Green Finance Institute

Property Linked Finance:

A NEW FINANCIAL SOLUTION TO DECARBONISE THE UK'S HOMES AND BUILDINGS

Property Linked Finance: A new financial solution to decarbonise the UK's homes and buildings

Introducing Property Linked Finance to the UK market will help to decarbonise the UK's buildings, reduce energy use, lower energy bills and create warm, comfortable homes across the nation. Other countries are already demonstrating how this can be done. In the U.S., where this type of finance is called Property Assessed Clean Energy (PACE), it has supported billions of dollars of investment in energy efficiency, renewable energy, resilience and water efficiency upgrades to buildings.

The UK is currently facing climate, energy and cost-of-living crises and urgently needs new solutions to address all three. By funding energy efficient building upgrades, Property Linked Finance (PLF) - an innovative financial solution for both residential and commercial properties that is not currently available in the UK – has the potential to reduce energy demand; lower bills, addressing severe affordability concerns for energy consumers; create warm, energy efficient homes and businesses; and produce thousands of new green jobs throughout the country.

The need is acute. Research by Citizens Advice[1] suggests that 58% of renters in England are struggling with damp, mould or excessive cold in their home, adding up to 2.7 million households, including 1.6 million children. Damp homes also cost the NHS £1.4 billion a year[2]. Ensuring that everyone in the UK can live in a warm, comfortable home is an imperative, but making the UK's residential and commercial building stock energy efficient will also help to improve energy security and move the UK much closer to a net zero future.

Property Linked Finance has the potential to meet growing consumer interest in energy efficiency. Research by the Green Finance Institute (GFI) has shown that there is a growing appetite from consumers for Property Linked Finance in the UK[3] and that PLF could enable between £52-70 billion of investment in upgrading the UK's inefficient buildings. Combined with the right policies, regulations, retrofit technologies, consumer education and incentives, Property Linked Finance can play an important role in decarbonising the UK's built environment.

[1] https://www.citizensadvice.org.uk/about-us/about-us1/media/press-releases/more-than-one-and-a-half-million-children-in-england-live-in-cold-damp-or-mouldy-private-rented-homes-citizens-advice-reveals2/
[2] https://bregroup.com/press-releases/bre-report-finds-poor-housing-is-costing-nhs-1-4bn-a-year/
[3] https://www.greenfinanceinstitute.com/wp-content/uploads/2022/09/GFI-PLF-SUMMARY.pdf

The investment challenge

The challenge of upgrading millions of UK homes and businesses is significant. The UK has some of the oldest and least energy efficient homes in Europe, with buildings responsible for 23% of the UK's annual greenhouse gas emissions. With roughly 80% of the buildings that will exist in 2050 already built, upgrading existing building stock is vital[4].

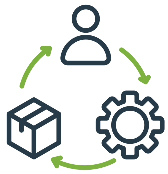
Yet there are three significant barriers to the widespread deployment of energy efficient upgrades in UK buildings. The availability of attractive financial solutions is one part of the puzzle, as is increasing demand for home retrofits and developing the retrofit supply chain:

1 Driving demand

Education and marketing campaigns are required to increase consumer awareness of the benefits of making energy efficiency upgrades

2 Delivering finance

Attractive financial solutions need to be available to homeowners to help fund energy efficiency improvements



3 Developing the supply chain

Supply chains need to be upskilled and expanded to create more green jobs

The need and opportunity for private finance to fund energy efficient upgrades through innovative new financial mechanisms is compelling. Future proofing UK buildings will cost an estimated £360 billion before 2050[5], which cannot be funded by public money alone. There is growing consumer interest in making energy efficiency improvements and reducing energy bills, given the cost of living crisis, but the barriers identified in the diagram above mean that consumer interest is not resulting in more retrofit projects. This, combined with a declining appetite for traditional finance options (see research below), means that new financial solutions are crucial to support large-scale upgrades to the built environment and to help to address the energy security, cost of living and climate crises.

[4] https://www.mckinsey.com/industries/engineering-construction-and-building-materials/our-insights/call-for-action-seizing-the-decarbonization-opportunity-in-construction

[5] Climate Change Committee (CCC), The Sixth Carbon Budget, December 2020

In September 2022, the GFI published *Property Linked Finance: rising consumer demand for energy efficiency and the need for financial innovation*[6], featuring research commissioned by the Institute. It showed that energy efficiency was even more important to consumers than in 2021. Nearly 9 in 10 people considered the energy-efficiency of their homes to be important or very important, up from 83% before the energy price crisis. However, only 20% of individuals were likely or very likely to use existing types of finance to do upgrade works and around 50% were unlikely or very unlikely.

Meanwhile, the new research found that interest in Property Linked Finance had increased across all demographic groups, with reducing energy bills, protecting against future energy price rises and saving money for other household costs all being important motivations. The data pointed to heightened demand from consumers for new financial solutions like Property Linked Finance to provide the funding homeowners need for upgrades.

Advantages for financial providers and consumers

If it was introduced in the UK, Property Linked Finance could offer significant benefits to financial providers and consumers. It would enable property owners to fund up to 100% of energy efficiency upgrades upfront, with the unique characteristic that the finance is linked to the property, rather than the property owner. This means the payment obligation transfers to the new owner when it is sold.

Property owners only pay for energy efficiency measures until they sell their property, while new buyers benefit from a more energy efficient, potentially more valuable property, in return for continuing to make regular payments.

This transfer of the payment obligation overcomes a key challenge of existing energy efficiency upgrades known as the payback period barrier, whereby homeowners wishing to move in the near to medium term are deterred from making energy efficient upgrades because the energy bill savings from the installation are not sufficient to pay for its cost in that time period.

Property Linked Finance offers financial providers with a new and potentially sizeable commercial opportunity (see potential size of the UK residential market below). As it enhances energy efficiency for the long term, it will also enable financial providers to decarbonise their portfolios and derisk their back books without discontinuing lending on less energy efficient properties if minimum energy standards are introduced.

The cash flows for Property Linked Finance are predictable, so can be securitised and distributed to the market, which can further reduce the financing costs for end consumers and enable institutional investors to actively participate in upgrading the UK's building stock.

Finally, Property Linked Finance schemes can be capitalised by public funds and institutional investment, which allows the funding structure to evolve towards more private sources as the market scales. Property Linked Finance should be designed to offer attractive financing costs, to overcome the 'golden rule'[7], and to focus on local delivery though a reputable supply chain[8], which directly addresses the major issues of the UK's disbanded Green Deal scheme, launched in 2013.

6 https://www.greenfinanceinstitute.com/wp-content/uploads/2022/09/GFI-PROPERTY LINKED FINANCE-SUMMARY.pdf

7 The 'golden rule' applied to the Green Deal loan scheme and required the cost of the repayments for the loan to be lower than the energy bill savings from improved efficiency. However efficiency savings were a challenge to quantify, and more expensive but essential measures such as solid wall insulation were sometimes deemed ineligible.

8 Examples of schemes that give consumers confidence in a reputable supply chain include Trustmark, MCS and PAS2035

The impact of Property Linked Finance in other countries

Property Linked Finance has been deployed in several other countries around the world, including the U.S., Canada, Australia and South Africa. In the U.S., it has not just supported widespread energy efficiency, renewable energy, resilience and water efficiency upgrades to buildings, but has provided a significant economic boost. The commercial **PACE market in the U.S. has supported $5.2 billion of investment in 3,100 commercial projects and created 65,000 jobs for one year, while the residential PACE market has supported $8.4 billion in investment, resulted in 344,000 home upgrades, and created 137,000 jobs for one year[9].**

While the regulatory and tax environment together with the capital markets structure in each country is different, the case studies featured in this report about Home Run Financing, Amalgamated Bank and Sustainable Australia Fund all offer insights into the development of Property Linked Finance in international markets. They provide valuable lessons about how this can be achieved successfully and the pitfalls to avoid ahead of its introduction in the UK.

The potential size of the UK Property Linked Finance market

In 2023, the GFI commissioned research to assess the potential size of the Property Linked Finance market, if Property Linked Finance was introduced as a residential solution in the UK. **Of the target market, estimated to be £130 billion to £175 billion in size, it found that the size of the energy retrofit market likely to be financed by Property Linked Finance is between £52 billion and £70 billion[10].**

The GFI sees Property Linked Finance as one of many ways to decarbonise the UK property market, rather than one solution to rule them all. However, for this cohort of the market that is able to pay, may not be eligible for grant funding, but still being squeezed by the cost of living and energy crisis, Property Linked Finance is an attractive option to help property owners to reduce their energy costs and cut their bills.

The continuing cost of living crisis means that it is critical that any new financial solution is attractive and affordable to customers, and competitive with substitute products. One of the lessons learned from the failure of the UK's Green Deal was that if the price is too high, consumers will not use a solution, but affordability is an even more pressing concern today. Development banks such as the UK Infrastructure Bank, Scottish National Investment Bank and Development Bank of Wales could play an important role in ensuring that early stage PLF market solutions meet that requirement.

[9] See: https://www.pacenation.org/pace-market-data/

[10] Research conducted by an external consultancy which assumed out of the 11.8 million owner-occupied homes rated EPC D and below and eligible for PLF, that all 2.1 million homeowners able to pay and likely to use PLF will make energy efficiency upgrades.

The GFI aims to build a model for Property Linked Finance that can be brought to market and lays the groundwork for a thriving and scalable PLF market that can successfully **decarbonise the UK's 28 million homes** and commercial and public buildings.

Designing Property Linked Finance for the UK market

Over the last four years, the Green Finance Institute has championed the development of many energy efficient financial products, including its campaign to scale the size of the UK's green mortgage market[11]. The GFI sees Property Linked Finance as a complementary product to green mortgages and can speak with expertise about how to develop this market, having identified a role for Property Linked Finance in the UK in early 2020 and explored the opportunities for Property Linked Finance to support the decarbonisation of UK buildings.

As well as conducting research to understand UK consumer attitudes towards energy efficiency and Property Linked Finance, which showed strong appetite among UK homeowners for a PLF-style solution, the GFI has:

- Visited the U.S. to meet with pioneers from the U.S. PACE market and consulted experts who structure and administer PACE to understand its operational process.
- Learned lessons from the rollout of Property Linked Finance in the U.S., Australia, Canada and a number of other international markets, testing ideas for UK Property Linked Finance with market experts.
- Joined PACENation – the trade body for the US PACE industry – to benefit from an experienced network and resources.
- Hosted a multiday offsite with industry experts in October 2022 to explore the key features and challenges for UK Property Linked Finance and how it could be scaled across the UK. The outcomes from the offsite have informed an initial 'greenprint' for a UK PLF scheme.
- Won PACENation's 2023 award for advocacy and policy innovation for the GFI's pioneering work to develop a model for Property Linked Finance in the UK.
- Appointed a global consultancy to work alongside the GFI to refine the PLF greenprint.

[11] https://www.greenfinanceinstitute.com/news-and-insights/green-finance-institute-hosts-its-inaugural-green-mortgage-summit/

Principles for designing a greenprint for PLF

The GFI's PLF greenprint lays out how Property Linked Finance could look in the UK market. It includes significant research into the mechanisms to link the finance to a property, key financial considerations, the funding model, the target operating model, the customer journey, the regulatory position, the potential impact on the housing market, and the market opportunity. The GFI will continue to develop its greenprint in collaboration with key stakeholders and aims to share this with the wider market in 2024.

The key design principles for Property Linked Finance and core areas of the PLF greenprint are:

- The purpose of Property Linked Finance is to enable customers to make home energy improvements. For this to be done effectively, PLF solutions must be customer-centric.
- Property Linked Finance ideally should be deliverable within the current legislative landscape, so that its operationalisation is feasible and practical.
- For the widest possible reach and funding potential of the solution, the design of Property Linked Finance should be flexible and adaptable to different building tenures, geographies and capital providers.
- A well-designed PLF solution must be scalable across the UK to maximise impact.

Lessons to learn from international markets

One lesson from the introduction of Property Linked Finance in other international markets is that it must be designed to be customer-centric. For example, property owners must still be able to obtain a mortgage on their property and have easy access to support and customer helplines when they want more product information or when things go wrong. It is also essential to control the customer origination journey, so that customers that are considering Property Linked Finance are advised by qualified financial professionals. One of the lessons from the U.S. PACE market is that enabling installers to sell Property Linked Finance to property owners creates a conflict of interest that does not guarantee the best outcome for consumers. Therefore, financial advice on Property Linked Finance solution should be independent of technical retrofitting advice.

A PLF solution that can be adapted for different tenures, capital providers and geographies is also key for replicability and scalability.

One of the positive lessons from the U.S. market is that hyper local delivery, with trusted organisations, such as Local Authorities (known as municipalities in the U.S.), community groups, local charities or faith groups, educating local citizens about Property Linked Finance and endorsing the solution, is crucial to its uptake.

Because the UK does not have a property tax system like the U.S., Australia and many other jurisdictions, payments cannot be collected as an assessment on the property owner's tax bill. Instead, a linking mechanism will need to be designed for the UK PLF market, using processes that are easy for consumers to understand.

Finally, Property Linked Finance cannot be launched in isolation and expected to flourish. For energy efficient retrofits to happen at scale, Property Linked Finance must be accompanied by advice and support for customers throughout their retrofit journey, with clear information about how consumers can reduce their bills through energy efficiency improvements and certification standards for retrofit works that customers can rely on. It also requires collaboration between financial providers, retrofitters and lawmakers, together with policies that will encourage people to improve the energy efficiency of their homes and develop and scale the retrofit supply chain. The Green Finance Institute's report published in November 2022[12], which looked more broadly at how the UK could finance energy efficiency, included several policy recommendations, such as policies to encourage consumers to hit energy efficiency targets by certain deadlines and tax incentives, including an energy adjusted stamp duty.

The next steps for UK Property Linked Finance

Pilots of Property Linked Finance by financial institutions are crucial to demonstrate that it delivers good customer outcomes that meet regulatory requirements, while also being a commercially viable product that can be operationally streamlined. However, pilots must also be scalable in order to develop a go-to-market solution. The GFI aims to build a model for Property Linked Finance that can be brought to market and lay the groundwork for a thriving and scalable PLF market that can successfully decarbonise the UK's 28 million homes and commercial and public buildings.

The GFI is committed to collaboratively designing, developing and publishing a greenprint for Property Linked Finance in the UK. It has been collaborating with the finance community in the UK, the U.S and other jurisdictions, and sharing learnings from those discussions.

Understanding that the local delivery of Property Linked Finance is critical to its success, the GFI has also been engaging with Local Authorities around the UK, which are increasingly interested in PLF-style solutions.

Property Linked Finance is an important financial tool that can help the UK to decarbonise its buildings and to reach a net zero future by reducing energy use, lowering energy bills, and creating warm, comfortable homes and buildings across the nation. Alongside a shovel-ready PLF financial solution that is affordable and attractive to lenders and customers alike, further collaboration between the financial sector, national lawmakers, Local Authorities, community groups and the retrofit industry will be required to provide consumers with educational resources on the benefits of energy efficiency upgrades, certification schemes to build trust and ensure consistent standards, and upskill the supply chain. With the right financial solution, policies, consumer education and technologies in place, Property Linked Finance can help to ensure the UK's buildings are energy efficient, comfortable and resilient.

[12] https://www.greenfinanceinstitute.com/wp-content/uploads/2022/09/GFI-PLF-SUMMARY.pdf

Case studies

Case study 1: Sustainable Australia Fund

Sustainable Australia Fund is the first, and currently the only, financial provider offering Property Linked Finance in Australia, where this solution is known as Environmental Upgrade Finance (EUF). EUF is available to businesses with existing commercial buildings (with at least 50% of non-residential use) on rateable land, where the finance deployed has a measurable environmental benefit. It is currently not available to residential borrowers, because existing residential legislation prohibits payment obligations being passed on to tenants in the event that homeowners rent their property.

EUF offered by Sustainable Australia Fund, a specialised non-bank lender, has terms between four and 20 years and covers up to 100% of project finance, including hard and soft costs. Payments are made through local council rates and can be split between commercial landlords and tenants. Because EUF creates a first ranking charge on the property, no personal or business guarantees are required.

The fund's loans enable projects such as rooftop solar installations for businesses, a market that is growing year on year; energy efficient, water efficient and other building upgrades and retrofits; and capital for major building renovations and repositioning.

The Sustainable Australia Fund, originally named the Sustainable Melbourne Fund, was established by the City of Melbourne in 2002 to increase the sustainability of the city's buildings. In 2010, that led to Australia's first piece of legislation that enabled EUF within the City of Melbourne. Scott Bocsay, CEO and Managing Director of Sustainable Australia Fund, was involved in this and subsequent pieces of legislation enabling EUF throughout New South Wales, Victoria and South Australia. The states of Queensland and Western Australia have also announced their intention to introduce legislation soon.

Although EUF is now available across more of Australia, Bocsay says that the relatively small market is fragmented. In South Australia and New South Wales, for example, councils set up and offer EUF schemes themselves. ***"That stopped the market from scaling, because product suppliers and project developers encountered different rules for each council,"*** he says.

As a result, Sustainable Australia Fund set up a separate administration business in 2016 to help councils to set up a common administrative framework. ***"That enables scale to come into the market, because like a mortgage, the rules, fees and processes are the same, no matter where your project is located,"*** he explains.

By the end of 2022, the fund had delivered energy savings of over **AU$111 million** and prevented **632,274** tonnes of greenhouse gas emissions for projects delivered, the equivalent of taking **395,171** cars off the road for one year.

The lessons from the Australian market

He says that an important takeaway from Australia's experience to date is that having a common administrative platform across all geographic regions is key. ***"This is a high volume, low margin business, so you need to make it transactionally simple, geographically scalable and applicable to a broad segment of the community."***

Another requirement is simple legislation that accommodates the commercial and residential market, and sub-markets, such as owner occupiers, tenants, investors, retrofit and new construction within residential. He says that while existing or new legislation needs to ensure consumers are protected in this market, enabling legislation must also foster innovation from the financial community and the retrofit sector alike, and allow the market to flourish.

Australia's residential EUF market is currently closed because of legislative constraints, while the current legislation covering commercial EUF only applies to existing non-residential buildings on rateable land. ***"You need to see that there's a scalable opportunity. My return on investment comes when you can get thousands of buildings and homeowners into the market,"*** he says.

The market outlook

Despite this, Bocsay is bullish about the EUF market in Australia and says that the demand and opportunity is there. With interest rates rising, the availability of business capital tightening and input costs going up, the demand for commercial EUF has grown.

In this environment, long-term funding that does not require traditional security is an attractive proposition for businesses, particularly in Australia, where mortgage terms on commercial properties only extend to five years. However, Bocsay says that the real power of EUF is that it is linked to the building, not the property owner. ***"If you sell, it stays with the building and passes to the new owner. That gives our customers positive cash flow and also overcomes the split incentive."***

He sees three trajectories for the growth of EUF in Australia: lending to small and medium businesses for rooftop solar installation; transitioning commercial offices into green buildings; and residential lending, subject to legislative change.

He says that the residential sector is particularly promising in Australia, because councils are asking for a residential offering and the delivery mechanism for some energy efficiency improvements, such as rooftop solar for tenanted properties, is already there, pointing out that Australia has one of the world's most advanced rooftop solar residential markets. ***"There is a huge workforce already out there putting over three gigawatts per annum on rooftops. You just need to open up that market to the 30% of freestanding properties that are tenanted."***

Sustainable Australia Fund is considering a range of potential projects it could fund in the residential space where finance is currently hard to mobilise. This includes funding both energy efficiency and building resilience improvements, so that Australia's homes are better equipped to deal with the impact of the country's changing climate, such as the increased incidence of bushfires.

Case study 2: Home Run Financing

Home Run Financing, founded in 2014 as PACE Funding, is the largest of four lenders that currently provide residential Property Assessed Clean Energy (PACE) financing in the U.S.. Home Run Financing provides low, fixed interest rate loans of up to 30 years for residential energy efficiency, renewable energy, water efficiency and resiliency projects, and can often approve them within minutes.

In the U.S., PACE can cover 100% of a project's hard and soft costs and provides long-term financing. This means that the annual energy savings for a PACE project can exceed the annual assessment payment, making owners cash flow positive in the first year. PACE-funded projects can be eligible for state and municipal tax credits and other incentives, which can also reduce the overall cost.

Energy projects funded by PACE are permanently affixed to a property and the PACE assessment is filed with the local municipality as a senior lien on the property. Homeowners make payments via an assessment on the property's regular tax bill.

"As a lender, the senior lien on the property gives you a lot of comfort that your principal is going to be paid back," says James Vergara, Chief Operating Officer and Chief Investment Officer at Home Run Financing. He says the fact that payments are collected alongside property taxes is another important feature. ***"In the U.S., most people pay their property taxes as part of their mortgage payment, so they don't miss those payments. I think these two credit enhancements can be hard to replicate in other jurisdictions."***

Since the company's inception, it has invested over **$785 million** in PACE loans, creating **5,986** jobs, saving over **15 million kwh** of energy, **153 million gallons** of water, and preventing over **5 million tonnes** of greenhouse gas emissions.

Lessons from the U.S. market

One of the biggest challenges for the U.S. residential PACE market is that only California, Florida and Missouri have legislation that allows it, while commercial PACE is available in 33 states and the District of Columbia. In addition, weak underwriting standards and business practices by some PACE providers in the residential market's early stages meant that some homeowners signed up for loans they could not understand or afford. As a result, California enacted the PACE Preservation and Consumer Protections Act in 2016 in response to these problems, which led to almost a 90% decline in annual originations in the state between 2017 and 2023.

"In the early days, going back before 2010, you had lenders that were both green environmentally, but also green in experience," says Vergara. ***"The argument was this is a tax assessment, not really a loan, so they didn't need to underwrite to the typical consumer loan standards, because they were loaning to the property and not to the borrower."***

He says that today's underwriting standards are much more rigorous. ***"In the residential PACE 2.0 that we're operating in now, I think all of us have an awareness that for all the credit enhancements, it's still a loan to a consumer. And so we have to make sure that it's appropriate for the consumer and that they can afford to pay."***

Nevertheless, the commercial PACE market across the U.S. has grown dramatically in the last 10 years, but the residential PACE market has contracted. Vergara says that California by itself used to be a $1 billion residential market, which is the approximate size of the whole residential market today. ***"On the other hand, the Florida market will grow from $300 million to 400 million in 2017 to $800 million or $900 million this year, so there is still growth and opportunity,"*** he says.

Because contractors sell PACE financing directly to U.S. homeowners, Vergara says that working with credible contractors and ensuring their compliance is also critical for the market's reputation. ***"We record phone calls and we do inspections. You have to be constantly vigilant to make sure that people are doing what they say they're going to do,"*** he says.

He says that rigourous underwriting standards, vigilance over contractors and excellent customer service are required, so that customers understand that they really need and want what's being financed, the terms of that finance, and that what's being financed is installed correctly.

The market outlook

Vergara believes there are lots of new and useful applications for residential PACE in states such as Michigan, where there have been lots of concerns about water quality due to lead pipes in recent years. ***"The municipalities can change all the pipes, but there needs to be a way for the homeowner to finance the last several feet from the municipal piping to the house,"*** says Vergara. ***"PACE as a public-private partnership would fit well with that."***

He hopes that ongoing work by the Consumer Financial Protection Bureau (CFPB) to develop a final set of rules and a national regulatory standard for the PACE market will encourage states such as Texas and Michigan that have been considering PACE for a while to adopt enabling legislation. ***"If the final set of rules are something we can operationalise, hopefully that will really help us to get some territorial expansion. I would love to see five or six states being active in the residential market in the next five years."***

Case study 3: Amalgamated Bank

Amalgamated Bank, a leading socially responsible bank and the first U.S. bank to be certified as a B Corp, is also the largest bank lender in the U.S. PACE market. It has been a big acquirer of PACE originations since 2018 and continues to grow its portfolio.

In the first quarter of 2023, Amalgamated's acquired PACE originations grew $84.5 million to $996.4 million, comprised of a $7.0 million increase in commercial PACE originations and a $77.5 million increase in residential originations. It has an exclusive arrangement where the bank is the sole acquirer of residential PACE loans originated by Home Run Financing. ***"We were able to partner with one of the first, best and most reliable originators very early in the PACE product cycle, which gave us a little bit of first mover advantage,"*** says Jason Darby, CFO at Amalgamated Bank.

The bank's involvement in the PACE market has doubled its proportion of climate-related loans. ***"When we started getting into PACE, about 16% of our overall loan and investment portfolio was climate related,"*** says Darby. At the end of 2022, 36.5% of its lending book, including PACE securities, was dedicated to the category of climate protection.

Darby says that while originators, regulators and legislators, including local municipality and state government leaders, care about the banks that are buying PACE loans, residential consumers of PACE mostly care who the installer and the originator is. He says having quality installers is critical, because they are the first point of interface with consumers, but that working with reliable originators and reliable installers and tying those pieces together is also vital.

"One of the biggest metrics that we decided was important as an investor in PACE originations was to measure consumer complaints and consumer lawsuits, so we have complaint and lawsuit metrics in our covenants," he says, adding that if the originator exceeds these metrics, the bank can curtail its production. ***"That's a very healthy binder, because originators know they have to keep installation quality high and consumer complaints low."***

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Lessons from the U.S. market

Darby says that if that triangular relationship between the bank, originator and installer breaks down, either through dishonesty from the originator or poor quality work from the installer, then the bank's reputation can suffer.

"That's what was happening a few years ago, when there were some consumer complaints being lodged around PACE, with the commentary being that this was the second wave of subprime lending," he says. ***"Amalgamated Bank and Home Run Finance were never touched by that discussion, because we've always held ourselves to a much higher standard, but I think the biggest thing that we learned from that period is that consumer complaints can snowball and can sink your product in a hurry."***

He adds that, following some bankruptcies and closures of residential PACE originators, the residential market has consolidated around a small number of dominant and competent originators, which he thinks is positive for the market.

Darby says that having banks, originators, regulators and legislators speaking in a unified voice on the product before going to market is probably the most valuable takeaway from the development of the U.S. PACE market to date. ***"Regulators and legislators weren't involved in the development of this product early enough, so it took longer to build traction,"*** he says.

The market outlook

Darby says that Amalgamated has every intention of growing its PACE portfolio and that the only constraint will be the bank's own concentration risk. He thinks that the U.S. could see exponential growth in the residential market if one or two more states adopt enabling legislation, but says there is more than enough residential production available in California, Florida and Missouri to move the bank's business forward.

"There's a continuously growing appetite for clean energy alternatives from consumers, but PACE also typically does very well in a higher rate environment," says Darby. ***"When interest rates are much higher, the unsecured lenders for energy improvement projects retreat, and people don't move home as often. We see a great opportunity for PACE production to increase if people stay in their houses, but still want to do the energy efficient improvements."***

He also sees a lot of opportunity in the commercial PACE market, which is so not geographically constrained and can see deals of \$5 million up to \$50 million or even higher, rather than the average \$20,000 to \$30,000 residential PACE loan. ***"Commercial PACE is often county-driven, based on an industrial or commercial project that's being developed, where a PACE layer will be introduced in the capital stack to create tax credits for the developer of an energy efficient facility and a tax incentive for businesses to move in"*** he says. ***"That's an area where we've seen tremendous growth opportunities."***

He also sees significant potential for PACE to be replicated globally. ***"We see strong growth potential for PACE, both domestically and internationally, which is why we're working with the Green Finance Institute to share best practice and key learnings."***

Conclusion

With buildings responsible for 23% of the UK's annual greenhouse gas emissions, making buildings more energy efficient is key to achieving net zero. This will require an estimated investment of £360 billion to upgrade the UK's inefficient buildings by 2050. Delivering this capital requires the catalysing and scaling of existing green building finance markets and the development of innovative financial solutions. Drawing on its discussions with the UK finance industry, international providers and learning key lessons from international markets, the Green Finance Institute believes that Property Linked Finance will be a key financial tool to help decarbonise the UK's building stock with the potential to enable £52-70 billion of investment in making UK homes more energy efficient.

The GFI is committed to the development of Property Linked Finance in the UK, with the potential to expand to Europe and beyond, and to designing a solution in collaboration with the finance industry that is consumer-centric and scalable. Property Linked Finance must be designed around the consumer and enshrine consumer protections. Ideally, it should be deliverable within the current legislative landscape and offer different routes to market in different jurisdictions. It should be flexible and adaptable for use a wide variety of different end users, purposes, buildings and capital providers.

Property Linked Finance also requires collaboration between the financial sector, national lawmakers, Local Authorities and the retrofit industry to ensure its scale and success. The GFI looks forward to working with these stakeholders to develop a UK solution for Property Linked Finance that helps consumers to reduce energy use, lower energy bills and create energy efficient buildings across the nation.

The Green Finance Institute is grateful to our funders, MCS Foundation, Laudes Foundation and Amalgamated Bank, for supporting our work on Property Linked Finance to date. We would also like to thank Globescan for its thorough research into consumer attitudes towards Property Linked Finance and Osborne Clarke for providing invaluable legal support in our research.

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