suite of green financing options, Fannie Mae has exhibited leadership in its underwriting standards within the multifamily sector, but commercial underwriting practices must undergo substantial change to incentivize building energy efficiency.

Some organizations have already engaged commercial lenders to identify the financial barriers and solutions to develop a more energy-efficient building stock. The American Council for an Energy-Efficient Economy (ACEEE) and Energi Insurance Services created the Small Lender Energy Efficiency Community (SLEEC),⁷ a platform to engage small to mid-size lenders. ACEEE has also published a series of reports that explore energy efficiency finance and act as critical resources for states, municipalities, utilities, and lenders.

The Investor Confidence Project (ICP), launched by the Environmental Defense Fund, is an effort to bridge the gap between energy efficiency retrofit opportunities and funded projects. ICP has created a set of protocols that standardize how energy projects are developed and how savings estimates are calculated, thereby reducing transaction costs and increasing projects' appeal. ICP is developing a network of investors who recognize the value of standardized projects.⁸

Another entity that has been actively engaging real estate lenders is GRESB, an organization that analyzes the sustainability performance of real estate portfolios.⁹ In her August 2015 blog post, Sara Anzinger, Manager Real Estate Debt & Fixed Income at GRESB, mentions that the most common lender reaction to GRESB engagement has been some form of:

⁶ IMT has compiled research that identified rental premiums for high-performance buildings: <http://www.imt.org/resources/detail/rental-premiums-of-green-commercial-buildings-in-the-u.s>.

⁷ ACEEE and Energi Insurance Services were supported in this initiative by the Department of Energy (DOE), National Renewable Energy Laboratory (NREL), and Argonne National Laboratory. <http://aceee.org/financing-energy-efficiency/information-lenders>.

⁸ For more information on the Investor Confidence Project, please visit: <http://www.eepformance.org/>.

⁹ For more information on GRESB, please visit: <https://www.gresb.com/>.

- “As a lender, we have less control over properties than do borrowers/asset owners. Furthermore, we realize no upside as a result of energy efficiency...Why should we consider environmental, social and governance (ESG) issues relative to our lending platform and processes?”¹⁰

This quotation highlights the rather somber outlook many lenders have towards energy efficiency finance, a sentiment revealed during IMT’s lender interviews, as well. While lenders may not often perceive any benefits to financing energy efficiency projects, this report describes how energy efficiency can lower lender risk and explores opportunities to increase lenders’ willingness to finance such projects.

¹⁰ <https://www.gresb.com/insights/2015/08/real-estate-lending-and-esg-observations-from-the-2015-gresb-debt-survey/>.

2. Survey Methodology

IMT explored the opportunity to better leverage the financial resources of commercial lenders by conducting phone interviews with a diverse group of 30 national, regional, and local banks, as well as CDFIs. Interviews ranged in length from 10-40 minutes and IMT prepared a script of 15 questions that were used to guide discussion. Interviews were not overly structured in order to allow for more free-flowing discussion and additional insights.

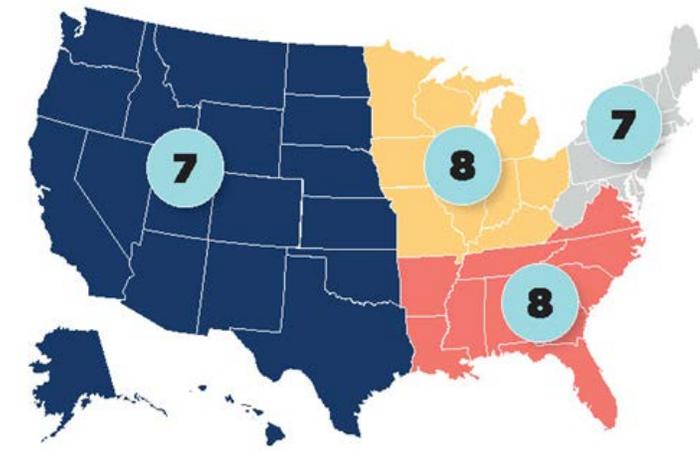
Table 1 provides a breakdown of the financial institutions interviewed by size and type. A wide range of lenders were represented in this study, including half of the ten largest U.S. commercial banks.¹¹

Table 1: Breakdown of Lenders by Size and Type

Institution Size and Type	Number of Interviews
>\$200B Banks	5
\$5B-\$200B Banks	10
<\$5B Banks	12
CDFIs	3

In addition to interviewing a wide range of lenders based on asset size, IMT also sought to interview a geographically-diverse selection of lenders. Figure 1 highlights the regional distribution of interviewees on a map of the United States.

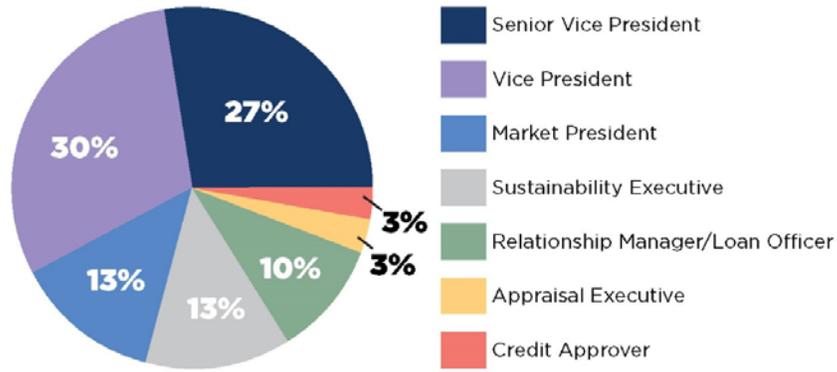
Figure 1: Geographic Distribution of Interviewed Lenders



¹¹ Bank size ranked based on consolidated assets.

Furthermore, Figure 2 shows a breakdown of interviewees by professional title. IMT’s research team sought to interview senior lenders who are focused on commercial real estate, however challenges arose that occasionally prevented IMT from identifying ideal candidates. In some cases, IMT identified an appropriate individual, but scheduling constraints prevented an interview from occurring. In addition, large financial institutions tend to have complex structures with extensive employee hierarchies and varying naming conventions for departments, divisions, branches, etc. This complexity occasionally hindered the research team from identifying appropriate interviewees. Lastly, the wide range of topics covered during the interviews often meant that lenders were only knowledgeable on a subset of questions.

Figure 2: Interviewed Lenders by Professional Title



3. Interview Findings

Demand for Energy Efficiency Finance

The majority of lenders revealed that they are seeing low loan demand for energy efficiency (Table 2), which is generally part of larger capital improvement projects and not a driver of loan demand. As one banker explained:

- “We have not had anyone say, ‘I need a loan because I want to make my building more energy efficient.’ What they do say is, ‘I bought this older building and I want to renovate it.’ Sometimes that includes HVAC and lighting systems and other efficiency measures. But we have never had someone ask for money specifically for energy efficiency. It’s always driven by other building improvements.”

Table 2: Perceived Demand for Financing to Make Buildings More Energy Efficient

Level of Demand	Number of Responses
None	3
Low	18
Moderate	7
High	2

An interviewee from a large bank described how competing priorities and perceived high costs have limited demand for energy efficiency in his market:

- “I think demand is kind of an issue. We have a particular niche (affordable housing), which has a whole host of physical preservation issues that a property owner or landlord might put ahead of energy efficiency...Building owners sometimes see energy efficiency retrofitting as a luxury they can’t afford. Landlords and operators in the affordable space are getting more interested, but the market needs to develop further to identify the best options for affordable owners.”

In addition, a CDFI director noted how insufficient collateral to finance energy retrofits has hindered deal flow:

- “Demand is low. We are usually encountering people through a vendor and the products they are looking for are usually

not secured debt, but we are a secured debt lender...An energy retrofit's collateral normally does not appraise and as a result we are looking for additional collateral. Building owners simply don't want to provide that."

Nevertheless, a few lenders reported greater demand for energy efficiency finance. One banker indicated high demand for energy efficiency in new construction, but much lower demand for existing buildings. Another banker cited three reasons for the high demand in his market: 1) a large number of old buildings that need to be repurposed, 2) high-performance building incentives, and 3) high tenant expectations.

High-Performance Building Certifications

The level of awareness of high-performance building certifications, especially ENERGY STAR and LEED, was high. Eighty-three percent of interviewees noted that they've seen at least some loan demand for projects incorporating high-performance building certifications. An interviewee with a large, national bank described the prevalence of LEED in major markets:

- "With Class A developers, this is standard operating procedure now...we are hearing that there is basically no major metropolitan area in the US where Class A developers are building anything other than LEED certified buildings."

Another notable response was that some developers pursuing energy efficiency do not feel that the costs of LEED documentation are worth it. In addition, one lender said that in his experience, LEED and ENERGY STAR certifications have not impacted sales and rental prices for commercial buildings.¹²

Available Financing

The majority of lenders interviewed, approximately 83 percent, stated that either their institution does not offer financing tailored to building energy efficiency, or they were unaware of such financing. A perceived low level of demand was frequently cited as the reason for this. One banker explained:

- "[Energy improvements] generally will be developer or investor-driven. If a developer or investor wanted to incorporate energy efficiency into a budget, that would be another line item we'd consider. We don't offer anything specifically to incent people to do energy efficiency."

¹² In contrast, IMT has compiled research supporting the existence of [sales](#) and [rental](#) premiums for high-performance buildings.

Some of the larger banks are involved with specialized energy project financing, such as Energy Services Agreements (ESAs), Property Assessed Clean Energy (PACE), and lease programs. Nevertheless, one banker described the challenges his institution faced while attempting to finance energy efficiency projects:

- “We did an energy-efficiency (EE) lending pilot several years ago and found that loans were big enough to encourage borrowing, but not big enough to do EE standalone. We had an awkward price point of \$100,000-\$300,000. Since then we haven’t developed specific products/services for EE, but we have looked to adapt existing products/services to support those looking to do EE as part of larger financing projects.”

The same banker continued to explain the difficulty of introducing new products tailored specifically to building energy efficiency:

- “The problems stem back to the larger economic climate as banks find themselves in a prolonged low-interest rate environment, where banks are focused on expense reduction and often this means reducing staff. So the bandwidth to launch new products is minimal. I’m not just speaking for our bank. I believe this is a general perception of the industry.”

Utility and Government Energy Efficiency Programs

The overwhelming majority of interviewees stated that their institution was not involved with a utility or government energy efficiency program. The exceptions include a CDFI and small bank, both of which were incentivized to finance energy efficiency projects with energy savings guarantees from local utilities. In addition, another lender explained that government and utility partnerships have driven his institution’s involvement in energy efficiency:

- “We have a utility that’s facing load issues in areas of the city – it’s looking to improve energy efficiency so it doesn’t have to build substations. Where we’ve gotten involved has been more driven by our partnerships with city government, or the utility, or non-profit intermediaries, rather than in response to demand from building owners.”

Environmental, Social, and Governance Policies

While the majority of lenders mentioned that their institutions do have Environmental, Social, and Governance (ESG) policies, none explicitly stated that energy efficiency finance is integrated into these policies. One lender stated that his institution’s ESG policy was focused internally on the bank’s carbon footprint and resource conservation, and did not apply to the bank’s underwriting procedures. Another mentioned that his bank’s policy is geared more

towards social economic justice rather than environmental sustainability. An interviewee working for a small bank made a broader statement by implying that there is an industry-wide lack of integration between energy efficiency finance and ESG policies:

- “We have an environmental policy, but nothing that’s related to energy efficiency per se. I don’t know of any bank that does include energy efficiency in their environmental policy, which is more related to mold, asbestos, groundwater contamination, and other things like that.”

Lender Risk

In 2013, IMT explored how energy efficiency impacts the risks associated with residential mortgages, finding that on average loan default risks are 32 percent lower with energy-efficient homes.¹³ Energi Insurance Services has similarly explored the commercial lending risks associated with energy efficiency projects.¹⁴ While this study maintained a broad scope and did not provide a deep level of risk analysis, it nevertheless investigated lender risk in the commercial sector and found that lenders’ unfamiliarity with energy efficiency has made them concerned about these projects’ associated risks. Unsurprisingly, the most frequently cited risk was energy savings not materializing, and the resulting impact on a project’s payback period and return on investment (ROI).

Several of the interviewed lenders account for energy cost savings during underwriting. One banker stated that energy cost savings are incorporated into expense calculations, increasing a borrower’s Net Operating Income (NOI) and Debt Service Coverage Ratio (DSCR).¹⁵ Another said that his bank uses the cash value of a project’s energy savings as a credit enhancement. A third banker mentioned that if an appraiser can show there are lower operating costs (e.g. energy costs) due to an investment, he would consider this reduction when forming the loan.

Other lenders reported that their institution does not incorporate energy savings into underwriting, as one interviewee with a large, national bank lamented:

- “Our credit underwriters will give no credit to post-retrofit energy savings...they’re like the credit rating agencies. If you

¹³ For more information on IMT’s report, please see:

<http://www.imt.org/resources/detail/home-energy-efficiency-and-mortgage-risks-executive-summary>.

¹⁴ For more information on Energi’s guide, please see: [Risk Mitigation Reference Guide for New Energy Financing](#).

¹⁵ DSCR is a common metric used by lenders to evaluate risk during underwriting. It is equal to a borrower’s NOI divided by total debt obligations. <http://www.investopedia.com/terms/d/dscr.asp>.

can't show up with 7-10 years of data, they're not interested."

In addition to the risk of projected energy savings not materializing, technology and equipment-related risks were also identified. One interviewee discussed the difference in risk profiles between proven and novel technologies, using solar panels as an example of a proven technology that makes banks more comfortable. A CDFI loan officer explained the risk of equipment not being properly maintained, stating that building staff often do not know how to operate equipment efficiently and may run systems manually, especially when tenants are complaining.

Lenders' past experiences working with project stakeholders was also cited as an important factor when assessing project risk. One lender asserted that if the bank were to do a standalone energy efficiency loan, it would want a third-party that it knows and trusts to complete an energy audit, so that the bank has confidence in the estimated energy savings and payback period. Similarly, another lender described the importance, in terms of risk mitigation, of working with an established developer with whom the bank has experience.

Interestingly, two bankers did not believe that energy efficiency projects presented additional risk and described how such projects can actually mitigate lender risk:

- "We don't see this as an area where we are accelerating our risk, but actually enhancing the financial performance of the client."
- "We analyze [energy efficiency] as part of the offset to risk. It may make a property more desirable and better suited for sale or tenancy. We like when customers are incorporating some type of energy efficiency into their properties, although we don't require it."

Building Energy Data

Approximately half of the interviewees said that their institution does not currently incorporate building energy data into underwriting procedures, but a higher percentage of respondents thought this data would be valuable. One of the large banks has conducted a study to collect building energy data, reasoning that it may become easier to connect such data with loan performance and clients' financial performance. A banker at a large financial institution stated:

- "I think having the data would be fabulous. The more information that is gathered over a period of time, the more valuable it is. It's one of the line items on the income statement. When you do a comparative, particularly if you

provide that information to the appraiser, it could impact value, so I think it would be a good thing to have.”

Energy benchmarking policies, which require large buildings’ aggregate energy use to be measured and then reported, have been adopted in 18 jurisdictions across the country.¹⁶ The publicly available whole-building energy data outputted from these policies is valuable to a variety of industry stakeholders, including lenders who can use it to evaluate operating expenses and assess savings opportunities.

The majority of survey participants were unfamiliar with energy benchmarking policies, and only two respondents, representing a bank and CDFI respectively, mentioned they were actively using benchmarking data:

- “Our strategy is to include disclosure of any local energy benchmarking or building labeling requirements in the obligation of our appraisers. If they are appraising a building in a city with benchmarking, they should disclose that to us in their appraisal. It doesn’t mean we’ll factor [benchmarking data] into the evaluation. This is written into our agreement with appraisers, but they are not doing this consistently.”
- “Benchmarking data is valuable to us because we have staff who know what to do with it. We see it as our job to take that information to loan officers and ultimately convince borrowers to do something smart with it...Loan officers might find this information persuadable and useful because they can go to the borrower and say there is money on the table. Usually this conversation would lead to an energy audit, which we find brings the whole conversation to a halt because it takes time and money to do that.”

Several interviewees who were not familiar with energy benchmarking policies nevertheless saw the value of whole-building energy data, specifically in the context of evaluating a property’s operating expenses during underwriting.

Supervisory Guidance

In 2013, the Office of the Comptroller of the Currency (OCC) updated its commercial real estate lending guidance by, among other additions, expanding upon its previous guidance pertaining to environmental risk management.¹⁷ Similarly, a potential way to

¹⁶ <http://buildingrating.org/jurisdictions>.

¹⁷ <http://www.occ.treas.gov/news-issuances/bulletins/2013/bulletin-2013-19.html>.

increase lender confidence in building energy efficiency is to encourage federal banking regulators to offer guidance describing how lenders should consider financing for energy improvements to buildings. However, several lenders had a negative reaction to the idea of banking regulators issuing supervisory guidance, stating that the market will dictate what can be done in terms of energy efficiency and that there is already too much regulation in the business. One lender recognized this sentiment, but also articulated a strategy forward:

- “If there were regulations coming into the banking industry regarding energy efficiency, I think there would have to be a clear value proposition addressing what the banks can gain from that and I’m not sure if there’s anyone out there articulating what that is. If something is going to come to be across the industry, then regulation will make it happen...The struggle is trying to find a way to apply regulation that would be meaningful to banks with slightly different business models and strengths.”

Appraisal Process

Another, more promising lever to catalyze the market for building energy efficiency is incorporating the value of high-performance building features into a property’s appraisal.¹⁸ The Appraisal Institute’s recently released “Commercial Green and Energy Efficient Addendum” is a mechanism for communicating high-performance building features to assist appraisers with their valuations.¹⁹ Although some lenders did not think there was an industry *need* to incorporate building energy information into the appraisal process, most saw the value of doing so. One interviewee noted that energy cost savings have a positive impact on an owner’s NOI, which translates into added property value when applying the income capitalization approach.²⁰ Showing how energy cost savings increase an owner’s NOI can encourage banks to lend additional capital for a project.

The Uniform Standards of Professional Appraisal Practice (USPAP) has a rule that requires appraisers to be competent in an assignment prior to accepting it and to act competently during the given assignment.²¹ However, the majority of commercial appraisers do

¹⁸ IMT has published both an [owner](#) and [lender](#) guide for navigating the *green* appraisal process.

¹⁹ http://www.appraisalinstitute.org/assets/1/29/AI_821_Green_Commercial_Interactive.pdf.

²⁰ <http://www.investopedia.com/terms/i/income-approach.asp>.

²¹ <http://www.appraisers.org/Disciplines/Appraisal-Review-Management/arm-news-and-events/2014/01/07/2014-15-uspap-modifications-released>.

not currently have the knowledge to accurately identify and value high-performance building features. IMT explored this issue of appraiser competency, asking survey participants if there was an industry need to select appraisers with experience valuing energy-efficient buildings. Approximately half of the interviewees recognized the value of having appraisers with experience valuing high-performance buildings, with a slightly smaller percentage characterizing this as an industry need. The Appraisal Institute's "Valuation of Sustainable Buildings Professional Development Program" consists of four voluntary continuing education courses that educate appraisers on how to value high-performance buildings.²²

Community Reinvestment Act

The Community Reinvestment Act (CRA) was enacted by Congress in 1977 to encourage banks to help meet the credit needs of their communities, including low- and moderate-income populations. Federal supervisory agencies periodically assess banks' CRA performance record, which is taken into account when banks apply for new branches, as well as mergers and acquisitions.²³

Bankers have mentioned that CRA examiners sometimes do not consider projects incorporating "green" components because these types of projects are not addressed in the CRA regulations or Questions and Answers. To address this issue, in September 2014 the federal banking regulators proposed revisions to the Questions and Answers, including adding an example of how CRA examiners may consider loans related to renewable energy or energy-efficient technologies that also have a community development component.²⁴

The large majority of interviewees were not aware of this proposed CRA revision, but several mentioned having colleagues who focus on CRA and would be aware of it. With regards to the proposed revision's impact, a common response was that the revision would not affect bank lending because the regulators have not fundamentally changed the intent of CRA. Financing energy projects is not by itself sufficient to receive CRA credit; rather banks will still have to address the financial needs of low- and moderate-income neighborhoods. Others had a more positive outlook on the proposed revision. One respondent thought it would heighten the financial sector's awareness of green activities, while another interviewee stated that projects with both energy and low to middle-income components would "be a bonus" and "sweeten the pot."

²² <http://www.appraisalinstitute.org/education/education-resources/green-building-resources/>.

²³ http://www.federalreserve.gov/communitydev/cra_about.htm.

²⁴ Please see Appendix A for the proposed text of this example.

4. Discussion

Survey results have shown that lenders generally do not perceive significant demand for building energy efficiency. Competing owner priorities and perceived high costs were cited as barriers inhibiting owner demand. As a result, many lenders do not see building energy efficiency as a business opportunity and are not proactive in stimulating demand.

The large majority of lenders mentioned having an ESG policy, but no one stated that their policy included goals for financing clean energy projects. Such policies were more likely to focus on environmental hazards, with social economic justice and corporate sustainability metrics such as the carbon footprint also cited as important considerations. Lenders are missing a large opportunity to bolster their ESG performance by also focusing on clean energy lending. Providing capital is a core business of commercial lenders and it seems intuitive that they should expand the scope of their ESG policies to include strategies related to clean energy project finance.

Lenders generally liked the idea of being provided more building performance data, which they can analyze and incorporate into their underwriting processes. Therefore, one of the study's primary takeaways is the instrumental role of borrowers in catalyzing the market for building energy efficiency. Greater awareness of the benefits of energy efficiency will help building owners overcome the aforementioned barriers,²⁵ and this education is especially needed for Class B and C owners. Furthermore, when owners have completed or are pursuing an energy retrofit, it is critical that they provide sufficient energy data to their lender. This data can illuminate a project's cost effectiveness, increasing lender confidence in project performance and convincing them to lend more capital.

As building energy efficiency is largely an unfamiliar investment for lenders, they are unsurprisingly concerned about associated risk. Energy savings not materializing was cited as their greatest risk, and multiple lenders mentioned that third-party savings guarantees can ameliorate their risk profile. Research on the current and potential effectiveness of third-party guarantees, and perhaps more generally credit enhancements, to incentivize lenders to finance energy efficiency projects would be of great value to the industry.

While the idea of federal banking regulators issuing supervisory guidance related to energy efficiency finance was generally not well-received by lenders, there may be an opportunity for guidance pertaining to the integration of energy factors in the appraisal process. Most interviewees recognized the value of energy data in

²⁵ The split-incentive, a situation in which owners are disincentivized to pay for upgrades because energy savings accrue to tenants, is also a barrier and can be overcome when owners and tenants agree to a [green lease](#).

the valuation process and some thought it was important to select appraisers with experience valuing high-performance buildings. Guidance that references IMT and the Appraisal Institute's lender guide for navigating the appraisal process,²⁶ or the Appraisal Foundation's forthcoming recommendations to be released in 2016, would be a useful resource for lenders interested in pursuing this business opportunity. This can become a virtuous cycle, since incorporating energy efficiency into the appraisal process will increase property valuations and encourage more owners to secure financing for energy projects, thus increasing lenders' loan pipelines.

A relatively recent regulatory change may have made it more difficult for lenders to ensure that high-performance buildings are properly valued. In 2010, the federal financial regulatory agencies issued guidelines that called for financial institutions to establish a real estate appraisal and evaluation program independent from their loan production processes.²⁷ This guidance has had a profound impact on commercial lenders, as described by one interviewee:

- "Five years ago I could call an appraiser and pick his brain about a project and then decide to hire them, but now lenders can't have any direct communication with appraisers unless they call us and engage in conversation about the project for use in their official report. Each bank now has a third party who does this aspect of the work-they're an intermediary."

An examination of the impact this regulatory change has had on lenders' ability to select appraisers with experience valuing high-performance buildings, and ultimately the consideration of high-performance building features in the appraisal, is warranted.

The opportunity for the CRA to incentivize investment in building energy efficiency is unclear and additional lender engagement is needed to better understand this opportunity. It is important that future engagement be focused on individuals who specialize in CRA lending at their respective banks. A couple questions to guide future outreach are:

- What is the level of importance to receive CRA credit, relative to other priorities at the bank?
- How will(has) the revision to the CRA Question and Answers impact(ed) the bank's willingness to finance energy efficiency projects?

Comparisons by Lender Type, Size, and Location

²⁶ [High-Performance Building and Property Value.](#)

²⁷ <http://www.occ.gov/news-issuances/federal-register/75fr77450.pdf>

There were a few noticeable differences in the responses between commercial banks and CDFIs. Although the CDFI sample size was small, CDFIs were more likely to offer financing options specifically tailored to energy improvements. In addition, due to their different regulatory requirements, CDFIs had less to say about supervisory guidance and the CRA proposed revision.

Interestingly, the size of the bank did not seem to have a significant impact on responses to survey questions. Small and large banks that were interviewed generally do not offer specialized financing for energy efficiency, and while some small and large banks consider energy data in their underwriting processes, neither small nor large banks do this on a consistent basis. Larger banks tended to see greater demand for energy efficiency, and were more likely to participate in utility or government-based energy efficiency programs.

Finally, an analysis of responses by geography revealed a few interesting results. East Coast lenders reported mixed levels of demand and were unlikely to offer specialized financing for energy efficiency. They also responded favorably to the ideas of increasing the presence of energy data in the appraisal process, and hiring appraisers with experience valuing high-performance buildings. Lenders from the middle of the country, on the other hand, experienced very little demand for energy efficiency finance and were less convinced of the need to integrate energy factors into the appraisal process. The two most notable takeaways from interviews with West Coast lenders were the significant number of retrofits to older buildings that they've witnessed, and the relatively common existing practice of reflecting utility cost savings in the DSCR.

This analysis of responses based on lender type, size, and location provided initial insights, such as commercial banks' low commitment to energy efficiency finance relative to CDFIs', that can be explored in future studies. However, due to the relatively small sample size of this survey, it is important not to immediately generalize these results across the lending community.

5. Recommendations and Conclusion

These next steps are recommended to further leverage the abundance of capital available in the commercial banking industry:

- An industry-wide effort by energy efficiency advocates, contractors, utilities, tenants, and lenders is needed to increase: 1) building owners' understanding of the benefits of energy efficiency, and 2) their willingness to provide building energy information to lenders. Owners are the most important stakeholder to engage to further develop the market for building energy efficiency.
- Investigate opportunity for commercial lenders to incorporate energy efficiency finance goals and strategies into their existing ESG policies.
- Conduct research on the potential opportunity for credit enhancements, especially energy savings guarantees, to entice lenders to finance energy efficiency projects.
- Encourage federal banking regulators to develop a policy or guidelines pertaining to appraising high-performance buildings. This may include a certification for appraisers who have experience valuing high-performance buildings.
- Explore how the recent federal banking regulation, which instructed financial institutions to establish an independent appraisal group, has impacted high-performance building appraisals.
- Engage lenders who specialize in the CRA in order to better understand the opportunity to develop the market for building energy efficiency projects via the CRA.

Due to its sheer size, the commercial banking industry has the potential to lead the scaling up of building energy efficiency finance over the next several years. Yet its size also presents a challenge: a monumental effort is needed to overcome inertia in the banking industry and change the status quo. IMT's survey has probed "business as usual" in commercial lending, uncovering insights into how lenders view energy efficiency finance and identifying next steps to encourage industry change. There's much more work to be done, and it will require a collective effort among energy efficiency advocates and other key stakeholders within the building sector.

Appendix

Proposed Example of Community Development Loans

Loans to borrowers to finance renewable energy or energy-efficient equipment or projects that support the development, rehabilitation, improvement, or maintenance of affordable housing or community facilities, such as a health clinic, even if the benefit to low- or moderate-income individuals from reduced cost of operations is indirect, such as reduced cost of providing electricity to common areas of an affordable housing development.

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About the Institute for Market Transformation (IMT)

The Institute for Market Transformation (IMT) is a Washington, DC-based nonprofit organization promoting energy efficiency, green building, and environmental protection in the United States and abroad. IMT's work addresses market failures that inhibit investment in energy efficiency and sustainability in the building sector. For more information, visit imt.org.

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